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International Camellia Journal

International Symposium, Nanning, Guanxi, China 8-14 January, 1994. Left; Prof. Chang, Hungta, (Dept. of Biology, Sun Yatsen Univ., Guangzhou. Center; Prof. Chen, Junyu (Beijing Forestry Univ., Beijing). Right; Mrs. Mavda Reynolds, Channel Island, VP, ICS

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

An Official Publication of the International Camellia Society

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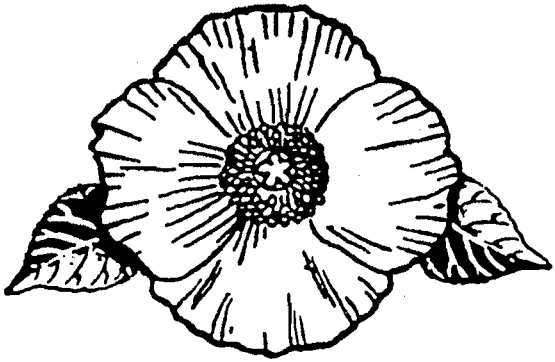
*Papers presented at 1993 ICS Congress in Johannesburg
**Papers presented at 1994 International Symposium of C. Chrysantha



International Camellia Journal

No. 26 October 1994

An Official Publication of the International Camellia Society

Directors and Officers

1994

PRESIDENT

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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

The good news is that we have a new President elected to take my place. Please welcome Mrs. Mayda Reynolds of Jersey Islands. She steps up from the Vice-Presidency and is very experienced in the ways of the Society. She has assembled a strong Executive and will guide us well. Along with her election she has a new slate of Vice Presidents to help her. Lew Fetterman of the U.S., Jennifer Trehane of the U.K. and Pat Macdonald of New Zealand will fill the jobs. Best wishes to all.

I must report to the Society that our journey to South Africa in August 1993 for our Conference was splendid. Our host group, led by Leslie and Gladys Riggall, chose the right venue and experiences in this amazing country. We did not have a large group due to media reports of conditions down there. Those who were not brave enough to venture down really missed the trip of a lifetime. Our first view was of the Cape region which was full of history and a fantastic array of flora. Some of the plants were new to most of us, but many more were the precursors of plants which are in all of our gardens. We traveled in their winter time over varied landscapes and found that their Camellias thrived where grown. None of us will ever forget our visit to Leslie Riggall's Fern Valley Botanic Garden. He had so many camellias and associated plants so carefully arranged in this natural valley and he had a sampling of flora from all over the world for us to enjoy. The South African Nursery Association sponsored the complete Conference and took care of us very well.

Most of us have received our corrected Registers and all reports I hear is that they are magnificent and very useful to our Camellia World. Congratulations to Tom Savige and all who helped him all the way through. First reports are out that the Society is financially solvent on the publishing venture. Think that there are about twenty five per cent unsold volumes in this final printing. I hope all of you will help to complete the sale of the remainder.

At the beginning of 1994 your Society helped sponsor a Symposium of the Yellow Camellias in Nanning China. Many articles in this Journal will attest to its success. I was signed up to attend this Symposium but the U.S. Postal Service lost my Passport and only sent it back to me three months late with a note that it was found in the trash. Mrs. Mayda Reynolds, our Vice President, represented me and put forward the notion that our Society wanted to have as many Chinese members as possible. Mrs. Mayda Reynolds, Herbert Short, Jennifer Trehane and I are sponsoring a group of Chinese members for a period of 5 years in the hope that they will form the nucleus of a viable Region in the future.

There has been a rebirth of the German Region with a stronger but leaner society. With the efforts of Werner Fritchi, Peter Fischer and Gerhard Kasimir, they have shouldered their financial responsibilities and re-organized with a new and dedicated group of members. Congratulations on pulling the Region together.

This is the last testament from me as your President and I hope all will express to my Executive helpers your satisfaction with their efforts. I appreciate the opportunity to serve through this period of growth and success in most of our Regions. Thanks to all.

MESSAGE DU PRESIDENT.

THOMAS H. PERKINS III

UN MESSAGE DU PRESIDENT

BOTSCHAFT DES PRASIDENTEN

UN MESSAGGIO DEL PRESIDENTE

UN MENSAJE DEL PRESIDENTE

Comme bonne nouvelle, j'ai le plaisir de vous annoncer l'élection d'un nouveau président qui va prendre ma place. Je vous présente Mme Mayda Reynolds de l'ile de Jersey. Ayant été vice-présidente, elle a l'experience nécéssaire pour régir la Société. Lew Fetterman des Etats-Unis, Jennifer Trehane du Royaume Uni et Pat Macdonald de la Nouvelle Zélande seront ses vice-présidents. Bonne chance a tous!

Le voyage de notre conférence en Afrique du Sud au mois d'àout 1993 a été un grand succes. Notre groupe, dirigé par Leslie et Gladys Riggall, avait choisi les plus beaux coins de ce merveilleux pays. Nous n'étions pas nombreux à cause sans doute des conditions qui existaient alors dans la région. Ceux qui ne sont pas venu avec nous ont raté une expérience unique.

Notre première vue fut de la région du Cap, pleine d'histoire et de végétation fantastique. Nous y avons trouvé beaucoup de plantes inconnues probablement les precurseurs de celles qui maintenant habitent nos jardins. Nous étions là pendant leur hiver et nous avons découvert que leur Camellias prospèrent où ils sont plantés. Aucun de nous oubliera jamais notre visite au Leslie Riggall Fern Valley Jardin Botanique: il y avait beaucoup de Camellias et plantes associées soigneusement arrangés dans cette vallée naturelle et des specimens de flore du monde entier que nous avons bien admirés. L'entière Conférence était sous le patronnage du South African Nursery Association qui prit bien soin de nous.

Pour la plupart, nous avons reçu notre régistre corrigé, et on me dit qu'ils sont magnifiques et très utiles a notre monde du Camellia. Félicitations a Tom Savige et a tout ceux qui l'ont aidé. D'après les premiers comptes rendus, la Société est solvante au sujet de la publication de cette édition. Il reste 25% de régistres nonvendu. J'espére que chacun va essayer de complêter la vente de ceux-ci.

Au début de 1994, votre Société a aidé a organizer un symposium du Camellia Jaune a Nanning, en Chine. Plusieurs articles dans le journal vous renseignerons sur son succes. J'étais inscrit pour participer a ce symposium, mais le service postal americain a perdu mon passeport. Je l'ai reçu trois mois trop tard avec la simple explication qu'il avait été trouvé dans une boite à ordures. Mme Mayda Reynolds m'a représenté et a annoncé que notre Société voudrait accueillir autant de membres chinois que possible. Mme Mayda Reynolds, Herbert Short, Jennifer Trehane et moi allons supporter pour une periode de cinq ans un groupe de membres chinois qui, nous espérons, formeront le noyau d'une region future.

Il y a une vigoureuse résurgence de la Société allemande. Bien qu'avec moins de membres elle semble plus forte. Grâce aux efforts de Werner Fritchi, Peter Fischer et Gerhard Kasimir, elle a epaulé ses resposabilités fiscales, s'est reorganizée avec des membres nouveaux et fort dedicacés. Félicitations a tous'.

Ceci est mon dernier message comme president. Je remercie tous mes aides pour leurs efforts. J'ai apprecié l'opportunité de servir la Société pendant ce temps d'expansion et de succes. Merci a tous.

NOTE FROM THE EDITOR

JEAN COMBER

NOTES DU REDACTEUR EN CHEF

ANMERKUNGEN DER RADAKTION

NOTA EDITORIALE

NOTA DE LA REDACCION

This has been a busy year. My daughter and I moved into our new house and have been busy getting settled. We did not have enough shade trees for my husband's camellias so the first thing we had to do was to build a shade house for his plants. We moved over 100 in containers but had to leave a lot of the large old plants.

Thanks for all of the help you have given me the past six years. Many thanks for the title translators - Dr. Pierre Kaufke, Univ. of West Florida; Dr. A. W. Krause, Gulf Breeze, FL; Mr. Joe Bonfiglio, Mrs. Helga Reed and Mrs. Jannine Adams, Brookhaven, Ms.

Congratulations to Tom Savige for the conferring of the Degree of Master of Science in Agriculture (Honoris Causai) by the University of Sydney. I know the camellia world appreciates the hard, dedicated work he has done on the ICS Camellia Register.

I wish the best to the next Editor.

NOTES FROM THE SECRETARY
ICS GOVERNING BOARD MINUTES

ARTHUR LANDRY, SECRETARY, INTERNATIONAL CAMELLIA SOCIETY

COMPTE DE ICS

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

LA PROCESSI VERBALE DEL CONSIGLIO D'AMMINITRAZIONE DELLA

OROTOKOLI DES I.C.S. VORSTANDES

Since this is my last message as your Secretary, I wanted to express my appreciation to all who helped me in so many different ways over the past six years. I want to especially thank Tom Perkins and Vi Stone for their guidance and experience shared with me. All Officers and Board Members have been of great help and support and I thank them all. The ICS has had a lot happen during the last two terms, had some great congresses and concluded publication of the outstanding International Camellia Register. I have made many new friends all over the world whom I will continue to value in the years to come. Our Society is great because of the great people in it. We share a common interest in Camellias, but it is the people who are the heart and enduring core of the Society. I look forward to continued involvement and contributions to ICS in my new role next year as ICS Director for USA. Thank you again for your help.

The following officers have been elected by the Board for the three year period January 1, 1995 through December 31, 1997:

President - Mayda Reynolds, Channel Islands.

Vice President - Lewis Fetterman, U.S.A.

Vice President - Pat Macdonald, New Zealand.

Vice President - Jennifer Trehane, United Kingdom.

The Secretary has been notified by the following regions of selections for Directors-ICS for the next three year period commencing January 1995 through December 1997. (report compiled 10 July 1994).

REGION	DIRECTOR
Africa	* Mr. L. Riggall
Asia	Dr. Shunpei Uemoto
	Mr. Gorou Iimure
Australia	Mr. Eric Craig
	Dr. Ross Hayter
	Miss Nance Swanson
France	* M. J. Laborey
	* M. C. Thoby
Germany	Mr. Gerhard Kasimir
	Mr. P. Fischer
Italy	* Dott. I.A. Sevesi
New Zealand	Mrs. P. Macdonald
Portugal	* Sr. J. de Ferreira
Spain	* D. J. de Rivera
United Kingdom	Mrs. M. Assinder
	Mr. David Benton
	Miss Jennifer Trehane
U.S.A.	Mr. G. Davis
	Mr. A. Landry
	Mr. W. Stewart
Other Regions	* Mrs. A. Bushell
	* Mr. G. Kranen

*- The Secretary did not receive information from these regions by deadline and assumes these Directors have been re-elected for the term January 1995 through December 1997.

ICS GOVERNING BOARD MINUTES

Cont. from pg. 7

The Board of Directors for ICS met at the Balalaika Hotel, Johannesburg, South Africa on August 12, 1993. Proxies for those members unable to attend the meeting were approved as nominated and are listed in the attendance list.

The minutes of the ICS meeting held at New Orleans, LA USA on January 31, 1992 were approved. Treasurer Greg Davis gave the financial report and provided supplemental information on the Society accounts. The 1991 income included in the 1992 totals was 1990 & 1991 subscriptions from Spain. Mr. Davis was happy to report that 1992 subscriptions had been collected from every region. Mr. Davis expressed his appreciation to all membership representatives in each region for their endeavours. However, he reiterated that, where possible, Regions should try to remit funds earlier to the ICS Treasurer (1993 by January 1, 1994, if possible). Interest rates were very low (approximately 3%), resulting in a reduced amount of interest received during the period. Total income in 1992 amounted to US$19,732.

Expenditures on the 1992 Journal was reduced due to the smaller publication produced, with fewer color pictures. ICS Register expenses were supplemented by a payment by Eric Craig from Australian Funds. Total expenditures amounted to US$11,108 (excluding the Australian funds), giving a net excess of income over expenditures in 1992 of US$8,624. Details of the ICS Register financial status were included in the Treasurer's Report, and it is anticipated that the balance remaining in Australia will cover all costs to final re-publication.

The balance sheet showed assets in cash and money market deposits totalling US$22,539, with liabilities (loans due to ICS Directors made for Register expenses) of US$12,359, giving net current assets of US$10,180. Reducing this by the Designated Life Membership Fund gives available funds of US$4,899.

Subscriptions for 1992 were received from Germany totalling US$2015. A letter from Dr. Ingrid Batzenschlager, Director for Germany, was read by Mr. Perkins which described efforts of Germany to raise funds of DM1724 to repay the debt of former Director Hacklander.

It was noted that both the African subscription and that of Portugal resulted in receipts by ICS of less than the actual journal cost. The New Zealand Region had requested a rise in subscription to NZ$20, and this figure was used in the schedule.

ICS Register Deposits and Donations received by the Treasurer commenced in the fall of 1990, and up to 1992 resulted in the sale of 258 sets for US$29,371. Donations of US$19,713 includes the sum of US$12,359 in loans from various Directors. Mr. Davis stated that these loans will be repaid with interest of between 3% and 4%, when the ICS financial position is stabilized after final payment for the Register.

The Treasurer's Report was approved by the Board and the Board approved a vote of thanks to Greg Davis for his excellent report and hard work.

Jean Cox, as proxy for Tom Savige, Registrar, read the ICS Register Report to the meeting. Mr. Perkins had received a letter from Eric Craig on the progress with re-publication of the Register and summarized the letter to the meeting. Great concern was expressed over the apparent lack of a formal written contract with the Register publishers, especially in light of the re-publication and expected reimbursement of distribution expenses for the original faulty publication. After discussion it was proposed by Lewis Fetterman, seconded by Ronald Macdonald, that the Board of Directors request President Perkins to write to Tom Savige (copied to Eric Craig), thanking him for all his efforts and congratulating him on the Register, but expressing concern about the financial aspects of the publication of the revised version, and requesting copies of ALL papers and information regarding Fine Arts Press. The motion was passed by the Board.

Mayda Reynolds described arrangements for the 1995 Congress, including pre- and post-tours, and distributed a set of brochures to each member present. It was formally proposed by Lewis Fetterman and seconded by John Tooby that the 1997 ICS Congress be held in New Zealand. Pat Macdonald gave some details of arrangements which have been made, and after discussion it was agreed that the Congress should be held in Auckland in August/September 1997, to follow the

National Show and Convention of the New Zealand Camellia Society. A message from the Mayor of Miyazaki, Japan, was circulated to the meeting proposing that the 1999 Congress be held in Miyazaki. Dr. Uemoto requested, and obtained, formal approval of Japan as the site for the Congress, during the last week in February, 1999.

Lewis Fetterman proposed a vote of thanks to Leslie Riggall for all the hard work and efforts put into the current 1993 Congress, which had been a very rewarding experience. The motion was seconded by Greg Davis and approved by the Board.

John Tooby outlined the proposal to create a process for standardized registrations. After much discussion regarding the practicality of getting international agreement on applications for registration, President Perkins proposed that a Committee be formed to develop the proposed procedures. The committee will be comprised of Jennifer Trehane, Shunpei Uemoto, Vi Stone and Vonnie Cave.

Leslie Rigall stated that the problems of the African Region subscription level was caused in great part by the weakness of the Rand. The subscription will be increased to SAR20 for single and SAR24 for couple.

There was a discussion about appointing Tom Savige to the office of Patron of the Society. (Secty. note: Mr. Savige has held that position for a number of years.)

There was a discussion of the International Symposium of Yellow Camellias at China on January 8-11, 1994. Dr. Shunpei Uemoto gave some details of post-Symposium tours, with duration, locations and estimated costs. Tom Perkins gave an account of the background to the China meeting, whereby he had been approached by China organizers for ICS to sponsor the Symposium. Japan had also been asked to sponsor the meeting. The Japanese had agreed to sponsor the Symposium, with various conditions regarding access to research material, etc., and the Chinese organizers had agreed to the conditions. Dr. Uemoto reported that six out of the 19 species of yellow camellia would be available for sale, the actual species to be indicated at a later date. The approximate Meeting fee would be US$300. It was formally proposed that non-financial ICS sponsorship of the Symposium be agreed, and this was approved by the Board.

Separation of China as a Region was discussed and it was proposed that the development of a new region in China be handled by the Japan Camellia Society. The motion was approved by the Board.

Mary Caroni, as proxy for Sevesi, conveyed Dr. Sevesi's greetings and regrets for his absence. He was very happy about the progress of Camellia shows in Italy, which were now in the hands of garden clubs. He is concerned that there is no movement being made in Italy currently to provide new varieties.

After approving a motion by John Tooby to give a vote of thanks to President Tom Perkins for all his work, the meeting was adjourned.

ATTENDANCE LIST
ICS Governing Board Meeting - Johanesburg, RSA, August 12, 1993

Mr. Thomas H. Perkins, III	President	USA
	Proxy for Craig	Australia
	Proxy for Swanson	Australia
Mrs. Mayda Reynolds	Vice-President	Channel Islands
	Proxy for Thoby	France
	Proxy for Bushell	Channel Islands
Mr. Greg Davis	Treasurer	USA
	Proxy for McRee	USA
Miss Simone Andrews	Acting Secretary	Channel Islands
Mr. Leslie Rigall	Director	Africa
Mrs. Pat Macdonald	Director	New Zealand
Mr. Ronald Macdonald	Proxy for Clere	New Zealand
Mr. John Tooby	Director	United Kingdom
Miss Jennifer Trehane	Director	United Kingdom
Mr. Paul Bleaney	Proxy for Assinder	United Kingdom
Mr. Lewis Fetterman	Director	USA
Mrs. Annabelle Fetterman	Proxy for Stone	USA
Mrs. Mary Caroni	Proxy for Sevesi	Italy
Mrs. Jean Cox	Proxy for Hayter	Australia
Dr. Shunpei Uemoto	Director	Japan
Mr. Tsuneo Nakamura	Proxy for Arai	Japan

1994 Camellia Registrations

TOM SAVIGE, AUSTRALIA

ENREGISTREMENTS DE CAMELLIAS 1994

REGISTROS DE CAMELLIA 1994

REGISTRAZIONI DI CAMELLIE 1994

1994 KAMILIENREGISTRIERUNG

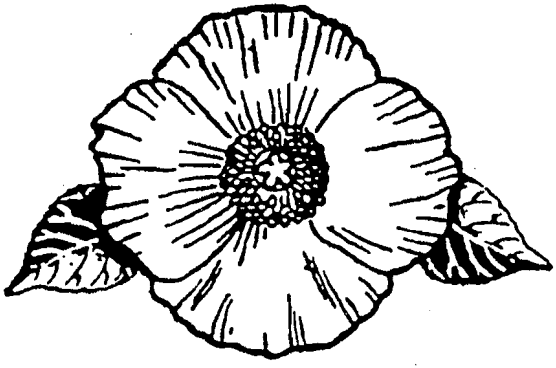
No. 26 'Robert Strause'

No. 26. Camellia japonica 'Robert Strause'
Originated by Stonehurst Nurseries, Selsfield Road, Ardinsly, Sussex, England.
Flower: Medium sized, carmine rose (RHS.CC.55C), veined deeper rose madder, with irregular white border, semi-double of 14 large rounded petals, up to 5 cm deep x 4.2 wide. Small, pinched column of stamens. No petaloids, blooms early to late. A sport of 'Cinderella' first observed in 1976 and propagated in 1977.
Leaves: Olive green, elliptic with recurved margins, glossy surface, serrations moderate, 8-10.5 cm long x 4.5.6 cm wide, apex acute. Plant growth upright and bushy.
Exhibited in 1987 by Hayworth in RHS Show, London.

Future ICS Congresses

CONGRESS ICS A VENIR
ICS - KONGRESS VORSCHAU
LI CONGRESSI PROSSIMI DELLA ICS
EL PROXIMO CONGRESSOICS

1995	International ICS Congress at Channel Islands, Brittany and Paris 26-30 March - Pre-Congress Tour 30 March - April - Congress 4 April - 11 April - Post Tour
1997	International ICS Congress in Auckland, New Zealand
1999	International ICS Congress at Miyazaki, Japan, where a Camellia Garden is under development on top of a mountain.



New Director

Mrs. Ann Bushell, Channel Islands

UN NOUVEAU DIRECTEUR

DER NEUE DIREKTOR

NUEVO DIRECTOR

NUOVO DIRETTORE

Mrs. Ann Bushell

Ann Bushell and her husband have lived in the Channel Islands for the past 27 years, seventeen of those years living in Guernsey and for the past ten years in Jersey. A career in the world of fashion, followed by two children, Ann became an enthusiastic gardener and Flower Arranger. For the past four years she has been Chairman of the Jersey Flower Club and is currently the Wessex and Jersey Area Officer for the NAFAS publication "The Flower Arranger."

Ann has been a member of The Royal Horticultural Society for many years and is also a member of the Garden History Section of the Societe Jersiase. Together with Mrs. Mayda Reynolds and other local members has organized three very successful Camellia Shows in Jersey, and has been directly responsible for the staging of a competitive Flower Arrangement Section at each Camellia Show.

Having discovered the joy and challenge of growing camellias in the Channel Islands, Ann joined the Society in 1985 and was appointed Membership Representative for the Channel Islands, Republic of Ireland and Western Europe in 1987. She has attended I.C.S. Congresses in Naples, Japan and New Orleans, and is looking forward to welcoming members at the 1995 Congress to be held in Jersey.

Ann reports that she has enjoyed her role as Membership Representative and has agreed to continue as Membership Representative as well as Director for the Region.

International Camellia Society Congress 1995 Pre-Congress Tour 26th March - 30th March Bailiwick of Guernsey, Channel Islands

CONGRESS 1995 LA SOCIETE INTERNATIONALE DE CAMELIAS-UN TOUR PRE-CONGRES

DER 1995 INTERNATIONALE KAMELIEN VEREINIGUNG KONGRESS-EINE KONGRESS VORSCHAU (TOUR)

EL CONGRESO DE LA SOCIEDAD INTERNACIONAL DE LA CAMELIA, 1995-UNA GIRA PRE-CONGRESO

IL CONGRESSO INTERNAZIONALE DELLA SOCIETA DELLE CAMELIE 1995-GIRO PRE-CONGRESSO

THE BAILIWICK OF GUERNSEY consists of seven inhabited islands of which the main three are Guernsey, Alderney and Sark. The historic harbour town of St. Peter Port, where the tour will be based, retains much of its original charm and offers spectacular views of the neighboring islands. Horticulture is still a major industry and beneath the acres of glass, which occupy much of the island, we will see tomatoes and flowers as they are grown for the export markets. During the spring the unspoilt south coast cliffs have an abundance of wild flowers and time has been allowed during the tour, to walk some of the cliff paths.

*SUNDAY 26th MARCH:
I.C.S. Members arrive at The Duke of Richmond Hotel, St. Peter Port (Five Crown Hotel).
EVENING: Registration and Dinner at the Duke of Richmond Hotel.

MONDAY 27th MARCH:
MORNING: By coach for greenhouse visits which will include tomatoes, freesias, roses and carnations. Visit to Bruce Russell, Gold and Silversmith. Lunch at The Furze Over.
AFTERNOON: Visit private gardens of I.C.S. members and walk on the south coast cliffs.
EVENING: Dinner at the Duke of Richmond Hotel, followed by an illustrated talk by Mr. Raymond Evison, owner of The Guernsey Clematis Nursery.

TUESDAY 28th MARCH:
MORNING: By coach to The Guernsey Clematis Nursery. Visit to a private garden and Saumarez Park.
EVENING: By coach to Castle Cornet for a Vin d'Honneur, hosted by The States of Guernsey, which will be followed by a dinner at the Castle.

WEDNESDAY 29th MARCH:
ALL DAY: Boat trip to the island of Sark. Carriage drive, lunch and visit to La Seigneurie gardens.
EVENING: Farewell Dinner at the Duke of Richmond Hotel.

THURSDAY 30th MARCH
MORNING: Free for sightseeing, shopping etc. Lunch on own account.
AFTERNOON: Travel to Jersey by Aurigny Air Services.

PRE-CONGRESS TOUR: COST £325.00 PER PERSON
This inclusive cost covers accommodation, meals and transportation, as detailed in the itinerary.

PRE-CONGRESS TOUR ORGANIZER: I.C.S. DIRECTOR MRS. ANN BUSHELL
Lower Hall, Rue d'Empierre, Trinity, Jersey JE3 5FQ, Channel Islands.
Telephone: 0534 862963
Telefax: 0534 864047

* Tentative Schedule

INTERNATIONAL CAMELLIA SOCIETY CONGRESS 1995 PRE-CONGRESS TOUR 26th - 30th MARCH BAILIWICK OF GUERNSEY, CHANNEL ISLANDS

REGISTRATION FORM

COST OF TOUR:

£325.00 per person, inclusive of all accommodation, transportation, meals and gratuities, as detailed in the published itinerary. This cost is based on either twin occupancy or single rooms at the Duke of Richmond Hotel. However the number of single rooms available is limited and in the event of single occupancy of a twin bedded room, then a sur-charge may be necessary. Allocation will be made in strict order of receipt of the Registration Form, so an early response is recommended.

PAYMENT DETAILS: All payments should be in Sterling.

1. Payment direct to the Tour Organizer, Mrs. Ann Bushell, by Sterling Draft, Bank Cheque or Giro and made payable to:
INTERNATIONAL CAMELLIA SOCIETY C.I. ACCOUNT.
Or
2. Payment by Bank Transfer to:
BANK: NATIONAL WESTMINSTER BANK PLC
BRANCH: JERSEY 60-12-03
ACCOUNT: INTERNATIONAL CAMELLIA SOCIETY C.I. ACCOUNT
ACCOUNT NUMBER: 49896032

INSURANCE:

For your own protection, it is strongly recommended that you take out personal insurance to cover all medical, cancellation or curtailment costs. Please note that cancellation fees in respect of accommodation may be incurred if withdrawal takes place after full payment has been made.

RESERVATIONS AND PAYMENTS:

To reserve a place on the Pre-Congress Tour please complete and return the Registration Form as soon as possible to the Tour Organizer. No Deposit is required but PAYMENT IN FULL MUST BE MADE BY THE 16th JANUARY 1995.

REGISTRATION APPLICATION:

Please complete and return as soon as possible to the Pre-Congress Tour Organizer:
MRS. ANN BUSHELL,
I.C.S. REGIONAL DIRECTOR
LOWER HALL, RUE D'Empierre, Trinity
Jersey JE3 5FQ, Channel Islands
Telephone: (0534) 862963
Telefax: (0534) 864047

Registration Form - PLEASE TYPE OR USE CAPITAL LETTERS:

MEMBERS SURNAME: _____
MR/MRS/MISS (Please delete as applicable)

FORENAME (S) _____

ADDRESS _____

_____

TELEPHONE _____ TELEFAX _____

ACCOMPANYING PERSON, SURNAME _____
MR/MRS/MISS (Please delete as applicable)

International Camellia Society Congress 1995 Thursday 30th March - Tuesday 4th April Jersey, Channel Islands

CONGRES 1995 DE KA SICUETE UBTERBATUIBAKE DE CANELIAS

DER INTERNATIONALE KONGRESS DER KAMELIEN GESELLSCHAFT-1995

EL CONGRESO DE LA SOCIEDAD INBTERNACIONAL DE LA CAMELIA 1995

LA SOCIETE INTERNAZIONALE DELLE CAMELLIE-1995

The island of Jersey is the largest and most southerly of the Channel Islands, lying in the Bay of Mont-St-Michel between Normandy and Brittany. Jersey is a popular tourist resort with miles of sandy beaches and unspoilt countryside. It is renowned for its horticultural and agricultural produce and has many fine restaurants offering a choice of international, traditional and ethnic cuisine. Jersey is a leading conference centre and our venue for the ICS Congress is the Grand Hotel, a first class establishment, close to the shops of St. Helier as well as the beach and several parks.

*THURSDAY 30th MARCH:
EVENING: Registration.
Vin d'Honneur as guests of the Jersey Tourism Committee
Dinner at the Grand Hotel.

FRIDAY 31st MARCH:
MORNING: Three lecture sessions.
Light lunch at the hotel.
AFTERNOON: By coach to the Jersey Museum for a floral exhibition "East Meets West" to be staged by members of the Jersey Flower Club and the Jersey Ikebana Group. Scenic drive with a stop for afternoon tea.
EVENING: Delegates' own arrangements.
ICS Directors' Board Meeting and Dinner, Grand Hotel.

SATURDAY 1st APRIL:
MORNING: Three lecture sessions.
By coach to the Jersey Wildlife Preservation Trust for lunch.
AFTERNOON: Guided tour of the Jersey Wildlife Park. Many of the Camellias planted in the Park have been donated by ICS members from around the world.
Visit to private garden of an ICS member and return to hotel.
EVENING: Delegates' own arrangements.

SUNDAY 2nd APRIL:
MORNING: By coach to visit private gardens of ICS members.
Lunch at St. Brelade's Bay.
AFTERNOON: Visit to St. Brelade's Parish Church and Fisherman's Chapel, dating back to the 11th Century. Visit gardens of ICS members in the St. Brelade's Bay area.
EVENING: Delegates' own arrangements.

MONDAY 3rd APRIL:
MORNING: Coach to Howard Davis Farm (States of Jersey) followed by a visit to Rosel Manor and Mont Orgueil Castle.
Lunch at the Jersey Pottery.
AFTERNOON: Visit to the Eric Young Orchid Foundation OR free afternoon.
EVENING: Farewell Gala Dinner

TUESDAY 4th APRIL:
END OF CONGRESS: Members participating in the Post-Congress Tour will depart for St. Malo, France, after breakfast.

CONGRESS CO-ORDINATOR:
Mrs. Mayda Reynolds
(ICS Vice-President)
Westward, La Marquanderie,
St. Brelade
Jersey JE3 8EP Channel Islands
Phone: 0534 43516
Fax: 0534 47479

CONGRESS ORGANIZERS: BUSINESS & INCENTIVE SPECIALISTS (C.I.)
7, David Place, St. Helier,
Jersey, Channel Islands
Phone: 0534 77727
Fax: 0534 58593

*Tentative Schedule

The International Camellia Society Congress Jersey, Channel Islands 1995

MAIN CONGRESS HOTEL:
THE GRAND HOTEL, The Esplanade, St. Helier Jersey.
Telephone: 0534 22301
Fax: 0534 37815

THE FOLLOWING RATES, ARE BASED ON BED AND BREAKFAST ACCOMMODATION WITH TWO PERSONS SHARING A ROOM OR ONE PERSON IN A SINGLE ROOM:
£60 per person per night
£20 Single occupancy supplement per night (double room)

THE NUMBER OF SINGLE ROOMS AVAILABLE IS LIMITED so early application is advised.

ALTERNATIVE ACCOMMODATION IS AVAILABLE AT THE FOLLOWING HOTEL, WITHIN FIVE MINUTES WALK FROM THE CONFERENCE HOTEL.

HOTEL REVERE, KENSINGTON PLACE, ST. HELIER, JERSEY.
Telephone: 0534 38773
Fax: 0534 66703

THE FOLLOWING RATES ARE BASED ON BED AND BREAKFAST ACCOMMODATION WITH TWO PERSONS SHARING A ROOM:
£25.00 per person per night:
Single occupancy supplement: £10 per night.

ACCOMMODATION REQUEST:

Name _____

Address _____

Room Type _____

Hotel _____

Dates _____

PLEASE RETURN BOOKING REQUESTS WITH A DEPOSIT OF £50 - PAYMENT SHOULD BE IN STERLING.
PER PERSON TO THE CONFERENCE ORGANIZERS:

Incentive and Conference Specialists (C.I. Limited)
7, David Place
ST. HELIER
Jersey
Channel Islands
TEL: 0534 77727 FAX: 0534 58593

INTERNATIONAL CAMELLIA SOCIETY CONGRESS JERSEY CHANNEL ISLANDS 30TH MARCH TO 4TH APRIL 1995

REGISTRATION FEE: £200 per person payable by the 16th January 1995.
If payment is made after the 16th January the fee is £220. The registration fee covers the lecture sessions, specified meals, functions, full representation by Incentive and Conference Staff, private coaches with driver guides and admission charges to places of interest.

PAYMENT: All payments should be in Sterling.
1. Direct to the Congress Co-ordinator, Mrs. Mayda Reynolds by Sterling Draft, Bank Cheque or Giro made payable to:
INTERNATIONAL CAMELLIA SOCIETY C.I. ACCOUNT
Or
2. By Bank transfer to
BANK: NATIONAL WESTMINSTER BANK PLC
BRANCH: JERSEY 60-12-03
ACCOUNT: INTERNATIONAL CAMELLIA SOCIETY C.I. ACCOUNT
ACCOUNT NUMBER: 49896032

Please complete the registration form as soon as possible and return to the Congress Co-ordinator:
MRS. MAYDA REYNOLDS I.C.S. VICE PRESIDENT
WESTWARD, LA MARQUANDERIE
ST. BRELADE,
JERSEY JE3 8EP CHANNEL ISLANDS.
TELEPHONE: 0534 43516
FAX: 0534 47479

REGISTRATION FORM
International Camellia Society Congress - Jersey. C.I.
30th March - 4th April 1995.

Member's Name _____ Mr/Mrs/Miss

Forename _____

Address _____

Telephone _____ Fax _____

Post Congress Tour - France
Provisional Programme

CONGRES 1995 DE LA SOCIETE INTERNATIONALE DE CAMELIAS - UNTOUR POST-CONGRESS

EINE KONGRESS RUECKSCHAU TOUR DES INTERNATIONALEN KAMELIENKONGRESSES 1995

EL CONGRESO DE LA SOCIEDAD INTERNACIONAL DE LA CAMELIA - 1995 POST-CONGRESO

IL CONGRESSO INTERNAZIONALE DELLA SOCIETA DELLE CAMELIE - 1995 POST-CONGRESSO

*TUESDAY 4th APRIL:	
Morning:	Arrive in St. Malo from Jersey Visit the Chateau de Montmarin and floral park
Lunch:	Restaurant "Le Palais du Grand Large", St. Malo
Afternoon:	Saint-Brieuc, Guingamp, Morlaix, Saint-Thegonnec
Dinner/Overnight:	Hotel Oceania, Brest
WEDNESDAY 5th APRIL:	
Morning:	Visit Pepinieres Stervinou; visit Oceanopolis
Lunch:	Hotel Oceania, Brest
Afternoon:	By coach, visit Port-Museum Du Rmu, on to Quimper
Dinner:	At a local creperie
Overnight:	Hotel Mascotte, Quimper
THURSDAY 6th APRIL:	
Morning:	Visit the Faiencerie Henriot; Locronan; free time
Lunch:	At Locronan
Afternoon:	Domaine de Trevarez, visit the park, chateau, exhibitions, Societe Bretonne du Camellia
Dinner:	Chateau du Perennou, in a magnificent location overlooking the Riverodet
Overnight:	Hotel Mascotte, Quimper
FRIDAY 7th APRIL:	
Morning:	Free time
Lunch:	Hotel de la Pointe Mousterlin, by the ocean
Afternoon:	Depart by coach to Vannes Garden visits
Dinner/Overnight:	Hotel Adagio, Nantes
SATURDAY 8th APRIL:	
Morning:	Visit to Jardin des Plantes or Cimetiere paysager
Lunch:	Chateau de Goulaine - Wine Tasting
Afternoon:	Visit to la Beaujoire Park or Free Time
Dinner:	Dinner-cruise on the River Erde, the most beautiful river in France.
Overnight:	Hotel Adagio, Nantes
SUNDAY 9th APRIL:	
Morning:	Free time; walk to Cafe la Cigale
Lunch:	At Cafe la Cigale
Afternoon:	Coach tour of Nantes; train (TGV 1st class) to Paris
Dinner/Overnight:	Hotel Concorde Saint-Lazare, Paris
MONDAY 10th APRIL:	
Morning:	Guided tour of the capital
Lunch:	At the Societé Nationale d'Horticulture France Centre
Afternoon:	Reception and visits organized by the City of Paris
Dinner:	Eiffel Tower Restaurant
Overnight:	Hotel Concorde Saint-Lazare, Paris
TUESDAY 11th APRIL:	End of Post Congress Tour - AU REVOIR Approx. costs - FF 6,245 on basis of 40 persons per coach. Supplement for 1 room 1 person 1,700 FF

* Tentative Schedule

POST-CONGRESS TOUR - FRANCE 4th APRIL - 12th APRIL

All information and booking form for this Tour will be sent under separate cover by the French Directors. Visits will include specialist Nurseries, private gardens and the Jardin des Plantes at Nantes. The French Tour will end in Paris.

POST-CONGRESS TOUR ORGANIZER: I.C.S. DIRECTOR M. CLAUDE THOBY
Le Vieux Grand Chemin, Route de Paris, B.P. 113, 44471 Carquefou, France
Telephone: (40) 50 88 48
Telex: 700 365F
All payments for Post Congress should be in Francs.

REGISTRATION FOR FULL DETAILS, COSTS AND BOOKING PROCEDURES, PLEASE SEND THIS FORM TO: M. Claude Thoby, Directeur ICS France, BP 113, 44471 Carquefou Cedex, France

Name _____

Address _____

_____

_____

ENREGISTREMENT: POST-CONGRES ICS FRANCE (4/10 avril 1995)

Règlement avant le 15 janvier 1995
To be paid in full before Jan. 15, 1995
S.V.P. adresser ce document en lettres capitales a:
Please address this document, in capital letters to:
Claude THOBY, Directeur I.C.S. FRANCE
Le Vieux Grand Chemin
B. P. 113
44471 CARQUEFOU
FRANCE

Name (Mr., Mrs., Miss)
NOM (M./Mme/Mle) _____

First Name
PRENOMS _____

Address
ADRESSE _____

City, State, Zip Code — Country
VILLE _____ PAYS _____

TEL _____ FAX _____

Accompanied by Mr. Mrs. Miss
ACCOMPAGNE DE: M./MME/MLE _____

Enclosed
CI-JOINT:

Balance (before Jan. 15, 1995)
SOLDE (avant le 15 janvier 1995) _____ FF

+ Cotisation. I.C.S. (si non réglée) _____ 80 FF
ICS dues (if not already Pd)

Bank check
( ) par cheque bancaire le _____

( ) par cheque postal le _____

Bank transfer
( ) par virement bancaire le _____

The Smallest Floral Kingdom

by

Mike Fraser, South Africa

LE PLUS PETIT ROYAUME FLORAL

DAS KLEINSTE BLUETENKOENIGREICHLA

LA MAS PEQUENA EN EL REINO FLORAL

LA PICCOLA REGNA FLORALE

Perched on the southern edge of the African continent is the smallest and, for its size, richest floral kingdom in the world. Here the beautiful mountains and coastal plains of South Africa's southern and southwestern Cape are home to a unique and diverse plant community.

The Cape flora occupies a narrow, crescent-shaped band extending down the Atlantic coast from about 150 miles north of Cape Town, thence 500 miles east to Port Elizabeth on the Cape coast, an area of some 56,000 square miles. In this dramatic landscape, unchanged for millions of years, plants have speciated to a remarkable degree. Notoriously nutrient-poor soils, the dissected terrain and a natural fire regime combine to provide a multitude of niches in which peculiar forms have evolved. The result is a flora of great richness, boasting over 8,500 species. This richness is popularly illustrated by a statistic from one of the region's most famous landmarks: The 40 square miles of Table Mountain support more species of plant than the whole of the British Isles, an area 5,000 times bigger! The fact that the Cape flora exhibits a density of species second only to the rain forests of Panama is also somewhat startling. Perhaps even more mindboggling than the sheer richness, is that almost 6,000 species, some 70% of the Cape flora, are endemic. That is, they occur here and nowhere else in the world.

The very special nature of this flora, recognized by the earliest visitors to the Cape of Good Hope, can now be appreciated in a global context. Botanists have divided the world into six floral kingdoms on the basis of the distribution and composition of its vegetation. Five of these kingdoms are enormous, each covering an average of 20% of the world's land surface. In contrast, the 0.04% of the world's land surface occupied by the distinctive flora of the Cape merit the accolade of "The Smallest Kingdom".

The Cape Floral Kingdom comprises many vegetation communities, but the major one in terms of area and species richness, and its most well known, is Fynbos. Pronounced *faynbos*, the word derives from the vernacular Dutch and describes the many shrubs with small leaves (an adaptation to minimizing water loss in the summer drought) which characterize much of the vegetation. This shrubby heathlands (heathy shrubland would also describe it!) contains many broad-leaved plants as well, but the name Fynbos stuck. Ecologically, Fynbos is the South African counterpart of Mediterranean *macchia*, Australian *kwongan*, Chilean *mattoral* and Californian *chaparral*, occupying as it does the same latitudes and sharing many of the environmental conditions, notably climate, as these.

Two families have become synonymous with Fynbos - the proteas and the heaths. Proteus was a Greek god able to change his form at will, and a diversity of shape and size is symptomatic of the family named after him. The best known member of this family is the King Protea *Protea cynaroides*, South Africa's nation-

al flower. The heath family is spectacularly well represented in the Cape with over 670 species, of which over 650 are endemic. More than 500 of these are members of the genus *Erica* - a remarkable figure when considering that the rest of the world put together can boast only about 25 *Ericas*. Other sizeable Cape floral families include the Asteraceae (almost 1,000 species), Fabaceae and Iridaceae (both in excess of 600 species).

If the flowers of Fynbos and the Cape Floral Kingdom seem just a distant curiosity, they are perhaps closer to home than you might imagine. From gracious country estates and city parks, to the cascading window-boxes on picture-postcard Swiss chalets, and the solitary potplant in a suburban window, there can hardly be a house or garden in the world which does not boast a Fynbos plant, whether the owner realizes it or not.

The first collections of Cape plants were made in the early years of the seventeenth century, by mariners en route to or returning from the Dutch trading stations in the Far East. In later years scientists and collectors, mainly from England and Holland, added to the rapidly expanding garner of plants sent back to Europe for scrutiny. It soon became clear to horticulturalists that here was a flora which displayed not only remarkable richness and beauty, but was potentially extremely lucrative for their trade.

Perhaps the greatest contribution the Cape has made to the world's gardeners is its bulbs. The dazzling Harlequins (*Sparaxis*), Hairbells (*Dierama*), Red-hot Pokers (*Kniphofia*), Nerine Lilies, Freesias and *Agapanthus* all emanate from "The Smallest Kingdom". But these are not the only invaluable contribution which this part of the world has made to horticulture. In 1891, Miss Hildagonda Duckitt sent seeds of *Nemesia strumosa* from the Cape to Suttons seed merchants in Reading, England. These proved viable and the flowers very attractive and, by 1893, Nemesia seeds were available commercially and it has remained a favourite ever since.

The *Pelargoniums*, popularly but erroneously known as Geraniums, also have their roots in the southern and southwestern Cape and represent another enormous Cape floral contribution to gardeners. Over 120 species of Pelargoniums, the ancestors of these universally celebrated ornamental plants, still grow wild on the mountain slopes and coastal plains of the Cape. *Pelargonium cucullatum,* primary source of the Regal "geraniums", made its first appearance in cultivation in England in 1690. The Regals have been selectively bred and crossed to achieve the most beautiful and showy blooms, but it is still hard to beat the massed display of wild *Pelargonium cucullatum* in spring.

Sadly, however, such sights are becoming increasingly rare. As fast as the extraordinary floral richness of the Cape was recorded it was destroyed by the burgeoning settler population. This destruction continues apace today, such that some 60% of the natural vegetation of Cape Floral Kingdom has now been wiped out by human activities. Twenty-seven species of flower are known recently to have become extinct here. There are over 1,300 species presently are rare or endangered, with 362 *Red Data Book* threatened plants on the Cape Peninsula alone.

In addition to urban and agricultural development, a major conservation headache in the Cape Floral Kingdom is "green cancers" - introduced trees and shrubs, particularly Australian eucalypts and wattles, and *Lantana* and other New World nasties. These now infest thousands of square miles of Fynbos and threaten to extinguish many native species. To add insult to injury, many local authorities plant alien ornamentals (including known and potentially invasive species) in public places. Sadly, and for whatever reason, Cape nurserymen and gardeners also seem loathe to grow local species and are replacing the riches of the Cape flora with exotics, while ignoring the unmatchable floral splendours on their very doorstep.

Past and present South African conservation efforts have focused largely on protecting "big game", notably big cats, rhino and elephant. But, as yet, the diminutive and less demonstrative but, in my opinion, equally deserving occupants of the Cape Floral Kingdom, far to the south of the lion's domain, languish largely unknown and unappreciated by most South Africans and the world environmental community. Here an entire ecosystem is under threat, not just a few

species.

"If it pays it stays" is an unfortunate fact of life in the conservation world. Will the Cape Flora follow the Dodo because it has, in the eyes of the powers-that-be, failed to pay its way? This would be an unworthy fate, because it has been paying its way for almost four centuries as the provider of many of the world's most popular garden flowers. Even so, only a fraction of the Cape's rich flora has found its way in to commercial horticulture; there remains a vast and virtually untapped potential for new and exciting flowers from this veritable treasurehouse. Such is the rate of destruction, however, that today's Fynbos wildflower may be tomorrow's extinct species and not tomorrow's garden jewel.

If the Cape Floral Kingdom is to survive, it must be promoted to "rainforest" status by the international community. An undertaking to ensure the survival of this horticultural cornucopia will allow the world at large to reap its many benefits. But, surely, we also have a moral obligation to conserve an ecosystem which has already given so much to enrich and beautify the lives of people who live not just within, but thousands of miles from its native shores, but which has received precious little in return.

So, when you next water your geraniums on the kitchen window sill, arrange a vase of freesias or admire your nerines in the garden, please spare a thought for the plight of their ancestral home - the smallest kingdom.

The moral right of the author has been asserted.

M. W. Fraser
Sandbanks
Kenmuir Steps
7995 GLENCAIRN
South Africa

The Jonkersboek Mountains near Stellenbosch, typical fynbos habitat.

Common Sugarbush Protea repens in flower near the Cape of Good Hope.

Perhaps the Cape Floral Kingdom's most famous flower, the King Protea Protea cynaroides.

China Revisited

Boyd & Lorena McRee, U.S.A.

LA CHINE REVISITEE

NOCH EINE CHINATOUR

LA CHINA REVISITADA

LA CINA REVISITATA

In January 1984, Lorena and I participated in a tour to China primarily to plant a Friendship Camellia Garden in Kunming. Many nations contributed camellias to be planted in this garden with Americans contributing some 40 plants, mostly hybrids. A time capsule was installed to be opened in 2034 listing those who contributed. Since I was 66, I only had a dim hope of being at the opening ceremony. All the plants from the U.S. were especially prepared and packaged by Nuccios in California, including bare rooting.

Lorena and I were invited to attend the International Symposium on Camellia *chrysantha* at Nanning in Guangxi, China, 8-11 January 1994. The symposium was sponsored by the International Camellia Society, Chinese Society of Forestry, Chinese Society of Environmental Sciences, China Flower Association, Japan Camellia Society, Guangxi Association for Science and Technology, Guangxi Society of Environmental Protection and Guangxi Association of Flower and Bonsai. The yellow camellia was discovered in Guangxi in 1933, reported to the public in 1948 and given to the world in 1960. Of the 23 species of the yellow camellia, 21 are found in Guangxi and Guangxi has just completed a 20 year exhaustive study on every phase of its culture, including 47,869 crosses with other species.

Our critique of the yellow camellia, which the Chinese called the "Queen of Camellias" is that as a flower it does not rank well with those we have. Although it is the yellow one, it is small, not spectacular in display and other than the color would hardly be noticed in our gardens. On the other hand, its culture and propagation in hybridizing will probably produce outstanding cultivars.

Lorena and I wish to return to China, hopefully before another 10 years, but certainly before they open the time capsule in 2034. I will be 116 years of age and Lorena - well she will be old too.

"Faces In China"

Boyd & Lorena McRee, U.S.A.

VISAGES DE CHINE

DIE GESICHTER VON CHINA

ROSTROS DE LA CHINA

LE FACCIE NELLA CINA

Is it not incredible when two people, continents apart geographically, and worlds apart in race and culture, meet for the first time and there is an instant bonding? This happened to us on our trip to China in January to attend the International Symposium on Camellia *chrysantha*.

Monday, January 10th, we set out on a long interesting bus ride to the Tang Ching Yellow Camellia Preservation area near the North Vietnam border. After viewing the plants and flowers growing in their natural habitat, we were served a Chinese box lunch. It was then I first met Lu Tianling, a professor of genetics and breeding of plants, Chinese Society for Forestry. Her smile was so genuine and friendly. As we talked, I felt we had been friends for years. Our paths crossed again at the banquet the last night of the Symposium. Again it was like we had known each other always.

The night we attended a Music Banquet at Penglai Grand Restaurant, we were seated with four young Chinese students, including William (Zhao Shi-Wei). We were impressed by all of them as they were very friendly and intelligent but it was William who stole our hearts. Later we got to hear him sing and again we were impressed.

This was our second trip to China so we have many pleasant memories but it's the faces of Lu and William that we carry in our hearts as we think and remember China. Hopefully our paths will cross again.

Channel Islands In Retrospect

Helen Simon, Australia

LES ILES ANGO-NORMANDES EN RETROSPECT

KANALINSELN-EINE RUECKSCHAU

LA ISLES DEL CANAL DE LAS MANCHAS RETROSPECTIVAMENTE

LE ISOLE NORMANCE IN SGUARDO RETROSPECTTIVO

Helen Simon

A feeling of nostalgia stirred in me when I received the announcement of the 1995 I.C.S. Congress at Jersey, Channel Islands.

It all began when five friends with itchy feet were preparing for a trip overseas, four from Sydney Australia and one from Maryland, U.S.A. Plans were to meet for dinner at the Greenhill Country Hotel, Mont de l'Ecole, St. Peter, Jersey via the 1977 I.C.S. Congress at Nantes and St. Malo, France. Incredibly, after unforeseen near-disasters, this really happened!!

It was Mary from Maryland with Elaine from Sydney who wisely left early and proceeded to Nantes as planned. Suddenly, Dorothy and I were trapped in Sydney, the air traffic controllers staged a week long strike. Luckily for Wyn, an Asian airways whipped her off to Paris with only a couple of days delay. Dorothy and I kept pestering the travel agents for an alternative route which resulted in an amazing flight to Paris via Tokyo and Moscow!

So off we flew into a brilliant sunrise as a backdrop to Tokyo. Instead of waiting in a queue for French francs, we nonchalantly sped off for a seven-hour visit to the Ginza obtaining yen, locker, tickets and were bundled onto a train in the morning peak hours. Meeting many friendly and helpful Japanese people there and back on this exciting jaunt, we boarded the plane with seconds to spare!

Flying in and out of the ethereal clouds over Siberia and Russia, we had plenty of time to reflect on this daring dash!

Only briefly did we think of the final banquet in Nantes on the Wednesday evening as we landed in the sparkle of Paris. Oh, for a helicopter!

Haunted by lack of enough French francs for taxis, accommodation and train fares, we settled down for St. Malo when we thought our problems were over . . .BUT NO!! This was Thursday 19th May Ascension Day and a long hol-

iday week-end, all accommodations and ferries to the Channel Islands were booked out until Monday. Our only hope for Jersey was a catamaran leaving late on Friday afternoon. How did this appeal? Well I thought of previous sailing trips on my brother's "Magnificat" on Botany Bay . . . but this was the English Channel! No other way so our names finally went on the passenger list.

Luckily, two German girls who befriended us on the train offered to share accommodations overnight at a nearby seaside resort, Paramé where Madame Barnard, not quite ready for early guests, graciously greeted us amid metres of curtain material!

In the balmy evening of long daylight we discovered the delights of a crepière, staying long and savouring the piquant flavours of various crepes. It was 10 p.m., many shutters were closed, gardens gay with spring flowers, lilac and laburnum, sailing boats tossed on the rough seas. The doona was a snug place to be that night.

Madame Barnard was a charmer so was her daughter, Brigette who escorted us to the local bank where the exchange was more favourable than Paris. Pink chestnut blooms on street trees and scarlet hawthorns added to springtime gaity.

On returning to St. Malo we relished a local lobster lunch after a walk around the battlements of a centuries' old castle and dodging among thousands of cars and holiday makers. The lure to discover more of Paramé and St. Malo was very tempting.

Farewell to German friends who were off to Dinard by ferry, so we headed for the waterfront burdened with luggage. To our dismay we thought the tide was unusually low "Just normal"! The sight of a narrow ladder down 10 metres to the craft was frightening . . . our only access to the catamaran. After much joking some British students, doing French at Rennes University, kindly took our heaviest bags down this hair-raising stairway. Sighs of relief and safely on board! Another hurdle over!

With Customs cleared, a taxi sped us to the Greenhill Country Hotel. What a climax! The five friends met as scheduled after such incredible adventures.

Imagine the chatter over a welcome dinner and later around a blazing fire in company with a docile Great Dane. I.C.S. Congress incidents were recalled by the two who were in Nantes and eagerly appreciated by those who had missed out.

I for one slept contentedly that night with much relief. My plans were successful, all were safely in Jersey and ready for new experiences.

In the light of day, the Greenhill garden was full of colour, bright red broom, pink clematis rambling over walls, fragrant stocks and petunias, roses about to bloom . . . all very lovely.

A hired car and local money soon opened up the joys of Jersey next morning through farming countryside, along narrow lanes with necessary lay-bys for passing vehicles, hedges and local rock as boundaries.

Certainly a must was Gerald Durrell's Zoo famous for preserving rare species of birds and animals. Lush green lawns swept down to pools of water where elegant pink flamingoes and downy ducklings thrived. The big red gorilla played up to an amused audience by continually taking off and putting on a green sweater. Eight lovely lemurs sat close together on a perch . . . very photogenic!

At this time Mrs. Vi Lort-Phillips, ICS member of long-standing, was president of the Horticultural Committee of this Zoo, an invaluable group which voluntarily spent much time and expertise keeping the park-like terrain so pleasant including a camellia grove with new spring foliage. Our party was indebted to her for kindly guidance while visiting Jersey.

After waving one friend off to London next morning, the rest settled themselves into seat belts for a 12 minute flight to Guernsey and the comfort of La Houge Foque Farmhouse. The interesting courtyard there, with a grand solid granite trough was within sight of bright yellow laburnum, rhododendrons, paulownia reminiscent of mauve blooms of jacaranda, camellias with seasonal new leaves.

Needless to say Guernsey cows munched the juicy green grass while a duck was placidly sitting on her eggs in a hollow tree trunk. A bus ride soon brought us to St. Peter Port for shopping and sight of shipping then further into the country with buttercups and daisies everywhere and "Mr. Kipling" cakes.

At this time, throughout Guernsey, 320 miles of glasshouses sheltered carnations, roses, gerberas and superb stephanotis, just a few of the beautiful

blooms exported to the world.

With amazement we watched the colossal tonnage of tomatoes being loaded for export from Guernsey glasshouses. Each tomato plant set in a "pillow" of peat, with nutrients no doubt, grew to 30 feet! Later when in London we enjoyed these luscious tomatoes for breakfast.

From the steep rocky cliffs above, we saw the white sands and blue green waters encircling Rocquaine Bay, on the west coast.

As we travelled around Guernsey, I often saw the name Saumarez and thought of a camellia I had in my Sydney garden *Camellia japonica 'Lady de Saumarez'*. Quite a traveller!

It is impossible to be in Guernsey and not hear of Victor Hugo, French poet and writer, who so aptly described the aquisition of these islands by the British: "Pieces of France fallen into the sea and gathered up by the British." Victor lived and wrote while living for many years in Guernsey.

All people we met on Guernsey showed us warm friendship for which we were extremely grateful.

The north west wind was with us on the return flight to Jersey . . . only ten minutes!!

On a clear sunny day after thunder and rain overnight, Vi Lort-Phillips generously allowed the four friends to pile into her Triumph car tolerating the chatter and questions on the way to the wonderful home and garden of the charming Lady Binney, Domaine des Vaux, St. Lawrence.

A fleeting glance through this country home, part of which was 400 years old, housed many treasurers. This entrancing house overlooked a wonderful valley with mossy paths through a forest of lovely trees including a surprising collection of camellias showing bronze and green spring leaves. We were most appreciative of the privilege of seeing this fine estate.

Another delight to come was La Colline the home and garden of Vi Lort-Phillips, our mentor for the day, shared with husband, Raymond. The view from La Colline was breathtaking, looking over the sandy shores of Gorey Bay. The garden was terraced down to Camellia Cottage at the road below with many camellias showing healthy spring foliage and to our amusement the family twin marmalade kittens romped in the shrubbery, coming to us for a pat now and again. Vi Lort-Phillips' hospitality extended into the late afternoon with a sightseeing tour of northern parishes of St. Catherine's, Rozel Bay and Trinity Manor back to Greenhill. We all appreciated her unstinting efforts to make our visit so enjoyable.

Reluctantly that night we packed our bags. Next day one friend flew to London, two others and I boarded a hydrofoil for St. Malo and three weeks of unforeseen adventures in Europe.

The puzzling difference between a jersey and a guernsey can be discovered while visiting this unique part of the globe! My Channel Islands visit was a travel highlight of my life . . . it could be yours too. Best wishes for the success of the 1995 I.C.S. Congress in Jersey, Channel Islands.

Expedition 1999—Miyazaki's Astonishing Camellia Forest Park

Eric Craig, Australia

EXPEDITION 1999—L'ETONNANT PARC FORESTIER DE CAMELIAS DE MIYAZAKI

EXPEDITION 1999—MIYAZAKI'S ERSTAUNLICHER KAMELIENWALD

LA EXPEDIDICIN 1999—EL ASOMBROSO PARQUE SELVITICO DE MIYAZAKI

LA SPEDIZIONS 1999—IL MARAVIGLIOSO PARCO SILCATICO DI MIYAZAKI

Line of Australian camellia plants, potted up by staff of Miyazaki City's Agricultural Departments for replanting at TSUBAKIYAMA FOREST PARK.

Despite three unforgettable visits to Japan in Springtime, entranced by mile after mile of cherry blossoms, our many friends in the Japan Camellia Society insisted we would never see their country at its most-beautiful best until we visited in Autumn.

But no sooner had such a visit been arranged for November last year (1993), than Mr. Goro Iimure, vice-president of the JCS, asked us to allocate two days for a flying return to the garden city of Miyazaki, on the south-eastern coast of Kyushu.

Back in March 1990, our Australian group of 36 ICS members, then en route to the Maizuru-Kyoto congress, had been warmly welcomed to Miyazaki City by Mayor Teizo Nagatomo, a good friend of Mr. Iimure.

The situation and climate of Miyazaki, overlooking the Pacific Ocean, are remarkably similar to Sydney's location on the south-eastern coastline of Australia.

Notwithstanding the extraordinary brilliance of Miyazaki's annual Flower Fiesta at that time, the highlight of our visit was to be a planting of the first camellia tree at Furusato Forest Park, a 25.3 hectare area atop some low mountains to the city's south-west.

This area, already thickly wooded with majestic pines, laurels and Obi cedars, would be transformed into the world's largest Camellia Resort, according to Mayor Nagatomo.

The camellia tree we jointly planted on March 28, 1990, was the forerunner of 100,000 to be progressively spread throughout a renamed Tsubakiyama Forest Park by 1999, the Mayor promised.

Following the ICS Board's confirmation of Miyazaki as host-city for the society's 1999 congress, a number of

The misty, tree-clad slopes of Miyazaki's TSUBAKIYAMA FOREST PARK, with many camellias already in good growth. Rowena Craig (Australia), Munehito Goto (International Affairs, Miyazaki), Mitchitada Niina (Tokyo representative for Miyazaki City), Gotou Iimure (Vice President, Japan Camellia Society).

First camellia planted at Arrival Centre, Miyazaki City's TSUBAKIYAMA FOREST PARK. Planted March 1990 by Mayor Teizo Nagatomo of Miyazaki and Eric Craig, Australian Director ICS. Gorov Iimure (Vice President JCS), Rowena and Eric Craig (Australia).

Japanese enthusiasts have donated collections of camellia trees to the project, several gifts comprising more than 100 cultivars, and some even exceeding 1000.

It doesn't take long for the visitor to understand why Miyazaki is known as the "city of sunshine and flowers", although the mountainous Tsubakiyama Forest Park averages some 100mm of welcome rain per annum.

A 1992 tour of Sydney camellia gardens by Mr. and Mrs. Michitada Niina, Tokyo representatives of Miyazaki City, was followed by its decision to import several hundred advanced camellia plants from Australia, for periodic supplementation of the Tsubakiyama Park's planting program.

The task of selecting, assembling, packing and air-freighting a trial consignment of 52 plants in September 1993 was willingly undertaken by ICS member Bob Cherry of Paradise Plants, a reputable importer and plantsman based at Kulnura, on the New South Wales central coast.

The plan was for this initial shipment to be collected at Tokyo airport by a Kawaguchi horticultural firm, inspected at their premises by Messrs Iimure and Niina, and then on-freighted to Miyazaki's agricultural department.

Consequently, the two-part purpose of our 1993 mission to Miyazaki, accompanied by Messrs Iimure and Niina, was to review the air-freighting procedures, and to observe the progress of camellias already planted at Tsubakiyama Park.

En route, our Japanese companions revealed that Tokyo handling of the trial consignment had proved too protracted, so a number of casualties could be expected.

This forecast proved correct, despite the most expert potting - up of the Australian cultivars by Miyazaki's horticultural staff immediately upon receipt.

Two-thirds of the consignment were in good condition, but the other third had suffered from the delay occasioned by arrival at Tokyo airport at a weekend.

The remedy was fairly clear: Future shipments should be consigned from Sydney on a Monday or Tuesday, and by an airline which could undertake immediate on-flying from Tokyo to Miyazaki.

Upon our arrival in November last year at the Tsubakiyama Forest's carpark, we were delighted to see the camellia we had planted in March 1990

was still thriving, despite having had to be propped up after the typhoon which hit southern Kyushu a few months earlier.

An easy sloping pathway led to the crest of this mount, where an 18.6 metre-high viewing tower enabled us to see the astonishing development of a stunning landscape.

The discreetly-distributed plantings of almost 20,000 camellia trees, mostly half-shaded by tall pines, exhibited an extent of progress we had never imagined, especially with a number of early-blooming varieties already in flower.

We were truly amazed by the degree of this unique Forest Park's development since our 1990 site inspection, and could now see that Mayor Nagatomo's vision of 100,000 camellias by 1999 was much more than a dream!

Much credit for the implementation of that vision must go to Miyazaki's own agricultural staff, headed by Mr. Tadao Goto and Mr. Sadaaki Yokoyama.

Seeing is believing, so we can certify that MIYAZAKI 1999 is a vision of incredible beauty, coming true!

Map of Miyazaki's TSUBAKIYAMA FOREST PARK; camellias fluorishing beneath tall, well-spaced pines. Gorou Iimure and Eric Craig.

South African Odyssey

Jean Cox, Australia

UNE ODYSSEE SUD-AFRICAINE

SUED AFRIKANISCHE ODISSEE

ODISEA SUDAFRICANO

ODISSEA SUD-AFRICANO

My participation in the 1993 International Camellia Society Congress in the Republic of South Africa came as a result of dining with my friends Tom and Olive Savige of Wirlinga. Before the evening concluded my reservations with regard to South Africa melted away. The program for the congress was interesting and the associated tours offered an opportunity to visit many interesting gardens and to view the diverse flora, fauna and birds in their natural surroundings.

Australian I.C.S. members who did not attend missed a truly outstanding experience. The South Africans do these things well. A great deal of time and effort must have been involved in the planning.

As the only Australian member to participate I was invited to join the New Zealand contingent and was made an "honorary" New Zealander for the duration. My special thanks to this group and to other I.C.S. members for their warm welcome.

Both tours were taken prior to the I.C.S. Congress as the Australian & New Zealand National Camellia Congress dates would not be altered.

We were warmly welcomed to Johannesburg by Nancy & Louis van Heerden. The following day we set off for Pretoria and Tzaneen, visiting en route the Voortreker Monument which commemorates the fortitude and courage of these early settlers. Next we visited the Sapeko Tea Plantation. Camellia *sinensis* now covers many hectares of soil giving the Republic of South Africa an important commercial crop. Later we visited the Modjadji Cycad Collection.

Thence to Kruger National Park, en route enjoying a stop at the Blydeport Canyon - one of the great natural wonders of South Africa with its awe inspiring vistas. Next a fascinating formation of potholes at the confluence of two rivers and later the incomparable view across the Lowveld at God's Window. Kruger National Park did not disappoint us. We had close encounters with animals and many photographic opportunities. Some species of trees here, when grazed, are said to increase the tannin in their leaves to make them unpalatable to animals, thus preventing the plant being completely denuded.

Capetown was our base for visits to Stellenbosch (a historic university town with interesting Cape Dutch buildings and museums, many dating back to C18th) and Namaqualand (noted for its fynbos -

Afrikaans for fine bush), Its multitude of fascinating plants was a carpet of orange, yellow and white flowers. The plants here have adapted to moist winters and hot, dry summers. In winter and spring the plant cover is high but it becomes barren in the summer. John Tooby joined us on this expedition and an exhilarating time was had by all.

President Thomas Perkins III and other Congress participants arrived via the Blue Train the following day and we proceeded to the Arderne Garden which was established in 1845. Once a private garden, it is now a public garden. Fine specimens of old camellia *japonica* were growing here, notably `Althaeiflora', `Latifolia' & `Grand Sultan'. Unfortunately rain began falling, but our enthusiasm was not dampened.

The first camellias grown at the Cape were mainly reimported from European nurseries and were Camellia *japonica.* These were probably introduced in the 1790s. Surviving old trees in historic gardens suggest that among early introductions were a single red and the formal double `Alba Plena'. `Elegans' & `Donckelarii' seem to date from the 1830s. Dr. John Rourke (National Botanical Institute: Kirstenbosch) mentions a plant known as `Old Cape Camellia'* planted about 1850 and now 60 feet high which continues to grow vigorously, bearing a heavy crop of flowers every year, producing medium sized dusty pink flowers of the anemone type. Among the more successful early survivors were `Usuotome', `Nobilissima', `Grand Sultan', `Gigantea' and an interesting pink and white cultivar which may be `Otome-shibori'. It seems that *C. sasanqua, C. reticulata* & modern *hybrids* were introduced after 1950 in South Africa. Because of local conditions at the Cape these need to be of the robust type. There were some fine specimens in the Kirstenbosch Gardens where rain continued to fall.

Kirstenbosch was originally owned by Cecil Rhodes and was bequeathed to the nation on his death in 1902. It has been extended and now its 528 hectares support a rich fynbos flora and coastal forest vegetation. 36 hectares of the garden are intensely developed to display the living collections of plants indigenous to Southern Africa. More than 25,000 plant species grow in this region. The plants selected for inclusion have horticultural potential, are of botanical interest, enjoy rare or endangered status or are used for educational and research purposes.** Eucalyptus trees grow well in South Africa being free from the pests associated with them in Australia. Grevilleas also thrive here. (We were accompanied by horticulturists on all garden visits. There were also several lectures and video presentations.) We were entertained that evening by members of the Capetown Camellia Society.

We followed the Garden Route from Capetown to Port Elizabeth visiting the Cape of Good Hope Reserve, the Vergelegen Wine Estate (an oak tree on the estate is thought to be the oldest specimen in South Africa and the 300 year old camphor trees are national monuments), Oudtshoorn (proteas and associated genera grow prolifically on the hillsides near Sir Lowry's Pass), the Cango Caves (first discovered by bushmen) where a recording of J.S. Bach's Toccata & Fugue in D Minor echoes impressively around in the darkness and the Safari Ostrich Farm (running away from an ostrich will do you no good as this creature can maintain a speed 60 - 80 kmh). There were many fine plantations of pines and eucalypts along the route. We also viewed a fine outenqua yellow-wood tree 800 years old towering above other trees. Arriving in Durban we were greeted by Mr. Leslie Riggall, Chairman of the South African Camellia Society. We met Japanese members also here. Durban's Botanical Gardens now cover 50 acres and numerous important collections have been established including a wonderful collection of orchids, indigenous cycads and 240 species of palms. An Indian dinner was followed by a colourful performance of classical and modern Indian dances.

One of the highlights of the tour was the visit to the Fern Valley Botanic Garden at Kloof where we were hosted by the curator, Leslie Riggall and his charming wife, Gladys. He is a keen collector of beautiful plants travelling widely and constantly increasing the collection. This includes many beautiful camellias, magnolias, azaleas, warm climate rhododendrons, other flowering trees, ferns and a wide variety of foliage plants. The garden is described as a haven for indigenous plants and fauna, being officially certified as a site of conservation significance. The Japanese Garden with its carefully retained natural features was delightful. No doubt Gladys Riggall has made a significant contribution to the designing of this delightful garden.

Leslie & Gladys joined our group and we visited Mrs. McLeod's pleasant garden at Hilton en route to Drakensburg for an overnight stop. There we enjoyed a special performance by the world famous Drakensburg Boys' Choir. It was a memorable evening!

Arriving in Johannesburg we were entertained by South African members at a cocktail party at the Balalaika Hotel. President Thomas Perkins III and committee members welcomed us to the 1993 Congress. The Congress venue was the Sandton Sun Hotel and Louis van Heerden was Chairman. Videos on South Africa were presented and papers on various aspects of camellia research, history, cultivation and companion plants. There were also beautiful floral art demonstrations. Mayda Reynolds invited I.C.S. members to attend the 1995 Congress to be held in the Channel Islands and France. Speakers were presented with decorated ostrich eggs by the organizing committee. Visits were made to gardens in Johannesburg, Pretoria and the Boskoop Nursery. Here camellias grow rapidly and seem to reach for the sky!

The Mayor of Sandton and his wife hosted a picnic lunch for I.C.S. members at a newly developed park, Innesfree, on Arbor Day. Several members were asked to plant a camellia to represent their country. As Australia's representative I planted `The Czar'. It was amusing to see Thomas Nuccio `planting Grandpa' ('Guilio Nuccio')!

Brenthurst Gardens, the home of Harry & Bridget Oppenheimer was another highlight of the tour. It was sheer delight. Around each bend a new vista was a feast for one's eyes. Here again we came across some very old camellias in good condition. Australian eucalypts grew well here. Morning tea was served on the terrace looking back over the garden. The Japanese Garden behind the house was also very pleasant. Mrs. Oppenheimer walks the bottom half of the garden in the morning and the upper half in the evening when in residence.

A farewell dinner was held at the Johannesburg Country Club. Good food, good wine, good company and music by a string quartet ensured a pleasant evening. Presentations were made to those people who were responsible for organizing the Congress and tours. President Thomas Perkins III informed delegates of decisions taken at the Directors' meeting and invited members to attend the 1995 Conference.

We had experienced a wonderful three weeks meeting and enjoying the company of camellia enthusiasts and being stimulated by this land with its many contrasts. South Africa's magic will linger long in the memory.

*Dr. John Rourke supplied a colour slide of the flower of this camellia to be given to Tom Savige for identification. Tom tentatively identified it as Low's old `Anemoniflora Rosea' first catalogued by Loddiges in 1830.

**Kirstenbosch National Garden Pamphlet.

1993 - A Banner Year For South Africa

by

Gregory E. Davis, U.S.A.

1993-UNE ANNEE SUPER OIUR L'AFRIQUE DU SUD

1993-EIN HERVORRAGENDES JAHR FUER SUED AFRIKA

1993-UN ANO SIMBOLICO PARA SUDAFRICA

1993-UM ANNO STANDARDO PER SUD-AFRICA

History will note that 1993 was a banner year for South Africa. The South African Parliament voted in a new constitution giving voting rights to all South Africans and set the first general election for April 27, 1994. Messieurs F. W. DeKlerk and Nelson Mandela shared in the Nobel Peace Prize for 1993 and then they shared honors from Time Magazine as men of the year.

History and Time may overlook another notable event in South Africa in 1993, the I.C.S. Congress in Johannesburg and the three week South African tours by more than 100 members of the I.C.S. However, I will assure you that for these 100 visitors, the South African I.C.S. Congress will long be remembered as one of our best and the tours of South Africa were the most educational, interesting, and enjoyable of any world tours. Johannesburg to Cape Town.

Getting to South Africa is a challenge to the sitting ability of any experienced traveler. It is a long way from Houston or Brookhaven and most all other camellia growing areas. Landing in Johannesburg is like coming into Midland, Texas—dry, barren except along creek-bottoms and a very modern city crisscrossed and bypassed by freeways.

The Host Committees out did themselves in Johannesburg, and later in every city we visited. We were met at the airport, delivered to the hotel, invited to the sherry-cocktail party and welcoming dinner on Sunday night.

We boarded the famous Blue Train the next morning for the overnight trip to Cape Town. The Blue Train is S.A.'s answer to the Oriental Express, and everything about it is "five star". Only Mr. Perkins was completely at home in this luxurious surrounding. Dress for lunch was "smart casual" and for dinner "elegant". We spent most of the time in the Dining Car or in the Lounge Car. The scenery was very much like West Texas west of the Pecos.

A three hour stop in Kimberley, the site of the world's most productive diamond mine, the source of Cecil Rhodes wealth, and one of the causes of the Boer War was a welcomed stop on the train trip. A refurbished tram transported us to the Kimberly Mine Museum and the "Big Hole". This large open air museum depicts Kimberley in its Victorian heyday complete with a church, diggers' tavern, the De Beers directors' private railway coach, shops, houses, and other relics of the early mining days. After searching for diamonds in a wheelbarrow load of ore (a few planted diamonds were found), the group enjoyed a sherry party before returning to the train. As we approached Cape Town through the mountains the next morning we saw our first and only rain in S.A.

A word about S.A. climate. We visited in August, early Spring in S.A. We were told this was winter in S.A. and to be prepared for cold weather, which we did not find. Although Cape Town is the same latitude south that Los Angeles is north, Cape Town is cooler year round due to the cold Atlantic sweeping up from Antarctica. Winters are very mild—it never freezes in Cape Town. The strong winds are a factor in both winter and summer. Durban on the southeastern coast of S.A. is the same latitude south that New Orleans is north. As Durban is warmed by a warm Indian Ocean current, it has an almost tropical

climate.

Cape Town is the oldest town in S.A. and is the cultural center for the "old guard" of S.A. The S.A. Parliament also meets in Cape Town. There is no single capitol in S.A. The Executive Branch meets in Pretoria and the Judicial Branch meets in Bloemfontein. The Jet Set from Europe buys their summer condos on the seaside cliffs overhanging the Atlantic. Cape Town is built around Table Mountain which is usually covered by it's tablecloth of fog and clouds. This is an elegant town and a detailed and proper description is beyond the scope of this article.

The Cape Province has an environment of it's own. Foremost is the "Fynbos" which is an Afrikanns word meaning "fine bush" which now is used to describe most of the Cape Province which is recognized as one of the six plant kingdoms of the world. Australia is also one of these plant kingdoms. The Boreal Kingdom, essentially all of the Northern Hemisphere and covering 40% of the earth's surface, is another plant kingdom. The Fynbos area represents only 0.04% of the earth's surface but contains more plant species than the entire British Isles. Many of the species are "endemic" to the Fynbos, i.e. found no where else in the world. The unique, cool but not cold, climate of the area is one of the factors which makes this possible.

Highlights of our visits in the Cape Province were to the gardens of Arderne and Kirstenbosch. Yes they have some very old and unidentified camellias. Naturally a visit to the Cape of Good Hope (not the southern most tip of Africa as I remembered from my geography book) was included as well as a visit to the Vergelegen Winery, founded by Van der Stel in 1685. The country's oldest oak and camphor trees are located on this estate. The best buys in S.A. were the Vergelegen wines at $3.00U.S. per bottle.

Cape Town to Durban

Leaving Cape Town we drove east via an excellent superhighway system to Oudtshoorn where we overnighted. Next day we visited the Cango Caves and the Safari Ostrich Farm. Petite Jeannette Bleaney proved to be the best ostrich rider among the group. We were served an ostrich egg omelet and ostrich steaks for lunch. We learned the poor ostrich hen has limited counting ability but a strong will to lay eggs until she has 15 in her nest. Unfortunately for the hen, the farmer secretly removes eggs from the nest until the hen lays up to 60 eggs before 15 are left for the hen to hatch.

We stopped several places along the route to look at the many wild flowers which were everywhere. The number of different species and their beauty were outstanding. A number of Protea (there are 12 varieties) were found at each stop.

After visiting the Tzitzikama Forest and several stops along the coast, we arrived in Port Elizabeth where we caught a plane to Durban. Surface travel through Transkei and Lesotho, two of the Black Homelands, was not recommended and thus we flew to Durban.

Durban to Johannesburg

Leslie and Gladys Riggall, who met the group at Durban took over as honorary guides. They stayed with the group as we traveled back to Johannesburg, through the Congress, and then went on the post tour to Kruger National Park the final week. They did more than necessary to see that we had a pleasant visit in S.A.

Durban is almost a tropical city. There are parks and flowers everywhere. We visited the Durban Botanical Gardens and the Mitchell's Bird Park. Les encouraged everyone to view the Purplecrested Lourie as he said that the sight of a Purplecrested Lourie in flight would be a sight we would remember forever. We will.

Fern Valley, the home of the Riggalls, was the highlight of the trip. The Riggalls have spent the last 20 years or more gathering plants from all over the world. These 40 acres are a sight to behold. The camellias were in full bloom, and they were more spectacular than in any garden I have seen (including California and Japan). The setting is perfect for camellias. The valley has good drainage and an ever-flowing stream flows through the property. The climate is cool enough for retics but it never freezes. Many blooming magnolias, rhododendrons, and azaleas provide background for the camellias. We did not get to see all of the camellia plants in the time we spent in the garden. The Riggalls also have a world class collection of succulents which are planted in a series of terraces dropping down the slope from

their lovely home. A tremendous croquet court is laid out on the only flat area in the Valley. Les has always said that he had the world's best area for camellias. Now we believe him.

We were entertained by a group of Zulu Dancers while we were in the Durban area. I will not go into details here but you can ask Tom Nuccio or Simone Andrews to describe some of the native costumes (or lack there of) and dances if you like.

The cultural highlight of the trip was a choral performance by the Drakensberg Boys' Choir at the Drakensberg Sun Hotel. This group is one of the top three boys' choirs in the world. They have sung at the Vatican, at the Notre Dame Cathedral in Paris, and toured most of the countries of the world. Drakensberg is about as deep into the backroads of S.A. as you can get.

Leaving Drakensberg for Johannesburg we visited Mrs. McLeod's garden in the small town of Hilton. She had a lovely camellia-filled garden. Of course, she served us tea. Wherever we went, each local group tried to outdo all others in the tea service. In S.A., as in England, teatime seems to be the excuse for serving everyone's favorite deserts. There were always strawberries and cream, several cakes, cheesecakes, pies, and several plates of cookies. I forgot if I ever had any tea or coffee. We have many good slides of Mrs. McLeods garden and tea service.

Johannesburg I.C.S. Congress

I will not review the many fine papers which were presented here, as they will be published in one of our Journals. The organization of this Congress was outstanding. The hotel, The Sandton Sun, was five star with a first class shopping mall attached. Reportedly the hotel was modeled after the Atlanta Hyatt Regency. The meeting rooms were as nice as I have seen anywhere.

Louis van Heerden, who was the master of ceremonies for most of the functions was the best the ICS has seen. (I offered him a job at all future ICS Meetings - no pay of course.) He combined humor, poetry, and art to keep the programs moving and on time. Nancy van Heerden, Keith Kirsten (the President of the S.A. Nurserymen's Association), Edgar Rosenberg, and Allison Adair all did yeomen work in making the Congress a real success.

The camellia plantings in the Peace Garden on Arbor Day, August 13 in S.A., was an impressive event. Each country represented at the Congress was asked to plant a camellia in the Peace Garden. Tom Perkins planted one for the U.S. Camellias were also planted for Japan, Australia, Jersey, New Zealand, Germany, Switzerland, France, and the United Kingdom. In addition to the various countries, Tom Nuccio planted his grandfather's namesake, a GUILIO NUCCIO and Dr. Clifford Parks planted a DR. CLIFFORD PARKS. We all agreed to go back to S.A. some day to determine how well these camellias are growing.

Johannesburg to Tzaneen and Kruger National Park

The Riggalls, our Guide, Peter Master, and a hardy band of 20 I.C.S.'ers drove north into the Northern Transvaal after the Congress. Mr. Peter Master was an excellent guide. He had infinite patience and never got upset with us although after three weeks away from home even some of us I.C.S.'ers became rather testy. We started each day with an interesting history lesson.

North of Petoria the landscape is almost semi-desert as it is dry and barren of trees. We spent two nights in a delightful country hotel, The Coach House. This is an award-winning hotel, very isolated in the mountains outside of Tzaneen. This is an ideal place to stay in this area. The wake-up call is the delivery of a pot of coffee and sweet rolls.

Sightseeing the next day included the Modjadji Cycad Forest—a mountainside of 400+ year old Cycads and a visit to the realm of The Rain Queen. The Rain Queen is the leader of a large group of native South Africans who are governed by the magical powers of the Rain Queen. She has the ability to control the rain, along with her other abilities. Traditionally the reigning Rain Queen, as she reaches old age, passes her powers to a younger woman, and then commits suicide. This cycle has now been stopped and the ex-Rain Queen now resides in a rest home.

The group then split into the Kruger National Park visitors and the Kirkman's Kamp group for our once in a lifetime photographic safari. Both groups saw more wild animals than you can imagine

and thoroughly enjoyed their three days in the bush. I went to Kirkman's Kamp and I strongly recommend a private game preserve, such as Kirkman's, when you go to S.A. to see the wildlife. At the private game preserves you are able to venture into the bush in open Land Rovers. Picture taking is not inhibited by a bus window. Also our Ranger was allowed to follow the game anywhere it went. Driving off roads was a bit rough but an interesting adventure. With radio contact, several Land Rovers would gather to follow a lion hunting or a leopard stalking a herd of impalas. Also we stayed out in the bush after dark to view the night animals with the aid of a spot light. Kirkman's Kamp, a five star arrangement, was not fenced in or protected from the animals. After dark, everyone was escorted to his cabin, as the animals love to graze on the irrigated lawns at night. The final night, a pack of hyaenas killed an impala on the porch of our dining hall! Once a lioness came over to inspect our Land Rover and then lay down within three feet from where I was sitting. With the help of our Ranger and Tracker, we saw 28 different mammals and 60 bird species. Mary Caroni, from Switzerland, was our champion bird spotter.

Our most frequent questions upon returning has been, "did you see any evidence of the political unrest?" The answer is Yes and No. "Yes" in that most of the housing areas in Johannesburg are fenced and the fence topped with several feet of razor wire. We certainly saw the "shanty towns" which have recently grown up around most of the major cities. These are certainly a hot bed of political unrest. "No" in that we never felt threatened or saw any rock throwing or heard gunfire. We took only the normal precautions that tourists should take in Houston or New York or Istanbul. We learned a lot of interesting history of S.A. We now know what the Boer War was all about. We all met many great people in S.A. and now count many as our personal friends. We all hope and pray that the forthcoming election can be held without further bloodshed. Furthermore, S.A. is a very strong industrialized and democratic nation. I believe they will survive the forthcoming elections. I believe that someday we will plan to go back to S.A. to visit our friends and to see how the camellias are doing in the Peace Garden in Johannesburg.

News From Brittany

MARIE LESVENAN & ROGER SALAUN, FRANCE

NOUVELLES DE BRETAGNE

NOTICIAS DE BRETANA

NOTIZIE DI BRETAGNA

MEIDUNGEN AUS BRETAGUE

Societe Bretonne du Camellia at Jennifer Trehane's Hampreston Camellia Nursery.

The Societe Bretonne du Camellia celebrated the 5th anniversary of its creation December 12, 1993. The sum of its accomplishments were discussed and future objectives put forth to wit: 1. To foster the love of Camellias in our region, maintain and increase their popularity and to make them better known; 2. Propagation information, locally, nationally and internationally. Assure the formation of memberships to help with identification, multiplication and maintenance of Camellias, as well as the utilization in landscape, bouquets and paintings. Encourage friendly exchanges; 3. Develop and maintain amicable relations with foreign societies in the framework of La Societe Internationale du Camellia (ICS); 4. To support good relations and cooperation with professional Camellia growers; 5. Inventory camellias in Bretagne - begin local historical research.

For this anniversary, Mr. Figureau, the man in charge of Le Jardin Botanique et Le Jardin des Plantes de la Ville de Nantes, hosted a conference on the theme "Management of a Camellia Collection" which, among other things, recalled the history of the camellia in Nantes and presented the current collection along with the ongoing projects.

The Society Bretonne du Camellia organized a trip to England the last week of April 1994. Forty members participated in a most interesting and educational visit to gardens, homes and nurseries. You will find the account of the trip below.

The third trip of the Societe Bretonne du Camellia to the Shires south of London, 26-30 April 1994 was organized

and directed by Denise and J. Michael Madec.

We arrived in Plymouth after a rather rough crossing aboard the unscheduled "Duchesse Anne," and soon after debarking we find ourselves sitting down to a substantial breakfast in one of the city's hotels before taking off for our first destination.

We crossed the southwestern shires - green Devon, so like the tip of our own Brittany, then Dorset where past Dorchester, Jennifer Trehane awaited us at her Hampreston Camellia Nursery.

And here are in Poole, at the very end of Dorset where we visit Compton Acres, a group of small gardens of diverse styles, where we stroll peacefully and linger in the ravishing Japanese section - there we are discovered by a timid ray of sunshine!

After driving through Wiltshire and Hampshire, we arrive in West Sussex and discover our "Birch Hotel" at Haywards Heath. Following a buffet style dinner and a restful night, we set off in good humor, despite a grey drizzle for Wakehurst Place (Ardingly). Wakehurst offers gardens full of far-eastern specimens from Korea and Japan - a little young yet but full of promise. In spite of the rain, we started our walk through the large park which is located in an untouched and very romantic site. Huge and magnificent trees climb the blue Hyacinth clad slopes of the narrow valley. A walk along a sandstone outcropping reveals remarkable twisted tree roots.

Wakehurst was created by Gerald Loder (brother of the celebrated Sir Edmund Loder who bought Leonardslee in 1889) and is now managed by Royal Botanic Gardens of Kew. The upkeep is flawless. The afternoon of the second day was devoted to a visit of Sir Winston Churchill's home - Chartwell (Westerham) in Kent has been the family residence since 1924. Terraced gardens offer a panoramic view of the English countryside.

After the restful visit of Chartwell and its reminders of the great WWII British statesmen, we are off to Handcross, not far from Wakehurst, to see Nymans Garden, of the great botanical gardens of Sussex, containing large groups of rare and beautiful specimens from every corner of the globe. There are many ancient, gorgeous Camellias, also Magnolias, Azaleas, Rhododendron, Eucryphias and Hydrangeas massed around the ruins of a beautiful Elizabethan house.

Thursday, the 28th, here at last is the sun already quite hot in the morning. This is going to be a memorable day - double memorable - since we are going to spend the whole morning and part of the afternoon at Wisley, a garden of the Royal Horticultural Society, a unique place for its well tended grounds, its beauty and its layout (very instructive - everything tagged). It is nearly impossible to describe Wisley, its collections are so varied, they beggar description but those who saw the greenhouses full of blooming alpine plants, orchids and tropical plans, the vegetable garden, the orchard, the hillside covered with azaleas and rhododendrons, the rose garden which promises a splendid showing in June and so many other things, will never forget this marvel. One regret only - no camellia garden—only the odd bush here and there.

After a dazzle of Wisley, we regrouped under the watchful eye of Denise and J-Michel. Everyone is there so it is off to Lingfield, where we are welcomed by Jeannette and Paul Bleaney. Jeanette, with charm and efficiency, takes us on a tour of her old village, explaining the history of each ancient house as we pass - the butcher, the greengrocer, the old pub now a parochial house, a very old house with a bow-window, a lovely 13th century church where, under copper clad tombstone, rest the Lords of Cobham, one of which fought at the Battle of Crecy and the other at Azincourt and last but not least, a 14th century house now a Municipal Library.

Next Jeannette leads us to her own "Old Town House." There, at the entrance to the courtyard, Paul greets us, dressed in a Japanese cloak decorated by stylized Camellias. A cozy and lovely home where Paul pours a welcoming glass of wine in our honor. You could really call this the House of Camellias — they are everywhere. A few of us had the privilege of leafing through old volumes full of beautiful illustrations (some dated 1819) and the "International Register of the Camellia, in 2 volumes (32,000 names of varieties — a Bible!)

After the house, the greenhouse, the sacred den of the man of the house

which we are allowed to walk through, then the closed garden, a charming place replete with nooks and crannies where Paul and Jeannette enjoy their favorite plants and in the middle, a large white cherry tree in full bloom - surely to welcome us. We leave that calm garden with a feeling of restful well being, a state of mind so welcome after the excitement of Wisley and set off for "The Star" a pub where - Oh astonishing England, we are offered a choice of Mexican or Italian cuisine. Paul and Jeannette leave us but since we will see each other tomorrow again, no goodbyes yet.

Friday, the 29th, still under the spell of yesterday's visits, we go to the huge garden center Snow Hill in Copthorne, near Haywards Heath. A whole morning goes by while we search for the perfect plant, the perfect tool for the perfect amateur. Everyone finds exactly what he or she needs and the luggage bin of the bus is full to bursting. Where on earth shall we stow our luggage for the return trip?

From Snow Hill, we take aim at East Grinstead, on the border of Surrey where stands Standen, a fine old mansion dating from the 19th century and run by the National Trust. The house of an artist - the son of William Morris, a fabric and wallpaper designer - where we can admire fine furniture, a billiard room, Italian majolica, fine porcelain from China and a winter garden dominated by a superb pink bougainvillea. The garden is magnificent.

For the less than agile legs, there are sunny benches on the terrace, and a loggia built of ancient Delft tiles. A grassy path leads to a square gazebo where one can see the faraway countryside and the reflection of an artificial lake.

We leave Standen for Sheffield (at Uckfield) in east Sussex. Fifty hectares of gardens embellished by five lakes are spread before us. Everywhere there are flowers - blooming rhododendrons (many Loderi), Japanese azaleas in full flower - a remarkable mass of the Hinomayo variety of which 30 specimens have with time spread into a huge hemisphere. There were many trees, some leafy, some conifers probably dating back to the time when the garden was laid out by Capability Brown in the 18th century. In the course of our walk around the lakes, which flow from one to the other, we admired superb sequoias, mature pines, oaks, majestic beeches and a maple in bloom, just before leafing out. Just past the bridge over the first fall, a handsome black male swan scared our driver, Gilles, half to death. Some venerable old chestnut trees with huge split trunks next claim our interest. A birch tree grows comfortably, quite at home in one of the forks. Sheffield is justly renown for its beauty "for all seasons." The romantic charm springs from its lakes and trees. It is the superlative English Park of the 18th century—but Camellias—none or few.

We returned to the hotel after a full day. Now we have our final dinner with our friends, Jeannette and Paul Bleaney, who brought with them a few Camellia friends. Sparkling champagne and happy relaxation.

After a night of music and spectacle (for the strong among us) comes the morning. We methodically arrange all the treasures we have accumulated from the first day and we leave the Birch Hotel of Haywards Heath for the much awaited visit to the marvel that is Leonardslee, acquired in 1889 by Sir Edmund Loder who gained fame for his X.Loderi, suavely perfumed rhododendrons.

In spite of the damages caused by the fierce 1987 storm, the Park offers us the splendor of its blooming azaleas and rhododendrons. At each bend of the path, we are amazed at the sight of the hybrids of Loderii, the blue Augustiniis, the Mollis with their heady perfume, the carpet of blue Hyacinths, the elephantine trunks of the sequoias, the oaks, and the beeches. The necklace of ponds strung like beads in the valley below us enhanced a natural beauty so well managed. A couple of weeks from now, thousands of yellow Molli Azaleas will cover the slopes with a magical effect and fill the air with a fragrance unknown anywhere else on earth. Let's not forget to note a unique example of *C.Donation* in the splendor of its 7 meters full of blooms.

Before leaving Leonardslee, we visited the old Camellia Garden - a closed garden which contains only one specimen and meditate in front of a collection of Bonsai arranged so elegantly by a Chelsea medalist.

Leonardslee marks the end of our horticultural journey. We, of course, made a few more purchases and then

took off for Brighton, the resort of the British Riviera, which we discovered behind the chalky hills of Southdown. Brighton has its amazing Royal Pavilion named for the equally amazing George the IVth. Some of the group visited the town's narrow streets, some Albion Beach and some the famous Place Pier, jutting into the sea with its Penny Arcades and the noisy Merry-Go-Rounds.

After our visit to this strange Port of Call, we rolled toward Portsmouth through a region where nature has taken a backseat to human endeavors - factories abound. After a stop at Arundel, asleep at the foot of its fortress in the distance, we spot the imposing "Bretagne" which will take us comfortably home.

Happy he, who like Ulysses makes a beautiful voyage—and returns home full of purpose and wisdom.

Jennifer Trehane showing the rooting beds.

Group visiting Jeannette & Paul Bleaney

Jeannette & Paul Bleaney, Denise & J. Michael Madec

Des Nouvelles De La Societe Bretonne Du Camellia

La Société Bretonne du Camellia a marqué, le 12 décembre 1993, le 5ème anniversaire de sa création. Le bilan moral des réalisations a été dressé et des objectifs fixés pour les années à venir. Pour cela, le Président a rappellé les buts de la Societé, à savoir:

1°) Promouvoir l'amour des Camellias dans notre région ; maintenir et accroître leur popularité ; mieux les faire connaître.

2°) Propager des informations - locales, nationales, internationales. Assurer la formation des membres à l'identification, à la multiplication et à l'entretien des Camellias, ainsi qu'à leur utilisation dans l'art du paysage, du bouquet et de la peinture . . . Encourager, favoriser des échanges amicaux.

3°) Développer et entretenir des relations amicales avec les Sociétés étrangères dans le cadre de la Société Internationale du Camellia (ICS)

4°) Entretenir de bonnes relations, voire coopérer avec les professionnels du Camellia

5°) Inventorier le Camellia en Bretagne; entreprendre des recherches historiques locales.

A l'occasion de cet anniversaire, Monsieur FIGUREAU, Responsable du Jardin Botanique et du Jardin des Plantes de la Ville de NANTES, a animé une conférence sur le thème "Conduite d'une collection de Camellias" qui, entre autres sujets, a rappelé l'historique du Camellia à NANTES et présenté la collection actuelle avec les projets s'y rapportant.

Autre activité : La SOCIETE BRETONNE DU CAMELLIA a organisé, la dernière semaine d'avril 1994, un voyage instructif qui a emmené 40 de ses membres en ANGLETERRE visiter des jardins, des maisons et des pépinières dignes d'intérêt. Vous en trouverez, ci-dessous, la relation :

Arrivée à PLYMOUTH après une traversée un peu agitée sur une "Duchesse Anne" qui n'était pas prévue au programme. Très vite débarqués, nous voilà dans un hôtel de PLYMOUTH où nous attend un "breakfast" substantiel avant de rouler vers notre première destination.

Nous traversons successivement les Comtés du sud-ouest : Le vert Devon si semblable à notre pointe de Bretagne, puis le Dorset où, après DORCHESTER, nous attend Jennifer TREHANE en sa pépinière de camellias de HAMPRESTON.

Accueil chaleureux et sympathique de Jennifer où nous pouvons nous extasier à loisir devant quelques variétés dans toute la beauté de leur floraison. Explications techniques très claires de Jennifer sur sa technique de multiplication par bouturage, visite de sa pépinière qui se présente dans sa rustique simplicité à l'image même de la souriante Jennifer.

Après cette première étape, où déjà nous voyons les soutes à bagages accueillir les nombreuses emplettes, avec quelques sujets sauvés du feu auquel les condamnait Jennifer, nous reprenons notre route vers l'est.

Et nous voici à l'extrémité du Dorset où nous visitons COMPTON ACRES, ensemble de petits jardins, de divers styles où nous nous promenons paisiblement, nous attardant un peu plus au ravissant jardin japonais où vient nous caresser un timide rayon de soleil.

Après avoir écorné les deux comtés du Wiltshire et du Hampshire, nous atteignons le West-Sussex et découvrons notre "Birch Hotel" à HAYWARDS HEATH.

Après un dîner-buffet et une nuit réparatrice, dans la bonne humeur matinale, malgré la grisaille, nous nous rendons à WAKEHURST PLACE (ARDINGLY). WAKEHURST nous présente ses jardins de collection d'Extrême Orient, Corée, Japon, . . . un peu jeunes encore pour nous éblouir. Malgré la pluie fine, nous nous engageons dans l'immense parc, site naturel très romantique où sont mis en valeur de très beaux arbres sur les versants escarpés d'un vallon étroit couverts de jacinthes bleues (Endymion nutans) - Une promenade le long d'un mur de rochers de grès, nous permet de voir des

effets de racines tordues remarquables.

WAKEHURST fut créé, par Gérald Loder (Le frère du célèbre Sir Edmund Loder qui acquit Léonardslee en 1889) et est administré par les "Royal Botanic Gardens de KEW". La maintenance en est remarquable.

L'après-midi de ce deuxième jour est consacré à la visite de la maison de Sir Winston CHURCHILL. Il s'agit de sa résidence de famille depuis 1924 à CHARTWELL (WESTERHAM) dans le Kent. Des jardins en terrasse offrent une vue très large sur la campagne anglaise.

Après la reposante visite de CHARTWELL et des souvenirs du grand homme d'Etat britannique de la 2ème guerre mondiale, nous nous rendons à HANDCROSS, non loin de WAKEHURST, pour voir "NYMANS GARDEN" un des grands jardins botaniques du Sussex, regroupant un très grand nombre d'espèces rares et belles, arbres et arbustes provenant de toutes les parties du monde. Nous y voyons de nombreux et très beaux camellias anciens, mais aussi des magnolias, des azalées, des rhododendrons, des eucryphias, des hydrangéas autour des ruines d'une belle maison élisabéthaine . . .

Le jeudi 28, voici enfin le soleil dès le matin et déjà bien cuisant. Journée mémorable, doublement mémorable, qui nous fait passer toute la matinée et une partie de l'après-midi à WISLEY, un jardin de la "Royal Horticultural Society" unique par le soin apporté, pour sa beauté et son ordonnancement, trés instructif (tout est étiqueté avec soin). Décrire WISLEY relève de la gageure. Les collections sont si variées qu'on ne peut les décrire toutes. Mais ceux qui ont pu voir la serre des plantes alpines en fleur, la serre d'orchidées, celle des plantes tropicales, le jardin potager, le fruitier, la colline d'azalées et de rhododendrons, sans oublier la roseraie qui promet d'être une splendeur en juin et tant d'autres choses, ne sont pas prêts d'oublier ces merveilles - un seul regret : pas de jardin de camellias ; seulement quelques rares exemplaires de ci, de là. La jardinerie est une mine de trouvailles où chacun s'exerce à découvrir la plante ou l'objet de ses rêves d'amateur.

Après l'éblouissement de WISLEY, nous voici rassemblés sous l'oeil attentif de Denise et Jean-Michel. Tout le monde est là pour aller à LINGFIELD où nous accueillent Jeannette et Paul BLEANEY. Jeannette, avec charme et efficacité, nous fait l'honneur d'une visite de son vieux village, expliquant l'histoire de chaque maison ancienne, le boucher, l'épicerie, l'ancien pub devenu maison paroissiale, leur vieille maison avec son oriel (mot français = Fenêtre en encorbellement couramment appelée à présent bow-window mais l'ancien terme est oriel-window), la belle vieille église des 13 au 15ème siècles qui abrite les gisants et les pierres tombales plaquées de cuivre des seigneurs de COBHAM dont l'un fut à Crécy et l'autre à Azincourt, la vieille maison du 14ème siècle devenue bibliothèque municipale . . .

Puis Jeannette nous guide vers son "Old Town House" où à l'entrée de la cour Paul BLEANEY, revêtu de son vêtement japonais orné de camellias stylisés, nous gratifie de son si charmant et fin sourire - Adorable et accueillante maison où Paul fait couler le muscadet en notre honneur. On pourrait l'appeler "la maison du camellia". Partout il est présent. Certains d'entre nous ont la chance de feuilleter des ouvrages anciens avec des planches superbes (l'un est de 1819 !), le registre international du camellia en 2 volumes (32000 noms de varietés !) : Une bible . . .

Aprés la maison, la serre, antre secret du maître de maison, où nous osons voir et entrer. Le jardin clos est charmant dans son naturel villageois, avec ses recoins qui recèlent les plantes qu'affectionnent Jeannette et Paul, et son magnifique cerisier blanc, en parure de fête pour nous accueillir. Nous sortons de ce jardin si calme, apaisés après l'excitation provoquée par la visite de WISLEY, pour nous rendre au pub "The Star" où l'on nous propose, étonnante Angleterre, le choix entre une cuisine mexicaine et une autre italienne ! Nous nous séparons de Jeannette et Paul et sachant nous retrouver le lendemain, en remettant à plus tard nos adieux.

Le vendredi 29, encore émerveillés de nos visites de la veille, nous conduit à la vaste jardinerie "Snow Hill" à COPTHORNE (Tout près de HAYWARDS HEATH). Toute une matinée se passe à prospecter parmi les plantes et les objets indispensables au parfait amateur. Chacun trouve son bonheur dans ce "T"y trouves tout pour le jardin". Et les soutes de notre car se remplissent encore un peu plus ! mais où donc mettrons nous nos bagages pour le retour ?

De Snow Hill, nous nous dirigeons vers EAST GRINTEAD, en lisière du Surrey où se tient STANDEN, très belle demeure de la fin du 19ème siècle gérée par le National Trust - Remarquable maison d'artiste - Le fils de William Morris, créateur de tissus et papiers peints - où nous pouvons admirer un beau mobilier, une salle de billard, des majoliques italiennes, de fines porcelaines de Chine, un jardin d'hiver où s'épanouit une superbe bougainvillée rose. Le jardin est magnifiquement situé à flanc de colline avec une vue très large sur la Medway Valley.

Pour les jambes les moins agiles, la terrasse offre ses bancs au soleil et pour s'abriter une loggia habillée de carreaux de Delf ancien. Une allée gazonnée mène à une gloriette carrée permettant d'admirer, à perte de vue, la campagne où luit, dans le lointain le miroir d'un lac artificiel . . .

De STANDEN, nous partons pour SHEFFIELD (à UCKFIELD) dans l'East Sussex. 50 ha de jardin agrémentés de 5 lacs s'offrent à nos regards extasiés devant rhododendrons fleuris (surtout des Loderi) des azalées japonaises en plein épanouissement (remarquable massif de la variété Hinomayo dont les quelques 30 exemplaires ont pris avec l'âge une forme hémisphérique) des arbres (tant feuillus que conifères) probablement datant de la création du parc par "Capability" Brown au cours du 18ème siècle. Au cours de la promenade autour des lacs qui se déversent les uns dans les autres, nous avons pu admirer de superbes séquoïas, également des pins sylvestres en pleine maturité, des chênes, des hêtres au port majestueux, un érable en fleur, juste avant l'apparition des feuilles, devant le lac supérieur, dans sa parure dorée.

Passé le pont qui franchit la première chute, un magnifique cygne mâle a causé une belle frayeur à notre jeune chauffeur Gilles . . .

De très vieux châtaigniers, aux troncs impressionnants, très sévèrement élagués, ont retenu notre attention par leur remarquable habilité à repousser vigoureusement malgré leur grand âge. Dans la large et confortable fourche de l'un deux, un bouleau a élu domicile.

SHEFFIELD est justement réputé pur sa beauté "en toutes saisons", son charme romantique vient de ses lacs et de ses arbres vénérables. C'est le type achevé du parc anglais tel qu'il fut dès le milieu du 18ème siècle. Mais de camellias : Point ! ou peu !

Nous rentrons à l'hôtel, après une journée très bien remplie, où nous attend le dîner de fin de séjour, avec nos amis anglais Jeannette et Paul BLEANEY qui se sont fait accompagner par quelques passionnés du camellia. Champagne pétillant et détente joyeuse, avec apparition non programmée de deux charmantes demoiselles, qui ont permis des échanges instructifs.

Après une nuit, en musique et en spectacle pour les plus vaillants d'entre nous, au petit matin, nous rangeons avec ordre et méthode tous les trésors accumulés depuis le premier jour chez Jennifer TREHANE et nous quittons le Birch Hôtel de HAYWARDS HEATH pour nous rendre au parc de LEONARDSLEE, la merveille tant attendue, acquis par Sir Edmund Loder en 1889, celui-là même qui s'est rendu célèbre par les rhododendrons X.Loderii au parfum suave.

Malgré les blessures infligées par l'ouragan de 1987, le parc s'offre à nous dans la splendeur de ses rhododendrons et azalées en fleurs. A chaque détour on s'extasie devant les hybrides de Loderii, les augustiniis bleus, les mollis au parfum entêtant, les tapis de jacinthes bleues, les troncs éléphantesques des séquoïas, des chênes, des hêtres. Le chapelet d'étangs qui occupent le fond de la vallée encaissée rafraichit un paysage naturel si bien aménagé. Une quinzaine après notre passage les millierrs d'azalées mollis jaunes du versant est donneront un spectacle féérique et d'une fragance inconnue en d'autres lieux. Ne manquons pas de citer un exemplaire unique de camellia X.Donation dans toute la splendeur de ses 6 à 7 mètres de haut, couvert d'une floraison généreuse.

Avant de quitter LEONARDSLEE, entrons dans l'ancien jardin de camellias, jardin clos ou subsiste un seul exemplaire, pour méditer devant une belle collection de bonsaïs tous élégamment présentés par une artiste de talent, primée à CHELSEA (On dit "médaillée" en anglais).

LEONARDSLEE clôture nos visites horticoles avec encore quelques dernières acquisitions . . . Puis nous faisons route jusqu'à BRIGHTON, station de la riviéra anglaise, que nous découvrons après avoir franchi les crayeuses

collines de Southdown, avec son ébouriffant "Royal Pavillon" dû au non moins ébouriffant George IV.

C'est la dispersion sur BRIGHTON, qui dans les ruelles étroites, qui sur le front de mer qui s'appelle ici "Albion Beach" our sur le fameux "Palace Pier" qui s'avance dans la Manche et où les machines à sous et les manèges de foire rivalisent a qui mieux mieux, ou à qui plus fort, de leurs bruits saccadés et de leur musique emportée par le vent et la rumeur des vagues . . .

Aprés cette escale étrange, nous roulons vers PORTSMOUTH à travers une région côtière où la nature a reculé un peu devant l'industrie humaine et ses cités. Après une halte dans ARUNDEL endormie au pied de sa forteresse, de loin, nous apercevons le somptueux "Bretagne" qui nous accueille pour une confortable traversée.

"Heureux qui comme Ulysse a fait un beau voyage . . . et puis est revenu plein d'usage et raison . . ."

News From The United Kingdom

Rosalind Mead, U.K.

Nouvelles de au Rotaumoni

Meldungen aus GrobBritannien

Notizie de Regno Unito

Noticias de Reino Unido

Members of ICS, UK Region with Lady Anne Cowdray on the terrace at Broadleas, Devizes. April 24th, 1994.

From the first sight of the statue of Britannia on the 15th century bridge spanning the river Avon at Ilford Manor to the last glimpse of the terrapins and lush vegetation of the Wyld Court Rainforest, U.K. members had a profusion of sights and experiences to enjoy. The tour, arranged by Elizabeth Scott-Moncrieff, was in an area of the country of which she had intimate knowledge and included the rewarding viewing of some of the oldest camellias in the western world.

Our opening visit was to Ilford Manor, near Bradford-on-Avon, the home of Mr. and Mrs. J. Hignett. The head gardener, Mr. L. R. Butler, outlined the main history of the house, with its medieval origins. He dwelt, in particular, on the period 1898-1933, when Harold Peto, the architect and landscape gardener, had given substance to his vision and wrought an Italianate formal garden out of a Somerset hillside. The vistas through arches, pergolas, and from terraces, were enchanting, while the casita, summer house, cloisters and conservatory all bore witness to his discriminating taste and collector's enthusiasm. Hillside mobility (12 inches in 100 years), tempests and insecure foundations in some features, had all been troublesome and efforts to return the garden to Peto's intention and plantings were a constant labour.

The unreliable weather after lunch encouraged us to spend the greater part of our time at Corsham Court, in Corsham, on the treasures in the magnificent interior of Lord Methuen's house. A marvellous collection of paintings, kept together since the mid-18th century, was

displayed in a suite of state rooms designed by Lancelot 'Capability' Brown, and furnished by Thomas Chippendale. Those who ventured on a tour of the extensive grounds were rewarded by a peacock in dazzling display and some majestic trees, of which the cedar and gingko in the forecourt were especially memorable with their lavish underplanting of spring bulbs.

In total contrast was Wiltshire's oldest inhabited manor house, Sheldon Manor, near Chippenham. This fascinating house, with its remarkable 13th century stone porch, has been lived in for 700 years as a family home, though at times declining into near ruin under feckless tenants. We were given a warm welcome (and a cream tea) by Major and Mrs. Martin Gibbs and were fascinated by the furnishings, including a large collection of Nailsea glass. These twisted-glass walking sticks were a precursor of preventative medicine: they were thought to attract lethal germs to be eliminated by conscientious daily dustings!

Friday's first visit was to Waterdale House, East Knoyle, where Mr. and Mrs. Julian Seymour not only welcomed us with coffee, but had reorganized most of the ground floor of their house to provide us with lunch. In between, we explored the four acres of their garden, admiring the wide selection of mature shrubs under overhead cover: these included camellias, rhododendrons and azaleas, while acres were self-seeding with an abandon that showed their appreciation of the conditions. Mrs. Vi Lort-Phillips, past president of the ICS, expressed our gratitude for the hospitality lavished on us.

At New Wardour Castle, near Ansty, we were greeted by Mr. Nigel Tuersley, who outlined the restorative changes taking place in the building, which until recently had been a girls' school. Through a modest entrance hall, we were ushered into the magnificence of the Palladian Rotunda with its double cantilevered stairway, bordered by delicate iron tracery, rising to a circular landing, where the coffered dome was supported on Corinthian columns. Here, the neglect in recent years proved a bonus, as the finely detailed plaster retains its sharp images because it had not been coated with thick, modern paint.

At the nearby camellia house, neglect of the building may have gone too far, but also may have helped preserve some of the oldest camellias in the western world. Although detailed records do not exist, the camellia house is known to have been built in the 1790s, probably by a local builder, and is similar in design to others built about that time in England. One of almost identical design, for example, is at Syon House, Isleworth, Middlesex, near London.

The camellia house at Wardour was built as an orangery, but was soon converted to camellias. The ancient trees it still houses are a white formal double, probably 'Alba Plena', which would fit with the time, as 'Alba Plena' and 'Variegata' were, in 1792, the first named camellias to be brought from China to the West by Captain Connor of the British East India Company. In the 1960s, blooms were still being sold as a commercial venture to the Covent Garden flower market in London, which was pleased to pay high prices for them. The house had moderate insulation and heating in the winter to protect the blooms from the cold Wiltshire weather.

The house is now open to the sky, which gives the neglected camellias the ventilation they need in the summer, while the walls provide shelter in winter. English Heritage, which maintain the romantic ruins of Old Wardour Castle a short distance away, have insisted on restoration of the camellia house as part of the reconstruction of New Wardour Castle.

At Old Wardour Castle we were given a brief outline of its history. It was badly damaged in 1643 during the English Civil War and was left to become a ruin. It was landscaped in the 18th century to enhance the romantic effect. After exploring the ruins and admiring the far-reaching views, we took tea in the splendid Gothic Pavilion overlooking the lake.

On Friday evening, U.K. director, Mrs. Marigold Assinder, entertained and instructed our members with an account of how she had gradually built up her collection of camellias in a London garden in Putney. She has entered blooms in the Royal Horticultural Society's spring shows with frequent success. Some discussion followed on the need for the ICS to help improve and define the various camellia categories at the RHS shows.

Saturday saw us traveling to Landford, southeast of Salisbury, to visit

Landford Lodge, the lovely Georgian house and tree nursery of Mr. and Mrs. C. Pilkington. After coffee, we were conducted by way of an avenue of fastigiate hornbeam to a display garden of a wide range of trees planted in alphabetical order. Various methods of tree propagation were demonstrated. Among the many camellias planted in the surrounding woodland, 'Kimberley', 'Lady Vansittart' and 'Magnoliiflora' ('Hagoromo') were identified before a delicious lunch was served in the house.

A picturesque drive brought us to Fonthill House, the home of Lord Margadale. The house commands magnificent views over the formal garden to the rolling countryside beyond. The head gardener, Mr. Peter Satchell, admitted to an occasional leisure moment of reflection at the end of his day's work while surveying the beautifully tended sunken garden, though the wide stretching acres of planted woodland garden behind the house would have allowed him little chance for rest. Camellias feature prominently, with many *x williamsii* and allied hybrids, such as 'Cornish Snow' and 'Donation' at their best, while japonicas 'Alexander Hunter' and 'Lady Vansittart' were also in full bloom. After tea, Mr. John Tooby, past president of the ICS, presented the camellia 'Dr. Burnside' to the Hon. Mary Morrison, daughter of Lord Margadale, as a token of our appreciation.

Saturday's activities concluded with our plant sale and raffle.

Our two venues on Sunday were on the outskirts of Devizes. At Home Covert, Mr. John F. Phillips greeted us with a disarming assessment of the garden as a "botanical madhouse," which belies an extensive botanical knowledge and a skill in siting and cosseting plants. Since 1960, both Mr. and Mrs. Phillips, herself a dendrologist, have been developing the garden of their dreams on a site selected for its location on a zone of green sand, a sandstone formation with neutral soil that enables the growing of both acid- and lime-loving plants. The 33 acres, comprising herbaceous borders, valley water garden and woodland, were there to explore. The watergarden was dominated by a 70 ft. *Magnolia veitchii* 'Peter Veitch'. Amongst the camellias, *x williamsii* 'Hiraethlyn', in palest pink, and 'Yukimiguruma', a pure white japonica with flaring cup-shape yellow stamens, were in full flower. Mr. and Mrs. Phillips were warmly thanked for their hospitality by UK director Jennifer Trehane, while at dinner on Sunday night, members had a further chance to quiz them on their experiences.

A brief journey through Devizes brought us to Broadleas, the home and garden of Lady Anne Cowdrey, who has played an active part, including that of a UK director, in the ICS over many years. We were provided with a picnic lunch and given free range of the extensive gardens with their wide range of unusual trees, shrubs, rhododendrons, azaleas and camellias. 'Alba Simplex', 'Mercury' and 'Joan Trehane' were showing particularly well and members were fascinated by the many varieties of trillium established along the valley pathways. A home made tea was not to be missed before the coach journey back to our hotel at Swindon by way of the ancient stones at Avebury.

That evening's dinner was followed by a talk with slides by UK membership representative, Herb Short, on the International Symposium on *C.chrysantha* in Nanning, China on January 8-11. After the talk, ICS Vice President Mayda Reynolds outlined the arrangements for the next International Congress in the Channel Islands, Brittany and Paris in March and April 1995.

On Monday, visits to Hilliers nursery at Hermitage and to the Wyld Court Rainforest at Hampstead Norreys, near Newbury, brought the tour to a close and members dispersed to cultivate anew their gardens with Voltairean fervour.

Mr. John Tooby presenting camellia 'Dr. Burnside' to the Hon. Miss Morrison, Fonthill House. April 23rd, 1994.

See You In Channel Islands - 1995

RENDEZ-VOUS A LA AUX ILES ANGLO-NORMANDES - 1995

AUS EIN WIEDERSEHEN KANALINSELIN - 1995

CI VEDIAMO IN CANAL DE LA MANCHA - 1995

VEASE USTED EN AL CANALE DE LA MANICAE - 1995

Young Camellia Plants at Zoo

The next International Camellia Society Congress is to be held in Jersey, Channel Islands and our headquarters will be the Grand Hotel, St. Helier.

The Grand Hotel has an excellent reputation for comfort and service and has provided hospitality for many distinguished visitors including Lily Langtry. Many members of the Royal Family have been guests at the States of Jersey banquets and the celebrated French composer Claude Debussy wrote "La Mer" whilst residing at this hotel. The Grand Hotel overlooks St. Aubins Bay and has splendid views of the historic Elizabeth Castle which is situated on a small island near St. Helier harbour.

Congress registration takes place from 2 P.M. on Thursday 30 March at the Grand Hotel and congress delegates will be invited to a Vin d'Honneur, hosted by the Jersey Tourism Committee and followed by an ICS Welcome Dinner at the Grand Hotel.

During the next four days, there will be the usual educational sessions with international experts; we will tour the island and enjoy the beautiful coastal and country scenes. Here are a few notes on some of the venues we will visit.

JERSEY WILDLIFE PARK is the home of the world famous zoo, a unique sanctuary and breeding centre founded over 30 years ago by author and broadcaster Gerald Durrell. The 25 acre parkland has many rare and unusual plants and as well as the original camellias, the new planting of camellias donated by ICS officers, directors and members of several countries has added much interest, especially for camellia lovers.

THE JERSEY MUSEUM is located at Weighbridge, near St. Helier harbour. Opened in 1992 after £3.8 million investment, the Jersey Museum was voted "Britain's most outstanding tourist attrac-

tion" by the British Guild of Travel Writers. The traditions, culture and history of the island are shown through original objects and the latest technology. The Barreau-Le Maistre Art Gallery houses a collection of paintings, etchings and sculpture. A floral exhibition "East Meets West," devised by ICS Director Ann Bushell, is to be staged at the Museum by the Jersey Flower Club and the Jersey Ikebana Group.

MONT ORGUIL CASTLE is on the east coast, facing France and dates from the time of King John in the 13th century. There will be a guided tour through the grounds, rooms, battlements and towers. Colourful tableaux give a vivid reminder of the castle's history.

ERIC YOUNG ORCHID FOUNDATION. Many gold medals have been awarded at World International Shows to orchids raised here. The Display House has a permanently planted landscaped setting for the display of plants in flower.

We know that for some members who have attended every Congress for many years, this may be the last time they will be able to travel so far to an ICS Congress, so come and join us to honour our old and welcome our new friends.

Camellia Walk Radier Manor

Rozel Manor

Rozel Manor

NEWS OF THE JAPAN CAMELLIA SOCIETY

Gorou Iimure, Japan

NEWS OF JAPANESE CAMELLIA SOCIETY

Nouvelles de Japon Camelias Societe

Notizied Camelias Giappone Camelias Sociedad

Meidungen Aus Japan Camelics Societa

1. The general situation of the Japan Camellia Society

In April of 1953, The Japanese Camellia Society was established to protect and promote our cultural appreciation of camellias as the Original Native Plant with its history of long and valuable development. At present, we have a membership of 1,400, with 600 members belonging to the 22 Chapters. The past President Dr. Hagiya (Kaoru) was the first president to be elected by direct vote of our members. The present President, Miss Touko Adachi, the 2nd president elected by vote is the 7th President of our Society.

2. The Characteristics of the Camellia.

History tells us that camellias from Japan went across Europe around 1700. Within 100 years the camellia became famous throughout Europe. A novel by French writer Dumas (1824-1895) - "La Dame aux Camellia" (1848) popularized the camellia so that it became hte fashion of the time. The specific characteristics of Camellias are: Evergreen flowering tree with strong and good growth. The flowers are gorgeous, magnificent and in various colors with many shapes and forms. These are the two specific characteristics of the Camellias. Not only in Japan, the Camellias are admired all over the world.

3. The activities of the Japan Camellia Society.

In Kyoto and throughout Japan, there are many old camellia trees - old trees of historical interests, precious trees and many, many Camellia natural forests still exist. The research and protection of these trees and areas are not sufficient as many trees die or are cut down by regional development or bad environment. The Japan Camellia Society is not just a hobby club - it is concerned with the history of correct classification of cultivars of the old 'Edo Camellia.' With the understanding of the inside and outside world, the Society will promote and contribute to the preservation of precious cultural history of the old Camellias and Historical Literature.

4. The publishing of the Japanese Camellia Directory.

For our Society's 40th Anniversary, the Society has studied 2,400 varieties of Camellias and Sasanquas in existence. A book containing photographs and commentary will give a complete Nomenclature and will be published by November of 1995.

5. The "National Camellia Summit," an interchange place for Camellia Lovers.

The Oushima Town, in the Peninsula, itself known as the Treasure Town of C. Japonica, announced in 1991 they would hold a National Camellia Summit there. Many Camellia lovers gathered. It was such a success that in 1992, a 2nd Summit at Miyazaki City was announced. In 1993 the 3rd Summit was held in Kamo City of Niigata, a great natural native place of C. Rusticana. A 4th Summit was held in 1994 at Ito City of Shizuoka Prefecture. This event is held only for two days, but all through Japan, there are 250 cities, towns and villages which have Camellias or Sasanquas as their symbolic flower and 100 or more Camellia Lovers' Groups attend. It has been steadily increasing in attendance. In 1995, Hagi City of Yamaouchi Prefecture will sponsor the Camellia Summit. It has

become an annual spring event as 'Camellia Festival' here in Japan. Any of the ICS members who may visit in the spring in search of Camellias are welcome to attend the 'Camellia Festival' with us. When you see this event, you will know why these cities and villages have Camellias or Sasanquas as their symbolic flower.

6. 1999's ICS Miyazaki Congress

The members already know ICS's 1999 Miyazaki Congress will be held at Kyushu's Miyazaki City. Many members of ICS may have met and become friends with Mayor Teizo Nagatomo. He has looked forward to inviting you all to the Miyazaki Camellia Forest Park. In November of last year, Mayor Nagatomo had to resign from his office because of his illness. In April of this year, he passed away. Miyazaki City will keep up the love of Camellias from the late Nagatomo and under the new Mayor, all the city will continue to promote a very beautiful and impressive Miyazaki Camellia Forest Park to welcome all ICS members for the 1999 Congress to a success.

Translated by Mieko Yamamoto, ICS Membership Rep.

China

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CHINA
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The following people are being sponsored by the United Kingdom Region:

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The following are being sponsored by Thomas Perkins, Mayda Reynolds, Herbert Short and Jennifer Trehane:

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Honors for Tom Savige

HOMMAGE POUR TOM SAVIGE

EHRT FEUR TOM SAVIGE

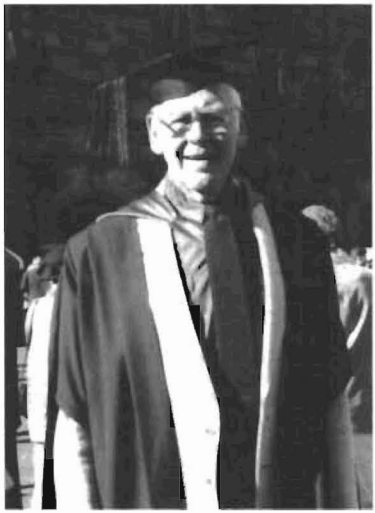
HONORA PARA TOM SAVIGE

ONORA PER TOM SAVIGE

Thomas J. Savige, Australia, was honored 10 June 1994 at the University of Sydney's graduation ceremony when Vice-Chancellor and Principal Professor D. McNicol conferred the Degree of Master of Science in Agriculture (Honoris Causa) on him for his work on the Camellia Register.

Tom presented a copy of the Camellia Register to the Librarian of Fishers' Library of the University of Sydney.

On 11 June, the NSW Branch of the Australian Camellia Research Society had a reception for Tom and his wife, Olive, at Eryldene.



Tom Savige at Ceremony at Univ. of Sydney.

Tom Savige presenting the Librarian of the Fishers Library, Univ. of Sydney, a copy of ICS Camellia Register

DEGREE OF MASTER OF SCIENCE IN AGRICULTURE (HONORIS CAUSA)
Presented by the Vice-Chancellor and Principal Professor D McNicol

Thomas James Savige

Chancellor,

I have the honour to present Mr Thomas James Savige OAM for the conferring of the degree of Master of Science in Agriculture (*honoris causa*).

Mr Savige trained as a draughtsman, rising to become a General Manager of Batterfield Company. However, he had a lifelong standing interest in the camellia, and, on retirement in 1982, he took up the position of Registrar of the International Camellia Society, with the objective of compiling a single listing of all the known species and cultivars of camellia.

This work, which began over 30 years ago, culminated in the production in 1991 of the *The International Camellia Register*, two volumes containing 2208 pages. The Register lists 267 species and over 32000 named camellias, including in many cases their origins, history and synonyms. In producing it, Mr Savige delved into literature dating back to the 17th century and earlier. Of particular value is his listing of the names of 9000 Chinese and Japanese cultivars, giving the correct names to be used for each. The two volumes are an invaluable contribution to stabilising camellia cultivar names and have become the essential reference for all those interested in the genus.

The work brings order to the world of camellia nomenclature, and sets a very high standard for those entrusted with preparing registers of other genera.Mr Savige is to be congratulated on the persistence and thoroughness he brought to this task, and on the high standard of scholarship achieved.

It is particularly appropriate that the University of Sydney recognises Mr Savige's work as the concept of the Register arose from the early studies of an international group of camellia specialists, including the late Professor E J Waterhouse of this University, initiated over 40 years ago.

Mr Savige brought together an 84 page bibliography of the books, journals and catalogues used as sources of information for the Register. This bibliography alone is a significant and scholarly contribution.

As Dr Peter Valder has noted, this is "an astonishing achievement which could only have been carried out by someone with Mr Savige's years of experience, not only in growing and breeding camellias but in visiting camellia growers, linguists and libraries all over the world".

Chancellor, I have the honour to present Mr Thomas James Savige OAM for the conferring of the degree of Master of Science in Agriculture (*honoris causa*).

New Zealand Camellia Garden Tour

Betty Daudt, U.S.A.

TOURNEE DES JARDINS DE CAMELIAS EN NOUVELLE ZELANDE

NEW SEELAND KAMELIENGAERTEN TOUR

UNA GIRA DE CAMELIAS EN NUEVA ZELANDIA

GIRO GIADINIERE DELLE CAMELIE NELLA NUOVA ZELANDIA

A group totalling ten camellia enthusiasts led by Jan Coyle, a native of New Zealand, toured about 35 private and public gardens in August 1993. An outstanding event was the guided tour of Eden Garden, Auckland. This garden, only 30 years old, was developed on the slopes of Mt. Eden extinct volcano. We were honored to have a tour led by Jim Rolfe. He is the author of the recent book "Gardening With Camellias" - given high marks by our travelling companions.

In Eden Garden and elsewhere in North Island, we noted phenomenal plant growth due to rich soil, extensive rainfall and semi-mild climate. Plants only 5 years old had appearance of being 30 years old. Most camellia plants were over 6 feet tall (Rhodendrons - many trees 30-50 feet were predominate with blooms and color, although camellias and azaleas were in bloom). We also visited several nurseries, including Duncan and Daires, largest camellia nursery in the southern hemisphere.

Of course the highlight was attending the annual camellia convention, this year held at Wanganui, North Island. We were impressed with the size and scope of the show, over 3000 blooms entered. It was a very large hall with natural light from skylight which enhanced the blooms. The camellia exhibit, meals and meetings of the convention were held at Horse Racing Complex. Over 500 attended the two-day convention and we were impressed by the large attendance. They have very few local shows. We were impressed by the large number, over 2800, who paid to view the displays. There were many different categories for the 340 exhibitors. The Honor Court blooms were displayed, using black cloth on tierred tables. The spaciousness of the building permitted good viewing for all. Collections of nine and twelve seemed to be the ultimate goal of the exhibitors. The prizes of glass, china and figurines were on display and complimented the blooms.

The Floral Art Society of New Zealand held its 1993 designer of the year competition in conjunction with the show. The theme was "Women's Suffrage 100 years" and had 34 entries - large 4' to 6' well thought arrangements. Also at the show were numerous commercial display of blooms, plants for sale and a book table. The "Champion" bloom and best reticulata was "S.P. Dunn" - a deep red.

An added feature to the convention was touring local gardens. Eight buses were filled with admirers seeing six gardens on Sunday. At the closing banquet, the lovely awards - filling a 30 foot table - were announced and presented. The room was decorated with 4' - 6' floral sprays and camellia blooms on each table. Several growers extended an invitation to visit their gardens which our group did. Always the host and hostess were friendly and gracious. The favorite camellias seen at the show were - S. P. Dunn, Little Michael (favorite miniature), Pavlova, Nicky Crisp, Dr. Clifford Parks, Dream Boat, Mark Allen, Waterlily, Betty Sheffield family, Elegans family, Tiffany, C. M. Hovey, Kumasaka, Debutante, Tomorrow family, Dixie Knight, Bob Hope and Valentine Day.

We noted very few variegated flowers, evidently New Zealanders prefer solid colors. "Brushfield's Yellow", an Australian cultivar, was seen in many gardens. The natives seemed to focus on growing camellias in their gardens rather than growing blooms for a show. The gardens, whether expansive - several acres - or small, hillside or dell, showed desire to cultivate a beauty spot to share with others.

This was a great garden tour led by a native - a real New Zealand adventure. I look forward to the ICS meeting in Jersey.

Camellia

Bai Wenli, China

Camelias

Kamelien

Cammelie

Camelias

The international Camellias Society gained a number of new members from China as a result of the International Symposium on *C.chrysantha* in Nanning in January. Most Chinese love poetry and many enjoy expressing their thoughts with poetry. The following are excerpts from a letter received by UK membership representative, Herb Short, whose report on the Nanning symposium appears in this issue of the Journal.

Dear Herbert,

When I am writing you this letter, the peach tree is in full bloom just outside my window, for it is spring here . . .

In the last letter you sent me, I happily noticed that I was accepted as a member of the International Camellia Society. I wrote a poem in Chinese to celebrate it. Now I have tried to translate it into English . . . please correct it if it should be corrected.

CAMELLIA

Camellia, camellia,
our friends come with you.
You are the angel of beauty,
you are the symbol of elegancy.
With bright colour,
you bring us bright hope,
with neat shape,
you bring us purity.
White as snow,
red as fire,
we love you, our camellia
the queen of flower.

With my warmest greetings

Bai Wenli

[Bai Wenli presented a research paper at the International Symposium on *C.Chrysantha.* He is with the Forestry Research Institute of Hebei Provence.]

What A Wonderful World

Anne Marie and August Duttweiler
Switzerland

QUEL MONDE MERVEILLEUX

WIE WUNDERVOLL 1ST DOCH DIE WELT

QUE MUNDO TAN MARAVILLOSO

CHE MUNDO MERAVIGLIOSO

This well known song from the legendary Louis Armstrong came into the minds of my wife and me again and again as we were in South Africa for the first time in our lives. In August of 1993 we participated for the first time as new members at a camellia show and at the Congress of the International Camellia Society. During this congress, and also on the pre- and post-congress trips, we enjoyed three weeks of continuing exceptional experiences. The South African camellia friends, and especially Allison Adair and also Renée Wagner of Grosvenor Tours, had everything superbly organized.

We landed about 8:00 a.m. August 1, 1993 - a Sunday - at Johannesburg, where we were met by several members of the South African Camellia Society and the travel agency, and were pleasantly surprised with the presentation of a camellia blossom. This first day ended with a warm welcome and a delicious meal at the Balalaika Hotel.

The dream-like Cape region will stay for us forever in memory, especially Cape Town itself with its renowned Kirstenbosch Botanical Garden, the wild nature reserve at the Cape of Good Hope and the giant Vergelegen Estate winery, with its camellias and ancient oaks. Also unforgettable for us were the Garden Route with the beautiful woods and Oudtshoorn with the Kango caves and the ostrich farm - especially the latter for me because I nearly fell to the ground while trying to mount one of these giant birds. We enjoyed the botanical garden in Durban, but were even more impressed by the 32 acre private garden of Leslie and Gladys Rigall, whose hospitality we were privileged to enjoy. One last big surprise of the first trip was the performance of the renowned Drakensberg boys' choir.

On August 12 the interesting three day Congress, which had been perfectly organized by Louis Van Heerden, Keith Kirsten and their aides, began in Johannesburg. Besides the instructive presentations we also visited the Boskoop Nursery of Jan van Bergen in Pretoria, and the botanical garden and the Brenthurst Gardens in Johannesburg. In the newly cultivated Mushroom Park we and other Congress participants planted a camellia for each country we represented. Sadly, after a joint farewell banquet, we had to leave our many new camellia friends, especially those from the Channel Islands, Japan and New Zealand.

The after-Congress trip took us to a completely new area - the Transvaal - with our knowledgeable tour guide Peter Masters. We viewed the giant Voortrekker memorial, the Modjadji Cycad Park, the many tropical fruit plantations near Tzanenn, the bizarre formations on both sides of the Blydepoort Canyons and finally we came to the destination of the trip, Krueger Park, where we observed many animals and took pictures.

For us ICS newcomers, the trips and the Congress were unique experiences; not just scenery, the plants and the friendships we made, but also the gourmets were completely satisfied and we must not forget the excellent wines and the first class hotels at which we stayed. We hope we can be present in March of 1995 at the Channel Islands and will meet again our many dear acquaintances. In closing we would like to thank all camellia friends that they welcomed us so warmly and were patient when we did not understand something because of our inadequate English.

What A Wonderful World

(Camellia Congress 1993 in South-Africa)

Dieses beruehmte Lied vom legendaeren Louis Armstrong kam meiner Frau und mir immer wieder in den Sinn, als wir zum ersten Mal in unserem Leben in Sued-afrika weilten. Im August 1993 nahmen wir als Neumitglieder erstmals an einer Kamelien-Veranstaltung teil, und swar gleich am Kongress der Internationalen Kameliengesellschaft. Waehrend dieses Kongresses, sowie der Vor- under Nach- Kongress-Reise erlebten wir innert drei Wochen einen Hoehepunkt nach dem andern. Die suedafrikanischen Kamelienfreunde, vor allem Allison Adair, aber auch Renée Wagner von Grosvenor Tours, hatten alles hervorragend organisiert.

Als wir am 1. August 1993 - einem Sonntag - morgens um acht Uhr in Johannesburg landeten, wurden wir von mehreren Mitgliedern der suedafrikanischen Kamelien - gesellschaft un vom Reisebuero empfangen und mit einer Kamelienbluete ueberrascht. Abgerundet wurde dieser erste Tag mit einem herzlichen Empfang und ausgezeichneten Nachtessen im Balalaika-Hotel.

Fuer immer wird uns die traumhafte Kap-Region in Erinnerung bleiben, besonders Kapstadt selber mit dem beruehmten Kirstenbosch Botanical Garden, das wilde Naturreservat am Kap der guten Hoffnung und das riesige Weingut Vergelegen Estate mit den Kamelien und uralten Eichen. Unvergesslich sind fuer uns aber auch die Garden Route mit den schoenen Waeldern und Oudtshoorn mit den Kango-Hoehlen und der Straussenfarm, letztere vor allem deshalb, weil ich beinahe beim Besteigen eines solchen Riesenvogels zu Boden gefallen waere. Noch mehr als der botanische Garten in Durban beeindruckte uns der 32 Acre grosses Privatgarten von Leslie und Gladys Rigall, deren Gastfreundschaft wir geniessen durften. Eine letzte grosse Ueberraschung der ersten Reise war der Auftritt des beruehmten Drakensberg Boys' Choir.

Am 12. August begann in Johannesburg der dreitaegige interessante Kongress, der von Louis van Heerden, Keith Kirsten und ihren Helfern perfekt organisiert worden war. Neben den lehrreichen Vortraegen besuchten wir die Boskoop Nursery von Jan van Bergen in Pretoria, den botanischen Garten und die Brenthurst Gardens in Johannesburg. Im neu angelegten Mushroom Park pflanzten wir und andere Kongressteilnehmer fuer jedes vertretene Land je eine Kamelie. Leider mussten wir nach einem gemeinsamen Abhschlussessen von vielen liebgewordenen Kamelienfreunden Abschied nehmen, vor allem jenen von Channel Islands, Japan und Neuseeland.

Die Nach-Kongress-Reise fuehrte uns in eine ganz andere Gegend, nach Transvaal, wieder mit unserem in allen Fachgebieten kundigen Reiseleiter Peter Masters. Wir bestaunten das riesige Voortrekker Denkmal, den Modjadji Cycad Park, die vielen Suedfruechte-Plantagen rund um Tzaneen, die bizarren Gelaendeformen beidseits des Blydepoort Canyons und erreichten schliesslich das Ziel der zweiten Reise, den Krueger Park, wo wir sehr viele Tiere beobachten und fotografieren konnten.

Fuer uns ICS - Neulinge waren die Reisen und der Kongress einzigartige Erlebnisse, und zwar nicht nur was Landschaften, Pflanzen und Freundschaften betrifft, auch die Feinschmecker kamen voll auf ihre Rechnung, nicht vergessen seinen die hervorragenden Weine und die erstklassigen Hotels. Wir hoffen, dass wir im Maerz 1995 auf den Channel Islands auch dabei sein koennen und viele liebe Bekannte wieder treffen werden. Zum Schluss moechten wir allen Kamelienfreunden danken, dass sie uns so nett aufgenommen haben, dass sie so geduldig mit uns waren, wenn wir etwas nicht verstanden haben, weil unsere Englischkenntnisse mangelhaft sind.

The Bamboo Forest

by
Leslie Riggall, So. Africa

LA FORET DE BAMBOUS

DER BAMBUS WALD

LA SELVA DE BAMBU

LA SELVA BAMBU

Surrounding me, the silver columns soar,
Creating shifting shade above my head,
Each moving frond revealing more and more
Of leafy layers elegantly spread.
The bamboo is not bright enough to shine,
But more like velvet in this verdant scene,
Whereas the golden blooms that intertwine
Contrast completely with metallic sheen.
The forest once was vast, but now is small,
The tiger, dragon and rhinoceros
Replaced by humans who destroyed it all,
Thus leaving an irreparable loss.
But in the silver forest still they glow
The golden blossoms of so long ago.

NOTES:

This sonnet was inspired by my visit to a remnant of a once great tropical forest of South China, where golden-flowered camellias still survive precariously. Most of the forest has been converted to plantations of rice, sugar, bananas and tea. The tea plants (*Camellia sinensis*), are grown on rocky slopes unsuitable for other crops. They need light shade from small trees, and the thrifty Chinese farmers use a productive tree which is tapped for latex, but it is not related to the rubber tree (Ficus elastica). The latter would completely smother the tea plants. Contrary to the general belief, Ficus elastica does not produce high-quality latex, and there are other plants and trees which supply a purer product.

The golden flowers referred to in the sonnet were a very good form of Camellia *nitidissima (chrysantha)*, which is registered as an endangered species. Even if its habitat is eventually destroyed by the teeming millions of humans in China, it will obviously survive in gardens around the world, but an elephant in a zoo is not the same as an elephant in an African forest.

The "silver" bamboo was covered with a layer of fine white powder, as I discovered when I stumbled and clutched a bamboo stem for support. Some of the powder stuck to my palm, and I found that if I rubbed it off from the stem, the latter was a smooth olive-green. The powder on it gave it a strange and beautiful velvet-soft silvery appearance.

The persecution of rhinoceroses goes

back to the dawn of history, when stoneage men hunted the woolly rhinoceros for food. But at least they had a sensible motive for the killing, unlike modern oriental men, with his idiotic superstition that powdered rhinoceros horn is an aphrodisiac or a medicine.

The dragons really did exist. Survivors from the prehistoric past, they have been compared with the huge carnivorous dinosaurs, with which they were contemporary. The only surviving species is the smaller Komodo dragon, which is about the size of a crocodile. The Curator of the reptile house in the London Zoo described two captive specimens as being extremely powerful, intelligent, and having a regal bearing. They resemble a giant monitor lizard with a shorter tail, and are capable of killing and devouring a man.

They are few in number, and declining, because of the persistent hunting of their main food, deer and wild pig. The elimination of food supply or habitat by man has caused innumerable species to become extinct.

The myth of dragons breathing fire arose from the large bright red mouth opening frequently, to allow the long yellow forked tongue to flicker from the mouth like a yellow flame. In the mood of panic which one of these monsters approaching would engender, one can understand how the fire-breathing myth arose.

The survival of Camellia *nitidissima* in the bamboo is very surprising, as bamboos have powerful root-systems, and large species tend to smother out smaller plants. Perhaps we should revise our ideas concerning yellow camellias and not coddle them in any way (other than by providing shade and protection from frost).

Those who made the long journey to China received a poor reward for their effort, as very little new material was released to the delegates. I did obtain one plant, of a camellia labelled Camellia *phaeopubipetala*, which is supposed to have more petals. It is doubtful whether it is any better than the types we have already, and whether it will help us to breed better yellow camellias remain to be seen.

Camellias At The Cape - The First Century, 1790-1900

J. P. Rourke, South Africa

CAMELIAS AU CAP-LE PREMIER SIECLE, 1790-1900

KAMELIEN AM KAP-DAS ERSTE JAHRHUNDERT, 1790-1900

CAMELIAS EN EL CABO—EL SIGLO PRIMERO - 1790-1900

CAMELIE NEL CAPO - IL SECOLO PRIMARIO, 1790-1900

The first Camellias to be grown in sub-Saharan Africa were planted in the gardens of Cape Town during the closing years of the 18th century, from where they were gradually introduced to various parts of the western Cape and eventually to other provinces like Natal. Despite a dearth of archival or documentary evidence I have attempted to reconstruct the story of Camellia culture in this region at least up until 1900. Developments after 1900 will have to be considered at a later stage and are beyond the scope of this contribution.

INTRODUCTION

Cape Town, at the southern tip of Africa has been one of the cross roads of world shipping ever since the Dutch East India Company established a refreshment station there in 1652. But it remained a small, rather impoverished settlement for the first 200 years of its history and although a great many vessels passed through Table Bay, especially from 1700, most of the desirable oriental merchandise being transported from East to West - including plants - was destined for more affluent customers in Western Europe rather than the humble burghers of the Cape. Indeed, until the opening of the Suez Canal in 1869 all live Camellia plants imported into Western Europe from China or Japan were transported via the Cape - yet relatively few seem to have been landed on our shores. Those that did reach us were mainly re-imported from European nurseries.

Various callers at the Cape made lists of exotic plants that had been introduced to the fledgling colony. Among the most reliable was that compiled by the Swedish botanist Carl Peter Thunberg who enumerated the exotic species he had observed between 1772 and 1775 (Thunberg 1823). Several genera of Chinese origin like *Citrus* and *Gardenia* were listed but no mention is made of any *Camellia* species. Had they been growing in Cape gardens by 1775 I am sure Thunberg would have mentioned them.

It was not until 1810 when the celebrated English botanist and explorer William John Burchell arrived in Table Bay that any mention is made of Camellias. Commenting on the local gardens in and around Cape Town, Burchell remarked: "A few exotics have, from time to time, been introduced" and proceeded to list about some fairly common garden plants including *Camellia japonica* (Burchell 1822). As it was December (the southern hemisphere summer) none were flowering but the shrubs must have been sufficiently large for Burchell to have noticed them. We can deduce therefore that the first Camellias to be grown at the Cape were *Camellia japonica* and that they were introduced between Thunberg's departure in 1775 and Burchell's arrival in 1810 - in all probability sometime in the 1790's.

Although there are no documentary records revealing the identity of these first *Camellia japonica* cultivars in Cape gardens, circumstantial evidence in the form of surviving old plants in historic gardens suggests that among these early introductions were a single red and the formal double white 'Alba Plena'. The single red was not unlike that featured in Curtis's Botanical Magazine in 1788 and is possibly the same as that grown by Lord Petre at Thorden Hall, Essex as early as 1739. However, 'Alba Plena' was by far the most widely planted. There are

innumerable old specimens some of them well in excess of 35 ft. tall still growing in the grounds of the late 18th and early 19th century homes around the Cape Peninsula.

The mid-19th Century

After Burchell had left the Cape there is no further evidence of any significant Camellia importations until the early 1830's when Baron Carl Fredinand von Ludwig, a native of Württemburg who had settled in Cape Town, began importing Camellia plants and other exotics to stock his private botanic garden.

This garden of three acres in extent, known as "Ludwigsburg", was situated in Kloof Rd., on the south side of Lion's Head about one mile from the centre of Cape Town (Bradlow 1965). In 1834, four years after he had purchased the property, the *Cape of Good Hope Literary Gazette* for January 1834 published a list of 40 new exotic genera which had recently been imported and established in the garden. These included "18 varieties of *Camellia japonica"* but unfortunately no cultivar names were given. A further report published nine years later tells us that the garden contained "the most rare and remarkable trees and shrubs" including "a splendid collection of *Camellia japonicas* and in daily expectation of 40 or 50 varieties of the same from England". (Sam Sly's Journal, 12 October 1843). Again no cultivar names are given. Equally regrettable is the fact that the supplying nurseries are not listed either.

After Von Ludwig's death in 1847 the garden was sold, subdivided into building sites and absorbed by the rapidly expanding city. Many of the container grown shrubs were also sold. Thus although the original plantings made by Von Ludwig are no more, they served as a source of propagating material. Indeed, many of the old Camellias still growing in the western Cape are probably derived from the material imported by Baron von Ludwig. Cultivars like 'Elegans' (1831) and Donckelarii (1834) seem to date from this period.

We may also be fairly certain that from the early 1800's Camellias were being planted in the Old Company's garden in central Cape Town. This is the garden that Jan van Riebeeck, the first Dutch commander of the cape, had established in April 1652 on instructions from the Dutch East India Company in order to grow fresh produce for the revictualling of passing ships. Under Johan Andreas Auge, Superintendent from 1751 to 1778 the character of the garden was changed from that of a utilitarian market garden to a botanic garden, a process which has continued to the present. In 1858, a real milestone was reached in the garden's history when the curator James McGibbon published a catalogue of plants growing in the garden. McGibbons' catalogue enumerates *Camellia japonica* (presumably the single red), and 14 named cultivars which he incorrectly lists as hybrids. These were: *Anemonaeflora, Blanda, Modesta, Althaeflora, Wellbankiana, Donckelarii, Rubra plena, Curvatifolia, Picta, Leysanthe, Fimbriata, Chandleri* and *Nitida.* Here for the first time we have authoritative evidence documenting actual cultivars which were established and growing in the Company's garden by the middle of the 19th century. Since McGibbons' list was published in 1858, many modifications have been made to the garden. From about 1880 much of the old Company's garden was sacrificed for the building of the houses of Parliament, the National Gallery and the South African Museum. Today, sadly, it is impossible to find any old specimens of the cultivars McGibbon listed. In 1939 when a new inventory of the garden was prepared only three *Camellia japonica* cultivars could be found growing there i.e. Alba Plena, Comte de Gomer and Princesse Bacciocchi.

Among the most widely planted *Camellia japonica* cultivars which appears in early 19th century and Victorian Cape gardens is one which I have not yet positively identified but which in the absence of its correct name I call 'Old Cape Camellia'. A few enormous specimens still survive in very old gardens although two of the biggest at Hawthornedene in Wynberg were recently felled as the estate was subdivided into smaller building sites. A particular feature of this cultivar is that it develops massive trunks. I have measured several well in excess of 40 ft. in height with trunk diameters of 3 ft. and even more near ground level. Of the surviving giants, one is in Dorp Street, Stellenbosch, where it was in a part of an old garden but has since been incor-

porated into a university residence. The tree is sufficiently large to provide shade for students' cars. The other, (even taller) is in the grounds of Mount Pleasant House, Newlands, Cape Town and was probably planted by the then owner of the property, Frederick J. Centlivres in about 1860. It continues to grow vigorously bearing a heavy crop of flowers every year. Robust and spreading in its growth, this cultivar produces a profusion of medium sized dusty pink flowers of the anemone type. I have shown slides to experts such as Charles Puddle at Bodnant and the late Prof. E.G. Waterhouse in Sydney as well as live material to Leslie Riggall but no one has yet been able to suggest an identification. One would expect there to be correctly identified specimens of this cultivar growing elsewhere in the world. Could it be *'Rubra Plena'*, one of the oldest Camellias grown in the west, having been brought to England from Japan by Sir Robert Preston in 1794? The description in *"Camellia Nomenclature"* (1981) fits it very well: "Rose red. Medium, semi double to anemone form, spreading growth".

In New Zealand, Col. Tom Durrant has described something rather similar. He believes that the oldest Camellias in New Zealand are two trees growing in the grounds of the Treaty House at Waitangi. Durrant remarks that they are very similar to the "Rose coloured or Middlemists Camellia" illustrated by Clara Maria Pope for Samuel Curtis's *"Monograph on the genus Camellia"* (1819). Having examined Clara Maria Pope's painting of 'Middlemists Camellia', I am inclined to think it is the same as the mysterious "Old Cape Camellia". Perhaps an expert here today can comment on its identity. But whatever this cultivar is called, it is gratifying that there are still some spectacularly large specimens in and around Cape Town which are now probably about 150 years old. If well cared for they may yet survive another century or more.

Another enthusiastic Camellia importer was Ralph Henry Arderne who acquired a large tract of land in the Cape Town suburb of Claremont in 1845. This he named 'The Hill' which was very soon transformed into a private botanic garden. As a timber merchant, Arderne used his shipping contacts to import desirable plant material. A good selection of Camellia japonica cultivars was established at The Hill by the middle of the last century and many are still growing there today. There are some particularly fine old specimens of *C. japonica 'Altheaeflora'; 'Latifolia'* and *'Grand Sultan'*. The Hill was sold by the Ardernes in 1914 and subsequently in about 1926, the Dept. of Parks and Gardens of the Cape Town Municipality acquired the property for public use. The Camellia plants clearly prospered at 'The Hill' in the deep rich soil and moist sheltered environment for in 1902 his son Henry Mathew Arderne noted in a paper to the Horticultural Club that some of the Camellias had attained 30 ft. with a circumference of 75 ft. (Tredgold, 1990)

The late 19th Century

There were also attractive plantings being established in other municipal gardens. In 1893 the Government of the Cape Colony ceded a piece of land on the south side of Wynberg Hill to the Wynberg Municipality which was planted up with trees and shrubs and subsequently became known as Wynberg Park. Some fine old *Camellia japonica* specimens are still growing there which can be reckoned to be perhaps a century old. The prevailing Victorian vogue for formal doubles predominates, Usu-Otome (Pink Perfection) and Alba Plena being particularly successful.

One of the most interesting historic plantings of camellias, now nearly a century old was established by the famous mining magnate and imperialist, Cecil John Rhodes on his estate, Groote Schuur near Cape Town. Rhodes owned the property from July 1894 until his death in 1902. During that time, probably between 1896 and 1898, a formal planting of over 1000 *Camellia japonica* plants was laid out flanking the path leading from Rondebosch to the 18th Century Dutch summer house on what was originally Rustenburg Farm. A double row of Camellia japonicas was set out on either side of this path, eventually diverging in front of the summer house to form a huge semi-circular planting. After Rhodes' death, the portion of the estate with the Camellia walk was ceded to the University of Cape Town where, I am sorry to say, it was shamefully neglected until relatively recently. Just how this Camellia walk

came to be planned, we do not know but there is an apocryphal story about its origin. On being conducted around the estate, his gardener pointed to some Camellia plants and remarked "We have planted a couple of dozen Camellias Mr. Rhodes" whereupon Rhodes is reputed to have retorted, rather peevishly, "Good Heavens man, when will you learn to think in thousands". This comment apparently prompted the planting of the Camellia walk which was hurriedly laid out shortly afterwards.

In many respects it was a poorly selected site, on a very steep rather dry hillside with little or no shade. Moreover, it is situated in a part of the Cape Peninsula which is blasted by both north west gales in winter and south east gales in summer.

A great number of plants have died due mainly to sun scorch, wind damage and drought. The survivors however present us with an interesting picture of the toughest most robust cultivars. Elegans (Chandler 1831), Usu Otome, Nobilissima (1834), Grand Sultan, Gigantea, Alba Plena and an interesting pink and white streaked cultivar which may be Otome Shibori are among the more successful survivors. Many formal doubles which may have been ideal for Victorian Conservatories in England have fared extremely poorly. More than a third of the original planting has died completely and only the stumps can now be seen.

Looking at Camellia Walk today is clear that he was sold a great number of unnamed seedlings as well as named cultivars - probably because the supplying nursery was unable to meet such a large order. No local nursery could possibly have provided so large an order in the 1890's. It is more than likely that the entire consignment was imported from a large firm of British nurserymen but this must remain speculation as no accounts seem to have survived in the archival records.

CONCLUSION

In reviewing early attempts to grow Camellias at the Cape several trends became apparent; trends which indicate that by 1900 and even up until the 1960's we seriously lagged behind the advances in Camellia culture being made in other parts of the world. Right up until the middle of the present century only *Camellia japonica* was cultivated. It was not until after 1950 that *Camellia sasanqua, C. reticulata* and some of the modern hybrids were introduced. This is in stark contrast to what our southern neighbours in Australia and New Zealand were doing. Also, unlike the Macarthurs of Camden Park, Australia, no local grower seems to have attempted to experiment with raising new cultivars from seed or undertake any breeding during the 19th century. Moreover, it should be stressed that Camellias were valued exclusively as ornamental garden shrubs. The tradition of growing Camellias for individual show blooms as is frequent in the U.S.A., never developed here. Although we experience an equable maritime climate without frosts or extremes of temperature there are other serious limiting factors such as our light, sandy, nutrient impoverished soils, our mediterranean climatic conditions with long dry summers and fierce dessicating winds during the phase of maximum vegetative growth. We can safely say that the general environment of the Cape quickly weeds out all but the most robust cultivars, robust that is, in terms of sun tolerance, drought and wind resistance. What emerges from this century long trial is a clear indication of which old fashioned cultivars have survived best and are still worth cultivating in the western Cape. In my opinion pride of place goes to Alfred Chandler's classic Camellia 'Elegans' bred in 1831 followed by *Adolphe Audusson, Donckelarii, Alba Plena, Nobilissma, Grand Sultan, Usu-Otome, Latifolia* and the mysterious pink Anemone form Camellia. There are splendid old specimens of some of these cultivars still growing in Cape gardens which are now between 100 and 150 years old. The test of time is a very rigorous one and despite the breathtaking creations of modern plant breeders it is as well to pause occasionally, reflect and salute the achievements of the past.

My Life With Camellias

Leslie Riggall, So. Africa

MA VIE AVEC LES CAMELIAS

MEIN LEBEN MIT KAMELIEN

MI VIDA CON LAS CAMELIAS

MIA VITA CON LE CAMELIE

This story begins with my honeymoon. We married when the World War finished, and I had bought a house in Surrey, England with a five acre (2 Hectare) garden cultivated by an employed professional gardener.

I had never owned or experienced any garden and knew nothing about horticulture. However during our courtship, Gladys had a war-time job with an aircraft firm, which had taken over an estate containing magnificent rhododendrons. She was already a keen gardener, and showed them to me, and I was astonished and fascinated by these splendid flowering plants towering above me.

We ferried a car over the Channel, and drove through France and Italy for our honeymoon. I was again fascinated by a palm tree outside a hotel window, as I had never seen one before in a garden. And I was entranced by a fine flaming display of Pyrostegia venusta in Sorrento, which in those days was a quiet, beautiful, and very romantic place.

I knew I could not grow such plants, but the effect was very important, because I was now hooked on horticulture for life. When we returned through Paris, we visited a flower market there, and I made my first purchase of plants for my garden, five camellias. They were very strong plants, having been pruned back in the French style each year for seven years, before being sent to market.

The astonishing fact about these fine Camellias was the price. In England everyone had been growing food, and such ornamental plants were simply not available. If such a plant had been available it would have commanded a price of something like £30, which was a lot of money in those days. I bought these Camellias for the equivalent of 40 pence each, and it is a mystery how they could have been sold at such a price.

We were driving a roomy estate car and the Camellias were in full view on top of everything else. When we got to Dover we had some problems. The worst was due to the fact that our car had been broken into in Florence, and all our papers were stolen. As I could not prove that I had taken the car out of Britain, the officials would not let me bring it in. Eventually, with the help of the Royal Automobile Club, I solved that problem. But another problem reared its ugly head. In my innocence I knew nothing about Plant Importation Controls, and I was truly dismayed when I learned that the camellias could not enter Britain. I was complaining of my misfortune to the helpful R.A.C. man, and he said he would speak to the Customs Officer. He reported that all would be well, but I should give the Customs man a reward. I was astonished by this, because law-abiding British people would never dream of bribing a Customs Official, and would expect to go to prison if they tried it. I said I could not bring myself to do it, and the R.A.C. man said he would give the money to the official for me. When I asked how much, he said, "Oh, five bob (25 pence) would do!"

This was the foundation of my Camellia collection, and they were planted around the house. Only slow progress was made in this direction until I bought a magnificent garden, thirty acres (12 hectares) comprising the ornamental grounds of Titness Park, near Ascot. There were outstanding conifers and other ornamental trees, superb rhododendrons and a collection of Camellias which included many imported direct from Japan.

I now had acid soil and woodland, favourable for camellias, and my collection grew continuously. The garden was too cold for reticulatas and sasanquas, so I built a large glasshouse which could be heated in cold weather. The results were excellent, but a new problem had arisen under the Labour Government of Harold Wilson. I had to pay a total of income taxes on a large part of my income at the intolerable rate of 136%. This taught me just how ruthlessly Governments exploit their helpless subjects, and I realized that wherever we live our Government is our only real enemy.

With great regret I gave up our lovely garden and emigrated to Portugal, but I was determined not to lose the plants which I had collected at so great an expenditure of time, effort and money, and I took all important shrubs with me, including my collection of Camellias. Those Camellias which were too large to move, I grafted.

The stony shale of the wine-farm I had bought in Portugal proved to be useless for my Camellias and Rhododendrons, and all the plants had to be grown in containers until I could find a suitable property for them. But no proper containers were available in Portugal, and we collected hundreds of make-shift containers, an incredible assortment, from rubbish dumps. One I remember was an antique Victorian style bath which was like a combination of a bath and a high chair. It was usable for a rhododendron, and we would intrigue our visitors by taking them to see, "Mrs. Davies Evans in her bath".

Meanwhile I was seeking a suitable garden for my plants, and eventually I discovered the Quinta de Curvos. In more prosperous times it had been the finest and most famous private garden in Portugal, but this truly spectacular garden had been neglected for thirty years after its creator died. Also in very bad condition was the residence, with hand-carved granite towers in fancy shapes, looking like a Walt Disney creation.

The interior was equally lavish, and included a ballroom with a beautiful sprung floor, and decoration and furniture in the style of Louis XIV. Although I had bought the property at a public auction conducted by the Government, I had to struggle for years to obtain possession of it. I battled for possession against a master criminal named "Falcâo" (The Hawk), who was able to manipulate court officials and judges, and against resentful xenophobic local peasants who used more direct methods such as poisoning my drinking water or cutting the pipes, and when I tried to defend my water, they kidnapped me for a few hours until I was freed by the police. The full story of my struggle will never be told because I do not think it would be believed. My thirteen legal cases included an action in which the Government, probably bamboozled or bribed by Falcâo, contested my ownership of the property which it had publicly sold to me, and another case was a completely fabricated charge that I had assaulted an old woman of 80 and a girl of 21. The unsophisticated peasants of Northern Portugal are brutal, and so the courts deal very severely with a man convicted of assaulting a woman. The idea was to drive me away, leaving them to illegally exploit the ample water, very precious in Portugal, and the vineyards and orchards of Quinta as they had done for 30 years. But I won this case as I did a dozen others, and I continued to restore and develop the famous old garden.

The restoration was a Herculean task. One area was an impenetrable mass of brambles 20 feet high, which we did not clear for several years, because we assumed that there was nothing in that area. But when we did clear it we discovered a beautiful antique-tiled summer-house with toilet, and a round pond which had a fountain fed by gravity pressure from the mountain. When we restored the connections the fountain shot up into the sky so high that it could be seen over a mile (2 Kilometres) away. There were also several grottos, the largest being modelled on that created by mad King Ludwig of Bavaria. It contained stalagmites and stalactites, and colonies of two species of bats.

In the grounds were huge Camellia trees which were as large as any that could be found anywhere in the world. This is a clear indication of how perfect were the conditions for Camellias in this garden, because they were only about 70 years old, and moreover they had never been watered in the dry summers for 30 years, and they were stripped of flowering branches each year for sale in the market. Even palm fronds were mercilessly stripped for religious processions, and my refusal to allow this desecration of the garden to continue baffled the peasants, whose only interest in plants was the money or food they could obtain from them.

I had been assiduously collecting Camellias from every country where Camellias are grown, and this even involved me in the tragedy of communist Vietnam, where I went hopefully, to collect some of the fragrant, and purple, and yellow camellias known to exist there. The regimentation was unbelievable, for example although I carried various horticultural credentials, I was not allowed into any botanic garden, and was carefully supervised every day until 8:30 p.m. Instead of collecting Camellias as I had hoped, I was never allowed even to see one. However the curfew was not until 11:00 p.m., and although it was forbidden for me to speak to Vietnamese people, I used this interval to slip away and make contact with the victims of the regime. The stories they related were heart-rending, and when we left that unhappy country we felt an ineffable sadness. This collecting of camellias was very rewarding, because in the excellent soil imported by the creator of the Quinta, and the warmer climate of Portugal, I could grow all types and species of camellias. Because of these very favourable conditions I thought that my collection could be the best in Europe, and I decided to enter my flowers for the International Exposition in Vigo, Spain. I had accompanied my friend Alfredo Moreira da Silva, of Oporto, the leading nurseryman in Portugal and Spain, to the previous exposition and he had won the Gold Camellia with his exhibit. This coveted award was wrought in gold by Spanish craftsmen and presented by Carmen de Polo Franco, wife of the Spanish President.

I loaded a van with 36 boxes of flowers and off we went, but I had not reckoned with the incredibly obstructive bureaucracy of Portugal, and an obdurate official would not allow me to take the van out of Portugal. We argued for hours and I appealed in the end to his patriotism. I argued that it would be a triumph for Portugal if I could bring back the Gold Camellia from Spain, and only his refusal could stop this, as I had wonderful flowers which had never been seen before in Spain. This intrigued him and he asked to see the flowers. I showed him a box of spectacular reticulatas, and having never seen anything better than old out-dated japonicas before, he was astonished, and waved me straight through the frontier!

The triennial Vigo Exposition used to be a wonderful affair before the socialists obtained power and ruined it. In addition to the Camellia flowers and other exhibits there was a choir, an orchestra, and a full ballet company. The enthusiasm of the thousands who crowded into the stadium was equal to that of a great sporting event, and when I held up the Gold Camellia for photographs the roar of applause was astonishing, and later children asked me for my autograph, as in other countries they do with the heroes of sport.

We won the Gold Camellias three times in succession in Vigo before the strain of living in Portugal became intolerable and we emigrated to South Africa, a country in which we have been happier than anywhere else.

Once again we faced the problem of transporting my collection of plants, which was of course larger and better than before. It was a major operation lasting for two months. The plants were packed in the morning, my wife Gladys drove them to Oporto and dispatched them by the evening. I was collecting the big boxes of plants the following morning at Durban airport. Friends were surprised that I took my plants and stone ornaments for the Japanese Garden, but left all my furniture behind, including a superb Bluthner grand piano. But I could buy furniture in South Africa, whereas I could not replace the plants or the antique Japanese ornaments.

The South African Plant Inspectors are very strict and I had many problems with them. One day they made me soak

all the plants in Kelthane fungicide. I was plunging the plants in the bath all day long, and when I got home in the evening I found that I was poisoned and I felt very ill.

One group of plants was correctly condemned, because nematode infestation was discovered, a pest commonly known as eelworm. But there was another amusing incident when they announced that a microscopic nematode had been found on a plant. As I thought these plants were healthy I queried this, and they allowed me to see it in the microscope. I happened to know that thousands of species of nematodes do not kill plants, but are useful animals which attack harmful soil organisms, or assist the conversion of dead plant material into compost or humus. I took a chance and said, "But this is a beneficial nematode". The laboratory scientist looked at me in surprise and said, "How did you know?"

Some of the restrictions were most unreasonable, for example not a single conifer was allowed in. Strangest of all was the blank refusal to allow in a most valuable magnificent seedless orange which had originated in Barcelona. The great merit of this first-class orange was the fact that it fruited two months before the other oranges. South Africa is a major exporter of oranges and this introduction would have been of great economic importance to South Africa by extending the season for two months.

The good news was that all my hundreds of different varieties of Camellias were allowed in, I continued to increase the collection, and generally speaking they have done well here. Weevils are a problem, eating the leaves and flowers, and in the larval stage feeding on the roots.

The root-rot fungus Phytophthora cinnamomi kills various plants, including even mature avocado pear trees. Our wet warm summer favours this fungus, but we have lost few Camellias from this dangerous disease. And the incidence of this disease has been reduced by using Phytophthora-resistant stocks for grafting. We use "Kanjiro", but most sasanquas and their hybrids are resistant to root-rot. In fact here we find that sasanquas are resistant to nearly every enemy of Camellias, even the weevils never attack them. We use "Kanjiro" because we get almost 100% strike when we set the cuttings, and it has resisted Phytophthora even when deliberately inoculated with it.

After establishing my Camellias here, and having been a member since the early days, I became I.C.S. Director for Africa, and later founded and organized the South African Camellia Society.

My life with Camellias has taken me to many strange places around the world, and favoured me with the friendship of innumerable people in far-away places, whom otherwise I would never have met. The climax was reached when I had the honour and pleasure of entertaining the I.C.S. delegates at Fern Valley. I could never have foreseen or even imagined all this when I, as a complete novice, bought those first five Camellias in a flower-market in Paris.

International Symposium On *C.Chrysantha*

Herb Short, U.K.

SYMPOSIUM INTERNATIONAL DE C. CHRYSANTHA
INTERNATIONALES SYMPOSIUM UEBER DIE C. CHRYSAANTHA
SIMPOSIUM INTERNACIONAL DE LA CAMELIA CHRYSANTHA
IL SIMPOSIO INERNAZIONALE DELLE CHRYSANTHA C.

More than 130 people from 10 countries traveled to Nanning, China, for the International Symposium on Camellia Chrysantha, January 8-11. In addition to providing a platform for discussing a wide range of research on yellow camellias, the symposium presented the rare opportunity to see the yellow species where most of them grow in the wild.

If anyone had doubts about the true beauty of the yellows, considering them mere curiosities for all but the hybridizers, those doubts were swept away by the Nanning conference and the trek into the wilds of Guangxi Zhuang Autonomous Region near the Vietnam border. In their native habitat, the yellows are superior in every way to those grown in captivity. The blooms are larger, richer in color and better in quality.

The symposium was sponsored by the International Camellia Society and the Japan Camellia Society, in conjunction with seven Chinese organizations—the China Society of Forestry, the China Flower Association, the China Society of Environmental Sciences, the Guangxi Association for Science and Technology, The Guangxi Association of Flower and Bonsai, and the Guangxi Society of Environmental Protection.

And while China and Japan each accounted for one-third of the participants, another one-third came from Australia, France, Germany, New Zealand, South Africa, Switzerland, the U.K. and Channel Islands, and the U.S.A., to make it a truly international gathering.

The importance of the symposium to China was underscored by Li Zhengian, Governor of Guangxi, who opened the conference. He extolled his province as the place where the "golden camellia grows." And he said, "We are glad to see that chrysantha has been introduced to the world for further research and development work."

ICS Vice President Mayda Reynolds spoke briefly, thanking our hosts and giving ICS President Thomas Perkins' apologies for not being able to attend because his passport had been lost while applying for a visa.

The difficulties of trying to breed yellow hybrids were brought home by the first paper at the opening session, presented by Professor Chen Junyu of Beijing Forestry University.* Professor Chen summarized 20 years of breeding research in China. Its aims: to produce a series of large, double, yellow-flowered camellias; a series of small, yellow-flowered camellias; and stress-resistant yellow camellias.

The work of breeding began in 1973 at Kunming, where interspecific crosses were made between *C.reticulata, C.pitardii* and *C.japonica* as seed parents and three species of yellows as pollen parents. More than 1,700 flowers were pollinated and over 200 seedlings were obtained, but no yellows flowered.

In 1980, breeding also began at Nanning, using yellow camellias as mother plants. From 1982 to 1990 at Nanning and Changsha, more than 47,000 flowers were pollinated. More than 440 interspecific crosses were made within *C.chrysantha* species. And the number of crosses involving other species reached more than 6,800. Among the most promising first-generation hybrids is one with a reddish purple flower. But there are no yellows.

Although he had not submitted a paper for the conference, Dr. Clifford Parks of the Dept. of Biology at the University of North Carolina, Chapel Hill, North Carolina, U.S.A., gave a brief slide talk on the ease—and difficulties—of making crosses between various camellia species. It was a thumbnail, or perhaps little-fingernail, sketch of his 1990

ICS paper at Maizura, Japan *(International Camellia Journal No. 22, October 1990, p.37).**

Later in the program, Xia Lifang of the Kunming Institute of Botany, Academia Sinica, spoke in detail on the cross-compatibility and inheritance of hybrids in cross-breeding.* She said that the inheritance of plant habit, leaves, floral form, color, scent, etc., is very complicated and still needs more work with back and reciprocal crosses. She also pointed out that while yellow is a dominant character, if genes controlling red and yellow both exist in a plant, red is epistatic, determining the flower color. "Thus, if we want to develop new camellia cultivars with yellow-colored and double flowers through the method of cross-breeding, the deep yellow-colored flower species *C.chrysantha* should be used as one of the parents, and those species with light-colored, or white-colored, flowers as the corresponding parent," she concluded.

Research horticulturalist Dr. William Ackerman of Ashton, Maryland, U.S.A., who had carried out early yellow camellia research before retiring from the National Arboretum in Washington, D.C., made a plea for hybridization work using *C.chrysantha* as the seed parent, which, he said, has generally been overlooked, perhaps because pollen from chrysantha has been more plentiful than seed.* He gave his hypothesis as to why more intense yellow pigments may be transferred from the seed parent, rather than the pollen parent. Unfortunately, he could not be present to discuss his ideas. His paper was read by the author of this article.

In his paper, Tadao Yamaguchi of Ishikawa, Japan, outlined the breeding method for producing his light yellow first-generation hybrids.* He had previously reported on the morphological character of the hybrids in 1990 *(International Camellia Journal, No. 22, 1990, p.58).* And Ikuo Miyajima of Fukuoka, Japan, reported on flower colors and pigments in *C.chrysantha* and its first-generation hybrids.*

Before the meeting ended, Professor Chang Hung Ta of the Dept. of Biology at Sun Yatsen University, Guangzhou (Canton), made an impassioned plea regarding *C.chrysantha* nomenclature. He said that *C.chrysantha* and *C.nitidissima* are synonyms, but that *C.petelotii* is being used incorrectly as a synonym for *C.chrysantha.*

Space does not permit discussing all of the more than 30 papers and presentations that the symposium attracted, but one of the most fascinating was on the taxonomy and medicinal value of chrysantha species. It was submitted by Huang Xiecal of the Guangxi Institute for Drug Control in Nanning.*

Among the paper's many listings: the leaves of *Theopsis chrysantha* Hu — *C.chrysantha* (Hu) Tuyama — are a folk medicine of the Zhuang people in Guangxi. When boiled in water and made into tea, they are used chiefly for sore throat, dysentery, hypertension and prevention of tumors. The leaves contain various trace elements including germanium, zinc, selenium, molybdenum, manganese and vanadium, as well as potassium, calcium and magnesium.

Everyone attending the conference was invited to try Golden Camellia Tea (both regular and instant) and the oil. At least one customer was told that he appeared more youthful with each sip of the oil he took.

Herbal medicine has a long tradition in China and it has been gaining a following in the West. There is no telling whether Golden Camellia products will catch on, but we were told that there is already concern about seed and leaf poaching in chrysantha preserves. Guangxi authorities are trying to encourage businesses to establish their own chrysantha groves.

Oil obtained from a number of camellia species, especially *C.oleifera,* has long been used industrially and in cooking, particularly in southern China. Professor Chang Hung Ta, in his book *Camellias,* translated and augmented by Bruce Bartholomew, points out that the pericarp of the camellia capsules contains tannic acid and is used in adhesives and concrete. He also says camellia leaves contain xanthin, theophylin, theobromin, adenin, theanine, glycoside, oleic acid and esters, and other chemicals that are all important ingredients for the pharmaceutical industry. And one of the symposium excursions was a visit to the nearby Guangxi Academy of Forestry, where a camellia grove of various species was established about 20 years ago for research, mainly in edible oil.*

The grove contains 13 species, including five different group plantings

of *C.oleifera,* by far the most widely grown species for oil. Other group plantings include *C.crapnelliana, C.fluviatilis, C.furfuracea, C.grijsii, C.lapidea, C.longicaudata, C.magnocarpa, C.polyodonta, C.semiserrata, C.vietnamensis, C.villosa* and *C.meiocarpa*. The nomenclature of *C.meiocarpa* is still to be sorted out by the author, as its name does not appear in reference works, such as *The International Camellia Register* and *Camellias.**

Unfortunately, the flowering season was over for some of the species, but *C.crapnelliana, C.fluviatilis, C.grijsii, C.lapidea, C.oleifera, C.polyodonta, C.semiserrata* and *C.vietnamensis* still had sufficient flowers to keep cameras busy. In fact, *C.polyodonta* put on a spectacular show, with its large, silky red, single flowers covering several beautifully shaped trees about 20 feet (6 meters) tall. And *C.crapnelliana* won many hearts with its highly fragrant, large, white, single flowers on trees with soft, velvety red-brown bark.

From a strictly utilitarian standpoint, Li Daomei of the Academy of Forestry noted that *C.fluviatilis* is an excellent species because it is disease free and *C.lapidea* provides very high quality oil.

When the buses returned to the hotel in Nanning after the visit, the inevitable question was asked: "Did you have a good day?" Clifford Parks' response—"Any day that I can see four species I had not seen before is a good day"—said it all.

Another visit, to the Xinzhu Nursery yellow camellia gene bank in Nanning, was interesting, but, perhaps, less satisfactory. The nursery, established 10 years ago to provide plant material for propagation, is said to contain more different yellow camellias than any other place in China and includes species from other countries, as well. But very few camellias were in bloom and, those that were, had only a few, quite small flowers. Also, it was difficult to get good photographs because more plant areas were cordoned off—understandably so, as the large number of visitors could have damaged plants, inadvertently, had roaming been allowed.

Still, seeing *C.fusuensis,* with its stamens turning from yellow to purple as the blooms aged, easily made the visit worthwhile—although some question remains as to exactly the identification of the particular plants that were in bloom.

But everything before January 10 was the buildup, and everything after was the anticlimax. For that was the day of the visit to the Fangcheng Yellow Camellia Preservation Area.

It was a three-hour ride to Fangcheng, a bustling port city about 75 miles (125 km) south of Nanning on the Beibu Gulf (the Gulf of Tonking). There was a police escort with sirens and flashing lights. But even that could not prevent all manner of often startlingly overloaded vehicles, and a quagmire at a major road junction, from impeding the progress of our convoy of a dozen small buses. It was the dry season and all of China seemed covered with dust, not helped by the brick factories every few miles along the way. The countryside became subtropical, with banana trees, sugar cane and bamboo, and with water buffalo working or lounging in the fields.

After a break at the Nanyuan Hotel in Fangcheng, it took another hour to reach the camellia preservation area, some 20 miles (about 35 km) to the west and only about 15 miles (25 km) from the Vietnam border. Tea plants on terraces were still carrying some of their small, white flowers, and the country became more rugged as we climbed into the foothills of Shiwan Dashan, the Shiwan Mountains.

Following a generous box lunch eaten on the grounds at the Shangyue conservation area office, we headed for the preservation areas. Because of the size of the party, we were split into two groups—the Japanese and a few Chinese went to the *C.euphlebia* area, while the rest went to the *C.chrysantha* area. We all found out later that the euphlebia, unfortunately, were not quite in bloom.

Our group was much luckier than the Japanese — but only after almost half an hour of trekking along dikes that crossed dried up rice paddies, fording dried up streams, and traversing some difficult terrain for the older members of our group. Then, in a stand of bamboo and other monsoon rain-forest trees near the edge of a rice paddy, deep golden splotches of chrysantha blooms shone brilliantly among the dark green leaves.

In numbers, they could not match the show put on by heavily laden japonicas and reticulatas during a camellia season. But in their way, they were just as arrestingly beautiful. And there was no ques-

tion that they were more than a match for the few greenhouse rarities, which is all that most of us had seen of chrysanthas until then.

It is doubtful that we saw any as large as the 6.5 cm (about 2.5 inches) they are said to grow to — although there were certainly some that were at least 5 cm. or 2 inches across. And with their tendency to hang downward, they often presented themselves as small, golden bells. The sight of an occasional spray will always remain a treasured memory.

It is no wonder that the nearby farmer has some chrysanthas growing in pots by his wall. It is also no wonder that the chrysantha waited so long for discovery by the outside world. Without a special quest, that remote area near the Vietnam border is seldom traveled by outsiders. Even in Guangxi's capital, Nanning, the Westener remains a curiosity.

But just how special are the conditions in Guangxi that give the chrysantha its true wild beauty? Professor Li Xiang Dong and Huang Bo of Guangxi Agricultural University's Forestry College outlined them in their symposium paper on Jin-Hua-Cha, the golden camellia, in Fangcheng.*

Plants are found at an elevation of less than 700 meters (2,300 ft.) on the south and east of Shiwan Mountain, sheltered from cold in winter. As recorded at the area's meteorological stations, the average temperature is more than 22°C (71°F). The lowest temperature is 3°-5°C (37°-41°F) and there is no frost. The coldest month is January with an average temperature above 15°C (29°F). The hottest month is July with an average temperature of 28°C (82°F).

But Li and Huang say that the plants are distributed mainly on the sides of gullies, where cold air can collect because there is less sun. So there is an occasional frost not recorded by the meterological stations. And the chrysanthas do endure 0°C (32°F) for brief periods.

(Privately, some of our hosts mentioned that cold-tolerant yellows have been found in the mountainous northwest border area. But they would not say more.)

Average yearly rainfall is more than 2,800 mm (110 inches) and can reach more than 3,800 mm (150 inches). It rains every day during the rainy season from May to October, but can be clear and dry from November to April, when the lowest monthly rainfall is 30-40 mm (1.2-1.6 inches). Relative humidity is high, and can be as high as 80%, even in the driest month of January. Li and Huang also point out that, because the plants tend to grow on the sides of gullies, the actual humidity can be higher than that recorded.

Sunshine is abundant: more than 1,800 hours per year. But chrysantha is in the shade of other plants in all cases and does not receive irradiation from direct sunlight. Li and Huang say that chrysantha still grows well when the light is 100-150 Lux (lumens per sq. meter) at noon, but if the plant receives direct sunlight, leaves become small, thick and appear burnt, and some branches die off.

The three yellow species *(chrysantha, euphlebia* and *tunghinensis)* that grow in the Fangcheng area are all in acid soil (pH 4.36-6.07, according to Xia Lifang). The soil is sandy loam, thin with many stones. It fills with water, has abundant organic material, but is poor in nutrients. The physiochemical properties in the chrysantha locality are: 33.0 ppm NH^4 - N, 4.12 ppm NO^3 - N, 1.03 ppm quick-acting phosphorus, 41.24 ppm quick-acting potassium and 6.32% organic material to a soil depth of 5 cm; and 24.7 ppm NH^4 - N, 0.82 ppm NO^3 - N, 0.82 ppm quick-acting phosphorus, 30.93 ppm quick-acting potassium and 2.66% organic material from a soil depth of 5 to 20 cm.

Plants and seeds were sold on the last afternoon of the symposium, but the Chinese government still has tight restrictions on what is available. And prices seemed high. For instance, a packet of 10 seeds of *C.chrysantha* (Hu) Tuyama or *C.chrysantha* (Hu) Tuyama forma *longistyla* (the only species for sale) was priced at US$20. Still, many of the seeds were sprouting before they arrived at their new homes, making some purchasers feel a bit better about the price they had paid.

At the closing banquet, after excellent food and the usual speeches, we learned that many of our hosts, in addition to loving camellias, love to sing and have excellent voices. It gave a special touch to the festivities.

And in the chilly, gray dawn, as various groups departed the following morning, there was a realization that many warm friendships had been made

as a result of the golden camellia. There was also a realization as to just how helpful and kind our hosts had been. Most of us will long remember the young Chinese woman who helped, pushed, pulled and boosted our ICS past-president, Vi Lort-Phillips, every step of the rugged way out to the Fangcheng yellow camellia preserve. And most of us will never forget the many hours our hosts spent sorting out money problems that resulted from the Chinese government changing the foreign exchange rate just before we arrived.

Some of us will also never forget the little Chinese girls running after us in Nanning, shouting, "I love you, I love you, I love you" — probably the only English words they knew. And we left our hosts wishing we could have found words in Chinese as touchingly appropriate for the occasion.

NOTE: The Chinese practice of giving the family name first, followed by the given name, has been used in the text for Chinese names only.

*References:

a. Collected Papers, International Symposium on *C.Chrysantha*, Nanning, P.R. China, 8-11 January 1994. November 18, 1993. Compiled by the Compilatory Group of Academic Committee. They include —

1. Cheng, J., Chen, J. and Zhao, S. Research in breeding of yellow camellias—A sum-up report.

2. Xia, L. Studies on cross-compatibility and inheritance in cross-breeding camellias.

3. Ackerman, W.L. A different approach in the hybridization of Camellia nitidissima *(C.chrysantha).*

4. Yamaguchi, T. Study on breeding method of F^1 Camellia chrysantha.

5. Huang, X. The taxonomy and medicinal value of the medicinal plants of the Sect. Chrysantha of camellia in China.

6. Li, X., Huang, B. A preliminary study of Jin-Hua-Cha in Fangcheng.

(Note: Miyajima, I. Flower colors and pigments in Camellia chrysantha and its F^1 hybrids. This paper is not included in the Collected Papers.)

b. *International Camellia Journal* No. 22, October 1990.

c. Chang, Hung Ta and Bartholomew, Bruce. 1984. *Camellias*. Beaverton, OR, USA: Timber Press.

d. Savige, Thomas J. 1993. *The International Camellia Register*. International Camellia Society.

Opening Address Li Zhengian, Gov. of Guangxi

Opening Conference - Mayda Reyonlds

Trip to Yellow Camellia Preservation area

Yellow Camellia Preservation area - Lu Tianling & Mayda Reynolds

C. brysantha

Group visiting camellia species grown for oil

Petal Blight Reaches New Zealand

Richard Clere, New Zealand

LA NIELLE DES PETALES ATTEINT LA NOUVELLE-ZELANDE

PILZBEFALL JETZT AUCH IN NEU SEELAND

LA ROYA DEL PETALO EN NEUVA ZELANDIA

LA PESTE DEL PETALO ARRIVA IN NEUVA ZELANDIA

Early pioneers to New Zealand introduced into a country almost totally free of any grazing animals such species as rabbits, deer, wallabies and opossums as a ready source of food and skins. Having no natural predators to control their numbers they soon became unwanted pests taking thousands of dollars to keep numbers in check. Similarly many plants such as blackberry, gorse and broom were introduced, only to become noxious weeds, such was the favourable growing conditions.

As an agricultural country depending on our overseas image of a clean, green, nuclear free land to assist our many exports, it is imperative that the errors of our forebears are not replaced. Visitors and even residents of N.Z. are often annoyed at the strict measures adopted by the Agricultural Departments to guard against any importation of undesirable plants, animals, birds, insects or blights and yet, in spite of all precautions, Camellia Petal Blight has sneaked through and established a foothold in the capital city, Wellington.

How did it manage to do this? Most of our camellia growers have been regaled with the horrors of having petal blight to combat and articles on the subject have appeared from time to time in our journals and I am sure no one would have been so silly as to try and bring into the country a plant from a source where petal blight is prevalent. One can only think that a visitor from Japan or the United States or a N.Z.'er returning home came into the country with some soil attached to their footwear from whence it escaped into a local garden.

The first warning of the prevalence came after the National Show and Convention held in Wanganui in 1993. Mr. & Mrs. Phillip Pearson, prominent camellia personalities and growers of Wellington arrived at the Show with boxes of their choice blooms picked to be at their peak when the judging began. On opening the carrying boxes bloom after bloom was showing unsightly brown blotches. Immediately thinking that they had been damaged in transit they withdrew from all the classes they had entered for and disposed of the flowers. On returning home after the Convention and viewing the camellias in their garden the Pearsons realized that something was seriously amiss with the flowers on their camellias bushes. Specimens were sent to the experts on plant diseases and the verdict came back—Ciborinia camelliae, the dreaded PETAL BLIGHT.

Sasanquas In New Zealand

by
Jim Hansen, New Zealand

LES SASANQUAS EN NOUVELLE-ZELANDE

SASANQUAS IN NEU SEELAND

SASANQUAS EN NUEVA ZELANDIA

LE-SASANQUAS IN NUECA ZELANDIA

I feel that perhaps, in the past, the tendency in New Zealand has been to overlook *sasanquas* when selecting camellias for the home garden. The inclination has been to favour the *japonicas, reticulatas* and *hybrids* with their larger, more spectacular blooms. However, there are signs of change with more interest becoming apparent in the smaller flowered camellias and this would seem to include an increased interest in *sasanquas*.

Sasanquas have much going for them and it is well worthwhile growing a few of them to complement the other later flowering types. They are the first camellias to bloom each season starting in New Zealand to produce flowers early in autumn, providing colour as early as March in the warmer areas, through into winter, by which time the blooms of the other types are appearing. This means that by planting a mixture of *sasanquas, japonicas, reticulatas* and *hybrids* we can have camellias blooming from March/April to October/November - right through the colder months of the year.

The fact that *sasanquas* tolerate full sun and flower better in an open situation is a bonus for gardens that have little or no shade. Their smaller dark green leaves, small to medium flowers ranging in colour from white through pink to burgundy and red, and the fact that they are so floriferous, makes them a very attractive addition to any garden. The spreading habit of most sasanquas makes them ideal plants for espaliering on fences, frames and trellis, and, in New Zealand, we see a number of sasanqua hedges. In Waikanae there are several such hedges, some quite informal with a number of different varieties, others more formal and kept clipped. Yet again varieties with a pendulous growth habit can be used very successfully in hanging baskets. Other varieties have a compact upright habit of growth, and a few make low, dense, compact bushes. This wide habit of growth gives one the opportunity to choose *sasanquas* for a range of situations and helps with landscaping.

There is quite a wide selection of *sasanquas* now available in New Zealand nurseries and I would point out that, for practical reasons, *hiemalis* and *vernalis* are included in the lists. Not many of the plants available originated in New Zealand and of the eight or nine registered, only about three or four appear to be on sale.

'Gay Border' which is a large white, heavily shaded rose-red bloom, single, with bright yellow stamens.

'Gay Sue' with its pink tipped buds opening to a medium sized semi-double white flower with cream anthers.

'Jury's Joy', a delightful semi-double to peony bloom, creamy white at the base deepening to medium pink at the outer edge.

Our nearest neighbour, Australia, has given us a number of good varieties such as: 'Beatrice Emily', 'Bert Jones', 'Jennifer Susan', 'Gwen Pike', 'Lucinda', 'Plantation Pink', 'Queenslander', and from further afield, our American friends have produced such excellent plants as: 'Early Pearly', 'Jean May', 'Rainbow', 'Rosette', 'Sasanqua Compacta', 'Silver Dollar', 'Sparkling Burgundy' (hiemalis), 'Yuletide' (vernalis).

There are also some interesting

sasanqua hybrids grown such as: 'Dream Girl' (*C.sasanqua x C.reticulata*), 'Sugar Dream' (*C.hybrid* 'Dream Girl' *x C.oleifera* 'Jaune'), 'Yoimachi' (*C.sasanqua x C.fraterna*).

The above lists, by no means complete, will give some idea of the many sasanquas available from our New Zealand nurseries.

A New Species Of Camellia From China

by

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UNA NOUVEELLE ESPECE DE CAMELIA DE CHINE

NEUE KAMELIENARTEN AUS CHINA

UNA NUEVA ESPECIE DE CAMELIA DE LA CHINA

UNA NUOVA CLASSE DI CAMEKIE DA CINA

Abstract

In this paper a new species of camellia is reported, i.e. *Camellia tianeensis* S.Y. Liang & Y.T. Luo.

Key Words: Camellia, *Camellia tianeesis.*

Camellia tianeesis S.Y. Liang & Y.T. Luo, sp.nov.

(Subgen. Thea Chang. Sect. Nitidissima Chang. Sect. Nitidissimae Chang).

A species similar to *C.tunghinensis* Chang but differs in that it has larger leaves, 6.6-13.5 (-16.5) cm long by 3.5-6.5 (-8.5) cm wide with multiple lateral nerves, 6-7 pairs, reticulate veins, obscure on upper surface, prominent below, with flowers solitary, buds reddish or crimson becoming pale yellow on opening; pedicels shorter, 5-8 mm long; flowers larger, 4.5-5 cm in diameter; petals in greater number, 7-12; seeds brown to dense yellowish brown, pubescent.

A shrub, evergreen, 1.5-3 m tall, the bark on new growth reddish or crimson while that on the previous years growth is greyish brown to yellowish brown. Foliage is somewhat coriaceous, juvenile leaves reddish or crimson, elliptic, 6.5-13.5 (-16.5) cm long by 3.5-6.5 (-8.5) cm wide; apices acute or acuminate, bases cuneate or wide cuneate, upper surfaces shining intense green (olive-green in the dried state), under surfaces greenish (greyish-green in the dried state), both sides glabrous; 6-7 pair of nerves, impressed on the upper surface, prominent below, venation reticulate, obscure above, prominent below, margins serrulate; petioles 10-18 mm long, green, smooth.

Flowers for the most part solitary, axillary or terminal, buds reddish or crimson, becoming pale yellow on opening, 4.5-5 cm diameter; pedicels 5-8 mm long; bracts 5-6 small, semi-crescent shaped, green, 2-3 mm long, interior, shortly tomentose, silvery, exterior glabrous, persistent; sepals 5, suborbicular, green, 5-7 mm long and 5-8 mm wide, interior shortly tomentose, silvery, exterior glabrous, persistent. Petals 7-12, outermost shortly suborbicular, 11-15 mm long and 10-13 mm wide, exterior glabrous, interior pubescent; innermost, long-elliptic, apices rounded, 18-25 mm long and 15-20 mm wide, glabrous. Stamens numerous, about 170-250, in 4-5 circular rings, filaments glabrous, white; outer with bases joined bowl-shaped for 10-16 mm, interior 11-18 mm long, free to base, anthers, yellowish, elliptical; ovaries sub-globose, 3 mm diameter, glabrous; styles 3, white, free to base, 2-2.1 cm long, glabrous.

Fruit capsules compressed deltoid-globose, 3 cm diameter, apices lightly depressed, basal bracts and sepals persistent, for the most part 3-locule, opening in three valves. Pericarp 1-3 mm thick; 1-2 seeds in each locule, sub-globose or semi-crescent shaped, 10-15 mm diameter, brown or dense yellowish brown, pubescent. Flowers February to March in China.

Guangxi: Taine Xian, in evergreen broad-leaved forest on limestone hills at 350-450 m altitude.

The First Yellow Camellias

by

Thomas J. Savige, International Register for the Genus Camellia.

LE PREMIER CAMELIA JAUNE

DIE ERSTE GELBE KAMELIE

LA PRIMERA CAMELIA AMARILLA

LA PRIMA CAMELIA GIALLA

The history of the yellow camellias is remarkable for the fact that they were virtually ignored for 40 years after they were first reported. In 1910 the first yellow flowering camellias were named and described in the *Flore Générale de Indo-Chine*. This was published 1907-1912, under the direction of M.H. Lecomte, Professor of the Museum of Natural History, Paris, and in it were described by Pitard two yellow camellias. These were *Camellia flava* (Pitard) Sealy and *C.tonkinensis* (Pitard) Cohen-Stuart as *Thea flava* and *T.tonkinensis* respectively. Originally given in French, their descriptions are as follows:

Thea tonkinensis Pitard in Lecomte *Fl. Gén. Indo-Chine* I.343(1910), renamed *Camellia tonkinensis* (Pitard) Cohen-Stuart in *Meded. Proefst. Thee* XL.67(1916).

A shrub, young branches rounded, deep brown becoming clear grey on maturity. Leaves elliptic, rounded at base, apices long pointed, 10-15 mm, somewhat slim, surface smooth, edges obscurely toother, 10-14 cm long x 3.5 cm wide, veins scarcely prominent on both sides; petiole 3-6 mm long, face deeply channelled. Flowers solitary, pedunculate at the ends of branches, the peduncle covered with small bracts, passing imperceptably into sepals, then to petals. Sepals hairy on outer face and petals yellow coloured to the number of 10. Stamens numerous, in a number of series; ovary 3-compartmented with 3 velutinous styles; fruit slightly inclined on a 7 mm long pedicel with persistent sepals; seed capsule trigone, 15 mm high x 24 mm diameter, surmounted by persistent styles, pericarp velutinous on exterior, thick and woody, splitting locularly into 3 parts, opening from the summit; seeds 1 per compartment, 11 mm long x 9 mm wide, sub-rounded, external tegument crusted, adhering to the internal membrane, very thin; cotyledons plane convex, very fleshy, the edges level. One compartment of the capsule is generally sterile. Flowers in November in Northern Hemisphere. Tonkin. Flowered in the valley of Lankok, (Balansa).

Thea flava Pitard in Lecomte, *Fl. Gén. Indo-Chine* I.346(1910) renamed *Camellia flava* (Pitard) Sealy in *Kew Bulletin*, 1949, p.217.

A tree 2-5 m tall, new growth rounded, dark brown, becoming clear grey on maturity. Leaves large, elliptic, 5-15 cm long, rounded base, apices terminating in a long point, 10-20 mm long, glabrous, petiole very short, 2-5 mm long. Flowers solitary, axillary, peduncle 2-4 mm long more or less, with 4-5 bracts, unequal, probably very persistent, pubescent both faces. Petals 10-13, yellow, obovate, unequal, about 12-15 mm long by 10 mm wide, joined at the base for 3-4 mm and forming a tube; stamens numerous, those external joined at their base and to the corolla, those internal, free, filaments glabrous, anthers elliptic, 1.5 mm long, lightly notched at the extremes; ovaries 5-compartmented, very silky hairy, provided with 5 longitudinal sides, 2 mm high x 3 mm wide; styles 5, lightly covered for two-thirds their height with silky hair. Fruit unknown.

Flowers in December and January in Northern Hemisphere.

Tonkin: Latison; V6-xa, Mount Chua-ac. (Bon).

R.C. Rosmann of Boucau, France, whilst travelling in Vietnam in January 1994, at the time of the Nanning Convention, located two interesting yellow camellias. One appears to be *Camellia flava* (Pitard) Sealy as the flowers and leaves closely follow Pitard's original description. The leaves with their long narrow sharply pointed apices are particularly significant in identifying this species. The second plant he located

is much more double with up to 24 petals and it remains to be identified. As Rosmann found it at Cúc Phuong he suggests the name *Camellia cucphuong*.

In *The Supplément a la Flore Générale de L'Indo-chine,* published under the direction of Professor H. Humbert in March 1943 is another yellow flowered camellia. *Thea flueryi* Chevalier in *Bulletin econ. Indo-Chine* XXI.531(1919); renamed *Camellia Flueryi* (A.Chev.) Sealy in *Kew Bulletin,* 1949, p.217.

A shrub or tree, young branches brownish at first but ash grey on maturity. Leaves elliptic, acuminate, base cuneate, mostly 7-11 cm long x 2.5-3.7 cm wide, widely and shallowly sinuate-serrulate, thinly leathery, glabrous, upper surface dark green and smooth, lower surface light green, midrib impressed above, raised with the main nerves, below; petioles 6-10 mm long, glabrous. Flowers perulate, axillary. Perules forming an involucre about 10 mm high at anthesis, from lunate and 3 mm high on outer, to suborbicular and 10 mm long on inner, coriaceous-crustaceous, glabrous on back, densely straw colloured hairy on face. Corolla, 5 petals united to the stamens at base, yellow; petals obovate to oval, 11-15 mm long x 6-10 mm wide, coriaceous with petaline margins, outer hirsute over face, indumentum reduced on remaining petals. Stamens 8-9 mm long, glabrous, very numerous and free to the base. Gynoecium 8.5 mm long, glabrous; ovary subglobose, about 2 mm high; styles 3, free to the base, 6.5 mm long. Seed capsule compressed-rounded, 2.5 cm high x 3.8 cm diameter, grey, brown-furfuraceous.

Flowers in September in the Northern Hemisphere.

Indo-China. Annan: Hon-ba massif in forest at about 1000 m.

Sealy classified this in Section *Heterogenea* while Chang reclassifies it in Section *Corallina*.

In the *Supplément a la Flore Générale de Indo Chine,* 1943, there is a fourth yellow flowered species in *Thea gilberti* A.Chev, originally published in *Bulletin écon. Indoch.* XXI, (1919) p.531. Renamed *Camellia gilbertii* (A.Chev.) Sealy in *Rev. Gen. Camellia* 136, 1958.

A shrub 2-3 m tall, branches thin, 1.5 mm diameter, sparsely pubescent, becoming glabrous with age, bark smooth yellowish grey. Leaves lanceolate, briefly acuminate or shortly caudate, narrowly cuneate at base, 5-10 cm long x 2.5-4 cm wide, almost the same colour on both sides, glabrous; 7-8 lateral nerves each side, at 30° oblique, forming arcs at margins, veinlets obscure in a loose network, margins denticulate; petioles 5-9 mm long, slightly pubescent. Flowers pedunculate, 2 terminal from base of scales, 7-8 mm long; bracts and sepals 6-8, sepals upper, orbicular-reniform, 2.5 mm long. Petals yellow, 4, obovate, 5-6 mm long; stamens 4 mm long, filaments united for 2 mm, fleshy, anthers sub-globose; ovary sub-globose, 3-compartmented; styles 3, joined to form a column; seed capsule small; seeds covered with a rusty tomentum.

Tonkin: Station agric. de Phu-ho, province Phu-tho.

Sealy describes this species in some detail from material collected by Gilbert, du Pasquier and Pételot which show some variability.

The fifth Vietnamese species is *Camellia euphlebia* Merrill (MS) Sealy in *Kew Bulletin* 1949, p.216.

A shrub 2 m or more high; young branches dull purplish brown, becoming greyish on maturity. Leaves broad-elliptic, bluntly acuminate, 11-14 cm long x (4.5)-5-6.4 cm wide, bluntly serrulate, thinly leathery, glabrous, dark green above, light green below, venation impressed above, prominent below; petioles 10-13 mm long. Flowers fragrant, pedicellate, solitary at end of branches. Pedicel and calyx about 11 mm long, pedicel about 5 mm long, with 8 spreading bracteoles; sepals 5, semi-orbicular, unequal, 3-5 mm long, brownish on back, grey-velutinous on face. Corolla about 4 cm long, sulphur yellow, of 8-9 petals; outermost 2 petals transitional to sepals, remaining united with the androecium for up to 10 mm from the base, 2.2-3 cm long x 2.2-2.5 wide. Androecium about 3.6 cm long, outer filaments united for 1.6 cm from the base to form a tube. Gynoecium 4 cm long, glabrous; ovary ovoid, 3 mm high; styles 3, free to base, 3.7 cm long.

Indo-China. Tonkin: Kau Nga Shan and vicinity.

Flowers in December in Northern Hemisphere.

The variety *Camellia euphlebia* var *macrophylla* nominated by Mo & Huang in 1979 has been merged with the species and *C.euphlebia* var *yunnanensis* Wang & Fan has been reclassified as

C.fascicularis Chang.

Three of the above species have been classified in Section *Nitidissima*, the fourth one *C.gilbertii* (A.chev.) Sealy in Section *Brachyandra*, while the fifth one *C.flueryi* A,Chev has been classified in Section *Corallina*. As country borders have no meanings for plants we should expect to find them all over the border in China. This appears to be so as it is reported that the Chinese species *C.longgangensis* var *patens* is the same as *C.flava* and *C.longzhouensis* Luo and *C.xiashiensis* Lang & Deng the same as *C.tonkinensis*.

Camellia flava (Pitard)

Selecting Camellias For Garden Conditions

Clifford R. Parks and Kai Mei Parks, U.S.A.

CHOISIR DES CAMELIAS POUR CHAQUE JARDIN

DIE AUSWAHL VON KAMELIENARTEN FUER DIE VERWENDUNG IN GAERTEN

SELECCIONANDO CAMELIAS SEGUN CONDICIONES DEL JARDIN

LA SELEZIONE DI CAMELIE PER LE CONDIZIONE GIARDINIERE

The genus *Camellia* is composed of more than 200 named species although only about one-quarter to one-third are known in cultivation outside of the native condition. Though many species are cultivated, *Camellia japonica, C.sasanqua* and *C.reticulata* are most widely grown as ornamentals over the warm temperate zones of the world. The species of the genus *Camellia* are nearly unique among woody ornamentals in terms of the enormous floral diversity found, and in addition, camellias would be worth growing as broad-leafed evergreens even if their flowers were inconspicuous. They are tolerant of a wide variety of environmental and climatic conditions but have limitations as any grower knows. Poorly oxygenated soils, scale insects and some fungal diseases are the major problems.

We have been breeding camellias for more than thirty years now, and though we have maintained the same general objectives, our interpretation of these objectives has slowly evolved over this period. We began with the primary goals of cold-hardiness, fragrance and color breaks toward yellow and blue, with our focus of evaluation always the flower. We continue to select for winter hardiness and new colors, but have added the objectives of earliness (or a long season of bloom) and floriferousness. While we remain concerned about the quality of the bloom, now we place more importance on the garden impact of the plant in and out of the flowering condition. This reflects our greater interest in gardens as against greenhouses and shows. Although, out of necessity, we are spending a lot of time and energy on hardiness breeding, our breeding goals involve all aspects of successful garden usage of camellias for mild, as well as cooler areas.

Breeding for Cold Hardiness. We have said and written much about this topic over the years, and here We should like to summarize our current thinking. Hardiness has been demonstrated in three different species of the genus *Camellia — C.japonica, C.oleifera* and *C.sinensis*. Based on our experience, without quantitative data from replicated field trials, the hardiest accessions of each of the three will withstand temperatures to about -25° C (-10° F) with protection from wind exposure. We stressed in an earlier article (Parks and Parks; 1989) the need for reliable field tests of hardiness, but such are still not yet available, so that we must rely on the observations of growers and gardeners, who fortunately have taken very detailed notes in many cases. A brief review of hardiness work being done on the three hardy species follows.

Camellia japonica. This species has an enormous natural range and is very successful, even weedy, in parts of its distribution. It extends from the northern end of Honshu Island near the city of Aomori and the Korean islands near the 38th parallel in the north to Taiwan in the south. Hardiness varies greatly over this range, and individuals from the northern end of the range are often hardier than standard cultivated cultivars of *C.japonica*. Numerous collectors have imported *C.japonica* from the north including Dr. Creech and C. Parks from Honshu and Mr. Barry Yinger and his associates from the northerly Korean islands. The hardiness potential of these collections has been explored to only a

limited degree, but these materials have fared quite well in recent winters, and we have synthesized hybrids between Yinger's importations from Korea and standard *C.japonica* cultivars. The Yinger Korean collection and some individuals from northern Honshu showed little injury in the severe winters of 1983 and 1985 when temperatures dropped to -23°C, but it is essential to expand the winter-hardiness-testing program. There is no doubt that we have a considerable hardiness potential in these wild forms that remained to be explored, and indeed for the coldest areas where camellias might be grown the hardiest selections of *C.japonica* wild forms are worthy of cultivation without improvement by breeding. We are getting reports from gardeners in the northeast that they are enjoying the Korean wild forms in their gardens. The hardy wild forms can be crossed at will with other japonicas and some other species such as *C.saluenensis,* and large hybrid progenies should be generated for field testing. We hope to get into more of this work in the future but time, maintenance and climatic limitations on seed-set complicate this approach. The infrequency and the unpredictability of cold winters require that testing for winter hardiness be done in areas normally colder than central North Carolina. We hope to set up a series of small test plots in the mountains of North Carolina and Virginia—areas generally considered too cold for *Camellia* cultivation.

Much more selection for hardiness has been done with the cultivated *C.japonica* varieties and their hybrids. For decades growers have noted cultivars that bloom more satisfactorily after cold. For many years Mr. Wendell Levi (1971) took meticulous notes on floral performance in his garden, and his published lists provided guidelines still used by gardeners throughout the southeastern United States. Because of different patterns of climate between the Deep South and the Middle Atlantic states, hardiness evaluations done in eastern South Carolina (the site of Levi's garden) are not completely applicable to Washington, DC, for example. Floral performance after brief episodes of *moderate* cold on the South Carolina coastal plain does not always predict performance after a longer period of *severe* cold in Washington, DC. Also, the hardiness of the flower bud is only partially correlated with vegetative hardiness.

When we initiated our breeding work with camellias in 1962, we obtained a list of *C.japonica* cultivars considered by growers to be cold-resistant. We initiated our work by intercrossing these varieties in every combination with the objective of recombining hardiness genes and selecting winter-hardy selections more resistant to cold than were any of the parent cultivars. We worked with camellias for several years before it became apparent that this approach might work, and it took more than 20 years actually to make selections. By the time when we had taken data on hardiness responses for several years, we realized that hardiness is indeed under strong genetic control (see Parks; 1978), and therefore cold-resistant individuals could be identified and propagated. In the early years we worked in southern California, and since we could not test for hardiness, we sent out thousands of our seedlings for hardiness testing, but for the most part, this was a disappointing failure because collaborators simply did not take the kind of comparative data that we had to have to make selections.

After moving to North Carolina in 1967, we set up field-selection trials and took detailed notes, but no significant vegetative injury occurred until 1983 and 1985, when devastating cold fronts moved through our area. It was the -23°C night of January 19, 1985, that killed over 99% of our camellias to the ground and identified substantial hardiness in the small number that survived. These survivors have become the center of our selection efforts among the hybrids between *C.japonica* cultivars. Our best selections are being named the "April Series" because that is when they will flower in cooler Middle Atlantic areas. Our criteria for selection are different from those used for the selection of new *C.japonica* varieties by many others. To be selected, they must have good plant form and be able to be easily propagated by cuttings. The floral display is more important than individual flowers, and heavy bud-set is important because camellias set flower buds more sparingly at the coldest end of their range of cultivation. We are selecting a variety of colors and forms and also looking for

both early - and late-blooming selections. Many gardeners breeding for cold-resistance look only for late-blooming cultivars, but in the Mid-South of the eastern United States, good bloom can occur on early varieties during long mild periods in late winter and late bloom can be truncated by hot weather in late March or early April. It should be noted also that we find that a few blooms in the middle of winter are worth hundreds in middle spring. Below, some of the selections in our April series are described:

'April Rose' ('Berenice Boddy' X 'Kumasaka'; 60-0-22-CF-31), Compact, relatively slow-growing, well-formed plant with rose-red, formal double flowers. It has a heavy bud-set and a medium to late season of bloom. After the severe cold of January 1985, this was the only camellia, among thousands in our collections, to open flowers to any degree, and cold-induced dieback was not recorded on any of the three individuals in our test plots. This cultivar is pictured in Figure 1A.

'April Snow' ('Triphosa' X 'Betty Sheffield Supreme'; 152-I), Compact, medium to slow growth, well-formed plant with white, rose-form double flowers. It has a heavy bud-set and a late season of bloom. Good white-flowered clones have been the most difficult to select from our stocks, but this one has proven itself to be very hardy vegetatively.

'April Tryst' (Open-pollinated; 232-NX), Erect, medium growth rate, well-formed plant with bright red, anemone-form flowers. It has a heavy bud-set and flowers over a long period in the middle of the bloom season. Dense clusters of petaloids are easily damaged by cold in the unopened bud of many varieties; this clone opens flowers of good quality, however, after periods of freezing weather.

'April Dawn' ('Berenice Boddy' X 'Herme'; 60-L-9-CF-29) Erect habit, vigorous growth rate with shades of pink, shell and white variegated (not virus), formal flowers. It has a very heavy bud-set and blooms over a long period from the middle to the late season. The pink to white variegation among the flowers over the whole plant is very interesting.

'April Blush' ('Berenice Boddy' X 'Dr. Tinsley'; 102-F-30-CF-33), Compact, slow-growing plant with shell pink, semi-double flowers. The bud-set is heavy and bloom occurs in the middle of the season. This somewhat slower growing plant will be useful in more confined areas.

'April Remembered' ('Berenice Boddy' X 'Dr. Tinsley'; 102-F-6), Vigorous, faster-growing plant with large, cream to pink shaded, semi-double flowers. The bud set is substantial, and the flowers are produced over a long period from early to late in the season. This selection is slightly larger in all respects and much hardier than its mother, 'Berenice Boddy'. A picture of this selection appears in Figure 1B.

The six selections listed above have been tested to the degree that we have confidence in assigning them cultivar names. There are several more selections with different characteristics that may be named in addition, but they must wait for further observations to be taken.

Camellia oleifera. Although the hardiness of *C.oleifera* had been mentioned for some time, its full potential was first recognized and advocated by Dr. Bill Ackerman (1987) after severe winter weather in the late 70's left a plant at the National Arboretum in Washington, DC, as essentially a lone survivor. Soon after, he noted that hybrids with *C.sasanqua* carried hardiness from *C.oleifera* and had much better garden characteristics than *C.oleifera* alone. Over a period of years, Ackerman generated and tested a large number of *C.sasanqua* (and *C.hiemalis*) hybrids which are now being introduced into gardens in the cooler parts of the camellia belt in the eastern United States. Although we had made *C.sasanqua* X *C.oleifera* hybrids nearly 30 years ago, it was not until the freeze of January 1985 that these hybrids, then more than 15-feet tall, were recognized as significantly hardier than most other camellias. We are testing some of our selections for possible introduction. Among this group we are selecting particularly for earliness and heavy bloom.

The question of "where to go from here," becomes our main consideration in using *C.oleifera* in breeding. We are attempting to backcross *C.sasanqua* X *C.oleifera* hybrids to *C.sasanqua* to improve color and floral form. We are attempting crosses between *C.oleifera* and other species, such as *C.reticulata,*

to improve floral quality in hardy selections. We tend to lose, however, the critical characteristic of earliness in this last group of crosses. *Camellia oleifera* imparts excellent plant hardiness to its hybrid offspring, but bud hardiness in these hybrids is not outstanding. Unlike hardy selections of *C.japonica,* in my experience *C.oleifera* hybrids do not produce undamaged blooms after severe cold despite their excellent vegetative hardiness. Thus, we must have our flowers on these hybrids with *C.oleifera* before the onset of severe cold in early winter. We have not observed hybrids between *C.japonica* and *C.oleifera* which might exhibit better bud hardiness.

The question whether *C.japonica* or *C.oleifera* is the hardier species has not been resolved. The hardiest members of the two species have performed about the same in northern tests. It would be worthwhile to make duplicated field plantings of the hardiest known selections and hybrids of both species in several cold areas at the northern end of the zone of camellia cultivation and observe plant performance over a period of several years. Such a test would be invaluable to gardeners.

Camellia sinensis. The tea species is like *C.japonica* in that it is enormously variable. Its hardiness varies from USDA zone 6 to zone 8. The small-leafed teas that come to us from Japan seem to be more resistant to cold than those with larger foliage. These forms with smaller leaves are being successfully grown as garden plants at the northern edge of the area where camellias are cultivated in the eastern United States. Tea offers less hope for introducing hardiness into hybrids. It can be hybridized with difficulty with *C.japonica* and to a very limited degree with other species, but significant hardiness has not been observed in the offspring that we have generated. It might be worthwhile to explore the possibility of tea hybrids, but, for sure, they cannot be generated in the easy manner of *C.oleifera* hybrids. Nevertheless, some of the teas deserve a place in gardens where only the hardiest camellias will survive.

Breeding for Flower Number. I was impressed with the importance of floral display some time ago when I first worked at Descanso Gardens in southern California. I noticed one Saturday when the garden was busy with visitors that 'Flirtation', a small, single-flowered *C. X williamsii* hybrid, was attracting much more attention than adjacent *C.japonica* cultivars with much grander, but many fewer, flowers. It occurred to me then that the number of flowers, or perhaps we should say the garden impact, has been neglected in camellias.

The trait of heavy bloom, or floriferousness, occurs in many *Camellia* species, even *C.japonica.* Many species in the generic grouping known as *Theopsis* produce very large numbers of flowerbuds, frequently several buds at each leaf node. *Camellia cuspidata, C.fraterna, C.lutchuensis* and *C.rosaeflora* are examples of *Theopsis* species that all flower very heavily. Of these, *C.rosaeflora* is probably a garden hybrid of unknown origin, since it has never been found in the wild condition. *Camellia saluenensis* sets bud very freely and is responsible for the show put on by many of its hybrids with *C.japonica (C. X williamsii* hybrids). With maturity, even *C.chrysantha* sets an abundance of flower buds. By themselves, these free-flowering species may not be showy because the flowers are often small and pale in color; therefore, these should be hybridized with *C.japonica, C.reticulata* or even *C.sasanqua,* to bring improved flower quality, color and form combined with floriferousness to the garden display. Since these are intended for garden use, close attention must be paid to disease resistance and hardiness along with the floral display. Also, since many of these are second generation hybrids (F^2) and advanced generation segregates which may have three species in their ancestry, we observe a large amount of variation in our seedlings and occasionally unique recombinations.

Four different species combinations from this breeding program will be briefly discussed here.

'Isaribi': In 1964 more than 3,000 seeds were collected from the *C.japonica* cultivar 'Berenice Boddy' for a mass selection test for winter hardiness; and as a matter of fact, few hardy seedlings came from this trial. One seedling, however, had much smaller leaves and was very vigorous. The texture suggested a *Theopsis* species as the male parent. The rose-colored, semi-double flowers are produced in such abundance that when in full bloom the floral mass is more sug-

gestive of an azalea or a cherry than of a camellia. This seedling was eventually (about 1978) introduced in Japan and named 'Isaribi' (fishing lights) by Mr. Yoshiaki Andoh of Kobe. I can only guess the male parent of this seedling, but I imagine that the origin of 'Isaribi' is similar to that of *C.rosaeflora* in another garden many years ago.

Rosaeflora Hybrids. Another attempt to produce heavy flowering involved *C.rosaeflora* itself. We started with the cross between *C.saluenensis* and *C.rosaeflora.* The two seedlings that resulted had very fine texture and produced an abundance of tiny, bright pink, flowers. Unfortunately, the hybrid was a rather weak grower and very susceptible to dieback. We next crossed the hybrid with several varieties of *C.japonica* and were surprised to get a heavy seed set. The resulting seedlings were vigorous, highly floriferous and produced miniature flowers in a range of colors from apple-blossom to light red. We have named three of these and are still observing others. Of these 'Japanese Fantasy' (pictured in Figure 2) has single, apple-blossom-colored flowers produced in such abundance that the leaves are mostly covered in full bloom; 'Spring Awakening' has small, double rose-colored flowers also produced in an abundance; 'Bright Eyes' has larger, semi-double flowers in deep rose with very bright yellow centers and is very free-flowering. Of these three, the last, 'Bright Eyes,' favors the *C.japonica* parent much more than do the other two. And, this pattern of diverse variation is to be expected in F^2 families.

Camellia reticulata* X *C. fraterna
Another combination we have worked with is that between *C.reticulata* and *C.fraterna.* These two species are easily hybridized, and the hybrids are quite fertile, so that it is quite easy to generate large progenies. The F^1 and F^2 hybrids are highly variable and often are very attractive; but many, alas, are not especially resistant to cold and are also disturbingly susceptible to dieback. Our efforts with this group, then, are to try to select garden-worthy hybrids with good ornamental traits; consequently, we have discarded many. Now, I field-plant the seedlings and let the North Carolina winters make the first round of selection.

One individual from an open-pollinated F^2 progeny of *C.reticulata* X *C.fraterna* planted in 1976 was noticed to withstand winter cold well as a small plant; in fact, it was more winter-tolerant than either of its species parents (a transgressive segregant!). This selection showed another unusual trait in its flower buds. The cold-hardy flower buds show a deep red color throughout the winter as they expand. The elongating buds look like red candles until the burst of bright, rose-red bloom appears in late winter. The individual flowers are brightly colored, but small and single; the bud set is very heavy, however, and at peak bloom the garden impact is most impressive. This selection is altogether different from either of its species parents and represents a unique recombination of the traits in the parental species. This unnamed selection is pictured in Figures 3A and 3B. This example illustrate how quite different camellias are possible from F^2 interspecific hybrids.

Camellia sasanqua* X *C.fraterna.
Another hybrid with *C.fraterna* that makes a show in the garden is 'Yoi Machi' (named by Mr. Y. Andoh), a combination with *C.sasanqua.* A photograph of 'Yoi Machi' is shown in Figure 4. Unlike the cross with *C.reticulata,* the hybrid between *C.sasanqua* and *C.fraterna* is exceedingly difficult to obtain. As before, *C.fraterna* contributes the trait of very heavy bud-set, and *C.sasanqua* adds floral quality, color and earliness.

Where do we aim from here in this area of breeding for more free-flowering camellias? There are numerous floriferous, but small-flowered, species which have not been used substantially in hybridizing, and their potential contribution is unknown. Consider *Camellia euryoides,* which produces a vast quantity of tiny white flowers and has the smallest leaves of any *Camellia* that we have seen. What would its hybrids look like? Another neglected species is *C.saluenensis.* In our area it is severely damaged by dieback, but resistance is restored in many of its interspecific hybrids, and *C.saluenensis* offers florierousness, color, good plant form, and even some amount of cold-hardiness to its hybrids.

In all of the cases discussed above it is the impact of the plant in the garden that we are searching for. The individual flower is of less importance. Consider the case of the *C.reticulata* X *C.japonica* hybrids. In recent years that cross has

been employed to generate strains with ever more spectacular show flowers. On the other hand, we have been interested in the impact of hybrids of this parentage that bud freely but have simpler flowers. We have planted out a number of hybrids combining *C.reticulata* with *C.japonica* or *C. X williamsii* and selected for hardiness, disease-resistance and garden display. These have single or semi-double flowers in strong red or pink colors and bud freely. The flowers are still on the large side, 3 to 5 inches, and the plants are faster growing than most other camellias. Again, the garden display is impressive. I have seen the more tender show hybrids in gardens in the milder climates of Japan, and the impact is excellent; for us, however, the show hybrids rarely make a garden display as good as the hardier selections of the same parentage.

We have tried to show that, if we select for hardiness, disease-resistance and garden display rather than simply for superior flowers, we can develop a greater diversity of garden camellias, particularly for those areas where temperature does not limit the number of species that we can cultivate out-of-doors.

Earliness or extended season. For the milder areas in which camellias are grown (including Australia, most of Japan, New Zealand, South Africa, southern and eastern China, southern Europe and the southern and western United States) we feel that breeders should concentrate on earliness and a longer season of bloom. From the end of the flowering season of *C.sasanqua* until the beginning of the season for the spring-blooming camellias there is a lag period of one to two months, during which time flowers are few even in milder climates such as California. This is also a season when few other flowers are blooming, and the additional camellias would be particularly welcome. In areas, such as the southeastern United States where flower blight is a severe problem in the late winter and spring, very early varieties will reach full bloom before the onset of the spring-blight infestations. Also, we can extend the fall bloom season to Christmas - by selecting late-blooming varieties and hybrids of the fall-flowering species.

Autumn bloom is a trait that is associated with *C.sasanqua* and its relatives, but numerous other species (many not in cultivation) are also fall-flowering. In terms of breeding for earliness *C.sasanqua* is most useful because it has a high level of diversity in vegetative and floral traits unlike other fall-blooming species. *Camellia japonica* in its wild state has a very extended season of bloom with some individuals coming into full bloom during the period when *C.sasanqua* is at its peak, and earliness can be obtained by using the fall-blooming *C.japonica* cultivars in breeding. Most of our work in breeding for fall-bloom has centered around a crossing program with *C.sasanqua,* and that crossing program is reviewed elsewhere (Parks 1982). We have concentrated on *C.sasanqua* in this program because it offers better floral traits of color and form and plant characteristics than other fall-blooming species, such as *C.oleifera. Camellia crapnelliana* and its associated varieties (or species), *C.gigantocarpa* and *C.octapetala,* offer excellent floral and plant traits. Indeed, *C.octapetala* has large, pale yellow flowers. However, *C.crapnelliana* and its relatives are very distantly related to other *Camellia* species, and we know of no documented successful cross between any of these and other *Camellia* species. Even grafts are difficult, if not impossible, between these and other *Camellia* species. Consequently, we can grow only *C.crapnelliana* and its relatives (all three considered one species by Chang, 1981) as they exist as species; it seems, however, that we cannot recombine them in hybrids.

In breeding *C.sasanqua* hybrids, we have to select for disease-resistance since seedlings are variably susceptible to both dieback and leaf-gall *(Exobasidium).* Hardiness is important if we are selecting for early or middle fall bloom; but, if we are selecting for winter bloom, we are not concerned about hardiness because none of the mid-winter blooming *C.sasanqua* hybrids have good bud-hardiness and thus should never be planted in the colder areas where camellias can be grown.

For late fall to middle winter flowers perhaps the best hybrid combination is that between *C.sasanqua* and *C.reticulata.* Mr. Howard Asper (1960) was the first to make these hybrids, and his three well known cultivars have become known as Asper's girls. We synthesized a number of hybrids of this combination in the mid-60's. We have not explored this

hybrid combination further since it is marginally useful out-of-doors in North Carolina. However, because both parent species are rich in genetic variation, the hybrids produced vary in every trait from hardiness to floral color and form. One particularly early selection with large, single flowers was introduced in Japan as 'China Girl' by Mr. Y. Andoh.

The *C.sasanqua* X *C.reticulata* hybrids flower from November to January, but buds are damaged by temperatures lower than -5°C, so that in central North Carolina we usually experience good bloom only in November to early December; the most recent three winters, however, have been very mild, and we have had superb displays on these plants. The plant-hardiness is to the warmer end of zone 7 (7B) with wind protection. The flower size varies greatly but is often up to 6 inches (15 cm), and the flower colors range from pale to intense pinks even to rose colors. A wide range of floral forms is produced. Due to the *C.sasanqua* parentage, they bud more freely than do their *C.reticulata* parents. Plant texture is variable but closer to *C.reticulata* usually; the form of the plants, however, is superior to that of *C.reticulata*.

Why are such showy hybrids not being vigorously developed? Despite their value as a garden plant, the big flowers are, like their *C.sasanqua* parents, fragile, and difficult to show. Nevertheless, this hybrid combination is in the garden perhaps one of the most spectacular camellias that can be grown, and we believe it to be, sadly, neglected by gardeners and growers. It is best for areas with mild winters. There should be a breeding program undertaken to hybridize our best *C.sasanqua* and *C.reticulata* cultivars, with the goal of developing a wide range colors, forms and plant textures in this hybrid combination. It may be possible to augment hardiness by combining *C.reticulata* with *C.oleifera,* rather than *C.sasanqua*.

Because of hardiness considerations in North Carolina, we must have earliness, so that, rather than breed the *C.sasanqua* X *C.reticulata* F^1s, we have concentrated on backcrossing our hybrids to *C.sasanqua,* to develop showier flowers that bloom earlier, and this program has progressed well. This work has been described elsewhere (Parks, 1982). The seed-set is low in both hybrid and backcross combinations, but enough hybrids can be synthesized with repeated efforts to produce a large hybrid population for selection. Happily, a significant proportion of the hybrids and the backcrosses are vigorous or even highly vigorous.

When thinking about bloom in middle winter, the question of hybrids between *Camellia sasanqua* and *C.japonica* comes up. The F^1 hybrids are most difficult to synthesize, but there are ways to get around this problem. The collection of late fall to winter blooming sasanqua-like plants known as *C.vernalis* has been shown beyond a reasonable doubt to be (Tanaka, 1987) a group of hybrids and backcrosses (some ancient) between these two species. A wide variety of rare *C. X vernalis* cultivars is available in Japan, but only a few are known in other camellia-growing areas. The *C. X vernalis* hybrids can be hybridized (with some difficulty) with either putative parent species, and thus it is possible to widen diversity and upgrade this group by hybridization. Another way to recombine traits in *C.sasanqua* and *C.japonica* is by crossing *C.sasanqua* with *C. X williamsii*. This hybrid can be made only with difficulty, but the three-species hybrid can be very showy. One of these that we have made is named 'Christmas Rose' because of floral form, color and season of bloom. The flower and plant of 'Christmas Rose' are pictured in Figures 5A and 5B.

The hybrids between *C.sasanqua* and *C.japonica* or *C.saluenensis* are vegetatively as hardy as, or sometimes more so than, the *C.sasanqua* parent; they have, however, the flower-bud tenderness of all hybrids with *C.sasanqua*. The buds on these can take a little more cold than the *C.sasanqua* X *C.reticulata* hybrids, but there is severe bud injury from temperatures below -10°C (14°F) and for some cultivars below -6°C (20°F). During the last three mild winters the *C.vernalis* group and our 'Christmas Rose' hybrid have made excellent displays in middle winter (December to January); but in previous colder years the display was mostly limited to late November and early December. Some of these varieties are relatively early and, as with *C.vernalis* 'Egao', make a dependable display in November. The *C.XC.vernalis* cultivars should be tested and used more widely over the camellia-growing areas of the

world. It would certainly be worthwhile to make more crosses between *C.sasanqua* and *C. X williamsii,* although the breeder will have to be patient because the seed set from this three-way cross is very low.

The possibilities of hybrids between *C.sasanqua* and the wide range of other *Camellia* species remain mostly unexplored. Crosses between *C.sasanqua* and the large number of species in the section *Theopsis* (i.e. *C.cuspidata, C.rosaeflora, C.fraterna,* etc.) have mostly not been attempted. We have made a limited effort to cross *C.sasanqua* with *C.chrysantha,* but so far have obtained no viable seeds. Our crosses between *C.sasanqua* and/or *C.oleifera* and the tea group produced extremely weak, inviable seedlings that did not develop normal roots, but a vigorous spontaneous hybrid between tea and *C.sasanqua* has been found in Japan, to indicate that this hybrid is possible.

Looking for the Color Break. When we first began work with camellias, we were told that we should endeavor to breed yellow and blue camellias to expand the garden fare. At that time our only possibility of yellow was to increase pigmentation by recombining faint yellow tinges found in some cultivars of *C.japonica*. Dr. Walter Homeyer of Macon, Georgia, USA, has worked tirelessly at this approach, and he has made significant progress - recognized in his pale-yellow cultivar, 'Dahloghnega.' We have tried a number of interspecific combinations to develop yellow (Parks and Scogin, 1987), but none of these have yet produced encouraging results. The yellow-flowered species, *C.chrysantha,* and its close relatives, clearly offer us the best chance of developing yellow hybrids; nearly all F^1 hybrids with the yellow camellias have produced, unfortunately, non-yellow flowers. Some hybrids made by a Japanese worker (Yamaguchi, 1990) between *C.japonica* and *C.chrysantha* are the exception, with yellowish flowers.

Is there any way to transfer the yellow of the tender species *C.chrysantha* to horticulturally improved hybrids? Since the yellow trait behaves as a recessive, we should be able to select it out by generating F^2 hybrids from crosses between different F^1 hybrids. The problem with this approach is the sterility of the F^1 hybrids; we have, however, been to generate a few F^2s by this method. Another approach that should yield yellow offspring would involve backcrossing vigorous large-flowered *C.chrysantha* hybrids back to the *C.chrysantha* parent. We have no doubt that fully yellow hybrids eventually will be produced by hybridization with the *C.chrysantha* group, but we are not there yet.

As for blue shades, the quest has not progressed very far. There are reputed to be purple-flowered *Camellia* species in Asia, but these are not yet available for our work. Our efforts have centered on the development of *C.saluenensis* hybrids and backcrosses which produce lavender-pink shades. As soon as we obtain germplasm of the purple-flowered *Camellia amplexicaulis,* perhaps we can pursue this objective more vigorously.

Conclusions

In this summary of our breeding efforts, we have attempted to outline our approach to developing camellias for garden culture. Our general objectives include hardiness, floriferousness, early bloom and new flower colors. There are three species that currently are being used to develop hardier cultivars, *C.japonica, C.oleifera,* and *C.sinensis. Camellia japonica* is our source for the spring-flowering forms, while *C.oleifera* is our best source of hardiness for the autumn-blooming varieties. *Camellia sinensis* is hardy but less useful as a parent for interspecific breeding. We are taking several different approaches in the effort to breed camellias with a larger flower-bud set. Various combinations between the species in section *Theopsis* and the larger-flowered camellias offer the potential for developing a wide array of floriferous cultivars. Many hybrids between *C.sasanqua* or *C.saluenensis* and a variety of other species will also flower very heavily. Earliness or fall and winter bloom can be obtained from a variety of hybrids with *C.sasanqua,* and the hybrids and backcrosses between it and *C.reticulata* make particularly fine garden displays. The quest for new colors is progressing very slowly, but it can be expected that yellow garden hybrids will be developed from *C.chrysantha* hybrids in the next few years.

Literature Cited

Ackerman, W.L. 1987. History and progress on cold hardiness in Camellia. 1987 American Camellia Society Yearbook 52:13-16.

Asper, J.H. 1960. Notes on camellia hybridizing. 1961 American Camellia Society Yearbook 26:63-73.

Chang, H.T. 1981. A Taxonomy of the Genus *Camellia*. Editorial Staff of the Journal of Sun Yatsen University. Guangzhou, China.

Levi, Wendell. 1971. Ninth report on varietal differences in cold resistance of camellia buds. 1972 American Camellia Society Yearbook 37:138-157.

Parks, C.R. 1978. The components of cold hardiness in camellias. 1978 American Camellia Society Yearbook 43:47-55.

Parks, C.R. 1982. Sazanka and its hybrids. International Camellia Journal 14:29-33.

Parks, C.R. and Ron Scogin. 1987. The elusive yellow camellia: results from breeding and pigment analysis. American Camellia Society Yearbook 52:31-38.

Parks, C.R. and K.M. Parks. 1989. Breeding for winter tolerance in *Camellia*. Camellia Journal 44(3):10-15.

Tanaka, T., Uemoto, S. and C.R. Parks. 1987. Studies on the origin of *Camellia X vernalis*. American Camellia Society Yearbook 52:5-12.lc:

Yamaguchi, Tadao. 1990. New varieties of yellow flowered camellias. International Camellia Journal 22:58-59.

Figures

Figure 1A 'April Rose'

Figure 1B 'April Remembered'

Figure 2 'Japanese Fantasy'

Figure 3A 'Red Candles' (unnamed)

Figure 4 'Yoi Machi'

Figure 3B 'Red Candles' (unnamed)

Figure 5A 'Christmas Rose'

Figure 5B 'Christmas Rose'

Camellias In Channel Islands

LES CAMELINA EN AUX ILES ANGLO-NORMANDES

KAMELIEN IN WIEDERSEHEN KANALINSELN

CAMELIAS IN CANAL DE LA MANCHA

CAMELIE EN AL CANALE DE LA MANICAE

Senorita

Camellias have been growing in the Channel Islands for over 150 years, the earliest recorded date is 1839 and in 1850, the Jersey nurseryman, Langellier listed 3,000 camellias in stock.

In Guernsey, Smith's Nurseries (later named Caledonia Nurseries) imported a quantity of Camellia japonica from Louis Van Houtte of Belgium in 1887. These plants arrived in Guernsey numbered but not named. Nurseryman Charles Smith named them "Lady Clare" (syn: Akashigata), "Lady Marion" (syn: Kumasaka), "Lady Vansittart" (syn: "Edo-nishiki), "Lady Pollock", "Lady Vere de Vere" and several more. Charles Smith's great grandson, John de Putron, has the old Nursery Diary which gives details of the planting, propagating and President, Mrs. Vi Lort Phillips was asked to send scions of the Guernsey grown camellias to Japan so a study could be made to compare them with the originals and we await the results with great interest.

Some years ago, the Australian artist, Paul Jones visited Guernsey and painted many of the Caledonian camellias and these were featured in a book entitled "The Camellia" by Mrs. Urquart.

The Great Storm of 1987 caused much damage in the islands - huge trees were uprooted and crashed down on shrubs, walls and houses. Many gardens had to be re-landscaped and enthusiasts found they had space to plant more camellias. The local Garden Centres have responded by increasing their orders and extending their lists so we have many new camellias arriving from the United Kingdom, France and Belgium.

One of the good things to emerge after the Great Storm is the resurgence of interest in the camellia. Another is that camellias once kept in deep shade by trees are now able to receive more sun and are consequently blooming very well and producing more seed.

ICS membership has grown steadily since the Society was founded in 1962. The initial drive came from two ladies, namely Mrs. Vi Lort-Phillips and Mrs. Barbara de Veulle. Their enthusiasm was boundless, they visited gardens to measure and record old camellias, they held meetings and generally encouraged those who loved and grew camellias to join the International Camellia Society.

We continue to hold meetings and have guest speakers so we can improve our knowledge and at the same time invite others to share our experience and recruit new members. Camellia Shows have stimulated much interest and encouraged people to grow more varieties.

We are looking forward to hosting the 1995 International Camellia Society Congress and to welcoming our friends from all over the world.

Kitty

Lady VanSittart

Camellias In Germany

Klaus Peper, Germany

LES CAMELIAS EN ALLEMAGNE

KAMELIEN IN DEUTSCHLAND

CAMMILIE IN LA GERMANIA

CAMELIAS EN ALEMANIA

The most important German camellia nursery last century was that of Jacob Seidel. Jacob has introduced many new varieties, however, there is no camellia known as originated at the Dresden area, the reason being that camellia produced only few seed pods under Saxon climate condition. On the other hand, at Frankfurt/Main, under milder conditions, Rinz, Gruneberg and Kraatz were growers who introduced new varieties, some of which were quite successful.

Here follows a list of their names: (1) Francofurtensis, (2) Gunnellii, (3) Violacea Superba, (4) Teutonia, (5) Modesta Rubra Variegata Alba, (6) Rothschildiana, (7) Tumida, (8) Berolinensis.

Unfortunately all of these cultivars seem to be lost at Germany. In an attempt to re-establish at least a few of them, I would like to ask our international friends to contact me in case they know of the existence of any of the mentioned camellias.

Prof. Dr. Klaus Peper
Hopfenweg 15 66424 Homberg

"Wilder Camellias"

DAVID BENNETT, U.S.A.

"WILDER CAMELIA"

"WILDER KAMELIEN"

"WILDER CAMELIE"

"WILDER CAMELIA"

The early 19th century was an age of great discovery and intensive development for horticultural pursuits. It was at this time that the Western World became fascinated with the camellia. America, having recently emerged as a new nation, fostered considerable interest in the growing and breeding of camellias, thus producing new cultivars, several of which attained international recognition and favor.

Massachusetts was a major center for camellia enthusiasts and even today, remains home for the oldest camellia society in America. It was here that Marshall Pinkney Wilder rose to pre-eminence as a grower and breeder of camellias. He produced two cultivars which became esteemed throughout the world - "Wilderi" and "Mrs. Abby Wilder."

Although Wilder's two cultivars had their origins in the 1830's, they were first brought to public attention at an exhibition sponsored by the Massachusetts Horticultural Society (of which Wilder was the current President) on 14 February 1846. Such was the acclaim bestowed upon these camellias, that the MHS commissioned a special set of colored plates with accompanying descriptions and published them in the 1847 edition of their annual transcript.

"Wilderi (Wilder). "A shrub of free, upright but rather slender growth. Leaves one and a half inches wide, three long, oval acuminate, slightly dentate, very dark green, midrib prominent, petioles short; bud quite round with pale green scales; flower medium size, three and a half to four inches diameter, perfectly circular; color delicate clear rose; petals seventy-five to eighty in number, regularly imbricated; of the most perfect rose shape and arranged with exquisite regularity from the circumference to the center; style of flowering free, each flower expanding perfectly, remaining on the stem and retaining its beauty a long time. The superiority of this variety compared with old established varieties such as Double White, Lady Hume, Imbricata and others, consists in the perfect and beautiful circular form of the petals, which have scarcely a serrature or indentation on their edges. Raised from the Single Red Camellia, fertilized by C. japonica var. punctata. The original mother plant and all the stock with the exception of a single graft, were destroyed by accidental fire in the year 1841." —Trans. Mass. Hort. Society 1, p.11-12, 1847.

"Mrs. Abby Wilder" "This name was given by the committee on Flowers, in honor of the lady of the President of the Society. —"A vigorous shrub of upright growth; strong branches, large handsome foliage. Leaves two and a half inch broad, four long, roundish oval, rather reflexed, coarsely dentated acuminate, midrib and nerves pale and prominent, yellowish green, resembling those of var. Lady Hume; bud round with pale green scales, flower large, about four inches in diameter, very circular, of great depth and thickness, full and perfect; petals very numerous, of beautiful form, the exterior rows broad, circular, gradually diminishing in size to the center, arranged with great regularity; color azure white, with an occasional suffusion of light rose, somewhat after the style of the Duchess d'Orleans. Raised from the seed of C. var. middlemist, fertilized by C. pomponia."

The Wilder camellias were brought to Europe in 1847, where they became very popular. The Verschaffelt Catalogues illustrated and described 'Wilderi' in 1853 and 'Abby Wilder' in 1848 and 1853. Later, these varieties were brought to the American West Coast, first landing at Sacramento, California. In a few years' time, they were growing throughout the

Western World—even the Southern Hemisphere. They remained in favor in this century, having been described and recommended in the 1940's by Dr. Hume in "Camellias in America" and in the 1950's by the "American Camellia Catalog; the later approved of both cultivars as useful grafting stock, in addition to their beautiful qualities.

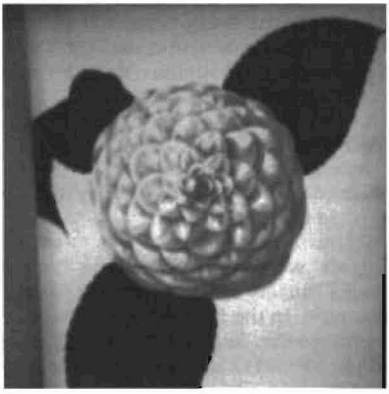
Unfortunately these cultivars have eluded present attempts to locate them. Where can they be? Surely, varieties of such universal popularity cannot have disappeared entirely! However, no current American collection included them.

The value in restoring and preserving these cultivars is twofold. First, they have attributes that are deserving of continued perpetuation in the same way that our gardens and exhibition tables still contain the 'Double White Camellia,' 'Pink Perfection,' 'Lady Hume's Blush,' and the like. Second, historic preservation of non-living and living things commemorates events, people, places and achievements that constitute heritage Mr. Wilder, who began rather modestly, raised himself in society by hard work and education; he then went on to serve in the legislature, the Senate, the Ancient Honorable Artillery, by helping to found the Massachusetts Institute of Technology, the Board of Agriculture and Massachusetts Agricultural College. According to the Dictionary of Biography (vol. XX, 1936) - "Wilder was a born promoter and leader of men. Original in ideas and practical in developing them, he inspired unusual confidence by his genial character and solid reputation as a man of business. For many years, he was known as the chief citizen of Boston; for more than sixty years he devoted his money and his talents to public service, consistently evidencing an intelligence, a whole-hearted enthusiam, and a lack of self-interest which made him one of the best loved and most influential men of his time. The results of his work are felt today in the various societies and institutions, which he founded and developed, and in his valuable contributions to the knowledge and practice of horticulture. He died suddenly in the midst of his activities at the age of eighty eight."

COL Wilder achieved attainment of the American Dream. To continue growing his camellias helps to perpetuate the memory of a remarkable human being. MEMBERS OF THE I.C.S. - Please help locate and obtain scion wood of the Wilder camellias. Please contact MR. DAVID BENNETT, 12 VARNUM STREET, HAVERHILL, MA. 01832 U.S.A. tel: (508) 372-6357.

Photos by Carmen M. MaBlio

Wilderi



Mrs. Abby Wilder

The Blooming Habit of Camellia Chrysantha Var. Longistyla And Its Sexual Process

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LES HABITUDES FLORALES DE CAMELIA CHRYSANTHA VAR LONGISTYLA ET SON PROCESSUS SEXUEL

DIE BLUEHGEWOHNHEITEN DER KAMELIE CHRYSANTA VAR LONGISTYLE UND THRE SEXUELLE VERMEHRUNG

EL COSTUMBRE DE FLORECER DE LA CAMELIA CHRYSANTHA DE LA VARIEDAD LONGISTVIA Y SU PROCESO SEXUAL

LE ABITUDINE RIGOGLIOSE DEI CAMELIE CHRYSANTHA DELLA VARIETA LONGISTVIA E LE SUE PROGRESSE SESSUALE

Camellia is one of the most important ornamental evergreen shrubs in China as well as in the world. A lot of gardeners over the world have been plunged in breeding new cultivars and the total number of the cultivars has extended to 5,000. But so far, there have been almost no purely yellow flowered ones among them. After *C. chrysantha* was published in 1960's, and other yellow flowered camellias were discovered in 1980's, golden camellias seemed not to be only a dream any longer. By crossing yellow flowered camellias with other species, diverse new cultivars might be obtained. Here, the blooming habit of *C. chrysantha* var. *longistyla* and its sexual process are to be reported, which will be a help in the breeding work. Since the embryological studies have been reported by Li, T. et al (1986), here the work is mainly concentrated on the germination and growth of the pollens on the stigmas, as influenced by the air temperature.

1. MATERIALS AND METHODS

1.1 Materials

Camellia chrysantha (HU) Tuyama var. *longistyla* Chen et Wang

C. Sasanqua Thumb.

Plants were planted in the Yellow Camellia Nursery and the Camellia Nursery in Nanning. In the interspecific crosses, *C. Chrysantha* var. *longistyla* was used as the seed parent and *C. sasanqua* was the male parent.

1.2 Methods

1.2.1 Observation on the blooming habit

In 1990-92, 10 adult plants of *C. Chrysantha* var. *longistyla* were used for the observance. The method follows Chen.X. (1986).

1.2.2 Artificial pollination

Flowers 1 day prior to opening were emasculated and pollinated and then capped. Fresh pollens were used.

1.2.3 The germination of pollens on stigmas in interspecific crosses.

Stigmas were cut and fixed with FAA solution for 1 hour, 2h, 4h, 6h, 8h, 12h, 24h, 48h, 72h, 144h and 192h after pollination respectively. The stigmas were stained with Safranin-Anilin Blue after being hydrated with HCL. Then they were observed under a microscope.

1.2.3 Treatment with GA to protect fruits

30-40 days after pollination when the fruits are about 0.5-0.9cm in diameter, GA with concentration of 50ppm, 100ppm, 200ppm, 500ppm and 1000ppm were treated on the pedicles and bodies of immature fruits for 1-3 times.

2. RESULTS AND ANALYSIS

2-1 The blooming habit of *C. chrysantha* var. *longistyla*

C. chrysantha var. *longistyla* blooms once a year. It usually takes over 5 years to bloom after sowing. But things are not always so, a few 1-2 year old can also bloom. The flower buds sit in the leaf lateral on the shoots of 1-year growth, and

some also on the shoots of 2-3 year growth. The buds often stand in couples, some lonely or in 3. The degree of prosperity of the flowers varies with the nutritional conditions, the surroundings and the individual divergence of different plants. Generally, 2-12 flowers can occur on a shoot. Like some other species from Sect. Chrysantha Ghang, *C. chrysantha* var. *longistyla* has a pedicle, as long as 0.9-1.2cm. When the flowers open, they tend to hang down on account of gravity. This is not so bad for it, which is relatively high and can be looked up. But long pedicle might be a disadvantage for breeding potted and dwarf camellia types.

In Nanning, the blooming of *C. chrysantha* var. *longistyla* begins from late December til mid-March. In late March, a few flowers can also be seen flowering. The full blooming period is in early and mid-February (often around Chinese traditional Spring Festival). On account of the difference in growing conditions, nutritional conditions and the individual divergence, the time of flowering has a variation. For example in 1992, most plants began blooming from January 10 but one plant bloomed as early as December 20, 1991 and was in full bloom on January 10. The blooming of *C.chrysantha* var. *longistyla* can last for as long as 3 months. For a single flower, the length of blooming is dependent on the temperature, ranging from 3-10 days. When the day temperature is around 9°C, a flower can last for 8-10 days, while in March when the temperature exceeds 25°C, it can only flower for 3 days. It is obvious that flowers last longer under low temperature because of slow consumption of energy for metabolism. And under high temperature, plants take more energy for metabolism and tend to wither earlier.

The whole blooming process of a flower can be divided into four states - bud-loosening, initial-blooming, full-blooming and final-blooming. The blooming process begins with the loosening of the bud. At this time, the bud becomes plump and the petals that were tight become loose. And the shape of the bud turns from global into oval. There appears a tip in the front of the bud, but no gap. This is the stage of bud loosening. The petals continue loosening and a gap can be seen. The shape of the bud then becomes a cup-like or jar-like, and the buds change into flowers. This is the stage of initial blooming. After that, the petals continue stretching out, forming a bowl-like flower. The fully opened flowers can last for 3-10 days. Finally the flowers begin withering. Since the petals are stitched together, so when the flowers fall, they don't fall, in petals rather than intact flowers composed of petals and stamens. Generally, the bud-loosening stage is the period when the flower is to open within 1-2 days. At this time, the bud feels a bit soft, and those which are still stiff will not open in 1-2 days. The stamens are not mature and can't enit pollens, and the stigmas are winding, lying amidst the anthers. The flowers aren't mature until the stage of initial blooming. Mature stigmas are usually different from immature ones in morphology in that they are straight, rather than winding. Mucus can be secreted on top of the stigmas to stick pollens. The stigmas are still straight and have the ability to be pollinated even after the flowers have fallen. So capping should be kept. Those stigmas that have been successfully pollinated will become brown and fading.

The ovary begins to expand and the embryo develops. For those that are successfully crossed, the ovaries look glossy and plump and in milk-white. If the flowers aren't crossed, they will have yellow and shrivelled ovaries. After 7-9 months growth, the capsules mature around October.

C. chrysantha var. *longistyla* is entomophilous and in nature it is cross pollinated with the help of insects, such as honeybees and ants. In the fine warm day, the vivacious activity of insects is beneficial to increase the natural fruit set. It's reported that in *C. japonica*, birds play an important role in open pollination. In this study, though birds' activities are usually seen in the forest. It's sure that it is insects other than the birds do the main work.

2.2 The germination and growth of the pollens on the stigmas.

Pollens of *C. sasanqua* were pollinated on the stigmas of *C. chrysantha* var. *longistyla* and the stigmas were fixed for the observance. On the stigmas that were fixed 4 and 6 hours after pollination, no pollens were found to have germinated and some tubes even grow to 10 times in diameter. Usually, it takes pollens of *C. chrysantha* var. *longistyla* and *C. sasanqua* only 2 hours and about 5 hours to germinate on medium at 20C - the reason why the stigmas' being immature. Since

the flowers 1 day prior to opening (bud-loosening stage) were used, they were too young to have the ability of pollination. Even the stigmas can't secrete mucus to stick pollen. But after a dozen of hours' development, they become mature and the stigmas begin to secrete mucus, able to be pollinated. The morphological study also proved it. The stigmas fixed 4 and 6 hours after pollination are winding, showing a character of being immature, while the stigmas fixed 24 hours after pollination are straight. On the immature stigmas, very few pollens can be found for they have been washed away in the process of fixation, while on the mature stigmas a lot of pollens can be seen to be stuck by the mucus.

2.2.2 Effect of temperature on the secural process

About 35 hours after pollination, the warm weather suddenly changed, and the temperature decreased from 22°C in the day to 4°-9°C. It's reported that the crossing compatibility of roses is not influenced by the temperature. In this study, it can be seen that the sexual process is affected by the change of temperature. On the stigmas fixed 48, 72 and 144 hours after pollination, the growth of pollen tubes has stopped. It indicates that low temperature can affect the viability of the pollens and prohibit the growth of the pollen tubes and subsequently influence the sexual process. *C. chrysantha* var. *longistyla* is native to the southern subtropic area, and relatively high temperature is necessary for its metabolism. In 1988 and 1984, a much decreased rate of fruit set was obtained in the interspecific crosses. The mechanism of the decrease is in that the sexual process was affected and prohibited by the long-time raining and low temperature. It shows that crossing in the warm fine day will be beneficial to the increase in the rate of the fruit set.

2.3 The effect of GA on the protection of fruits.

Every year, immature fruits fall seriously for twice as many fruits were lost. Things seem to be more serious in interspecific crosses. Measures should be taken to reduce the fruit fall and increase the efficiency of crossing. Li.T.et al (1988) reports that the fruits fall on account of being short of nutrient supply. GA can activate the transport of nutrition and accelerate the growth of cells. In many crops, it has been available in the protection of fruits.

In this study, the pedicles and the bodies of the immature fruits were treated with different concentractions of GA but no satisfactory results are obtained. None of the treatments show an increase in fruit set. It might be due to the methods and time of the treatments. Further work is necessary to be done.

3. DISCUSSIONS

3.1 The probable methods to fasten the breeding work.

3.1.1 To increase the rate of fruit set.

Low rate of fruit set is a common problem in interspecific crosses. To increase the rate of fruit set, multiple measures should be taken, such as intensive cultivation, in vitro culture of immature embryos and treatment of hormones. The mechanism of the prevention of fruits' early fall should be further investigated.

3.1.2 The potential of tetraploid yellow camellia in breeding work.

After years of breeding, it can be seen that the inheritance of the yellow colour is not so simple as expected. To get a breakthrough in the near future, something new should be brought in. The experience in the breeding for yellow - flowered roses may be learned from. After many years' failure, yellow rose has eventually obtained the level of tetraploid. It's certain that tetraploids have their advantages in that they may have an increased fertility. Compared with the diploid plants, their doubled chromosomes might make the plants have more possibilities to express gene of yellow flower in the interspecific offsprings. So, the authors suggest the yellow-flowered camellias be treated with colchicine to get tetraploids and then cross with common camellias.

REFERENCES

1. Chang, Hungta, 1981. A taxonomy of the genus Camellia. Sci. Nat. Univ. Sunyetseni, Monograph ser. 1:1-180

2. Chen, junyu, 1987. Fourteen years in breeding with yellow camellias. J. Beijing Forestry Univ. 9(3), 315-320

3. Chen. X.et al 1986. Tea Trees Breeding with yellow camellias. J.Beijing Forestry Univ. 9(3), 325-320

4. Cheng, Jinshui, 1986. Studies on inducing new plants from embryo culture and cotyledon culture in virtro of Camellia *chrysantha* (HU) Tuyama, J. Beijing Forestry Univ. 8(3), 31-34

5. Dubios, L.A.M. et al 1986. The effect of gibberelins on fruit set in pollinated 'Sonia' roses. Plant Growth Regulation 4(1), 75-78

6. Haldeman, J. H. et al 1991. Immature embryo culture of *C. sasanqua.* The Camellia J. May 19
7. Li, T and Cao, H.1986. The embryological study on the seeds development of Camellia *chrysantha* at early stage. J. Beijing Forestry Univ. 8(2):43-47
8. Luo, Zhonga 1986. A preliminary study on immature embryo culture in vitro of Camellia *chrysantha* and its interspecific hybrids. J. Beijing Forestry Univ. 8(4) 76-78
9. Ma, Yan and Cheng Junyu 1990. A preliminary study on breeding cultivars for establishing new rose group - Rejuvenation Rose Group (Rj), J. Beijing Forestry Univ. 12(3); 18-25
10. Parks, C. 1990. Pollination biology and pollination control under cultivated conditions. Amer. Cam. Yrbk 1990
11. Tang, Zhonghao & Huang, Liandong-1986. The preliminary report on breeding yellow camellias. J. Beijing Forestry Univ. 8.

On Taxonomic Problems Of Section Archecamellia Sealy And Section Chrysantha Chang In The Genus Camellia.

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A PROPOS DE PROBLEMES TAXONOMIQUES DE LA SECTION ARCHECAMILLIA SEALY ET DE LA SECTION CHRYSANTHA CHANG DANS LE GENRE CAMELIA

UEBER TAXONOME PROBLEME DER SEKTION ARCHEKAMELIA UND DER SEKTION CHRYSANTHA CHANG IN GENUS KAMELIE

RESPECTO AL PROBLEMA TAXONOMIC DEL GRUPO ARQUECAMELIA SEALEY Y DEL GRUPO CHRYSANTHA CHANG RESPECTO AL GENERE CAMELIA

SOPRA LE PROBLEME DEI CAMELIE TAXONOMIC DELLA DIVISIONE ARCI-CAMELIE SEALY E LA DIVISONE CHRYSANTHA CHANG DENTRO GENERA CAMELIA

Abstract:

The taxonomic position of Section *Chrysantha* Chang is mainly discussed in the paper. Researching texturally the specimens and data of *C.chrysantha* (Hu), Tuyama, *C.nitidissima* Chi and *C.petelotii* (Merr.) Sealy which is distributed in the north of Vietnam, we can confirm that the latin name *C.chrysantha* (Hu), Tuyama should be changed to *C.petelotii*, (Merr.) Sealy. A comparison of the characteristics of Section *Chrysantha* Chang and Section *Archecamellia* Sealy showed that Section *Archecamellia* set up by Sealy, including the type specimen of *C.petelotii* (Merr.) Sealy, is a natural group and that the characteristics of Section *Chrysantha* Chang and Section *Archecamellia* Sealy are the same taxonomically. Therefore Section *Chrysantha* Chang should be merged with Section *Archecamellia* Sealy. We do not agree that the taxonomical conception contained in *A Taxonomy of the Genus Camellia* by Prof. Chang Hung-Ta is correct in transferring the type-species of Section *Archecamellia*.

It is recognized, after researching, that there are 16 species and 3 varieties in Section *Archecamellia*. Besides the 7 species of Section *Archecamellia* Sealy, *C.indochinensis* of Section *Theopsis*, 6 species and 3 varieties of Section *Chrysantha* Chang and 2 new species published in this paper were all transferred into Section *Archecamellia*. 16 species, including 4 which were informally published, 2 varieties and 3 forms of Section *Chrysantha* Chang, were merged as synonyms with their corresponding species or varieties. In addition, various erroneous identifications, differentiations and distributions of the species in the two Sections are discussed.

1. It was regarded that Section *Archecamellia* presented by Sealy (1958) was a natural group with stable characteristics such as a distinct pedicel, 5-10 racteoles, 3-5 separate styles, villose seeds, brown punctures under the leaves etc. It was recognised that the changing of Sealy's conceptions and the transference of the type-species from Section *Archecamellia*, as was done in the book *A Taxonomy of the Genus Camellia*, was erroneous.

2. In accordance with the comparison and study of type-specimens and original description of *C.chrysantha* (Hu), Tuyama, *C.nitidissima* Chi and

C.petelotii (Merr.) Sealy, it was shown their characteristics were identical. Therefore *C.nitidissima* and *C.chrysantha* were further reduced to *C.petelotii* (Merr.) Sealy as distributed in North Vietnam.

3. Based on the analysis of the morphological characteristics of all species in Section *Chrysantha* Chang, it was of interest to note that there were common characteristics and identical type-specimens (*C.petelotii*) between Sections *Chrysantha* and *Archecamellia*. It was proved that Section *Chrysantha* could not be regarded as an independent group and was, for the first time, merged with Section *Archecamellia*.

4. 7 species of Section *Archecamellia* are recognized, *C.indochinensis* Merr. from Section *Theopsis* and 6 species and 3 varieties from Section *Chrysantha* are transferred to Section *Archecamellia*. The other 16 species with 2 varieties and 3 forms in this Section are revised with the necessary nomenclature changes. From the study, 16 species and 3 varieties are determined in Section *Archecamellia*, including 2 new species published here.

Some yellow flowering species of the Genus Camellia had been recorded from North Vietnam a long time ago. [1]. Many people have been paying close attention to *C.chrysantha* (Hu) Tuyama since *Theopsis chrysantha* Hu was discovered in China. The investigation of yellow species in the Guangxi district was carried out soon after and a new taxonomic unit, Section *Chrysantha* Chang was set up. Twenty two species (including 4 informally published), 3 varieties and 3 forms were published by botanists who worked in different districts in succession. [4-21], [28]. Some of the species indeed are valuable, however, new species emerged in an endless stream so that it was difficult to recognize and identify them. Recently Prof. Chang Hung-Ta made a revision to Section *Chrysantha* [22] and corrected the latin name of *C.chrysantha* (Hu) Tuyama. [23], [24]. Based on the above we will discuss whether the Section *Chrysantha* is an independent group and the relationship between this Section and Section *Archecamellia*. Also, many species, including *C.chrysantha* (Hu) Tuyama, which are distributed in the border area between China and Vietnam, are further revised.

Discussion on the taxonomic problems of the two Sections. J. R. Sealy [1] took *C.petelotii* (Merr.) Sealy as the type-specimen to set up Section *Archecamellia* Sealy. There were 7 close relatives in the Section. Their common characteristics were: flowers solitary, terminal; pedicels thick, strong and erect; 5-10 bracts and 5-6 larger sepals, 3-5 separated styles. We visited the type-specimens of the 7 species in the Section quoted by Sealy, kept in the Kew Herbarium, England. We also examined the type specimens collected in Vietnam in many herbaria. We found that the flowers of the Section were terminal or axillary or both. Besides the characteristics of stout pedicels, persistent bracts (5-10) and separated styles, the Section had arched nerves on leaves, brown punctures on their back surfaces, and usually villose seeds. These common and stable characteristics show that Section *Archecamellia* is a natural group in the Genus Camellia. In view of these studies and the knowledge obtained therefrom, we agree with Sealy's classification of Section *Archecamellia*, but not with the treatment of this Section by Chang in *A Taxonomy of the Genus Camellia*. We do not consider that Section *Chrysantha* is an independent group taxonomically.

1. While Chang retains the taxonomic rank of Section *Archecamellia* Sealy, of the 7 closer relative species determined by Sealy in the Section, only *C.pleurocarpa* (Gagnep.) Sealy remains in Changs classification. Six of the seven species were transferred into 4 different Sections and 2 species (*C.granthamiana* Sealy and *C.albogigas* Hu) of different ploidity were added to the Section. It is strange that Chang transferred *C.petelotii* (Merr.) Sealy, which is the type-species for Section *Archecamellia*, into Section *Longipedicellata* Chang, the type-specimen of which is *C.longipedicellata* (Hu) Chang et Fang, and he selected *C.granthamiana* Sealy, which is a polyploid species, as the type-specimen for Section *Archecamellia*. This confuses the conception of Sections in taxonomy and is widely divergent with Sealy's Section *Archecamellia*.

2. Professor Hu published *Theopsis chrysantha* Hu, then Mr. Tuyama revised it to *Camellia chrysantha* (Hu) Tuyama. The yellow species was recognised as a rare treasure in China and abroad. Professor Chang Hung-Ta trans-

ferred 2 yellow flowering species, *C.flava* (Pit.) Sealy and *C.euphlebia* Sealy from Sealy's Section *Archecamellia* and added 4 new species and set up the new taxonomic group Section *Chrysantha* Chang (3) in which the type-species is *C.chrysantha* (Hu) Tuyama, according to the yellow colour of their flowers. In fact yellow flower colour not only occurs in Section *Chrysantha* Chang, but also in other Sections. After comparing all the species in Section *Chrysantha* Chang, including many new ones published in recent times, we found that their leaves had arched nerves and punctures in their back surface, their pedicels were distinct with 5-10 persistent bracts, which were scattered on the pedicel, their styles were 3-5 separated and so on. These characteristics are according to Sealy's Section *Archecamellia*. The type-species of Section *Archecamellia* Sealy, was examined, that is, *C.petelotii* (Merr.) Sealy, which is distributed in the north of Vietnam. This has oblong-oval, coriaceous leaves, pedicels 10 mm long with 10 bracts, flowers 5-6 cm in diameter, thick petals, glabrous ovary and 3 separated styles. These characteristics correspond with the type-specimens of both *C.chrysantha* (Hu) Tuyama and *C.nitidissima* Chi, revised by Professor Chang Hung-Ta and Professor Li Shu-Gang, although the type-specimens did not show the colour of their flowers. In view of this, *C.chrysantha* (Hu) Tuyama should be changed to *C.petelotii* (Merr.) Sealy. Both *C.chrysantha* (Hu) Tuyama and *C. nitidissima* Chi are synonyms for *C.petelotii* (Merr.) Sealy. It is coincidental that the type-specimens of Section *Archecamellia* Chang and Section *Archecamellia* Sealy are the same. Because of this, Section *Chrysantha* Chang should be transferred into Section *Archecamellia* Sealy and it is necessary to resume Sealy's conception and rank on taxonomy for the Genus Camellia.

3. Since Section *Chrysantha* Chang was published as a new taxonomic group, close attention in the botanical field has been paid to the investigation of yellow flowering species and a large number of new species has been published. Some new plants and newly recorded species have been discovered in Guangxi, Yunnan and Guizhou in China and their distribution and biological patterns have been established. There have been 18 new species, 3 new varieties and 3 new forms [4], [9] which have been formally published to date and there are 4 new species being published [20], [21]. There are also many species of yellow flowering camellias that puzzle botanical taxonomists. For this reason Professor Chang Hung-Ta revised 14 species and 1 variety in Section *Chrysantha* Chang. This did not include *C.xiashiensis* Liang & Deng, and *C.nitidissima* var. *phaeopubisperma* Liang & Tang published later. In accordance with the view of transferring Section *Chrysantha* Chang into Section *Archecamellia* Sealy, all the yellow flowering species were examined, especially the type-species of the new taxonomic group and including a large number of specimens. The result of the examinations are as follows:

(A) The 7 species of Sealy's Section *Archecamellia* (1958) are admitted.

(B) *C.indochinensis* Merr. which has 3 separated styles and 5 persistent bracts on the pedicel, from Section *Theopsis*, Sealy 1958 should be put into Section *Archecamellia* Sealy.

(C) *C.pubipetala* Wan & Huang does not belong to Section *Archecamellia* Sealy because its flowers do not have a pedicel and the styles are semi-connate.

After reviewing *C.nitidissima* Chi, 22 new species, 5 new varieties and 3 new forms, including 5 informal species, published lately, as belonging to Section *Chrysantha* Chang, we believe that only 6 species and 3 varieties can be set up as valid, while the rest of them are merged as synonym into relevant species. It should be mentioned that the botanists in China have ignored investigation and examination of the "old species" from the north of Vietnam and the border between China and Vietnam. They also lack specimens from Vietnam.

(D) We have confirmed 16 species and 3 varieties, including 2 new species in Section *Archecamellia*, Sealy in this paper. We are sure that with the further development of research work, some of these species may be further merged and new discoveries may occur.

THE REVISIONS IN TAXONOMY.

Section *Archecamellia* Sealy, *Rev. Camellia*, 36-44, 1958;

Chang, *Tax. Camellia*, 15-16, 1981, quoad species *C.pleurocarpa*. Section *Chrysantha* Chang in *Act. Sci. Nat. Univ.*

Sunyatseni, 1979, (3):69-71 and *Tax. Camellia,* 101-107, 1981, syn. nov. Type: *C.nitidissima* Chi [*C.chrysantha* (Hu) Tuyama] = *C.petelotii,* (Merr.) Sealy.

Section *Longipedicellata* Chang, *Tax. Camellia,* 99-100, 1981, excluding type species.

Section *Theopsis,* auct. non Cohen Stuart: Sealy, *Rev. Camellia,* 87-88, 1958 quoad species *C.indochinensis* Merr. Section *Stereocarpus* auct. non (Pitard) Sealy: Chang, *Tax. Camellia,* 17, 1981, as to *C.krempfii* (Gagnep.) Sealy. Section *Corallina* auct. non Sealy: Chang, *Tax. Camellia,* 88, 1981, quoad species, *C.tonkinensis* (Pitard), Cohen Stuart.

The basic characteristics of the Section: Leaves coriaceous or paper-like, brown punctures and arched nerves on the back surfaces; flowers axillary or terminal or both axillary and terminal; pedicel distinct with 5-10 persistent and scattered bracts; sepals persistent, 5(-6); petals usually numerous, yellow, light yellowish white or red, 7-13; stamens numerous; ovary 3-5 locular; styles 3-5, separated, 3-5; seeds usually pubescent.

Type-species: *Camellia petelotii* (Merr.) Sealy. (Synonyms: *C.nitidissima* Chi and *C.chrysantha* (Hu) Tuyama.)

The Section contains 16 species and 3 varieties after revision. The major basis to classification of the species are: Whether or not the ovaries are pubescent and number of locules; length of pedicel; number of bracts; the texture, size and pubescence of sepals; the colour, texture and size of flowers; presence of hairs on filaments; the shape and size of seed capsules; the thickness of the pericarp; the presence of pubescence on seeds and characteristics of leaves and petioles.

The section is distributed in the north of Vietnam and Thailand, the south and west of Guangxi, the south-east of Yunnan and the south-east of Guizhou in China. [26], [27]. Except for one of the species which grows under evergreen, broad-leafed forests on limestone mountains in sub-tropical area, all the rest grow in tropical rain forests. There are 14 species and 3 varieties which are centrally distributed in the north of Vietnam, the south and south-east of Guangxi, and south-east of Yunnan.

The Section is thus a typical group growing in limestone mountains in a tropical area and is a primitive group of the Genus Camellia. Differentiation amongst the species are: Number of locules in an ovary are 5-3; number of bracts are from 10-5; the flowers are from large to small; the number of petals are from numerous to less and their texture is from thick to membraneous; the sepals are from large to small and their texture from coriaceous to membraneous; the seed capsules are from large to small and their pericarp from thick to thin. The primitive species such as *C.krempfii, C.flava. C. pleurocarpa* and *C.aurea* have 5 locular ovaries and *C.petelotii* and *C.euphlebia* which have 3 locular ovaries with large flowers and thick petals and numerous bracts are all distributed on the border between China and Vietnam.

KEY TO SPECIES IN SECTION ARCHECAMELLIA.

1. Ovary 5 locular; styles 5, separated.
   2. Ovary densely velutinous, styles and filaments pubescent.
      3. Leaves larger, long-ovate, 28-31 cm long x 6.5-7.5 cm wide cordate to deep cordate at base, petioles about 15 mm, pedicel 15 mm long
      .....1.*C.krempfii* (Gagnep.) Sealy.
      3. Leaves smaller, long-elliptic, 6-15 cm long x 3-6 cm wide, rounded at base, petioles 2-4 mm long, pedicels 6-9 mm long.
      .....2.*C.flava* (Pitard) Sealy.
   2. Ovary, styles and filaments glabrous.
      4. Leaves abrupt at apex, wide cuneate to rounded at base, pedicels 5-10 mm long, bracts 6-10, powdery, minutely pubescent on outside of bracts and sepals, but glabrous inside.
      .....3.*C.pleurocarpa* (Gagnep.) Sealy.
      4. Leaves caudate apex, cuneate base, pedicels shorter, 3-4mm long, bracts 5, glabrous on outside of bracts and sepals, but white sericeous inside
      .....4.*C.aurea* Chang.

1. Ovary 3 locular, styles 3, separated.
   5. Ovary velutinous or pubescent, bracts and sepals minutely pubescent on outside.
      6. Leaves larger, narrow obovate, 23-26 cm long, apex obtuse, cordate base, petioles short and thick, 3-5 mm long; flowers bright red, filaments minutely pubescent.
      .....5.*C.calciocola* Ming.
      6. Leave medium, long-ovate or elliptic, less than 20 cm long, apex acuminate to caudate, base cuneate or

obtuse, petioles 7-10 mm long, flower yellow; filaments glabrous.

7. Leaves, membraneous to paper-like, long-ovate, venation impressed on upper surface, prominent on rear, terminal buds long and thin, pubescent; flowers 3-4 cm in diameter, capsules 3-4 cm in diameter, seeds densely pubescent.

.....6. *C.tonkinensis* (Pitard) Cohen Stuart.

7. Leaves coriaceous, elliptic or long ovate-elliptic, venation indistinct both surfaces of leaf, terminal buds ovoid, glabrous; flower small, 1-2.5 cm in diameter; capsules 1.5-3 cm in diameter, seeds glabrous.

.....7. *C.parvipetala* Liang & Su.

5. Ovary glabrous, bracts and sepals glabrous.

8. Leaves deeply cordate at base, edges densely, finely serrulate, flowers red, filaments minutely pubescent.

.....8. *C.amplexicaulis* (Pitard) Cohen Stuart.

8. Leaves not deeply cordate at base, apex slightly obtuse, edges sparsely serrate, flower yellow, filaments glabrous

9. Young branches, petioles and back of leaves obviously pubescent

....9. *C.impressinervis* Chang & Liang.

9. Young branches, petioles and back of leaves glabrous.

10. Bracts numerous, (-8) 10, flowers large, 5-6 cm in diameter, petals thick.

11. Leaves coriaceous, long-ovate, glossy on surface, green on back surface after drying, base cuneate, pedicel 10 mm long, bracts slightly open but not covering the pedicel.

.....10a. *C.petelotii* (Merr.) Sealy.

11. Leaves thinly coriaceous, elliptic or wide-elliptic, matt on surface, brown on back after drying, bases obtuse, pedicel about 5 mm long.

.....11. *C.euphlebia* Sealy.

10. Bracts usually 5, petals membraneous or paper-like

12. Leaves coriaceous, oval, glossy on surface, petals slightly thick, capsules small, 2-3 cm in diameter

.....10b. *C.petelotii* var. *microcarpa* (Mo & Huang) Ming & Zhang.

12. Leaves thinly coriaceous to membraneous, matt on surface after drying; petals membraneous or paper-like.

13. Sepals coriaceous, green, 15 mm long, finely white silky on inside.

14. Flowers axillary, 3-4.5 cm in diameter.

15. Leaves elliptic or ovate-elliptic, petioles 10-15 mm long, bracts small, uncovered to petioles; capsule glabrous 8 cm diameter

.....12. *C.fascicularis* Chang.

15. Leaves long-oval, petioles 5 mm long; bracts larger, covered to pedicels, capsules compressed globular, 2-3 cm diameter

.....13. *C.flavida* Chang.

14. Flower terminal, 3 cm diameter.

16. Leaves membraneous, elliptic; petioles about 10 mm long, pedicels 7-8 mm long, seeds densely pubescent.

.....14. *C.huana* Ming & Zhang.

16. Leaves paper-like, ovoid or long-ovoid petioles 5 mm long, pedicels about 3 mm long; seeds sparsely short-velutinous.

.....16b. *C.pinguoensis* var. *terminalis* (Liang & Su) Ming & Zhang.

13. Sepals small, 2-3 mm long, membraneous, lightly yellow, not pubescent inside.

17. Leaves ovoid or long-ovoid, widest at base, cuneate or obtuse at base, edges waved and serrate; flowers and capsule small, 1-1.5 cm diameter.

.....16a. *C.pingguoensis* Fang.

17. Leaves elliptic or long ovate-elliptic, base cuneate, margins sparsely serrate.

18. Flower 1.5-2 cm diameter, pedicels 3 mm

.....15a. *C.indochinensis* Merr.

18. Flower 2-3 cm diameter, pedicels 9-13 mm long

.....15b. *C.indochinensis* var. *tunghinensis* (Chang) Ming & Zhang.

1. *Camellia krempfii* (Gagnep.) Sealy in *Kew Bull.*, 1949:219 and *Rev. Camellia,* 36, fig.7, 1958;

Chang, *Tax. Camellia,* 17, 1981, excl. specimen Sino-Vietnam Exp. 1970; Chang & Bartholomew, *Camellias,* 32, 1984. *Thea krempfii* Gagnep. in *Not. Syst.* 10:127, 1942 and in *Suppl. Fl. Gen. Indo-Chine,* 1:319, 1943.

Type: Vietnam, Nhatrang, M. Krempf 1564 (P).

Only the type-specimen of the species was seen. The leaves were larger, long-ovate, 31 cm long with cordate base; the filaments and stamens were

obviously pubescent. The ovaries were 5-locular; the styles were 5-fid. Professor Chang Hung-Ta (1981) had mistakenly considered type-specimen No. 1790 collected by the China-Vietnam Investigation Team as this species. Its dissection showed that its ovaries were 3-locular and styles 3; so it does not belong to the species.

Distribution: North of Vietnam.

Vietnam: Yazhuang (Nha-trang), M. Krempf 1564.

2. *Camellia flava* (Pitard) Sealy in *Kew Bull.*, 1949 (2):217 and *Rev. Camellia*, 39, fig. 9, 1958; Chang in *Act. Nat. Sci. Univer. Sunyatseni*, 1979, (3):70, and *Tax. Camellia*, 102, 1981 and in 1.c.30 (2):81, 1991; Chang & Bartholomew, *Camellias*, 128, 1984. *Thea flava* Pitard in Lecomte, *Fl. Gen Indo-chine*, 1:346, 1910; Gagnep. in *Suppl. Fl. Gen. Indo-Chine*, 1:319, 1943.

Type: Vietnam, Tonkin, Vo Xa, H.Bon 2831 (P).

Camellia cordatula Merr. in *Journ. Arn. Arb.*, 20:348, 1939.

Type: Vietnam, Hon Binh, A. Pételot 6387 (AA).

We saw the type-specimen of this species and the type-specimens of its synonyms. The species has pubescent stamens and pistils, 5-locular ovaries and 5 separated styles which are close to *C.krempfii* (Gagnep.) Sealy, but had smaller leaves which were rounded to shallow cordate at base. Its difference from *C.tonkinensis* (Pitard) Cohen Stuart is that the latter has 3-locular ovaries and 3 separated styles.

Distribution: North of Vietnam under broad leaved forests on limestone mountains at an elevation of 360-400 M.

Vietnam: Wushe, H. Bon 2831 (type-specimen); from Heping to Wuben in Heping Province, A Pételot 6387 (type-specimen of *C.cordatula*), China-Vietnam Investigation Team 2317 (KUN, IBG).

3. *Camellia pleurocarpa* (Gagnep.) Sealy. *Rev. Camellia*, 38, fig. 8, 1958; Keng in *Fl. Thailand*, vol. 2, 2:146, 1972; Chang, *Tax. Camellia*, 16, 1981; Chang & Bartholomew, *Camellias*, 32, 1984.

Thea pleurocarpa Gagnep. in *Not. Syst.*, 10:130, 1942 and in *Suppl. Fl. Gen. Indo-Chine*, 320, fig. 13-15, 1943.

Type: Vietnam, Thanh Hoa, Poilane 1731 (K, P).

Add to description:

Flowers axillary and terminal, solitary, pedicels 5-7 mm long, bractioles 6-8, semi-orbicular, 1-2 mm long, outside powdery minutely pubescent, inside glabrous, margins ciliolate; sepals 5, orbicular, 5-6 mm diameter, outside powdery, minutely pubescent to glabrescent, inside glabrous, margins ciliolate; petals 11, ovate or elliptic, 1.5-3.5 cm long x 1.3-1.7 cm wide, glabrous; stamens 2 cm long, outer filaments joined for 10 mm; ovaries 5-locular, glabrous, 3 mm long; styles 5, 1.5 cm long, free.

The characteristics of the species are that the ovaries are glabrous and 5-locule, styles separated and leaves from elliptic to wide-elliptic with bases cuneate to wide-cuneate. It is greatly different to *C.krempfii* (Gagnep) Sealy and *C.flava* (Pitard) Sealy, both of which originated in Vietnam. The specimens of Poilane 1731 (type-specimen) and 1783 in Kew Herbarium were examined and it was found that their leaves were larger than originally described and also by Sealy (1958). The leaves of the specimens were 18.5 cm long x 9.5 cm wide. The specimens collected from Haiyang, Vietnam by Kimson (23rd January 1961) and kept in the Kunming Botanical Institute have larger leaves, 23-26 cm long x 11-13.5 cm wide. Other characteristics of the specimens in Kunming are the same as those of the specimens at Kew.

Distribution: North of Vietnam (from Qinghua to Haiyang) and north of Thailand. (Qingmai).

Vietnam: Longhan of Qinghua, 5th August 1920, Poilane 1731 (P.K.): Huichun, Qinghua, 20th May 1921, Poilane 1783 (K); Haiyang, 23rd January 1961, Kimson, no number (KUN).

4. *Camellia aurea* Chang in *Act. Sci. Nat. Univer. Sunyatseni*, 1979, (3):71 and *Tax. Camellia*, 102, 1981; Chang & Bartholomew, *Camellias*, 129, 1984; Chang in *Act. Sci. Nat. Univer. Sunyatseni*, 30 (2):81, 1991.

Type: Vietnam, Liangshan, Sino-Vietnam Exp. 1599 (SCBI, KUN). *C.quinqueloculosa* Mo & Zhung in *Guihaia*, 5 (4):353, fig. 1-3, 1985.

Type: Guangxi, Fusui, Shanxi, Forest-Ecology Group, 84382 (IBG, GXFS, KUN).

Mr. Mo, Xin-Li and Mr. Zhung, Ye-Cong collected a specimen with a flower bud and pericarp from seed capsules, from the mountains of Fusui County,

Guangxi for which they published the name *C.quinqueloculosa* Mo & Zhung. The place of origin was visited 2 times, but it was found that the original plant had been cut down and had died and only the three specimens originally collected were available for checking. Comparing them, it was found that, except for obviously pubescent sepals, their characteristic were similar to *C.aurea* Chang.

Distribution: Liangshan, Vietnam, and the south of Guangxi, China, growing in mixed broadleaf forests on limestone mountains.

Vietnam: Yuopen, Liangshan Province, China-Vietnam Investigation Team 1599 (type-specimen).

China: Fusui, Guangxi, Forest Biological Group 84382 (type-specimen of *C.quinqueloculosa)*

5. *Camellia calcicola* Ming sp. nov.

C.krempfii auct. non (Gagnep) Sealy; Chang, *Tax. Camellia,* 17, 1981, p.p. specimen Sino-Vietnam Exp. 1790.

Similar to *C.krempfii* (Gagnep) Sealy but differs having flowers axillary, scarlet, on a short pedicel; filaments, outer glabrous; ovaries 3-locular, styles 3 free to base. A small tree, 4 m tall, branches of current years growth, powdery pubescent, new growth sparsely sooty, minutely pubescent. Leaves papery, oblong, 24-26 cm long x 8-8.5 cm wide, apices obtuse, bases cordate, margins sparsely serrate, upper surfaces glossy green, lower paler. Midrib sparsely pubescent or glabrous, prominent above, elevated below; lateral nerves about 20 pair, lightly exposed on upper surface, prominent below; petioles 6-7 mm long, sparsely pubescent.

Flowers bright red, axillary, solitary, about 6 cm diameter, pedicels 4 mm long, bracteoles 8-10, orbicular to ovate, 3-5 mm long, powdery pubescent both sides; sepals 5, ovate, 9-14 mm long x 7-10 mm wide, powdery pubescent both sides. Petals about 9, exterior 4 obovate, 2.5-3 cm long, outside, powdery pubescent, interior 5, oblong-obovate, 3-5 cm long, glabrous; stamens numerous, 2-2.5 cm long, outermost joined for lower half, interior free, pubescent; ovary 3-locule, sub-globose, densely silky; styles 3, free, 2.3-3 cm long, lower part pubescent. Seed capsule unknown.

Vietnam: Thanh Hoa, Kouei Chau, Sino-Vietnam Exp. 1790, (Type KUN, IBG).

The characteristics of the leaves of this species are very similar to *C.krempfii* (Gagnep.) Sealy. Professor Chang mistakenly identified it as *C.krempfii*; however the species is 3-locular, styles 3; flower single, axillary and red. The petioles and pedicels are shorter and leaves thinly-papery according to the record of No. 1790 collected by the China-Vietnam Investigation Team and our observation of it. It is greatly different from *C.krempfii* (Gagnep) Sealy and so it should be a new species. Also the areas of distribution of the 2 species are far apart.

Distribution: Kuzhou, Qinghua, Vietnam at an elevation of 170-210 m under forests, 26th January 1965, China-Vietnam Investigation Team 1790 (type-specimen).

6. *Camellia tonkinensis* (Pitard) Cohen Stuart in *Meded. Proefst. Thee,* 40:67, 1916; Melchior in *Engler. Nat. Pflanzefam.*, ed. 2. 21:129, 1925; Sealy, *Rev. Camellia,* 40, fig. 10, 1958; Chang, *Tax. Camellia,* 88, 1981; Chang & Bartholomew, *Camellias,* 112, 1984.

Thea tonkinensis Pitard in *Lecomte. Gen. Indo-Chine,* 1:343, 1910; Chevalier in *Bull. Econ. Indo-chine,* 21:531, 1919; Gagnep. in *Suppl. Fl. Indo-chine,* 1:308, 1943.

Type: Vietnam, Mt. Vari, B.Balansa 3680 (P).

C.chrysanthoides Chang in *Act. Sci. Nat. Univer. Sunyatseni,* 1979, (3):73, and *Tax. Camellia,* 105, 1981; Chang & Bartholomew, *Camellias,* 132, 1984; Chang in *Act. Sci. Nat. Univer. Sunyatseni,* 30 (2):83, 1991, syn. nov.

Type: Guangxi, Longzhou, C.C. Chang 11847 (SCBI).

C.longzhouensis Luo in *Guihaia,* 3 (3):192, fig. 1, 1983; Chang in *Act. Sci. Nat. Univer. Sunyatseni,* 30, (2):84, 1991, syn. nov.

Type: Guangxi, Longzhou, Y.P. Tao 76288 (GXMI, IBG, SYS). *C.xiashiensis* Liang & Deng in *Guihaia,* 11 (2);127, fig. 1, 1991, syn. nov.

Type: Guangxi, Pingxiang, S.Y. Liang 8409408 (GXFI, KUN). The type-specimen B. Balansa 3860, of which only the capsules were kept, was collected from Sanweishan in the north of Vietnam and is not reliable regarding the number of bracts and sepals. There was another record of it from the area of Fushou and Shanxi in Vietnam. Mr. A. Chevalier (1919) reported that the species had yellow flowers (no specimen). The type-

specimen was examined and it was found that the leaves were from thinly coriaceous to paper-like, from elliptic to long-elliptic, apex acuminate, bracts and sepals were minutely pubescent outside; ovary was hairy; styles 3, separated. On comparison with the type-specimens of *C.longzhouensis* Luo, *C.chrysanthoides* Chang and *C.xiashiensis* Liang & Deng it was found that the ovaries of the latter two were pubescent. In fact the three species above are the same thing and very similar to *C.tonkinensis* (Pitard) Cohen Stuart so that it is difficult to separate them. For this reason they have been merged with *C.tonkinensis* (Pitard) Cohen Stuart.

Distribution: North Vietnam and Longzhou and Pingxiang, Guangxi, China growing in broadleaf evergreen forests at an elevation of 20-750 m.

Vietnam: Sanweishan, B. Balansa 3860 (type-specimen).

China: Longzhou, Guangxi, Zhang Zhao-Yan 11847 (type-specimen of *C.chrysanthoides* Chang); same place, Longgang Team, 11364 (IBG, SYS), 20645 (GSMI); same place, Tao, Yi-Peng, 76228 (type-specimen of *C.longzhouensis* Luo); same place, Zhang, Wen-Ji etc 524, 91009, 9107 (KUN); Pinxiang and Xiashi, Liang Sheng-Ye, 8409408 (type-specimen of *C.xiashiensis* Liang & Deng); same place, Zhang, Wen-Ji 5311 (KUN).

7. *Camellia parvipetala* Liang & Su in *Guihaia,* 5 (4):357, fig. 1985.

Type: Guangxi, Ningming, J.Y. Liang, 100658 (IBG).

C.micrantha Liang & Zhung in *Act. Sci. Nat. Univer. Sunyatseni,* 1988 (4):110, fig. 1, 1988; Chang ibid. 30 (2):84, 1991, syn. nov.

Type: Guangxi, Pingxiang, S.Y. Liang, 8409430 (GXFI). *C.grandis* (Liang & Mo) Chang & Liang in *Act. Sci. Nat. Univer. Sunyatseni,* 30 (2):82, 1991, quoad synonym *C.parvipetala* Liang & Su. There is very sparse pubescence at the base of the styles in this species. One of the two type-specimens of Liang, Jian-Yin 101035 has indistinct pubescence on its ovary, however another one has distinct but sparse pubescence. The ovaries of *C.micrantha* Liang & Zhung were obviously pubescent. It seems that the degree of pubescence of the pistil is unstable for this species.

The common characteristics of *C.micrantha* Liang & Zhung and *C.parvipetala* Liang & Su are that the leaves are obovate-elliptic, apices abruptly, short-caudate; flowers smaller, 1-2 cm diameter, bract and sepals glabrous outside. This shows that the two species are the same thing, but different from both *C.longgangensis* var. *grandis* Liang & Mo and *C.tonkinensis* (Pitard) Cohen Stuart.

Distribution: Ningming and Pingxiang, Guangxi, China, in broad-leaved forests on hills at an elevation of 150-350 m.

Guangxi: Ningming, Liang, Jian-Ying 100685 (type-specimen), 101035 (two shares IBG); Pingxang, Liang, Sheng-Ye 8409430 (type-specimen of *C.micrantha* Liang & Zhung); same place, Zhang, Wen-Ji 91034 (KUN), same place, Zhung, Ye-Cong 791 (GXFI).

8. *Camellia amplexicaulis* (Pitard) Cohen Stuart in *Meded. Proefst: Thee,* 40:67, 1916; Sealy, *Rev. Camellia,* 43, fig. 13, 1958; Chang, *Tax. Camellia,* 99, 1981; Chang & Bartholomew, *Camellias,* 123, 1984. *Thea amplexicaulis* Pitard in Lecomte, *Fl. Gen. Indo-chine,* 1:343, 1910, Gagnep. in *Suppl. Gen. Indo-chine,* 1:304, 1943.

Lectotype: Vietnam, Hanoi, B. Balansa, 3858 (K). The characteristics for this species are: Ovary 3-locular, glabrous; styles 3, separated; pedicels thick and strong, about 10 mm long with 6-7 bracts; stamens 3-3.5 cm long, outer filaments joined for lower half, pubescent, but upper parts separated and glabrous, minutely pubescent on inner filaments. In comparison with those species that have 3-locular, pubescent ovaries, this species has thickly coriaceous leaves, bases deeply cordate, useful points for identification. The difference of this species from *C.krempfii* (Gagnep) Sealy and *C.calcicola* Ming in which the base of the leaf is slightly cordate and the filaments are pubescent, are that it has thickly coriaceous leaves with dense, deep serrations on leaf margins, and 3-locular and glabrous ovaries.

Distribution: North Vietnam, Henei, B. Balansa 3858 (type-specimen); same place, China-Vietnam Investigation Team 2456 (KUN); Yongan (Vinh Yen), Ederhardt 3762 (K).

9. *Camellia impressinervis* Chang & Liang in *Act. Sci. Nat. Univer. Sunyatseni,* 1979, (3):72; Chang, *Rev. Camellia,* 105, 1981, and in l.c.30 (2):81, 1991; Chang & Bartholomew, *Camellias,* 130, 1984.

Type: Guangxi, Longzhou, S.Y. Liang 700304 (SYS, GXFI). The characteristics of the leaves of this species are extremely similar to those of *C.tonkinensis* (Pitard) Cohen Stuart, but its small branches and leaves are pubescent and ovaries glabrous.

Distribution: Longzhou, Guangxi at an elevation of 280-420 m on limestone mountains, under broad-leaved evergreen forests.

Guangxi: Longzhou, Liang, Shen-Ye, 700304 (type-specimen); same place Chen, Shao-Qing, 13286 (SCBI, KUN); same place, Li, Huan-Qi, 40118 (IBG); same place etc. 634 (KUN); same place, Zhang, Wen-Ji, 529,481, 91002 (KUN).

10. *Camellia petelotii* (Merr.) Sealy in *Kew Bull.*, 1949:219 and *Rev. Camellia,* 42, fig. 12, 1958; Chang, *Tax. Camellia,* 99, 1981; Chang & Bartholomew, *Camellias,* 125, 1984.

Thea petelotii Merr. in *Univ. Calif. Bot.*, 10:427, 1924.

Type: Vietnam, Ha Noi, Tam Dao, Pételot 848 (AA), *C.nitidissima* Chi in *Sunyatsensia,* 7 (1-21):19, pl.5, 1948; Sealy, *Rev. Camellia,* 216, 1968; Chang, *Tax. Camellia,* 68, 1981; Chang & Bartholomew, *Camellias,* 125, 1984; Chang & Ye in *Act. Sci. Nat. Univer. Sunyatseni,* 30 (2):64, 1991; Lee & Liang in *Guihaia,* 12, (1):95-96, 1992, syn. nov.

Type: Guangxi, Fangcheng, C.L. Tso, 23483 (SCBI, IBG). *Theopsis chrysantha* Hu in *Act. Phyto-Tax. Sin.*, 10, (2):139, 1965, syn. nov.

Type: Guangxi, Yongning, X.P. Fang & F. S. Huang, 17530 (GXMI, PE). *Camellia chrysantha* (Hu) Tuyama in *Journ. Jap. Bot.*, 50, (10):299, fig. 1, 1975: Chang in *Act. Sci. Nat. Univer. Sunyatseni,* 1979, (3):71, 1979 and *Tax. Camellia,* 103, fig. 17, 1981; Chang & Bartholomew, *Camellias,* 134, fig.43, 1984; Chang in *Act. Sci. Nat. Univer. Sunyatseni,* 30, (2):82, 1991, syn. nov.

C.chrysantha var. *longistyla* Mo & Zhung in *Quihaia,* 5, (4):355, fig. 6-9, 1986, syn. nov.

Type: Guangxi, Fangcheng, Forest-Ecology Group, 84362 (IBG).

10a. *Camellia petelotii* var. *petelotii.*

Mr. Chi, Jing-Wen (1948) published *C.nitidissima* Chi from its type-specimens, which did not carry capsules and were kept in the South-China Botanical Institute and Guangxi Botanical Institute. These were collected from Fangcheng County, Guangxi. No attention was paid to this discovery for some time. Mr. Sealy (1958) treated it as a doubtful species in his book as he did not see the type-specimen. Professor Hu, Xian-Xu (1965), an older generation in the botanical field of China, published *Theopsis chrysantha* Hu, according to type 17530 (flower) collected by Wu, Xin-Fang and Huang, Shi-Sheng from Yongning County, Guangxi and type 17628 (capsule) collected by Gao, Ru-Chun. The species was then revised as *Camellia chrysantha* (Hu) Tuyama (1975) by Mr. Tuyama, a botanist of Japan. Professor Hu and later botanists neglected to compare their species with *C.nitidissima* Chi until Professor Chang (1991) pointed out that *C.chrysantha* (Hu) Tuyama and *C.nitidissima* Chi were the same and formally revised them.

This was not the end of the revision. We saw the type-species (Pételot 848) of *C.petelotii* (Merr.) Sealy, which had been collected from North Vietnam. The characteristics of the type were: Leaves coriaceous, long-ovate, bases cuneate, surfaces slightly glossy; pedicels 10 mm long; bracts 8-10; petals 11-13, moderately thick; ovary 3-locular, glabrous; styles separated. Comparing this with the type-specimens of *C.nitidissima* Chi and *Theopsis chrysantha* Hu, it was found that their characteristics were similar. So the correct name of the species should be further revised to *C.petelotii* (Merr.) Sealy. *C.nitidissima* Chi and *Theopsis chrysantha* Hu distributed in North Vietnam and South Guangxi, China, and published early or late are synonyms for *C.petelotii* (Merr.) Sealy var. *petelotii.*

Distribution: North Vietnam and South Guangxi, China at an elevation of 36-900 m on banks of streams and on hillsides and under ever-green, broad-leaved forests.

Vietnam: Sandaoshan (Tan Dao), Pételot 848 (type-specimen).

China: Guangxi, Yongning, Wu, Xin-Fang, Huang, Fen-Sheng 17530 (type-specimen of *Theopsis chrysantha* Hu); same place, Gao, Yu-Chun 17628 (IBG); same place, Zhang, Zhung-Xiang 3960 (IBG); same place, Liang, Sheng-Ye 6403506 (SYS, GXFI); same place, Zhung, Ye-Cong 7815, 7816 (SYS, GXFS); same place, Shi, Zong-Min etc. no number (Collected March 1972) (KUN); same place, Zhu, Xiang-Hung, no number (Collected 23rd November

1973) (KUN); Fangcheng, Zuo, Jing-Lie 23483 (type-specimen of *C.nitidissima* Chi); same place, Zhuang, Zong-Xiang 3782 (IBG); same place, Mo, Xin-Li 00070, 00078 (IBG); same place, Wan, Li 76507 (IBG); same place, Zhung, Ye-Cong 621 (SYS, GXFS); same place, Xie, Li-Shan etc. 714, 901 (KUN); same place, Zhang, Wen-Ji 514, 534 (KUN); same place, Zhung, Ye-Cong 84382 (type-specimen *C.chrysantha* form *longistyla* Mo & Zhung.

10b. *Camellia petelotti* var. *microcarpa* (Mo & Huang) Ming & Zhang, comb. nov.

C.chrysantha (Hu) Tuyama var. *microcarpa* Mo & Huang in *Act. Phytotax. Sin.*, 17, (2):90, fig. 2, 1979; Chang in *Act. Sci. Nat. Univer. Sunyatseni*, 30, (2):82, 1991.

Type: Guangxi, Yongning, Huang 7241 (GXMI, IBG).

C.longgangensis var. *patens* Mo & Zhung in *Guihaia*, 5, (4):353, fig. 4, 1985, syn. nov.

Type: Guangxi, Fusui, Forest-Ecology Group 84383 (IBG, GXFI).

C.microcarpa (Mo & Huang) Mo in *Guihaia*, 6, (1-2):62, 1986.

C.nitidissima Chi var. *microcarpa* (Mo & Huang) Chang & Ye in *Act. Sci. Nat. Univer. Synyatseni*, 30, (3):64, 1991.

C.nitidissima Chi var. *phaeopubisperma* Liang & Tang; Liang, Shen-ye in *Guangxi For. Sci. & Tech.*, 21 (1):1, 1992, syn. nov.

Type: Guangxi, Fangcheng, Deng 8402 (GXFI).

C.multipetala Liang & Deng in *Guangxi For. Sci. & Tech.* (1):9, 1990, fig. 3, nom. nud., syn. nov.

Type: Guangxi, Fusui, Dong 85001 (GXFI).

C.wumingensis Liang & Fu in *Journ. Wuhan Bot. Research*, 3, (2):132, 1985; *Guangxi For. Sci. & Tech.*, (1):17, fig. 7, 1990, nom. nud., syn. nov.

Type: Guangxi, Wuming, C.R. Fu 8001006 (GXFI).

C.chrysantha auct. non. (Hu) Tuyama: *Guihaia*, 1:780, 1991, quoad syn. var. *microcarpa* Mo & Huang.

Its main differences from var. *petelotii* are that both capsules and flowers are smaller; pedicel less than 5 mm long; bracts, fewer; 5-6 seeds, mostly long-pubescent; leaves from cuneate to rounded at base.

The type-specimens of *C.longgangensis* var. *patens*, *C.nitidissima* var. *phaeopubisperma* and *C.multipetala* as well as *C.wumingensis* were examined and it was found that their characteristics were the same as *C.petelotii* var. *microcarpa* (Mo & Huang) Ming & Zhang. Therefore they are merged into the one variety.

Distribution: South of Guangxi, growing under forests in valleys at an elevation of 150-150 m.

Guangxi: Yongning, Huang, Xie-Cai 7241 (type specimen), 7242 (GXMI, IBG); same place, Wu, Gui-Zhen 6895 (GXMI); same place, Huang, Qi-Bin 3691, 3746 (IBG); same place, Xia, Li-Fang etc., 23rd November 1974, no number (KUN); same place, Zhang, Wen-Ji 505, 506, 507 (KUN); Fangsheng, Deng, Chao-Zuo 8402 (type-specimen of *C.nitidissima* var. *phaeopubisperma* Liang & Tang); same place, Guangxi Forestry Investigation Team, 46236 (GXFI): Wuming, Fu, Cui-Rong etc., 8001006 (type-specimen of *C.wumingensis* Liang & Fu); same place, Liang, Sheng-Ye 8109323 (GXFI); Fusui, Forestry Biological Group 84383 (type-specimen of *C.longgangensis* var. *patens* Mo & Zhung; same place, Dong, Xue-Jun 850011 (type-specimen for *C.multipetala* Liang & Deng); same place Liang, Jian-Ying 100916, 100917 and 101034 (IBG); same place, Zhang, Wen-Ju 497, 501 and 504 (KUN).

11. *Camellia euphlebia* Merr. ex Sealy in *Kew Bull.*, 1949:216, 1949 and *Rev. Camellia*, 41, fig. 11, 1958; Chang in *Act. Sci. Nat. Univer. Sunyatseni*, 1979, (3):73 and *Tax. Camellia*, 105, 1981; Chang & Bartholomew, *Camellias*, 132, fig. 44, 1984; *Guihaia*, 1:780, 1991; Chang in *Act. Sci. Nat. Univer. Sunyatseni*, 30 (2):81, 1991.

Type: Vietnam Quang Ninh, Tieh Yen, Tsang, 27346 (AA, K, SCBI). *C.chrysantha* var. *macrophylla* Mo & Huang in *Act. Phytotax. Sin.*, 17, (2):88, fig. 1:1-5, 1979.

Type: Guangxi, Tangcheng, Y. Wan 76506 (GXMI).

This species has 8-10 bracts and large flowers with thick petals, similar to *C.petelotii* (Merr), Sealy, but differs in that its leaves are wide-elliptic to long-elliptic, matt on upper surface and brown on the back when dried, while the bracts closely embrace the pedicels.

Distribution: North Vietnam and south-east Guangxi, China, under forests and in valleys at an elevation of 36-400m.

Vietnam: Xianan, Guangning, Zeng, Huai-De 27346 (type-specimen).

China: Guangxi, Fangcheng, Wan, Li 76506 (type specimen *C.chrysantha* var.*macrophylla* Mo & Huang); same place, Zhung, Ye-Cong 622 (GXFS, SYS), 80118 and 80119 (GXFS, IBG); same place, Xia, Li-Fang etc. 1st November 1974, no number (KUN); same place, Xie, Li-Shan etc. 617, 626, 631, 720, 721 (KUN); same place, Zhang, Wen-Ji etc. 509, 535, 91604 (KUN).

12. *Camellia fascicularis* Chang in *Act. Sci. Nat. Univer. Sunyatseni,* 30, (2):81, 1991.

C.euphlebia var. *yunnanensis* Wang & Fan in *Act. Bot. Yunn.,* 10, (3):365, fig. 1, 1988.

Type: Yunnan, Hekou, Wang & Fan 860235 (SWFC).

Add additional description:

A tree 4-6 m tall, branches, dark brown, glabrous. Leaves paper-like, oblong-elliptic, 10.5-16.5 cm long x 5-6.5 cm wide; apices acuminate or abruptly cuspidate, bases cuneate, margins serrulate, upper surface green, lower paler and sparsely dotted with tawny punctata, midrib and lateral veins impressed on upper surface, prominent on lower surface, forming a bow-shaped network near the margins; petioles about 10 mm long.

Flowers axillary, solitary, yellow, 3.5-4.5 cm diameter; pedicels about 5 mm long; bracteoles 5, semi-rotund. 0.5-1.5 mm long; sepals 5, unequal, ovate or rotund, 4-8 mm long, 5-8 mm wide, apices round, exterior powdery pubescent or glabrous, interior, densely silky white; petals 7-8, membraneous, elliptic, 2.5-3 cm long x 1-1.5 cm wide, briefly joined at the base; stamens numerous, about 2 cm long, exterior briefly joined with petals, glabrous; ovaries sub-globose, glabrous, 3-locular; styles 3, free, glabrous, about 2 cm long; seed capsule globose, 4-8 cm diameter, valves woody, 4-8 mm thick; seeds densely tawny villose.

The species was published as a variety of *C.euphlebia* Sealy because of their similarity. The differences being: Bracts 5 only, uncovered to the pedicels; petals membraneous, capsules large, up to 8 cm diameter, pericarp, 4-8 mm thick; seeds densely pubescent and leaves not brown on back surface after drying. We agree that it is confirmed as an independent species by Prof. Chang, Hung-Ta.

Distribution: South-East Yunnan in broad-leaved forest on limestone mountains at an elevation of 360-1000 m.

Yunnan: Heko, Wang, Cong-Jiao & Fan, Guo-Sheng 860237 (type-specimen); same place, Min, Tian-Lu etc. 255 (KUN); same place, Xie, Li-Shan & Xie, Jian 903 (KUN); Maguan, China-Soviet Union Investigation Team 3330 (KUN); same place, Nanjing University Trainees Team 50054 (KUN).

13. *Camellia flavida* Chang, *Tax. Camellia,* 103, 1981; Chang & Bartholomew, *Camellias,* 129, 1984; Chang in *Act. Sci. Nat. Univer. Sunyatseni,* 30, (2):83, 1991, excluding syn. *C.limonia* form *obovata* Mo & Zhung.

Type: Guangxi, Longzhou, S.H. Chun 17376 (SCBI).

C.longgangensis Liang & Mo in *Guihaia,* 2, (2):61, fig.1:1-9, 1982.

Type: Guangxi, Longzhou, Longgang Exp. 110515 (IBG).

C.longgangensis Liang & Mo var. *grandis* Liang & Mo in *Guihaia,* 2, (2):63, fig.1:10-111, 1982, syn. nov.

Type: Guangxi, Longzhou, Longang Exp. 11600 (IBG).

C.ptilosperma Liang & Chen in *Bull. Bot. Research,* 4 (4):185, fig. 2, 1984, syn. nov.

Type: Guangxi, Pingxiang, S.Y. Liang 8309389 (GXFI).

C.flavida Chang form *polypetala* Li & He in *Guihaia,* 9, (3):200, 1989, syn. nov.

Type: Guangxi, Longzhou, G. P. Huang 42577 (IBG).

C.grandis (Liang & Mo) Chang & Liang in *Act. Sci. Nat. Univer. Sunyatseni,* 30, (2):82, 1991, Syn. Nov.

C.longruiensis Liang & Dong in *Guangxi, For. Sci. & Tech.,* (1):12, fig.5, 1990, nom. nud., syn. nov.

Type: Guangxi, Ninming, W.Y. Feng 820117 (GXFI).

The characteristics of the leaves of the species vary from thinly coriaceous to paper-like and are variously shaped from elliptic, long-ovate, long-ovate elliptic, with bases cuneate or rounded. It was because these characteristics were used by some botanists in classifying some of the yellow flowering species of camellias that so many species with different names have been published.

All the specimens and type-specimens on which the name depended were examined and it was found that the shape of the leaves varied in series, but

the flowers, capsules and seeds, as well as the areas of distribution and the species environments were the same. For this reason we adjusted and merged the species.

The characteristics of the species are: Leaves matt on both surfaces; petioles and pedicels both shorter, 5 mm long; bracts 5, membraneous; ovary glabrous, 3-locular; seed capsule flat globular, about 3 cm diameter; seeds long-pubescent. It differs from *C.fasciculatis* Chang in that the later has 10 mm long petioles, smaller bracts, 0.5-1.5 cm long, uncovering the pedicel; large flowers, 5 cm diameter, rounded capsules, 8 cm diameter and pericarps 7-8 mm thick. It differs from *C.petelotii* (Merr.) Sealy var. *microcarpa* (Mo & Huang) Ming & Shang in that its leaves are thinner, matt on the surface with 5 mm long petioles; the pedicels are 3-5 mm long, the petals are membraneous and the flowers and capsules are large, up to 3 cm diameter.

Distribution: South of Guangxi (Fusui, Chungzuo, Longzhou, Pingxiang and Ningming), under ever-green broad-leaved forests on limestone mountains.

Guangxi: Longzhou, Cheng, Shaoqing 13736 (type-specimen); same place, Longgang Team 10249, 10515 (type-specimen of *C.longgangensis* var. *grandis* Liang & Mo), 11697, 11742, 11951, 11986 (IBG); same place, Guangxi Traditional Chinese Medical Institute 0687 (GXMI); same place, Liang, Jian-Ying 100824, 100905, 100907 (IBG); same place, Huang, Qi-Bin 42577 (type specimen of *C.flavida* Chang form *polypetala* Lie & He); same place. Tao, Yi-peng 76225, 76226, 76227, (GXMI); same place, Xie, Li-Shan & Cai, Ming 633 (KUN); same place, Zhang, Wen-Ji 477, 478, 480, 527, 530 (KUN); Pingxiang, Chen, Qi-De 820524 (type-specimen of *C.ptilosperma* Liang & Chen); same place, Liang, Jian-ying 100691 (IBG); same place, Zhang, Wen-Ji 533, 91085 (KUN); Ningming, Feng, ye 820117 (type-specimen of *C.longruiensis* Dong.

14. *Camellia huana* Ming & Zhang, sp. nov. (Latin name given in honor of Professor Hu a famous Chinese botanist.)

C.indochinensis auct. non Merr.; Chang, *Tax. Camellia,* 99, 1981; Chang & Bartholomew, *Camellias,* 127, fig.42, 1984.

Similar to *C.indochinensis* Merr. but leaves membraneous, flowers terminal, larger, sepals coriaceous, about 5 mm long, interior densely silky white, seed capsules larger, seed densely villose. Large shrub to 3 m tall; branches of this years growth, slender, tapering and glabrous. Leaves membraneous, elliptic, 8.5-11.5 cm long x 3.5-5.3 cm wide, apices obtuse, shortly cuspidate or cuspidate, bases cuneate, margins sparsely serrulate, upper surface green, below paler and sparsely dotted with tawny punctata. Midrib and lateral nerves conspicuous on upper surface, prominent on lower, arching and uniting in a network near the margin; petioles 7-10 mm long, upper surface hollowed out.

Flowers terminal, solitary, pale yellow, about 3 cm diameter, pedicel 6-10 cm long; bracteoles 5-6, ovate, 0.5-11 mm long, exterior glabrous, interior pubescent, margins minutely ciliate; sepals 5, coriaceous, ovate, about 5 mm long, interior densely silky white, margins ciliate; sepal 5, coriaceous, about 5 mm long, interior densely silky white, margins ciliate; petals 7-9, membraneous, obovate-elliptic, 1-1.7 cm long x 1-1.3 cm wide, bases briefly joined; stamens numerous in 4 series, 1.5 cm long, exterior joined for lower third; ovary 3-locular, sub-globose, 2 mm diameter, styles 3, free, about 14 mm long, glabruos. Seed capsule depressed-globose, about 1.5 cm high and 3-3.5 cm diameter, glabrous; valves 1 mm thick, seeds densely tawny villose.

Guizhou: Ceheng, Huarong, Luxiong at altitude 750 m, small tree, flower yellow, fruit green, 1st November 1958, Z.Y. Tsao 1260 (Type, PE); same place alt. 670m, 12th December 1991, W.J. Zhang 91126; Luodian, S. Guizhou Exp. 170, 287, 490 (PE, GZBI, KUN, IBG); same place, Guizhou Exp. 896, 8867 (PE),

Guangxi: Tian'e Exp. 283, 499 (GXMI).

The species is close to *C.indochinensis* Merr. Prof. Chang Hung-Ta mistakenly classified the specimens from Guizhou (Wangmo & Ceheng) and Guangxi (Tian'e) as *C.indochinensis* Merr. The differences however are: Leaves membraneous, flowers single, terminal, large, 3 cm diameter; sepals coriaceous, about 5 mm long, silky white on the inside surface; capsules large, compressed globular, 3-3.5 cm diameter, seeds long pubescent.

Distribution: South of Guizhou and south of Guangxi, in broad-leaved evergreen forest on limestone mountains at

an elevation of 600-800 m.

15. *Camellia indochinensis* Merr. in *Journ. Arn. Arb.*, 20:347, 1939; Sealy, *Rev. Camellia,* 89, fig.39, 1958.

Type: Vietnam, Langsan, A. Pételot 5459 (AA).

Thea indochinensis (Merr.) Gagnep, in *Suppl. Fl. Gen. Indo-Chine,* 1:307, 1943.

C.limonia Liang & Mo in *Guihaia,* 2, (2):63, fig.2, 1982, syn. nov.

Type: Guangxi, Longzhou, Longgang Exp. 11572 (IBG).

C.limonia form *obovata* Mo & Zhung in *Guihaia,* 5, (4):355, fig.5, 1985, syn. nov.

Type: Guangxi, Fusui, Y. Wei 81086 (IBG).

C.fusuiensis Liang & Dong, *Guangxi For. Sci. & Tech.*, (1):24, fig. 12, 1990, nom. nud., syn. nov.

Type: Guangxi, Fusui, S.Y. Liang 8609464 (GXFI).

C.flavida Chang, *Guihaia,* 1:780, 1991, quoad syn. *C.limonia* Liang & Mo.

C.tunghiensis Chang in *Act. Sci. Nat. Univer. Sunyatseni,* 30, (2):83, 1991, quoad syn. *C.limonia* Liang & Mo.

C.flavida Chang, ibid., 30, (2):83, 1991, quoad syn. *C.limonia* form *obovata* Mo & Zhung.

15a. *Camellia indochinensis* var. *indochinensis*

The type-specimen (Laingshan, Vietnam, Pételot 5459) was examined and the Chinese-Vietnam Investigation Team 1506 and 1573 collected from their place of origin and compared with *C.limonia* Liang & Mo from Guangxi, Longzhou, China. They were the same in the characteristics of the branches, leaves and flowers; that is: Leaves paper-like, elliptic to long-ovate elliptic; flowers small, 1-2 cm diameter, white to light yellow; pedicels short, 3 mm long. We believe they are the same species.

Professor Chang Hung-Ta merged *C.limonia* Liang & Mo as a synonym into *C.flavida* Chang or *C.tunghinensis* Chang. However this merging is incorrect because of their characteristics of thin, short pedicels, extremely small bracts not covering pedicels, small membraneous sepals, glabrous inside; both flowers and capsules, small, 11-2 cm diameter. In addition Prof. Chang (1981) mistakenly nominated the specimens of *C.huana* Ming & Zhang, which were collected from south-west Guizhou and north Guangxi, as *C.indochinensis* Mer. var. *indochinensis* in *Tax. Camellia,* 1981. Sealy (1958) had put this species into Section *Theopsis* as it has 5 persistent bracts and 3 separated styles. Undoubtedly it should not be in Section *Theopsis*.

Distribution: North Vietnam and south China under ever-green, broad-leaved forests on limestone mountains at an elevation of 60-140m.

Vietnam: Liangshan, Wenlin, A. Pételot 5459 (type specimen); Liangshan, Wenzhou, China-Vietnam Investigation Team 1506 (KUN); Liangshan, Youpeng, China-Vietnam Investigation Team 1573 (KUN).

China: Guangxi, Longzhou, Longgang Team 11258, 11481, 11527 (type-specimen of *C.limonia* Liang & Mo0, 11549, 11942 (IBG); same place, Liang, Jian-Ying 100910 (IBG); same place, Luo, Jin-Yu 20757A, 20918 (GXMI); same place, Zhang, Wen-Ji 526 (KUN); Ningming, Liang, Shen-Ye 8409408 (SYS, GXFI); Fusui, Wei, Ning 81086 (type-specimen of *C.limonia* form *obovata*);same place, Liang, Shen-Ye 8609464 (type-specimen of *C.fusuiensis*), 8609464 (GXFI).

15b. *Camellia indochinensis* var. *tunghinensis* (Chang) Ming & Zhang, comb. nov.

C.tunghinensis Chang in *Act. Sci. Nat. Univer. Sunyatseni,* (3):73, 1979 and *Tax. Camellia,* 106, 1981; Chang & Bartholomew, *Camellias,* 132, fig.44:2-3, 1984; Chang in l.c. 39, (2):83, 1991, excl. syn. *C.limonia* Liang & Mo.

Type: Guangxi, Fangcheng, S.Z. Yan 77001 (SYS).

The characteristics of leaves and flowers of this variety are similar to var. *indochinensis,* but the pedicels are longer. 9-13 mm long, and the flowers are larger, 2.5-3 cm diameter.

Distribution: South Gaungxi in evergreen broad-leaved forests in valleys at an elevation of 200-300 m.

Guangxi: Niulan Village, Nasuo, Fangcheng County, Yan, Su-Zhu 77001, (type-specimen); same place, Liang, Sheng-Ye, 8109256 (GXFI, IBG); same place, Zhung, Ye-Cong 80115, 80116 (IBG); same place, Forest Biological Team 84384 (GXFS, KUN); same place, Xie, Li-Shan & Cai, Ming 628 (KUN); same place, Zhang, Wen-Ji 536 (KUN).

16. *Camellia pingguoensis* Fang in *Act. Bot. Yunn.*, 2, (3):339, fig. 2, 1980;

Chang, *Tax. Camellia,* 106, 1981; Chang & Bartholomew, *Camellias,* 134, pl.45, 1984; Chang in *Act. Sci. Nat. Univer. Sunyatseni,* 30, (2):83, 1991. excl. syn. *C.terminalis* Liang & Su.

Type:. Guangxi, Pingguo, D. Fang et al. 37692 (GXMI, KUN, IBG).

16a. *Camellia pingguoensis* var. *pingguoensis*.

This is another variety with small flowers, 1-2 cm diameter. The pedicels are 3-5 mm long, the bracts are small and uncover their pedicel, the sepals are 2-3 mm long and membraneous. The variety is similar to *C.indochinensis* Merr. but itds main differences are: Leaves thinly coriaceous, ovoid or long-ovoid with widest part below the middle, and bases wide cuneate or obtuse.

Distribution: West Guangxi in the area of Pingguo and Tiandong, in evergreen, broad-leaved forest, on limestone mountains at an elevation of 200-300 m.

Guangxi: Fangding & Pozao, Pingguo County, Fang, Xin-Pei 37629 (Type-specimen); same place, Nong, Cun-Ji 3-100117 (GXMI); same place, Xia, Li-Fang & Xie, Li-Shan 731 (KUN); same place, Zhang, Wen-Ji 541 (KUN).

16b. *Camellia pingguoensis* var. *terminalis* (Liang & Su) Ming & Zhang, comb. nov.

C.terminalis Liang & Z.M. in *Guihais,* 5, (3):183, fig. 1985; Chang in *Act. Sci. Nat. Univer. Sunyatseni,* 30, (2):83, 1991. p.p. quaod syn. *C.terminalis* Liang & Su.

Type: Guangxi, Tiandeng, J.Y. Liang 100861 (IBG).

Mr. Liang, Jian-Ying originally found this variety in the Tiandeng County, Guangxi and identified it as a new species to be published according to its characteristics of having large flowers, mostly single, terminal. From an examination of both the type-specimens and the sub-type specimens, it was found that the growing habits and foliaceous characteristics were very similar to *C.pingguoensis* Fang. It also has 3 separated styles and large flowers which are usually terminal. Therefore it is correct for it to be classified as a variety of *C.pingguoensis*.

Distribution: West Guangxi, under ever-green, broad-leaved forest or in bushes on limestone mountains at an elevation of 420 m.

Guangxi: Tiandeng County, Liang Jian-Ying 100861 (type-specimen); same place, Zhang, Wen-Ji etc. 522, 91006.

BIBLIOGRAPHY

1. Sealy, J.R. - *A Revision of the Genus Camellia,* London. The Royal Horticultural Society, 1958:36-88.

2. Hu, Xian-Xiao. - "The Genus Camellia and New Species and New Varieties of Section *Theopsis* Cohen Stuart in China" *Acta Phyto-taxonomica Sinica.* 1965, 10, (2):139-140.

3. Chang, Hung-Ta. - "The Section *Chrysantha* Chang of Botanical Ranges in Huaxia (China)" in *Acta Scientiarum Naturalium Universitatis Sunyatseni,* 1979, (3):69-74.

4. ———— - *A Taxonomy of the Genus Camellia,* 1981: 15-107.

5. ———— & B. Bartholomew, *Camellias,* 1984:1-207; Timber Press, Oregon.

6. Mo, Xin-Li & Huang, Xie-Cai, - "Two New Varieties of Yellow Camellias in Guangxi", *Acta Phytotaxonomica Sinica,* 1979; 17(2):88-92.

7. Fang, Ding, - "Two New Species of Golden Camellias in Guangxi", *Acta Botanica Yunnanica,* 1980; 2(3):339-340.

8. Liang, Tao-Fen & Mo, Xin-Li, - "The Data of Botanical Systems of Longgang Natural Protective Area in Guangxi", *Guihaia,* 1982; 2, (2):63-65.

9. Luo, Jin-Yu, - "A New Species of Golden Camellia in Guangxi", *Guangxi Bulletin of Botanical Research,* 1983; 3, (3):192-194.

10. Liang, Shen-Ye, - "Two New Species of Yellow Camellias in Guangxi", *Guangxi Bulleton of Botanical Research,* 1984; 4, (4):185-188.

11. Liang, Jian-Ying & Su, Zong-Ming, - "*C.terminalis* Liang & Su, a New Ornamental Plant of Guangxi", *Guihaia,* 1985; 5, (3):183-184.

12. Mo, Xin-Li & Zhung, Ye-Cong, - "New Plant of Golden Camellias in Guangxi", *Guihaia,* 1985; 5, (4):353-356.

13. Liang, Jian-Ying & Su, Zong-Ming, - "A New Species of Yellow Camellia in Guangxi", *Guihaia,* 1985, 5, (4):357-358.

14. Mo, Xin-Li & Zong, Ye-Cong, - "New Plants of Yellow Camellias in Guangxi", *Guihaia,* 1986; 6, (1-6):62.

15. Wang, Cong-jiao & Fan, Guo-Shen, -

"New Plants of the Genus Camellia in Yunnan", *Acta Botanica Yunnanica,* 1988; 10, (3):365-366.

16. Liang, Shen-Ye & Xie, Yong-Guan, - "A new Species of Yellow Camellia in Guangxi", *Acta Scientiarum Naturalium Universitatis Sunyatseni,* 11988; (4):110-112.

17. Li, Rei-Gao & He, Sun-Qing, - "A new form of *C.flavida* Chang". *Guihaia,* 1989; 9, (3):200.

18. Liang, Shen-Ye, - "A new Species of Yellow Camellia in Guangxi", *Guihaia,* 1991; 11, (2):127-129.

19. ————, - "A new Variety of Yellow Camellia in Guangxi", *Guangxi Forestry Science and Technology,* 1992; (1):1.

20. ————, - "A Taxonomy of Yellow Species of Camellia and their Biological Distributed Characteristics", *Guangxi Forestry Science and Technology,* 1989; (1):1-3.

21.————, - "A Preliminary Study on the Plants of the Yellow Species of Camellias in Guangxi", *Guangxi Forestry Science and Technology,* 1990; (1):1-42.

22. Chang, Hung-Ta, - "A Revision of the Sect. *Chrysantha* of Camellia", *Acta Scientiarum Naturalium Universitatis Sunyarseni,* 1991; 30, (2):76-84.

23. ———— & Ye, Chuang-Xing, "A Revision of the Latin Names of *C.chrysantha* (Hu) Tuyama", *Acta Scientaitum Naturalium Universitatis Sunyatseni,* 19911; 30, (3):64-65.

24. Li, Shu-Gang & Liang, Tao-Fen, "The Latin Name of *C.chrysantha* (Hu) Tuyama will be Changed", *Guihaia,* 1992, 12, (1):95-96.

25. Tuyama, T, "On *Theopsis chrysantha* Hu," *Journal Japanese Botany,* 11975, 50, (10):297-299.

26. Zhang, Ben-Neng & Huang, Guang-Bin, "A Taxonomy of Yellow Species of the Camellias and their geographical Distribution", *Wuhan Botanical Research,* 1986; 4, (1):34-42.

27. Su, Zong-Ming & Mo, Xin-Li, "The Geographical distribution of Sect. *Chrysantha* Chang in China", *Guihaia,* 1988; 8, (1):75-81.

28. Ye, Chuan-Xing & Xu, Zhao-Xing, "A Study of Sect. *Chrysantha* Chang in the Genus Camellia", *Acta Scientairum Naturalium Universitatis Sunyatseni,* 1992, 31, (4):68-77.

DIAGRAM

A. *Camellia calcicola* Ming: 1. Twig 2. Stamens 3. Gunoecium.
B. *C.huana* Ming et Zhang: 4. Twig 5. Stamens 6. Gynoecium 7. Fruit 8. Petal.

New Thoughts on the Hybridization of Camellia Nitidissima

by

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NOUVELLES PENSEES SUR L'HYBRIDIZATION DE CAMELIA NITIDISSIMA

NEUE GEDANKEN UEBER DIE HYBRIDISIERUNG DER KAMELIE NITIDISSIMA

NEUVAS IDEAS SOBRE LA HIBIDACION DE LA CAMELIA NITIDISSIMA

IL NUOVO IDEE SOPRA IL IBRIDO DELLE CAMELIE NITIDISSIMA

Efforts towards the transfer of yellow flower color from *Camellia nitidissima,* or other closely related species, into hybrids with flowers of commercial quality, appear to have reached a plateau in the late 1980's with little, if any, subsequent progress. During the past fourteen years, since *C.nitidissima* was first introduced into Australia, Japan, and the United States, thousands of crosses have resulted in many hundreds of valid F^1 generation hybrids. However, none, to my knowledge, have an intensity of yellow flower coloration comparable to *C.nitidissima.* This is in contrast to the great expectations expressed a decade ago that we would soon have an entirely new range of flower colors among commercial cultivars.

Apparently, the breeding procedures utilized thus far have not produced the desired results. Therefore, it would seem we need to strike out in new directions and take our chances that some new approach will succeed. It is with this in mind that I would like to present two possible alternate approaches to the problem.

In reviewing the literature, the first report (in 1981) is from Chang Ao-Lo and Xia Li Fang [8], and I quote: "Since 1973, the crossbreeding work has been conducted by using *C.reticulata, C.japonica, C.saluenensis,* and *C.pitardii* var. *yunnanica* as ***seed*** (female) parents and *C.chrysantha* as ***pollen*** (male) parent. Altogether, 3,400 flowers were pollinated and 561 fruits were achieved. Now, more than 500 hybrid seedlings have been achieved."

None of these hybrids possessed the sought after yellow floral pigment! "We used as the ***female*** parents, the camellias cultivated in the Kunming Botanical Institute, and as ***male*** parents, *C.chrysantha* growing wild in Guangxi," Xia Li Fang [24]. Other reports include Brown [6], Donnan [9,10], Donnan & Nuccio [11], Hagiya [12], Nagao [13], Parks & Scogin [15], and Piet [16]. Milton Brown, in a presentation at an I.C.S. Convention in 1985, gave a detailed report of the status of *C.nitidissima* regarding its hybridization and development throughout the United States. Plant breeders, with few exceptions, consistently used standard cultivars as ***seed*** parents crossed with ***pollen*** from *C.nitidissima.*

While in Japan in 1984 and 1985, the author observed a number of hybrids expressing intermediate characteristics between *C.japonica* and *C.nitidissima* that left little doubt regarding their validity. Yet, their stalked flowers (another sure indication of *C.nitidissima* influence) showed no real yellow pigmentation. Instead, several of these had a faint orangish-yellow cast not present in the ***seed*** parent. We assumed at the time, that the gene(s) for yellow inheritance were recessive and that sib crosses among the hybrids and/or backcrosses to *C.nitidissima* would bring forth the yellow character in due time. Since then, further tests have indicated that most interspecific F^1 plants are not only extremely pollen sterile, but also seed sterile. So, it may be difficult to obtain F^2

generation plants directly from the F^1 plants. Uemoto et al [23].

Yet, in retrospect, the yellow gene(s) was (were) recessive to what? *Camellia nitidissima* is a monocolored species. No one in China, that I am aware of, has come up with a *C.nitidissima* with anything other than yellow flowers. Thus, one must assume the species contains no other genes for flower pigmentation and exists in the homozygous state. The assumption is that the yellow gene(s) are recessive to *all* color pigment genes (including white) in *all* of the species used for crossing.

Parks [14] comes to this conclusion, stating "there is growing evidence that some of the *C.chrysantha* color determining genes are completely recessive (inactive) in combinations with other species. Dr. Shunpei Uemoto first observed this in studying the hybrid between *C.japonica* 'Hatsu-yuki' and *C.chrysantha,* which has none of the yellow flavinoids characteristic of the yellow-flowered parent." Considering the facts available, these were reasonable and logical conclusions. However, if true, then all future efforts involving *C.nitidissima* hybrids at the F^1 generation level would appear to be futile. The solution would be to overcome the extreme pollen and seed sterility described by Uemoto et al [22,23], and advance to additional generations with a combination of hybrid selfs, sib crosses, and back crosses to *C.nitidissima.* It is quite possible to convert sterile interspecific hybrids to fertile amphidiploids* by doubling their chromosomes.

The author was faced with a similar interspecific hybrid sterility problem in the early 1970's while trying to develop commercially acceptable fragrant flowers. The answer then, and perhaps now, was to utilize the drug **colchicine** to induce chromosome doubling. At that time, 'Fragrant Pink,' a *C.rusticana* x *C.lutchuensis* hybrid, was completely seed sterile and had only 5 percent normal appearing pollen grains as observed microscopically. Even so, no hybrids were ever produced using 'Fragrant Pink' pollen.

Approximately 500 buds on 56 plants were treated with a 0.5 percent aqueous solution of colchicine in 10% glycerine with a wetting agent. Two promising colchiploid branches from treated plants were identified cytologically. One 2-4-4 cytochimeral branch was forced into flowering and pollen samples showed 77 percent normal-appearing pollen. Ackerman & Dermen [5].

This plant, named 'Fragrant Pink Improved,' completely fertile and became the foundation for a continued series of fragrant flowered cultivars. What had been an apparent obstacle for further progress was overcome through **colchicine**-induced chromosome doubling. This approach may be an answer to the present dilemma which is inhibiting progress in the development of intense yellow flower color.

One thing puzzles me about the reported nature of the recessiveness of the *C.nitidissima* yellow gene(s). That is the assumption that this yellow gene(s) must be recessive to ***all*** color pigment genes (including white) in ***all*** of the species used in making crosses. What seems especially difficult to accept is that a genetic factor for intense yellow pigmentation, as expressed in *C.nitidissima,* should be recessive to white. From the author's own limited experience, and from a review of the literature regarding flower color inheritance, it appears that white is frequently recessive to many, if not most, pigmented flower colors. In *Iris ensata* we consider white the blank card in the genetic deck, since any flower pigment gene will invariably prove dominant over white. Ackerman & Bentz [4].

This suggests we have a more complex situation here than suspected. It is with this in mind that we should begin to explore other possibilities. Ackerman [3].

There appears to be a rather consistent lack of documentation of any *extensive* use of *C.nitidissima* as the *seed* parent. Yamaguchi [26], Campbell [7], and Pursel [17] were three of the very few hybridizers to even mention the use of *C.nitidissima* as the *seed* parent. Most others reported using *C.nitidissima* almost exclusively as the *pollen* parent. It is Yamaguchi [26] who thus far has produced the most promising hybrids. All were crosses between white-flowered *C.japonica* cultivars and *C.nitidissima;* three with the former as seed parent, and one the latter. All are described as light yellow in color but the yellow hybrid, where *C.nitidissima* was the seed parent, is described as different from the other three. It is this latter hybrid, 'Koho', that is illustrated on the 1990 I.C.S. Journal

cover. 'Kiho' and 'Ki-No-Gozen' are shown in the central colour 3, illustration. All four hybrids are lighter than *C.nitidissima* [26].

The fact that none of the four Yamaguchi [26] hybrids comes close to matching the intensity of *C.nitidissima* flavinoid pigmentation, suggests the possibility of modifier gene(s)*.

When we think of inheritance, we normally think of classic Mendelian inheritance involving genes on chromosomes located in the cell nucleus. However, there is a phenomenon called 'non-Mendelian' or 'extrachromosomal inheritance' which is controlled by cytoplasmic hereditary determinants, Rieger et al [18]. Most of us have heard about DNA (deoxyribonucleic acid). This is the stuff that genes are made of which controls inheritance. All DNA is not confined to the cell nucleus. More specifically, DNA is also present in the mitochondria, the cell's primary energy source. Mitochondrial DNA differs from nuclear DNA. It is ring-shaped, double-stranded, and does not hybridize with nuclear DNA. It thus operates quite independently [18]. Finally, mitochondrial DNA is passed on from the *female* to its offspring, independent from its *male* partner. Thus, the sexes are not equal in their influence on the next generation. Whereas, the *male* may contribute half the chromatin (DNA) material of the nucleus, it is the *female* which supplies the rest of the cell contents, including mitochondrial DNA and fragmental DNA which may be present in the cytoplasm. This DNA should not be dismissed as having no function, devoid of any influence on subsequent generations.

What does all this tell us? Basically, that there may be maternal inheritance factors here that influence the transmission of yellow flavanoid pigment gene(s). This does not necessarily mean that the actual flavanoid pigment gene(s) are physically located on the mitochondria, or other extra-chromosomal DNA. Yamaguchi's [26] three light yellow flowered hybrids with *C.nitidissima* as the pollen parent would seem to discount this. This does not, however, discount the possible influence of maternal DNA on inheritance. It also brings to question the statement that *C.nitidissima* color determining gene(s) are completely recessive in combinations with all other species. As mentioned previously, we are dealing with a complex situation.

"The discovery of DNA in the cytoplasm of eukaryotes (higher plants and animals) in the early 1960's, offered for the first time, a clear genetic basis for explaining at least some examples of extranuclear inheritance." Strickberger [21]. Although by no means extensive, there is evidence of maternal (cytoplasmic), inheritance among such plants as *Oenothera* (evening primrose), *Pelargonium* (geranium), *Lathyrus* (sweet pea), *Mirabilis* (Four O'Clock), and Maize (corn). Sager [19], SRB et al [20], and Strickberger [21]. Of less certainty is a phenomenon in *Camellia,* well known to plant breeders in California and Australia, that most crosses of *C.reticulata* x *C.japonica* create more desirable plants than the reciprocal cross. If we assume that each species makes the same chromosomal DNA contribution regardless of whether it supplies this in the form of egg or pollen, then that difference must come from outside the nucleus. That extra nuclear contribution, of course, comes from the seed parent.

What we need to do is utilize *C.nitidissima* on a larger scale as the seed parent. This in itself may present a problem because of difficulties some plant breeders have had in getting seed set on *C.nitidissima*. It is quite possible we may need to grow *C.nitidissima* under environmental conditions simulating its tropical origin. Xia Li Fang and K. Guan [25] provide rather detailed environmental descriptions of *C.nitidissima* in the wild. Yamaguchi's [27] success may have, in part, been due to his attempts at simulating the environmental origins of *C.nitidissima* by having the lowest greenhouse temperature set at10°C (50°F), throughout the course of crossing and ripening from embryonic development to maturation.

In the 1960's, when I was working towards floral fragrance using *C.lutchuensis* (also a tropical species) crossed with *C.japonica,* etc., I found it almost impossible to use *C.lutchuensis* as the seed parent. There were many other cases where I obtained vastly different results depending on which direction the cross was made. Ackerman [1,2].

I was working closely with Dr. Robert Cutter, of Oakland, CA at the time, and he was having the same trouble. However, a friend of his in southern California was having no trouble at all.

We concluded that perhaps we were too far north in latitude. We assumed it could be day length and/or temperature, that was affecting seed formation in *C.lutchuensis*. Several years later, we had a heating malfunction in the greenhouse at the U.S. Plant Introduction Station, Glenn Dale, MD, where *C.lutchuensis* was located. Temperatures during the flowering period ran in the mid-to-high 80's (more than 15° above our normal 65-70°F), and on its own, *C.lutchuensis* set several dozen open pollinated seed. The plant was shaded by a huge *C.japonica* situated next to it.

Considering the amount of time and effort that has been expended during the past fourteen years with minimal results, wouldn't it now be well worth while for some of us to explore new approaches? Perhaps there is yellow gold at the end of the rainbow after all, if we but take the proper route to get there.

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**Amphidiploid (allotetraploid) - the diploid hybrid from which an amphidiploid originates, is generally sterile, owing to the non-homology between the chromosome sets derived from two different species and consequent difficulty with chromosome pairing during meiosis (gamete production). With the doubling of the chromosome number, the sterility barrier is removed* [18].

**Modifier Gene - any gene that by interaction affects the phenotypic expression of genes at other loci. Many modifiers can be detected only by their effects on the expression of other nonallelic genes. They may be enhancers where they intensify, or as reducers where they decrease or inhibit the expression of other genes* [18].

Literature Cited

1. Ackerman, W.L. 1973. Species Compatibility Relationships in the Genus *Camellia*. Jour. of Heredity 64;356-358.

2. _____. 1977. The Question of Reciprocal Compatibility Among Camellia Species. International Camellia Soc. Jour. 9;32-35.

3. _____. 1994. A Different Approach in the Hybridization of *Camellia nitidissima (C.chrysantha)* - Some New Ideas for Getting the Yellow Camellia. American Camellia Jour. 49(1);8-11.

4. _____ and S. Bentz. 1986. Inheritance of White Flower Color in Japanese Iris. The Review (Amer. Jap. Iris Soc.) 23:1;19-21.

5. _____ and H. Dermen. 1972. A Fertile Colchiploid from a Sterile Interspecific Camellia Hybrid. Jour. of Heredity 63;2,54-59.

6. Brown, M. 1985. The Yellow Camellia. ACS Yearbook 50-63.

7. Campbell, A.E. 1985. *C.chrysantha* - a Progress Report from Australia. ICS Jour. 17;59-60.

8. Chang Ao-Lo and Xia Li Fang. 1981. The Research, History, and Present Status of *C.chrysantha* (Hu) Tuyama in Kunming Botanical Garden. ACS Jour. 36:1; inside front cover.

9. Donnan, W.W. 1987. The Quest for the Yellow Camellia. ICS Jour. 19;81-85.

10. Donnan, W.W. 1991. Hybrid Progress for Color Breaks. ICS Jour. 23;64-65.

11. _____ and J. Nuccio. 1985. The Crazy *C.chrysantha* Confusion. ACS Jour. 40:2;16-18.

12. Hagiya, K. 1984. Interspecific Hybridization of Camellias Using *C.chrysantha* Pollen. ACS Jour. 39:2;16-19.

13. Nagao, R. 1985. Looking for Yellow Flowers with Hybridizing. ACS Yearbook 66-70.

14. Parks, C.R. 1989. The Hybrids of *C.chrysantha*. ICS Jour. 21;76-79.

15. _____ and R. Scogin. 1987. The Elusive Yellow Camellia; Results from Breeding and Pigment Analysis. ACS Yearbook 31-37.

16. Piet, M. 1989. The Yellow Hourglass. ICS Jour. 21;87-88.

17. Pursel, F. 1986. Breeding for Yellow. ICS Jour. 18;44.

18. Rieger, R., Michaelis, A., and M. Green. 1968. A Glossary of Genetics and Cytogenetics (Classical and Molecular) Springer-Verlag, Inc., New York, 506 pp.

19. Sager, R. 1972. Cytoplasmic Genes and Organelles. Academic Press, New York & London, 405 pp.

20. SRB, A.M., R.D. Owen and R.S. Edgar. 1965. General Genetics, 2nd Ed. Freeman & Co., San Francisco & London. 557 pp.

21. Strickberger, M.W. 1985. Genetics, 3rd Ed. Macmillan Pub. Co., New York. 842 pp.

22. Uemoto, S., and I. Miyajima. 1987. Flower Pigmentation in *C.chrysantha*. ICS

Jour. 19;70-72.

23. _____, _____, and T. Eguchi. 1988. Floral Pigmentation in F^1 Hybrid Plants Between *C.japonica* and *C.chrysantha*. ICS Jour. 20;44-46.

24. Xia Li Fang. 1984. Seedling Breeding with *C.chrysantha*. ICS Jour. 16;18-20.

25. _____ and K. Guan. 1990. An Introduction to the Yellow Camellia. ICS Jour. 22;15-19.

26. Yumaguchi, T. 1990. New Varieties of Yellow-Flowered Camellia. ICS Jour. 22;58-59.

27. _____. 1992. Breeding My Way. ICS Jour. 24;69-70.

Diagnosis of the Systematic Development of Theaceae.

The Systematic Characters of the Golden Camellia - *C.nitidissima* Chi.

by

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DIAGNOSE DE DEVELOPPMENT SYSTEMATIQUE DE THEACEAE

EINE ANALYSE DER SYSTEMATISCHEN ENTWICKLUNG DER THEACEAE

LA DIAGNOSIS EN EL DESAROLLO SISTEMATICO DE THEACEAE

DIAGNOSI DEL SVILUPPO SISTEMATICO DI THEACEAE

As published with the *Collected Papers,* International Symposium on *C.chrysantha,* 8-11 January 1994 and translated by Zhao, Shi-wei, College of Landscape Architecture, Beiiing Forestry University, Beijing, 100083.

The discovery of the golden camellias amazed camellia gardeners and attracted wide interest from plant taxonomists and is one of the most important events of recent years. After many years spent in wide investigation, the number of yellow flowered species of camellias has increased constantly causing some taxonomical problems and arguments to inevitably arise. Ming and Zhang raised some new points of view in "On Taxonomic Problems of Sect. *Archecamellia* Sealy and Sect. *Chrysantha* Chang in Genus Camellia", published in *Acta Botanica Yunnanica,* 15(1): 1-15, which, in our opinion should be discussed here.

(1). The importance of petal colour in taxonomy.

Ming and Zhang claimed that yellow petal colour does not only occur in Sect. *Chrysantha* but also in other Sections, so that the yellow colour should not be used for classification. However, in our point of view the classification of Section should be based on the systematic development routes of organ morphology in flowers, with reference to the flower colour. In our classification system this has been used. If the flower colour is not considered and the development routes of organs are not taken into account, plants with red, white, yellow and even purple flower (such as *C.amplexicaulis* Coh. St. in Sealy's Revision) are combined into one Section, it seems that the real facts of systematic development have not been described.

(2). Since flower colours were not considered as a classification standard, the non-yellow flowered *C.petelotii* Sealy was treated the same as *C.nitidissima* Chi and they were merged in Ming and Zhang's paper.

(3). *C.nitidissima* Chi was thought to be an untenable species, thus Sect. *Chrysantha* (Sect. *Nitidissima*) was cancelled and merged with Sect. *Archecamellia.* However in fact in Sealy's *Archecamellia,* many systematically unrelated species were included there-in. Also, in Ming and Zhang's paper, *C.indochinensis* Merr. that systematically belongs to Sect. *Longipedicellata* was placed in Sect. *Archecamellia.* The point as to whether these treatments were proper is worth discussing again.

(4). In Ming and Zhang's paper, *C.nitidissima* Merr. was placed in Sect. *Archecamellia* and *C.tunghinensis* Chang merged with the former as a variety. In our point of view, this treatment seems to be divergent from the principles of taxonomy.

(5). Two new species, i.e. *C.calciola* with red flowers and *C.huana* with pale yellow flowers (according to the description in botanical Latin) were published. Whether they are tenable and where they should be systematically placed should be discussed.

(6). Are the treatment of the species that were in Sect. *Chrysantha* proper. For example, the merging of *C.parvipetala* Liang & Su is confusing. Regarding the status of *C.grandis* (Liang

et al.) Chang, specimen trees have been transplanted to the camellia nursery at Sunyatsen University and closely observed for a long time. It is concluded that this species is completely different from *C.flavida* Chang.

(7). In Sealy's *Monography* there is only a Type Balansa 3860 for *C.tonkinensis* Coh. St. and Sealy says "no petals or stamens seen." However Pitard, in his original paper mentioned the colour(1). With the only specimen without a flower, this has to be cleared.

(8). In another paper by Ming & Zhong, "A Revision of Section Theae in Genus Camellia", published in *Acta Botanica Yunnanica* vol.14(2), Sect. *Glaberrima* was cancelled and merged with *Theae*. The reason given is that "the stamens are slightly joined while in bud, but separate after opening". In fact the tenability of Sect. *Glaberrima* is not only due to the apparent joined androecium (into a joined tube of filaments), but also the non-existence of caffeine (from chemical analysis) in the two species from Sect. *Glabberima,* so that the mountain people of Guangdong and Yunnan do not use them for beverage. The classification of the species in *Theae* is considered inaccurate. This will be discussed further in a later paper.

All the problems are due to arbitrary insistence in Sealy's system. In fact in Sealy's *Monography* only 82 species were involved, including about 20 Dubiae (unplaced) species and the overall view of the systematic development of Genus Camellia was not mastered. With the increase in number of species, the systematic development becomes more and more clear and it is time to revise Sealy's system of classification of species.

All the problems raised in Ming & Zhang's papers will be discussed. Through discussion and exchange of views a better and clearer understanding will be obtained. In this paper we wish to examine the similarity and differences between *C.nitidissima* Chi and *C.petelotii* Sealy.

The main characteristics of *Camellia nitidissima* Chi are: Leaf, 3-4.5 cm wide with black glandular dots beneath and rough but apparent serration; petiole 10 mm long; pedicel and calyx 8-10 mm long; 5-6 bracteoles; 8-10 petals, golden yellow, obovate with obcordate apex; no indumentum on the bracteoles, sepals or petals; the base of the stamens joined and the filaments forming a short tube.

The main characteristics of *Camellia petelotii* Sealy fig. 1 are: Leaf, 4.5-7.5 cm wide, without glandular dots beneath, blunt and shallow serrations; petioles

Species	Leaf Size	Leaf	Petiole	Pedicel
C.nitidissima	3-4.5 cm wide	Black glandular dots.	1 cm long	8-10 mm
C.petelotii	4.5-7.5 cm	No glandular dots	1-2 cm long rough	1-2 cm 1g rough

Bracteoles	Calyx	Flower colour	Petals
5-6 without pubescence	Without pubescence	Golden yellow	8-10 glabrous Obovate to obcordate
10 whitish pubescence on inside	whitish pubescence on inside	Not yellow	14, oblong with acute apex Covered with whitish pubescence.

rough, 1.5-2.1 cm long; pedicel and calyx, 1.7-2 cm long; pedicels rough, 12-15 mm long, 10 bracteoles and 14 petals; inner petals wide-ovate, outer petals ovate to oblong-ovate with acute apex; petal colour not yellow (unknown); bracteoles, calyx and petals covered with a white pubescence; styles 3, separate to the base.

To compare the two species a table is given as follows. (Table 1).

From the table it can be seen that the two species are quite different in the presence or absence of black glandular dots beneath the leaf, the length of the pedicels, the number of bracteoles, the flower colours, the shape and number of petals and the presence or absence of whitish pubescence on bracteoles, sepals and petals. It is concluded that the two species should be separated to avoid confusion.

Abstract.

The golden camellia - *Camellia nitidissima* Chi *(C.chrysantha* (Hu) Tuyama) differs from *Camellia petelotii* (Merr.) Sealy by the smaller leaf-blade with black glanduliferous dots beneath, the half number of bracteoles, the yellow colour and the different shape of the petals, the lack of indumentum on the bracteoles, sepals and petals. On the other hand, the species *Camellia petelotii* Sealy is characterized by the broader leaves, without glanduliferous dots beneath, the longer pedicel with 10 bracteoles adhered there-to, the petals not yellow and oblong with acute apex, the bracteoles and sepals as well as the petals covered with whitish pubescence. They are distinguishable species. The Authors do not agree with the conclusions made by Ming and Zhang published in *Acta Botanica Yunnanica,* vol. 15, No. 1, 1993.

Footnote (1). See article "The First Yellow Camellias" by T.J. Savige

Comments.

In 1992 Ming Tien-lu of Kunming Institute of Botany published in *Acta Botanica Yunnania* 1992; 14(2):115-132, a complete revision of the Section *Thea* of Genus Camellia which merged Section *Glaberrima* with *Thea* and reduced about 47 species in these Sections to 12 species and 5 varieties.

Then in 1993 Ming together with Zhang Wen-Ji, also from the Kunming Institute of Botany, published in *Acta Botanica Yunnanica* 1993; 15(1):1-15 a complete revision of Section *Chrysantha* in which Section *Chrysantha* was merged with Section *Archecamellia* and about 16 species, 2 varieties and 3 forms of Section *Chrysantha* were revised. Finally in the same year Ming together with Zhong Ye-Chong of the Guangxi Academy of Forest Survey and Planning, Nanning, published in *Acta Botanica Yunnanica* 1993, 15(2): 123-130 "A Revision of Genus Camellia Sect. *Tuberculata"* with a reduction in the number of species. In the above paper given by Chang at the International Symposium of *C.chrysantha,* Nanning, he rebutted a substantial part of Ming's contentions on the revisions of the yellow camellias and mentioned that the classifications of the species in Theae was considered inaccurate and this would be discussed further in a later paper.

As Gao Ji-Yin says in a recent letter - "The taxonomists of China have started a disputation on the yellow camellias and other species. There are two schools of thought, one is the Guangdong school led by Prof. Chang Hung-ta and the other is the Yunnan school led by Ming Tien-lu. It is difficult to distinguish which is correct, at least for the present. In the meantime we should report their opinions without reservations."

T.J. Savage

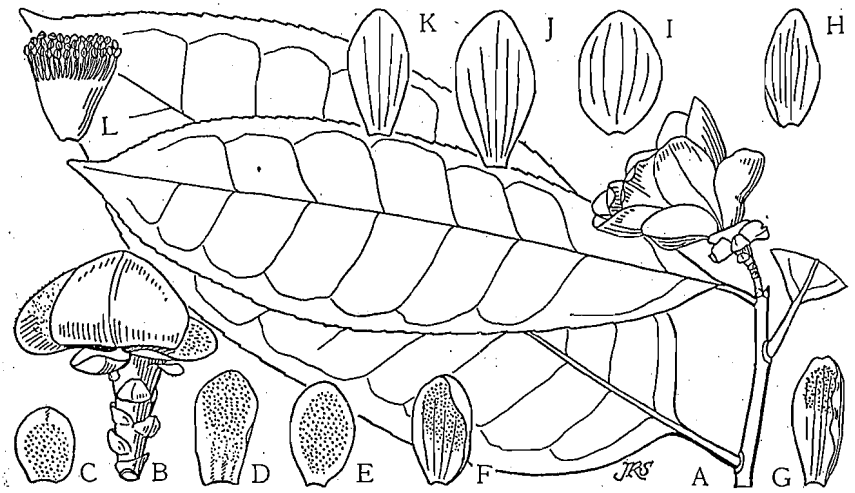


Fig. 12: *C.petelotii:* A, flowering shoot; B, pedicel and calyx; C-K, petals; L, androecium; B x 3, the rest natural size; all from *Pételot 848*.

Study on Breeding Method of F.Camellia *Chrysantha*

by
Yamaguchi, Tadao, Japan

ETUDE D'UNE METHODE D'ELEVAGE DE F1 CAMELIA CHRYSANTHA

EINE STUDIE UBER ZUECHTUNGSMETHODEN DER F1 KAMELIE CHRYSANTHA

UN ESTUDIO DEL METODO EN LA CRIANZA FE F1 CAMELIA CHRYSANTHA

UN STUDIO DEL MODO PER LA CREANZA DI F1 CAMELIE CHRYSANTHA

The morphological character of F1 *hybrid* (four species) between *C.chrysantha* and Japanese *C.japonica* was reported in the separate paper published in the International Camellia Journal in 1990. In this paper, the breeding method for producing hybrid is introduced as follows.

Hybridization of *C.chrysantha* and Camellia which originally grew in the subtropical zone was carried out in the greenhouse. The seed obtained from the *hybrid* was treated to stimulate germination. The minimum temperature in the greenhouse was controlled within 10 degrees during the period of maturation of hybrid seed (from forming embryo to mature).

The period of hybridization was from November to February in winter. As the outdoor temperature in the northern region of Japan, which our institute was located, sometimes was below 5°C and snowy, the work of hybridization could not be carried out outside the house and only done in the greenhouse.

Some *C.japonica* in Japan begin to blossom in early September. As the temperature during this period is quite high, fruit bearing rate is very low. Normally hybridization begins in November.

But at this time, *C.chrysantha* grown in above area does not begin to blossom, the pollen of *C.chrysantha* used for hybridization between Japanese *C.japonica* can be stored in the refrigerator (about 18°C) and can be germinated within one year.

The pollen taken out from the refrigerator was pollinated to the flower which is blossoming. As there was no insect or pest in the greenhouse during this period, the covering bag was not needed after hybridization. Much better fruit bearing was observed at the minimum temperature of above 18°C inside the greenhouse. That is why blossoming time of *C.Chrysantha* which growing in the subtropical region was in winter when sunlight was less and the temperature was about 10°C.

Most of the seed obtained from the hybrid of *C.chrysantha* and *C.japonica* were empty shell or not become mature.

Low temperature during the period of seed maturation has a great effect to seed maturation and the growth of the seed and cause premature drop of seed, from which there were some empty shell or colloidal.

Seven months after hybridization, the seeds become mature, (for intraspecific hybridization of *C.japonica*, one or two months shorter). Hybridization was carried out from November to February. Seed can be collected and sowed during June to September.

Before sowing, seed should be soaked into water for a certain time, then the seed which floated on the surface of the water should be taken away. Only the seed which sank to the bottom of the water can be used for further treatment and sowing.

The purposes of stimulating germination of the seed are as follows: (1) Seedling can be grown one year earlier and also the flower can be observed early. (2) Half year of time can be shorter from sowing to germinating. The less decomposed seeds were seen.

As per method described above, the following procedures were used: (1) One-third or one-fourth of the shell and inner coat was pared away. At this time it can be identified whether the cotyledon was colloid or already mature. If it was colloid, such seed cannot be used.

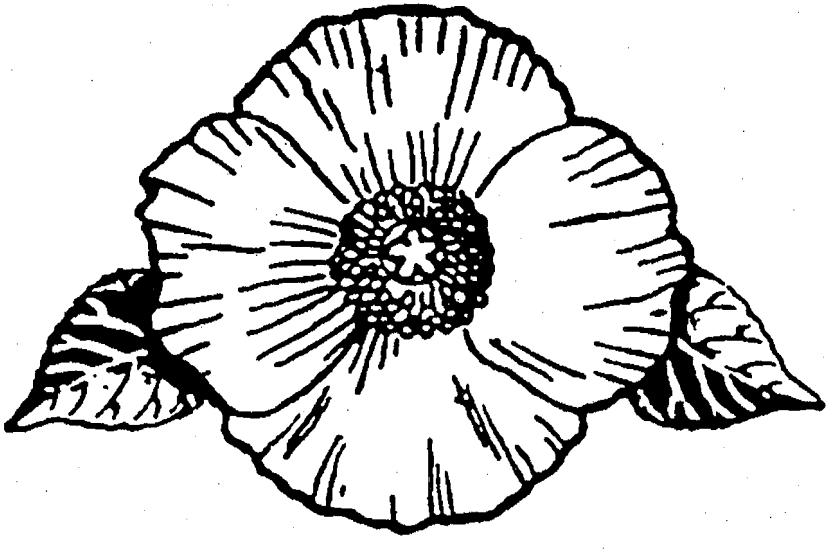
(2) The seeds should be immersed in the 100 ppm Gibberellin for 30 minutes. (3) After the seeds were immersed in Benlate bactercide for 15 minutes, the seeds were covered with vermiculite.

Sowing was carried out during the high temperature season (June to September). One to two weeks later, root started to grow and three to four weeks later, the seed sprouted. One month after sowing, the seedling can be transplanted to the plastic flower pot. At that time if the purplish red color was observed on the peeling part of the first leaf, it can be determined that the flower was of hybrid of C1, *C.chrysantha*.

The seedling was continually grown in the greenhouse and can be reached up to 15-20 cm high in May next year.

If such treatment above was not carried out to stimulate germination and sowing was done outside the house, germination can only be observed in May next year. Therefore compared with two results - the growing period was one year different.

NOTE—Refer to International Camellia Journal No. 22, October 1990, page 58, "New Varieties of Yellow Flowered Camellia" by Tadao Yamaguchi.



Research In Breeding Of Yellow Camellias - A Sum-Up Report*

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RECHERCHES SUR L'ELEVAGE DE CAMELIAS JAUNES-UN RAPPORT RECAPITULATIF

EINE ZUSAMMENFASSUNG DER FORSCHUNGSARBEITEN DER GELBEN KAMELIE-AINVESTIGACION EN

LA CRIA DE LA CAMELIA AMARILLA-UN RESUMEN DE ELLA

STUDIO DELLA CREANZA DELLE CAMELIE GIALLE-UN RAPPORTO AFFINE DI SOMMARE

INTRODUCTION

Common camellia is an important ornamental shrub. But in its thousands of cultivars, almost none appears to be purely yellow - flowered. With their unique characteristic of bearing yellow flowers, yellow camellias have long been considered the hope for breeding new cultivars of common camellia with yellow flowers.

METHODS

We began our research work of breeding in 1973 at Kunming, making interspecific crosses mainly between *C. reticulata, C. pitardii* and *C. japonica* (as seed parents) and 3 species of yellow camellias (*C. petelotii, C. petelotii* var. *microcarpa* and *C. euphlebia*) as pollen parents. 1741 flowers were pollinated and over 200 seedlings obtained, none being yellow-flowered.

In 1980 we began our breeding work at Nanning, using yellow camellias as mother plants to cross with *C. japonica, C. reticulata* and *C. sasanqua* at Camellia perelotii's wild habitat. After the study on the Breeding and Vegetative Propagation of Yellow Camellias was listed as the ministrial key Research Project of the Ministry of Forestry in 1982, in collabration with several other units, we started to investigate and collect the germplasm of wild yellow camellias and establish two gene pools in South China. On this basis, we did much research work in interspecific crosses, super-tree selection and vegetative propagation. Here is the sum-up of 20 years' research work.

RESULTS

1. Collection and preservation of germplasm resources of yellow camellias.

There are 23 species and 3 varieties of yellow camellias in the world. Among them, 21 species and 3 varieties are native to southwest Guangxi, China. The distribution area lies from 21° 30' to 23° 40' N and 106° 40' to 108° 35' E. According to the investigation, it reaches Dongxin, Fangcheng city in the south, Haicheng, Pinggua County in the north, Wutang, Yongning County in the east and Shuikou, Longkou County in the west. The vertical distribution lies at 20-900m above sea level, but mostly at 200-500m. The annual average temperature of the inhabitant area is about 21°-22°C. The average temperature is 12°-15°C in the coldest month (January) and 28°C, in the hottest month (July). The air temperature can be as cold as 0°C in the winter and as hot as 37°C in the summer. The annual precipitation varies from 1200 to 3800mm and relative moisture is generally 77-81% with usual fogs in spring and autumn. In this area, the germplasm resources of yellow camellias are badly damaged, some species being on the margin of extinction. It is therefore imperative to collect and preserve the germplasm resources of yellow camellias.

From 1983 onwards, two gene pools

of yellow camellias were established by means of initiating the wild habitat and transplanting adult trees to the gene pools. The two germplasm pools cover an area of 1.8 ha. Totally, 1,027 trees were planted. These yellow camellia trees are growing well now and blooming abundantly. Germplasm resources are preserved thus in the germplasm pools, they become important bases for the breeding research.

2. Interspecific crosses

After 1973, interspecific crosses were made separately at Nanning and Changsha from 1982 to 1990. Species from Sect. Chrysantha Chang were used to cross with many species from other sections of genus Camellia. In spite of over 15 species from Sect. Chrysantha Chang, species used in the crosses, including *C. japonica, C. yuhsienensis, C. rhytidocarpa, C. vietnamensis, C. handelii, C. polyodonta, C. gigantocarpa* and *C. semiserrata*, show some apparent advantages in floral size, fragrance or hardiness. With cross combinations exceeding 300,047,869 flowers were pollinated in these years. Among them, *C. reticulata, C. japonica, C. sasanqua, C. sinensis var. assamica* and *C. handeli* were used in 1,312, 5,303, 1,187 and 1,288 crosses respectively. Meanwhile 443 interspecific crosses were made within species of Sect. Chrysantha. The number of crosses involving other species (*C. oleifera, C. vietnamensis, et al*) reached 6,873. Totally 1,256 fruits were harvested and 2,707 seedlings grown up. The compatibility of the crosses varied to certain extent. For example, the rate of fruit set in the crosses between *C. petelotii* var. *longistyla* (*C. Chrysantha* var. *longistyla*) and *C. handelii* and *C. yuhsienensis* are 0.4% and 0.7% respectively, being very low; while the rate of fruit set in the cross between *C. petelotii* var. *longistyla* and *C. sasanqua* can reach 4.6%, being relatively high. When yellow camellias were pollinated by pollens of *'Shizirou'* and *'Zaotaohong'* of *C. reticulata*, 2.5% and 5.5% of the flowers could produce fruits respectively.

Because of genetic discrepancy between the parents and the physiological incongruity of the hybrid plants, some of the hybrid seedlings displayed low vital capacity. Some even died when they were very young.

Among F1 hybrid plants derived from the interspecific crosses, most resemble their mother plants and some hybrid plants display intermediate characteristics between their parents. Some even show a tendency to the male parents in their main characteristics. For instance, in the cross of *C. petelotii* var. *longistyla* X *sasanqua*, a dwarf, small-leaved hybrid plant with big and fragrant flowers was obtained. The flowers bloom from October to the next January, being 1 and 3 months earlier than pollen and seed parents, respectively. Unfortunately, the color of the petal is reddish purple. However, it's a prospective plant to be used in the further breeding work.

3. Super - tree selection.

Super trees are those which exceed the trees of same age and same species in the same habitat in overall character and especially in certain main characteristics. Since China is the distribution centre of yellow camellias and yellow camellias in the wild have some variations in character, so it's practical and labour-saving to select super trees out of their natural population. In 1981, in a tropical rain-forest habitat of *C. petelotii* in Yongning County of Guangxi, a super tree with 13 golden petals in a flower was selected out and named C-12. In 1984, one-hundred-mark system was used in super tree selection in Fangcheng, Dongxin, Longan and Nanning of Guangxi. The super-tree selection was repeated in 1985 and 10 super trees were selected out. From *C. petelotii, 'Jinbei'* (gold cup) and *'Jin Tanhua'* (gold cactus) were selected. From *C. petelotii* var. *longistyla, 'Huang Yulan'* (yellow magnolia), *'Jin Shaolan'* (golden lady-slipper), *'Jin Zhong'* (gold bell) and *'Huang Mudan'* (yellow tree-peony) were selected. From *C. tunghinensis, 'Huang Lindang'* (gold gingle), *'Huang Diaozhong'* (yellow fuchsia) and *'Dali'* (big oliole) were selected. From natural population of *C. pubipetala* 'Mao Yuhe' (pubescent jade-Lotus) was selected. All the ten super-trees are being vegetatively propagated.

4. Prospects and discussions

After 20 years' research work, much has been achieved in preserving and collecting yellow camellias' germplasm resources. Also a good number of crosses have been made and many hybrid

seedlings obtained. This is a good basis for the success in the near future.

REFERENCES

1. Ackerman, W. L. 1971 - Genetic and Cytological Studies With Camellia and Related Genera, USDA Tech. Bul 14277
2. Chang, Hungta, 1981 - A Taxonomy of the Genus Camellia, Sci. Nat. Univ. Sunyantseni, Monograph Ser. 1:1-180
3. Chen, Junyo and Deng, C.Z. 1986 - Using the Hundred Mark System to Select Super-Trees in Camellia Chrysantha, *C. tunghinensis* and *C. pubipetala*. Journ. Beijing Forestry Univ. 8(3), 35-43 (in Chinese)
4. Chen, Junyu, 1987. Fourteen Years in Yellow-Flowered camellia breeding. J. Beijing Forestry Univ., 9(3):315-320 (in Chinese)
5. Cheng, Jinshui and Xiong, H. P. 1986 - Studies on Inducing New Plants From Embryo Culture and cotyledon Culture in Vitro of Camellia Chrysantha (Hu) Tuyama, Jour. Beijing Forestry Univ. 8(3), 31-34 (in Chinese)
6. Donnan, W. and Nuccio, J. 1985 - The Crazy *C. Chrysantha Confusion*, Camellia Jour. 40(2), 16-18
7. Hagiya, K. 1984. Interspecific Hybridization of Camellias Using *C. Chrysantha* pollen, Camellia Jour. 39(2) 16-19
8. Parks, C. R. and Scogin, R. 1989 - The Elusive Yellow Camellia, Results From Breeding and Pigment Analysis. Amer. Camellia Yearbook (1989) 31-37
9. Xia L. 1984 - Seedling Breeding of Camellia Chrysantha, International Camellia Jour. (1984) No. 16 18-20

*also participated in research work-Cao, H.J., Li D.M., Deng C.Z., Tang, Z.H., Li T.Q., Mo S.Y., Luo Z.Z., Li Y.F., Dong X.J. et al.

ERRATA - ICS Journal No. 25 Oct. 1993 - The Golden Camellia by T.J. Savige - p.61 - left hand column - line 27 Species NO6 - preceeding Subgenus Thea - Camellia Flavida Chang in Acta Sci. Nat. Univer. Sunyatseni ser. 1:103, 1981.

REVISIONS — 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 1993.

AUSTRALIA

New Members

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BAKER, Mr. K., P.O. Box 208, Pt. Macquarie NSW 2445
BUSBY, Mr. Tom, C/-All Along Transport, 81 Sunderland, Moonah TAS 7009
COX, Mrs. J. I., 596 Read Place, Albury NSW 3131
CURLEWIS, Mrs. S., 112 Victoria Ave., Dalkeith, W.A. 6009
DEMPSTER, Mrs. B., 3B Scott St., Claremont, W.A. 6010
DAMEN, Mrs. F., 2 Onslow Close, Gooseberry Hill, W.A. 6076
MAISH, Mr. & Mrs. S., Camellia Glen, McKays Lane Palmwoods, QLD 4555
PERRY, Mr. M., 54 East PDE, Eastwood NSW 2122
SEE, M/S J., 19/25 Ramsgate Ave., Bondi, NSW 2026
WALDRON, Miss K., 106 Huon Creek Rd., Wodonga VIC 3690
WEMYSS, Mr. G., 14 Ardisia St., Arana Hills QLD 4054
WOOLLEY, Mr. A. J. Denerley, P.O. Box 201 Nowra NSW 2541

Changes and Corrections

A.C.R.S. TAS. Bch to A.C.R.S. (TAS BCH) Inc., c/-Mrs. P. W. Fredriksen, 2/563 Sandy Bay Rd., Sandy Bay TAS 7005
A.C.R.S. N.S.W. Foundation Bch to NSW Camellia Research Society Inc. c/-Mr. D. Hobbs, 10 Howey Ave., St. Ives NSW 2075
A.C.R.S. to c/-Mr. G. R. Daniels, 54 Sylvan Ave., East Lindfield NSW 2070
A.C.R.S. Adelaide Hills Bch Inc. to c/-91 Mr. Barker Rd., Stirling, S.A. 5152
A.C.R.S. Vic. Bch. to 47/49 Burke Rd., NTH, East Ivanhoe VIC 3079
FARRAND, Mr. & Mrs. R. to Braemar, 20 Heydon Ave., Warrawee NSW 2074
HUGHES, Mr. & Mrs. M. to 15 McKays Rd., Langwarrin VIC 3910
JONES, Mr. & Mrs. R. to Glen Cush, 388 Bucketts Rd., Belbora, NSW 2422
MILNE, Mrs. J. to 35 Astor Terrace, Brisbane QLD 4000
SULLIVAN, Mr. & Mrs. C. to Mt. Irvine Rd., Mt. Wilson NSW 2786
WILKINSON, Mr. R., — deceased

* Resigned - Blythe, Mr. D. J.; Caldwell, Mrs. I.; Lincoln, Mrs. J. F.; McGlynn, Mrs. M.; McGregor, Mr. & Mrs. L. W.; Macoboy, Mr. S.; Morgan, Mrs. A. P.; Pierson, Dr. T. E.; Sanders, Mr. & Mrs. J.; Simpson, Mr. & Mrs. P.; Wallace, Mrs. J.; Williams, Mrs. F.

CHINA

New Members

AU-LUO, Mr. Zhang & LI-FANG, Mrs. Xia, Kunming Institute of Botany, The Chinese Academy of Sciences, Kunming 650204, Yunnan
BAI, Wenli, via Lu Xiouyun, No. 76 Xin-kai Road, Shijiazhuang, Hebel, P.R. China 050055
BEIJING BOTANICAL GARDEN, att: Zhang Zuoshuang & Zheng Xiping, Wofosi Rd., Beijing 100093
CHEN, Professor Jun Yu, Dept. of Landscape Architecture, Beijing Forestry University, Beijing 100083
CHENG, Professor Jinshui, Dept. of Landscape Architecture, Beijing Forestry University, Beining 100083
LU, Mrs. Rianling, Forestry College, Guanxi Agricultural University, Yongwu Road, Nanning 530001 Guangxi

GU, Mr. Zhi-Jian *
WANG, Mr. Zhone-Lang *
XIAO, Mr. Tiojiang *
XIE, Mr. Jian *

* Kunming Institute of Botany. The Chinese Academy of Sciences, Kunming 650204 Yunman

ZHAO, Shi-wei, Box 110, Beijing Forestry University, Beining 10008
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ZHU, Xue-Nan, Horticulture Engineer, Hangzhou Botanical Garden, Hangzhou, Zhejiang 310013, P/R China

FRANCE
New Members
FURIC, Mme Monique, Kernivinen, 29190 LENNON
HOUITTE, M. & Mme. Andre, 6 rue des Mesamges. 35650 LE RHEU
JOHNSTON, MD, Dr. & Mrs. Jonathan, Mas des Moulieres 06190 ROQUESTERON
LAMEZEC, M. Jean-Claude, Le Pont, 29470 PLOUGASTEL-DAQULAS
LE ROUX, Mme Denise, 23 rue Keraudren, 29200 BREST

Changes & Corrections
RICHARD, Mme Francois, Cote de Landerose. 82200 MOISSAC
TANNEAU, Mme Anne-Marie, Keresquer, 29790 MAHALON

GERMANY
New Members
ALLESCH von, Herr Michael, Ackermannstr 21 22087 Hamburg
BALTUS, Herr & Frau Hans & Helene, Uranusstr 14 45277 Essen
BUDER, Herr Ulrich, Heriburgstr 26, 48157 Muenster
DAHMEN, Herr & Frau Heinz & Josephine, Zum Wurmial 1 52146 Wuerselen
DENES, Herr & Frau Dr. Arthur & Doris, Lerchenstr 3 4103 Bottmingen
DUTTWEILER, Herr & Frau, August & Anne Marie, Steinmueri 10, 8604 Volketswill
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FOEDERVEREIN LANDSCHLOSS PIMA-ZUSCHENDORF e. V, Kasianienaltee 6 01790 Pima
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HABERNMEHL, Herr Patrick Huttenheimer Str 13, 76706 Dettenhelm
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KLOESEI, Herr Georg, Gutenbergstr 37, 22525 Hamburg
KLOTZ, Herr Walter, Auf der Trift 13, 63329 Egeisbach
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MEYER, Herr & Frau Joerg, Maarweg 6, 52076 Aachen
MUELLER-LAUER, Herr & Frau Gabriele & Walter, Emmerich-Josef Str 52, 65929 Frankfurt
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SCHINDLER, Herr Dipl-Ing Kari-Heinz Ir. Dingerlaan 7, 6419 BC Heerien/NL
SCHULTZ, Heer & Frau, Erwin & Gisela, Waldstr 24, 28816 Stuhr
SEELINGER, Heer & Frau Dipl-Ing Walter & Ursula, Max-Reger Str 3, 69121 Heidelberg
STEWART, Frau Margitta, Limberger Str 13, 49080 Osnabrueck
URBAN, Herr & Frau, Helga & Klaus, Langheckenweg 13, 60433 Frankfurt
VOIGT, Herr & Frau, Juergen & Ingrid, Saselheider Str 50, 22159 Hamburg
WITTEBROCK, Herr & Frau Karl, Kempen 19, 42659 Solingen

GERMANY
Changes & Corrections (Note Zip Code Changes)
AMTHOR, Herr & Frau, Geert & Jutta, Waidweg 18, 22113
ANSEMS, Herr Paul, AmBersberg 14, 47551 Bedburg-Hau
ARTS, des, Frau Eva, Stettiner Str 22, 66121 Saarbruecken

BARTELZKO, Frau Dr. Cordula, Beethovenstr. 15, 27798 Hude
BEUCHERT, Frau Marianne, Marbachweg 55, 60357 Frankfurt
BOEHE, Herr Wilhelm-Dietrich, Langer Rehm 8, 24226 Heikendorf
BRANDIS, Herr & Frau, Prof. Dr. Henning, Zedernweg 3, 53125 Bonn
CZAMIECKI, Frau Antje, Erienstr 20, 22529 Hamburg
DEUBNER, Frau, Esther, Schlossweg 2, 97513 Micheiau
ENGELS, Herr Dr. Rolf, A-Schweitzer-Str 6,59558 Lippstadt
FICK, Herr & Frau Hiltrud & Hans, Demstr 32, 97070 Wuerzburg
FISCHER, Herr & Frau Peter & Jutta, Hoeden 16, 21789 Wirgst
FRITSCHI, Herr & Frau Werner & Gertrud, Postfach 76, 8305 Dielikon
GIASER, Herr & Frau Karl & Marie-Lucine, Alte Str 9, 64832 Bat-enhausen
GRIEDER, Herr Hans, Claragraben 114, 4057 Basei
GROSSMAN, Frau Marianne, Auf der Alm 11a, 50126 Bergheim
HACKENBRACHT, Frau Christine, Liliencronstr 6, 60320 Frankfurt
HANSEN, Herr Waldemar, Gruenenberger Str.24, 73079 Suessen
HEYNITZ, Frau Marta, Im Wiesengrund 3, 79588 Efringen
HOLBE-BERGER, Frau Margarete, Muenchner Str 90, 88757 Karisfeld
HUBEN, Baumschule, Schriesheimer Fussweg 7, 68526 Ladenburg
JAGAU, Herr & Frau Axel & Christiana, Am Kamp 1, 38173 Deitum
JANDER, Frau Dr. Silvia, Holderweg 46, 76199 Karisruhe
KALTSCHMITT, Herr & Frau Willi & Therese, Laerchenweg 8, 65366 Geisenheim
KAREL, Frau Doris, Goethwestr 25, 89518 Heidenheim
KASIMIR, Herr & Frau Gerhard & Ines, Stahlbuehiring 96 68526 Ladenburg
KILIAN, Frau Ingeborg, Illinger Str 54, 66564, Ottweller
KRAENZLEIN, Herr Dieter, Am Stockbuehi 1, 91235 Hakenstein
KREIGER, Herr Kuna, Egge 65, 58313 Heidecke
KRUSE, Frau Kathi, Wachtelweg 3, 22869 Schenefeld
LINDEN, Herr & Frau Walter & Dora Steinauer Str 59 40721 Hilden
LINTHE, Herr & Frau Dr. Hubert, Maschweg 7, 38350 Helmsted
LITWINSKI, Herr Dr. Andre, Weidstr 21, 6300 Zug
LUCAS-BACHERT, Frau Ursula Siesmayerstr 10, 60323 Frankfurt
LUTHER, Frau, Ingrid, Am Thiershof 40 45721 Haltern
MAIR, Herr Peter, Am Kronenberg 18, 87600 Kaufbeuren
MEHLHORN-SCHMIDT, Frau Dagmar, Bismarckstr 8, 72636 Frickenhausen
MEISSNER, Frau Gisela, Am Kornberg 64, 57076 Siegen
MERKEL, Frau Regina, Eichenstr 9, 86836 Graben
MOR-EPPEN, Frau Barbara, Gudnunstr 105, 22559 Hamburg
PALM, Herr & Frau Dr. Carlheinz & Erika, Weiherstr 29 53332 Bomheim
PEPER, Herr & Frau Prof. Dr. Klaus & Brigitte, Hopfenweg 15, 66424 Homburg
RECKNAGEL, Herr & Frau Werner & Brigitte, Auf der Gest 38, 47199 Duisburg
REINHARDT, Frau Annegret, Auf dem Stumpeirott 9, 50996 Koeln
RICHTER, Herr Dr. Karl, Breitscheidstr 53a, 01237 Dresden
ROEZEL, Herr & Frau Dr. Volkhard & Ingrid, Engelsberg 19, 53819 Neunkirchen
ROSSBACH, Herr Dr. Heimut, Weinbergweg 48, 66119 Saarbruecken
ROWEHI, Frau Hilke, Stoeverskamp 30, 27798 Hude
SCHILTENWOLF, Herr & Frau Dr. Kurt & Brigitte, R-Wagner Str. 27, 67655 Kaisersiautem
SCHLECKAI-BLIEDUNG. Frau Ulrike, Nifiandring 33, 22559 Hamburg
SCHWENK, Herr Dr. Pater, Parmemannweg 10, 14089 Berlin
SIX, Frau Baerbei, Dachsberweg 22, 64287 Danmstadt
STEINHAUER, Herr & Frau Heinz & Elisabeth, Thomas-Mann Str.11, 52146 Wuerselen
STEPHAN, Herr Dr. Gisbert, Heinrichstr 9,49080 Osnabrueck
TIEFENBACH, Herr & Frau Rolf & Heidemarie, Am Muehlenbach 12, 27711 Osterholz-Scharmbeck
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VOGT, Frau Resi, Schletiweg 3, 67752 Wolfstein
WAGNER, Herr & Frau, Michael & Waitraut, Danzinger St. 81, 61118 Bad Vilbel
WELSCH, Herr Georg, Schultheissenbranstt 23, 96114, Hirschaid
WILHELMA ZOOL-BOT GARTEN, Postfach 501227 70342 Stuttgart
ZICKGRAF, Frau Ingrid, Ganghoferstr 21, 67065, Ludwigshafen

GERMANY
* Resigned - Albers, T.; Baranee, S.; Batzenschlager, I.; Baumann, B.; Baumschule, E.; Bayer, W.; Betz, D.; Billig, R.; Bischoff-Vrobel, E.; Bour, R.; Brettar, H.; Bruck, B.; Dannenberg, R.; Degen, M.; Demming, W.; Eberts, B.; Eichholz, E., Eichstadt, D.; Elsner, R.; Endress, H.; Erlmann, F.; Eulenburg, G.; Fischer, E.; Gasumann Glaubert, I.; Gomm, L.; Graf, E.; Groffin, Z.; Haase, E.; Haase, M.; Hagner, A.; Hechtelhammer, P.; Heft, L.; Heidelberger, F.; Heise, L.; Horsch, I.; Horsch, H.; Jope, G.; Kastner, R.; Kneipp, O.; Knoll, A.; Kogel, A.; Kost, G.; Kroger, B.; Krous, D.; Kunz, J.; Landes, D.; May, C.; Meishelt, W.; Mentzel, C.; Mirus, S.; Miyabe, A.; Muller, K.; Muller, P.; Muller, H.; Nilges, E.; Obe, R.; Ohrnberger, D.; Overlander, D.; Reif, H.; Roitzschi, C.; Schafer, H.; Schienagel, R.; Schirra, J.; Schmidt, E.; Schnuckler, B.; Schuler, H.; Schwanke, W.; Seidel, T.; Seiber, J.; Silva, E.; Steinmetz, F.; Stetler, H.; Stolz, H.; Stolz, W.; Steinberger, S.; Strunz, C.; Stubig, H.; Trossen, J.; Ulbrich, K.; Vitzethum, R.; Wagner, N.; Wolf, F.; Wyss, G.; Zummer, O.; Zweydinger, B.

JAPAN
New Members - ADACHI, Touka, 4-3-11 Kyuden, Setagaya-Ku, Tokyo 157
KOBAYASHI, Iwao, 47 Motoda, ku-cho, Tottoriu 680
KIRINO, Akinari, 1-61 Kasumi-cho, Hachiouji-shi, Tokyo 192
OKAWA, Takeo, 31 Kazesamurai, Motomachi Ooshima, Tokyo 100-01
SEKIGUCHI, Kazuo
YOKOKAWA, Mutsuo

Changes and Corrections
HAGIYA, Kaoru, 2-10-52 Nishi-Kobayi-dai, Niigata 950-21
KISHIKAWA, Shinichirou 1-9-18 Choudo, Higashiousaka-shi Oosaka 577
MASUDA, Kousaku, 553-3 Dencho, Hachonai, Hamada-shi, Shimane 899-27
MOTOE, Syouji, 1-8-10 Chiyoda, Yotsukaidou, shi, Chiba 284
MORIKAWA, Kuniyasu, 1-7-18 Iwasaki-cho, Matsuyama-shi, Ehime 790
WATANABE, Mitsuo, 4-1-19 Minamisawa, Higasho-kurume-shi Tokyo

KOREA
New Member - KIM-UN CHO, C.P.O. Box 8763, Seoul

NEW ZEALAND
New Members - YOUNG, Mr. & Mrs. R. H. Craig Lea, R.D. 2, Marton
HINDMARSH, Mr. & Mrs. J. W., 19 Waimata Rd., Gisborne
HANNAM, Mr. & Mrs. R., 33 Totara St., Putaruru
ARTHUR, Mr. P., Touchwood Books, P.O. Box 610, Hastings
PROPEX, Mrs. A. Olsen, 168 Metcalf Rd., Ranui, Auckland 8
KAPITI COAST BRANCH, N.A. Camellia Society, c/o Mrs. E. Wall, 15A Alexander Rd., Raumati Beach
SOUTH TARANAKI BRANCH, N.Z. Camellia Society, c/o Halliwells, Barristers & Solicitors, Regent St., Hawera

Changes & Corrections
ABRAHAM, Mrs. D. M. (deceased)
KIDDLE, Mr. R. E. (deceased)
BODLEY, Mr. & Mrs. T. E. - moved to Australia
THOMAS, Mr. & Mrs. D.
CROWLEY, Mr. & Mrs. D.
COOPER, Mr. & Mrs. J. A., 16 Beach Rd., KATIKATI
SHARPE, Mr. B. E., 22 Kauri Rd., Birkenhead, Auckland
RESIGNED - HAMMOND, Mrs. M.; LEONARD, Mrs. J. M.

SOUTH AFRICA
New Member - McLEOD, Ms. Ann, P.O. Box 461, Hilton 3245

Changes & Corrections
JOUBERT, Mrs. Veronica, 'Gemvale' P.O. Box 19, Hazy View 1242

NEWTON-KING, Mrs. J., Kings Kloof, P.O. Box 2, Somerset West 7130
*RESIGNED - Barras, Mrs. R.; Burgess, Mr. Ey; De Jager, Mr. Paul; King, Mr. Derek; Retief, Mr. & Mrs.;

SPAIN
Correction - CARRAGEL, Jose M. Aran, Calie Sierra, 32-1, Pontevedra, 36002

UNITED KINGDOM
New Members
ARMSTRONG, K., Eaton Estate, Chester CH4 9ET
BERTASIUS, Mrs. O., 87 Lordship Rd., London N16 5HF
BOLITHO, Mr. & Mrs. A. R., Upper Bordean House, Langrish nr. Petersfield, Hants GU32 1ET
BRAHAM, Ms. J., Holly Lodge, Richmond Park, Richmond, Surrey TW10 5HS
BROWN, Miss K.R., 4 Bishops Cottagers, Wootton Courtenay, Minehead, Somerset TA24 8RE
CAPLIN, H., 169 London Rd., Clacton-on-Sea, Essex C015 4DT
CASH, Mrs. P. S., 1 Avenue Road, St. Albans, Hertfordshire
CHARNOCK, Mrs. P. J. 30 BassettGardens, Osterley, Isleworth Midx. TW7 4QY
CURTIS, Miss P. J., 5 Radford Close, Farnham, Surrey GU9 9AB
DAY, Mr. & Mrs. B.L.H., Yew Tree Cottage, Upper Common Road, Pennington, Lymington SO41 8LD
EDGE, K. E., 8 Sands Road, Harriseahead, Stoke-on-Trent, Staffs, ST7 4LA
FOX, P. V., 50 Pingle Rd., Millhouses, Sheffield S7 2LL
GAY, N. L., Wiltshire House, High St., Seend, Melksham, Wilts SN12 6NU
GEORGE, Mr. & Mrs. R., The Meadows, Treen, St. Levan, Pensance, Cornwall
HOLE, Mrs. V., Head Gardener-Antony, Honeysuckle Cottage, Wilcove, Torpoint, Cornwall PL11 2PF
HOLMAN, Mr. & Mrs. T., Garden Cottage, 19 Bridge St., Pershore, Worcs.WR10 1AJ
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KONIG, Mrs. S. M., 24 Amerland Rd., London SW18 1PZ
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MAY, F., 5 Ash Fall, Witham, Essex
MEHARG, Mr. & Mrs. B., 4 Compton Ave., Poole, Dorset BH14 8PS
REX-PARKES, M. J. 38 Sedgemere Ave., East Finchley, London N2 OS-X
SCOVELL, W. A., 386 Hook Road, Chessington, Surrey KT9 1NA
SMITH, Mr. & Mrs. M. J., Broadlands, Hazelbury Bryan, Sturminster Newton, Dorset DT10 2EE
SMYTH, Mr. & Mrs. P. H., Wayside, Matthews Point, Strete, Dartmouth, Devon TQ6 0RQ
TEMPLEMAN, Mrs. R. B., 40 Kirk Close, North Oxford, Oxon OX2 8JN
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THOMPSON, Miss S. W., 127 Goring Road, Goring-by-Sea, Worthing, Sussex BN12, 4AZ
VICKERS, Mr. & Mrs. R., 28A Mill Road, Great Burstead, Billericay, Essex CM11 sf
WADDINGTON, Mrs. J. "Rivendell" 46 Drummond Road, Bournemouth, Dorset BH1 4DT

Rejoined
HORSLEY, G. A., 141 Overstrand Rd., Cromer, Norfolk, NR27 0JH
SCOTT, Miss M. A., HR1 Efford, Lymington, Hants, SO41 0LZ

Changes & Corrections
ASSINDER, Mr. & Mrs. P. (family membership)
BLAKEWAY, Brigadier & Mrs. R.A. (family membership)
BURNS, Lt. Col. & Mrs. D. D. (family membership)
MARTIN, Mr. & Mrs. C.J.B. (family membership)
NORMANBY, The Marquis & Marchioness of—(formerly The Earl and Countess of Mulgrave) 72 Glebe Place, London SW3 5JB
SCOTT-MONCRIEF, Mrs. E. & Mrs. R. (family membership)

Address Changes
BUDGE, Mr. & Mrs. R., Limetree Cottage, Rumsam Road, Barnstaple, Devon EX32 9ER
DURRANT, Mr. & Mrs. C. M., 61 Christchurch Lane, Lichfield WS13 8AN
PENROSE, C. D. D., Tretheague Barton, Stithians nr. Truro, Cornwall TR3 7AF
WARNER, M., The Vicarage, Budock Water, Falmouth, Cornwall TR11 5DJ

*** Resigned**
Adams, Mrs. B.; Anderson, Mrs. M. S.; Barry, Mrs. I. N. L.; Boorman, Dr. & Mrs. E. J.; Bowen, Mr. & Mrs. H. K.; Brown, Mr. & Mrs. G. P.; Clulow, D.; Dewey-Leader, D.; Jones, Dr. & Mrs. C.; Kenworthy-Browns, J.; Langford, Mr. & Mrs. J.D.; Ledward, K. H.; Lister, Dr. H. K.; Mackay, C.; Macleary, D.W.; Newton, Mrs. O.A.; Preston, Mr. & Mrs. C.; Sherrington B.; von Stauffenberg, Baroness Linda; Thomson, Mr. & Mrs. W.; Woodroffe, Mrs. I. E.

U.S.A.
New Members
BRITTINGHAM, Dorothy M., 867 Curtiswood Lane, Nashville, Tn. 37204
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Changes & Corrections
ARCURI, Philip, 60-73 Gates Ave., Ridgewood, N.Y. 11385
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JOHNSON, Dr. Alvin (Deceased)
RAMBATH, H. C. Mrs. (Hal Deceased)

*Resigned - Bartholomew, Bruce; Braucht, Col. Jack; Carroll, Dr. E.; Kemp, Wm.; Lee, Mr. & Mrs. Thomas; Long, Frank; Mandarich, Mr. & Mrs. Jack; Renaissance Horticultural Soc., Scheibert, Dr. & Mrs. David; Taylor, Al

CHANNEL ISLANDS
New Members
ENGLISH, Mrs. Olivia, Le CLos Luce, Jubilee Hill, St. Peter, Jersey JE3 7FA
FELTON, Mr. & Mrs. Michael, Upton, Route d'Ebenezer, Trinity, Jersey JE3 5DS
MANCLARK, Mrs. Elma, Laurel Lands, Maufant Road, St., Saviour JE2 7HX
MAUGER, Mrs. Mary, The Dell, Les Forfaitures, Castel, Guernsey GY5 7XS
McALLEY, Mrs. M. M. 3 Links Court, Grouville, Jersey JE3 1JA
WILKINSON, Mr. & Mrs. R. B., Villa Bonita, Mont Felard, St. Lawrence, Jersey JE3 1JA

Changes and Corrections
JONES, Mrs. R. I. (Mr. R. I. deceased)
LEA, Mrs. Robert (Mr. Robert deceased)
LEACH, Sir Ronald (Lady Leach deceased)
SKINNER, Mrs. C. F. to Life Member
LE FEVRE, Mr. F. J. to Life Member
SARGEAUNT, Miss Ena (deceased)
WALKER, Lady Angela (deceased)

ITALY
New Members
CORNEO, Andrea, Via Sirtori, 23-20125 Milano
GHIRARDI, Dott. Franco, Via A. Da Brescia n 4-21013 Gallarate
SCARPELLINI, Arch. Ilex, via Provinciale, 59-24022 Alzano Lombardo

Changes and Corrections
ABBATE, Wladimiro and wife
SEVESI, Dott. Ing. Antonio, via Tommaso Salvini, 2-20122 Milano
*Resigned - Caraffini, Prof. Bruno; Ciampini, Maria Grazia; Comalini, Dott Alessandro; Comalini, Arch. Franca; De Gregorio, Cattaneo: Fiocchi, Brustio Silvia; Lanzara, Cozzi: Martini, Jasoni Eugenia; Najoleari, Dott. Angelo; Prina Ricotti, Anne; Rolando Gen. Ettorel; Terranova, Luigi

REPUBLIC OF IRELAND
New Member
O'DONOGHUE, Mr. John 27 Hazlewood Rive, Glanmire Co. Cork

SWITZERLAND
New Members
CARONY, Mary, via Solaria, 11-CH 6648 Minusio
WALDEN, Dott Manfred, via La Palma, CH 6353 Vescio
ZIHLER, Adolf & wife, via Fontana Martina-CH 6622 Ronco S/A

ICS TREASURY REPORT
RECEIPTS AND DISBURSEMENTS
US $

	1993	1992	1991
INCOME			
Net Subscriptions Received	'92 0	'91 922	'90 82
	'93 11,721	'92 14,060	'91 9,335
	11,721*	14,982	9,417
Advertising	530	520	320
Interest	488	1,356	2,733
ICS Register	5,627	2,874	12,048
Total Income	18,366	19,732	24,518
EXPENDITURES			
Stationery, Postage, Etc.	746	913	769
Journal Expenses			
Printing	8,334	7,235	8,937
Postage	1,854	1,866	2,132
Subscription Envelopes	230	226	304
Translation of Titles	-		
Membership Lists	1,288		
Total Journal Cost	11,706	9,327	11,373
ICS Register Expenses			
Tom Savige	0		614
Tama No-Ura Painting, Etc.	1,024	835	3,835
Other Expenses			
US Bank Charges	10	18	20
State of GA Registration	15	15	15
Total Expenditures	13,501	11,108	16,626
INCOME - EXPENDITURES	4,865	8,624	7,892

ICS CAMELLIA REGISTER FINANCIAL STATUS

USA Designated Register Funds	4,603
Approximate Australian Register Balance	11,458
Loans from Directors due for repayment	-11,859
Current Net Register Fund Surplus	4,203

•See details on following table.

GED: 7/14/94

SUBSCRIPTIONS RECEIVED BY ICS TREASURER US$

For 1992 & 1993	Total	Expenses	Net	% Remitted
Spain			0	Error in 92 Report
		Total for '92	0	
For 1993				
Africa	225	0	225	100
Asia	1,178	225	954	81
Australia	1,902	685	1,217	64
Channel Isles	2,049	205	1,844	90
France	915	119	796	88
Germany	-	-	1,249	No Data
Italy	492	20	472	96
New Zealand	613	178	435	71
Portugal	148	30	118	80
Spain			0	0
United Kingdom	3,418	923	2,495	74
U.S.A.	2,017	101	1,916	95
		Total for 1993	11,721	
		Totals for Year '93	11,721	

GED: 7/14/94

ICS REGISTER INVENTORIES

Country	Reprinted Distribution	Rejected	Sold and Replaced	Sold and Not Replaced	Unsold Sets On Hand
USA	400	1	251	0	148
Japan	120	0	98	0	22
New Zealand	120	0	105	0	15
United Kingdom	300	28	119	35	118
Channel Isles	60	2	32	0	26
Australia	400	0	256	40	104
Singapore	100	0	0	0	100
Totals	1500	31	861	75	533

GED: 7/14/94

ICS BALANCE SHEET

Assets	1993 6/30/94		1992 5/31/93		1991 5/29/92	
Debtors	0		0		0	
Cash at Bank	9,705	cash	17,545	cash	6,477	cash
	17,227	CD's	4,994	CD's	36,480	CD's
Total Assets	26,932		22,539		42,957	
Liabilities	11,859*		12,359		0	
Net Current Asset	15,073		10,180		42,957	
Designated Funds						
Life Membership	5,281		5,281		5,281	
ICS Register Fund	4,603		0		11,860	
	9,884		5,281		17,141	
Accumulated Funds						
Beginning Balance 5/31/93	22,067	5/29/92	42,957	3/29/91	35,065	
Income - Expenses	4,865		8,624		7,892	
Register Fund Drawdown			-13,899			
Fund Drawdown			-15,143			
TOTALS	26,932		22,539		42,957	
Less Designated Funds	9,884		5,281		17,141	
Less Liabilities	11,859		12,359			
Available Funds	5,189		4,899		25,816	
Total ICS Funds	26,932		22,539		42,957	

*ICS Register Publishing Fund loans due 12 Directors
Reduced by 472 error in 92 report
GED: 7/14/94

NOTES ON 1993 ICS FINANCIAL REPORT

1. 1993 receipts and disbursements have been extended through June 30, 1994 in an attempt to better depict the 1993 financial year. No 1994 subscriptions have been included in the 1993 financial summaries.
2. Current income in 1993; subscriptions, advertising, and 12,739 interest exceeded current 1993 expenditures by only $262. ICS Register sales less current Register expenditures accounted for nearly all of the 1993 income - expenditures of $4,865.
3. Each Region is again urged to follow the ICS Diary of Administration published in June, 1989. Final remittances for the 1994 Financial Report should be submitted in the first quarter of 1995.
4. Remittances to the ICS Treasurer should be made by wire transfer if at all possible.
5. Note that after repayment of ICS Register loans to our Directors, current net ICS Register funds are $4,203 U.S. Additional ICS Register sets are available for resale in each Region - see table of ICS Register Inventories.

GED 7/14/94
The Financial Records of ICS have been reviewed by the auditor and a copy is on file with the Secretary and Treasurer.

ICS Executive

REPORT OF THE MEMBERSHIP REGISTRAR

WALTER KRZYMOWSKI, U.S.A.

COMPTE REND DU REPONSABLE DES MEMBRES

BERICHT DES MITGLIERDSCHAFTREGISTRARS

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 1995 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 1995.

ICS Members' Subscription Rates in 1995 and Membership Representatives to whom payable - please use enclosed envelope to mail your dues to your I.C.S. Representative.

AFRICA (R 20.00, or Husband and Wife R 24.00) Mr. Leslie Riggall, Fern Valley, Igwababa Road, Kloof, 3600 Natal, S.A.

ASIA (Y2400, or Husband and Wife Y3300) Mrs. Mieko Yamamoto, 506-6-2-3 Akasaka. Minato-Ku, Tokyo 170, Japan

AUSTRALIA ($18, or Husband and Wife $23) 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, Le Vieux Grand Chemin, B.P. 113, 44471 Carquefou Cedex, France

GERMANY (30.00 DM, or Husband and Wife 35.00 DM) Gerhard Kasimir, 2 Vorsitzender, Stahibuehiring 96, 68526 Ladenburg, Germany

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

NEW ZEALAND ($20.00, or Husband and Wife $22.00) 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 Hill, 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.

1994 I.C.S. MEMBERSHIP

AS OF JUNE 30, 1994

	LIFE		REGULAR		
	SINGLE	COUPLE	SINGLE	COUPLE	TOTAL
Australia	8	2	101	59	231
Austria			8		8
Belgium			2	2	6
Channel Is.	16	2	89	24	157
China			19		19
Denmark			2		2
France		5	50	12	84
Germany			100	32	164
India			1		1
Italy	4		16	1	22
Japan	19	1	61		82
Korea			2		2
Mexico			1		1
Netherlands			2		2
New Zealand	5		35	39	118
Portugal			5	14	33
Rep of Ireland	1		4	2	9
South Africa	12	2	11	2	31
Spain	1		33	1	36
Swaiziland		1			2
Switzerland			12	6	24
United Kingdom	9	2	193	77	360
United States	9		95	51	206
Zimbabwe	1	1			3
Total	85	16	842	322	1603

Nanning, China Rest Stop-Lorena McRee, U.S., Pat Short U.K., Vi Lort Phillips-C.I.

Tom Perkins-Registered 1994 (photo by Greg Davis)

Everlasting Helichrysum Vestitum and Pink Heaths Erica sp in flower amongst Restios on Cape Pensinsula, Smallest Floral Kingdom, So. Africa.

Jury's Joy-Sasanqua, semi double to peony bloom, creamy white deepening to medium pink, Sasanquas in N.Z.

Camellia Japonica "Chardonneret" in Channel Island

Camellia - Henry E. Huntington in honor of the founder of the 75th anniversary of the Huntington Gardens & Library (photo from Nuccio's Nursery)

Senorita - Westward - Channel Islands

Radier Manor Dr., Channel Islands

Camellia japonica "Jules Verne" — seen in Channel Islands