

THE JOURNAL OF THE KEW GUILD

Founded in 1892

The Association of members of the Kew staff past and present

Events of 1985

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**Royal Botanic Gardens
Kew**

CONTENTS

	Page
Trustees and Committee	387
Editorial	388
President	389
Kew Guild Annual General Meeting	391
Report of the 1985 Annual Dinner	394
Kew Guild Award Scheme Report	395
Presentation of the Kew Diplomas and Prizes	397
Kew Medal Awards 1985	399
Students' Union Report	399
Horticultural Diploma Training Course	404
Mutual Improvement Society	407
Living Collections Division 1985	409
Seeds of the Future	412
Palm House Restoration	413
Lest We Forget — T. J. Dinn	415
Letter to the Editor	418
The Tallest Flagpole in the World	419
Garden Girls at Kew	420
Excerpts from Eurogardeners News 1985	424
Excerpts from Kew Newsletters 1985	429
Birds at Kew 1985	436
Operation Raleigh on the Atacama Desert	441
Paposo — Proposed National Park	442
Thornton-Smith. Papua New Guinea	443
Thornton-Smith. Tasmania	446
Visit to Java	451
Suchard, Succulents and Strudel	454
A Horticulturist with the Alpine Garden Society in Switzerland ...	456
News of Kewites at Home and Abroad	458
Obituaries	481
Accounts	492
RBG Staff List	494
Members Address List	498
Unknown Addresses of Members	509
Kew Membership List/Students etc.	510
Advertisers	511

ROYAL BOTANIC GARDENS, KEW

THE KEW GUILD COMMITTEE 1985-86

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 Honorary Editor: R. C. Ward, A.I.P.R.A. (Dip.)
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Retire 1986

T. J. Cole	Canada
J. R. Craig	Brighton
H. J. Fliegner	Kew
W. T. Preston	Ealing

Retire 1987

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J. O. Taylor	New Zealand
M. J. Whitehead	Merrist Wood
J. R. Woodhams	Kew

Retire 1988

D. J. Breach	Pinner
E. G. Every	Hanwell
F. J. Hebden	Australia

Retire 1989

M. A. Arnold-Gilliat	Kew
K. R. Jones	Ashford
K. F. Pearson	London
K. R. Woolliams	Hawaii

Award Scheme Chairman: W. E. Storey

Events Officer: D. J. Breach

Badges and Emblems: S. J. Henchie

Honorary Auditors: Mrs. J. Cowley, D. V. Field

Students' Union Representatives: M. Maunder, K. Parker

EDITORIAL

Happily the amount of copy received for publication each year is more than sufficient but I never know until the last minute whether I will have enough or whether it will be necessary to tout around for infill articles! This year, indeed, regrettably a few articles could not be fitted in, since, for economy reasons, the Journal has to be limited to approximately 90 pages. Certainly where too much copy comes in I shall give preference to paid up Guild members!

I try to encourage 'news' copy rather than too much general or Horticultural copy for obvious reasons and as I believe the Journal should be for members and about members. Also, a prerequisite for receiving a Kew Guild Award is that reports of recipients shall be submitted for publication in our Journal, so that some general articles are received.

Thus I am aiming for, and ask your help with, publication of '*Letters to the Ed.*', gossip, family and business achievements (for '*News of Kewites*' section), and if you know of any old colleagues who are not Guild members, or you can update us with addresses, dates of leaving Kew, unknown addresses etc. write to Hon. Sec. Winifred and help your Journal give even better info!

Finally, as ever, I wish to thank the many Committee and other members, and our Printers, for making my tenth year as Editor that much more bearable!

Keep in touch.

Richard C. Ward
Editor

NOTE

Subscriptions and change of address to the Membership Secretary: Miss E. H. Smith, Kew Guild, The Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AE.

Other correspondence to the Secretary: Mrs. W. E. Worth, 20 West Park Avenue, Kew, Richmond, Surrey TW9 4AL.

DOCTOR MARGARET STANT, B.Sc., Ph.D., F.L.S.

President 1985/86



DOCTOR MARGARET STANT, B.Sc., Ph.D., F.L.S.

President 1985/86

Our President was born in Cheshire and educated at Castle Preparatory School and Sir John Deane's Grammar School, with a short spell, interrupted by the second world war, as an Open Exhibitioner at Christ's Hospital. After success in the Cambridge Entrance Examination she was awarded a place at Girton College for 1945. However, already Head Girl, she decided against a fourth year in the Sixth Form, and in 1944 went up to University College London on a mathematics scholarship, promptly changing to read botany and zoology instead.

During the first term the college was evacuated to University College of North Wales, Bangor but returned to Gower Street in time to join in the V.E. Day celebrations in London. In 1947 Margaret graduated with First Class Honours in botany and was awarded several prizes and a post-graduate studentship to stay in the Botany Department where she was employed as a Demonstrator, and until the award of a D.S.I.R. grant worked also as an assistant lecturer at the Northern Polytechnic. On submitting a thesis entitled "The shoot apex in Monocotyledons" she gained a Doctorate in Philosophy in 1950.

Unhappily it then became necessary to look for a post, and on the suggestion of her professor, our President went to see Sir Edward Salisbury, then Director of the Royal Botanic Gardens. In spite of higher salaries on offer at Glaxo, I.C.I., Wye and Bedford Colleges, Margaret decided to join Dr. Metcalfe at the Jodrell Laboratory and so began a lifelong love affair with Kew Gardens.

In the old Jodrell building, so full of character and characters, and later in the modern "carbuncle", Dr. Stant carved out a research career in plant anatomy as a light and electron microscopist, also assisting with advisory and identification work. Earlier topics for investigation included thatching reeds, seed viability and gibberellin and light irradiation effects. Intermittently Margaret continued to work on Monocotyledons and more recently acquired a passion for fine structural studies on another, pistil and seed, moving to the Cell Physiology Laboratory, later renamed the Transmission Electron Microscopy Laboratory at 47A The Green, where she could keep an eye on successive directoral activities!

Margaret's 'blue-stocking' image was always tempered by sporting interests, winning tennis and hockey colours at school and a hockey blue at the University. At Kew she was a member of the tennis team and secretary of the tennis club for many years, before becoming secretary of the Guild.

Dr. Stant opted for M.A.A.F.'s premature (very!) retirement scheme in 1984 in order to move to Devon where she lives now in a fifteenth century cottage (originally a monk's rest home!) 50 yards from the sea at Sidmouth. Her outdoor life includes golf, croquet, swimming and walking and she has been co-opted onto the Planning Committee of the area amenity body which conserves and enhances the buildings,

gardens and natural landscape of the Sid valley, in co-operation with the East Devon Council.

The latest enthusiasm of your President is browsing and bidding in the auction rooms for pictures, furniture and other collectables, one of her most exciting acquisitions being a Henry Moore pen and wash drawing, dated the year of her birth (when?). As an antidote to sales fever there is time now to play the piano and always the stimulus of the 'Times' crossword and the challenge of the Stock Exchange. Although involved in arts interests centred on Exeter University, links with Kew provide the opportunity to indulge in cultural and scientific excursions to London with the R.H.S. show plants still an endless joy.

ANNUAL GENERAL MEETING OF THE KEW GUILD

by **Winifred E. Worth**, Hon. Secretary

On Saturday, 14th September, 1985, 45 members assembled in the Jodrell Lecture Theatre at 2.30 p.m. for the Annual General Meeting. The President, Mr. C. J. Mitchelmore, took the Chair, accompanied on the platform by the Hon. Secretary, Mrs. W. E. Worth, the Hon. Assistant Secretary, Mr. M. J. S. Sands and the Hon. Treasurer, Mr. W. E. Storey.

The President, welcoming everyone to the meeting, spoke of the value of the Guild in maintaining strong links between members and the Botanic Gardens, and in helping members to keep in touch with each other over the years.

Members then stood in tribute to Kewites whose deaths had been made known to the Secretary since the last Annual General Meeting: P. W. H. Conn (1923), F. P. Knight (1929) Past Presidents; J. W. Watson (1923), A. A. Cavanagh (1923), W. F. Walker (1937), Life members; N. D. H. McCartan (1939), B. B. Wass (1937); Dr. R. Melville (1968), J. L. Gilbert (1980), H. K. Airy-Shaw (1985) and E. C. Wray (1937).

Apologies for absence were received from the following members: Prof. E. A. Bell, P. J. Edwards, the Rev. H. Flower, M. J. Griffin, D. Hardman, Prof. K. Jones, K. R. Jones, G. Ll. Lucas, L. Pemberton, G. H. Preston, C. W. G. Poulter, T. Reynolds, Dr. D. J. Sales, A. D. Schilling, Miss E. H. Smith, Mrs. E. M. Wakefield.

The Minutes of the A.G.M. of 1984 were then adopted.

Matters arising from the Minutes. The President reported that in March, Mr. W. E. Storey took over the Treasurership from Mr. C. P. Bailes, and Mrs. W. E. Worth agreed to be Secretary in place of Dr. M. Y. Stant.

The Committee then reported as follows:

The Hon. Treasurer, Mr. W. E. Storey, presented *the accounts for the year ended 31st December 1984*, which showed the Guild's finances to be in a healthy state. He complimented his predecessor, Mr. C. P. Bailes, who had prepared them, on a very pleasing presentation of the

accounts. The Treasurer then outlined income and expenditure in *the ensuing half-year to 30 June 1985*. On the *expenditure* side: the Journal this year showed a marked increase in cost to £2,359 due to the very large number of submissions to the Editor. The Committee had decided that, rather than disappoint people who had responded to appeals for items of interest, all items should be printed and the expense of a considerably larger Journal incurred. Mr. Storey reported a loss of £196 on the Annual Dinner in spite of the very good attendance at this event. On the *income* side; subscriptions showed an increase of £120 on last year due in no small measure to the energetic efforts of the Membership Secretary in chasing up laggards. The Wakehurst Booklet continued to sell well; more than £1,000 had been received from sales in the first half of the year. Income of £220 had been received from adverts in the Journal, and many members had most generously sent in donations of various amounts, mostly for the Award Scheme. The raffle of the magnificent painting of Orchids by Leslie Greenwood had so far realised more than £700 and money was still coming in. Half way through the year the Guild's finances remained buoyant, and income had more than made good the drain of additional expenditure.

The Hon. Secretary, Mrs. W. E. Worth, reported that Mr. W. J. C. Lawrence, a Life member and Past President of the Guild, was the 1985 recipient of the George Brown Memorial Award. Mrs. Walker, widow of W. F. Walker of Tasmania would be arranging for a seat to be placed near the Australian House in her late husband's memory. Mrs. Worth indicated that 1992 would be the Centenary Year of the Guild and that a sub-committee under the chairmanship of Dr. Stant had been set up to organise appropriate celebrations. Suggestions from members would be welcome. The Secretary, in thanking fellow officers and committee members for the advice and assistance given to her, pointed out that Martin Sands had been Assistant Secretary for 18 years, thus equalling the late George Brown's record as Editor. Since 1974 he had also compiled the News of Kewites section in the Journal.

On behalf of Miss E. H. Smith, the Hon. Membership Treasurer who could not be present, Mr. Storey reported that there were a number of new members this year, but the increase in total *membership* was slight as the Guild had unfortunately lost a number of members through death, and because some members had failed to notify change of address. Three of the Trustees of the Gardens had joined the Guild and their support was very welcome. Mr. Storey expressed the hope that those members who knew of Kewites who were not on the list, or whose addresses they knew were out of date, would kindly encourage their friends to put the record straight.

The Hon. Editor, Mr. R. C. Ward, reporting on the 1984 *Journal of the Kew Guild* confirmed that rising prices as well as the increased size of the Journal had caused a 20% increase in cost. The response to his requests for copy and for advertisements had been encouraging.

Mr. S. Henchie reported a slow but steady *sale of scarves, ties and badges*. Unfortunately he had had no response to his request for ideas on what other articles could be sold.

It was reported that the *Annual Dinner* had been a very enjoyable event, the venue, menu and service being of a high standard. In spite of an increased attendance over previous years — well over 100 members — the occasion had incurred a considerable loss.

The President of the Guild, Mr. C. J. Mitchelmore, had been present on the platform at the *Student's Prize Day* when Mr. Laurence Banks, the guest speaker, presented the diplomas and awards. The Director, Professor Bell, in his speech had thanked the Guild for the support and encouragement it continued to give to students in the form of prizes. The previous day, the Past President, Mr. A. Woodward, had spoken to the students about the Guild, and a number of them had agreed to join.

The President then thanked the Student Representatives, Mr. M. Maunder and Mr. T. Walker, for the active and enthusiastic part they had been taking in promoting the Guild amongst fellow students, and for organising the tea which would follow the meeting.

Mr. W. E. Storey, as Chairman of the *Award Scheme*, spoke of the very generous response of Guild members and other individuals to his appeal for funds. The response from industry had been nil, even though in the long term industry might expect to be a considerable beneficiary. Receipts from the raffle, which at the date of the A.G.M. far exceeded £700 were very gratifying, Mr. Storey said, and were due in no small measure to the efforts of Mr. Kenwyn Pearson who had organised the raffle. Ten applications for awards had been received in 1985, the most ever, and all were well presented. The Committee decided on four awards of £100 each to two students and two members of staff; Miss L. Bustard to study Cacti in Europe, A. Jackson to visit Cameroun, J. Priest to visit Ecuador and Miss S. Piebenga to visit Indonesia. (Details of these projects appear later in the Journal. Ed.)

The President then thanked the officers and the *retiring members of the Committee*: Messrs. C. B. Bamkole, R. Mann, P. Maunder and P. Summers, as well as Mr. T. Reynolds as Auditor, Mr. S. Rutherford (Students' Union Representative) and Mr. F. N. Hepper, Vice President, for their help and support during their terms of office. The President also thanked Mr. Storey for agreeing to take on the Treasurership as well as the work involved in running the Award Scheme, and spoke with much appreciation of Mr. Sand's long and devoted service to the Guild. The meeting warmly endorsed this.

Election of Officers, Members of the Committee and Auditor:

Dr. Margaret Y. Stant, being the Committee's nomination, was elected as President for the year 1985-86. On taking the Chair Dr. Stant thanked Mr. Mitchelmore for his much valued contribution to the smooth running of the Guild during his term of office, and expressed the hope that she would be a worthy successor. This vote of thanks was supported unanimously. The other officers and four new committee

members were then elected *en bloc*; their names appear at the beginning of the Journal.

Two resolutions were then proposed by Mr. R. C. Ward, the first was seconded by Mr. T. Preston and the second by Mr. M. J. S. Sands.

- (i) "That the Offices of both Vice-presidents be omitted in two years' time, since they are no longer relevant today, and the Committee is too large."

The resolution proposed to omit the words 'two Vice-Presidents' in the second sentence of Rule 9 (a). Members felt that this proposal could in no way be accepted and the resolution was lost with two voting in favour and 43 voting against, and no abstentions.

- (ii) "That membership of the Kew Guild shall be open to Student Gardeners at Kew and at Wakehurst Place as from the commencement of their three year course."

In Rule 3 (a) of the Guild, the resolution proposed to omit the words 'Student Gardeners' in the first sentence, and after the words 'for at least twelve months' to add 'Membership shall be open to Student Gardeners as from the commencement of their course of training.' After considerable discussion it was decided that the resolution should be referred to the Committee for consideration. The Committee was asked to report back to the next A.G.M.

Mr. C. W. Rudd, who after 55 years was at last able to attend the A.G.M., was asked to draw the winning ticket for the raffle of Leslie Greenwood's beautiful painting of orchids. The winner was Mr. J. A. S. Brazier, Principal of Merrist Wood Agricultural College.

The meeting closed at 4.20 p.m. and members adjourned for tea in the Jodrell Common Room.

REPORT OF THE 1985 ANNUAL DINNER

by Richard Ward

The Annual Dinner was held at Imperial College Refectory on Wednesday 22nd May. Our President, Cyril 'Mitch' Mitchelmore presided, and was accompanied by his wife, and the main guest was Robin Herbert, President of the Royal Horticultural Society.

Mike Maunder, Students' Union Representative on the Kew Guild Committee responded to the toast to the Kew Guild by Robin Herbert and toasted absent friends.

Honorary Editor Richard Ward was the M.C. The George Brown Award was presented this year to W. J. C. Lawrence. Over one hundred members and guests enjoyed an excellent meal and bar extension until midnight.



The photograph shows President 'Mitch' (centre) with his wife and Robin Herbert.

KEW GUILD AWARD SCHEME REPORT

by W. E. Storey, Chairman

The 10th Anniversary Appeal for funds has been a year of great activity for the sub-committee members, not least in selling tickets for the superb Leslie Greenwood painting of Orchids which was raffled at the A.G.M., realising more than £700. The lucky winner was Mr. J. A. S. Brazier, Principal of Merrist Wood College.

Guild members all over the world responded most generously to the Appeal and a steady flow of donations, large and small, raised the total over the £1,000 mark. In addition, the sub-committee organised a highly successful Soiree after the A.G.M. which included a guided tour of the fascinating new Tropical Range and a superb home-made buffet supper attended by nearly 100 guests. Almost £300 of additional income flowed from this event: all adding significantly to the size and scope of possible future awards.

This year also produced a surge of interest in the awards themselves, with 10 well-presented applications including, for the first time, applications from Guild members on the staff. After careful deliberation, the sub-committee recommended four awards of £100 each to Louise Bustard for study of Cacti in Europe, to Andrew Jackson (student) for

studies in the Cameroun, to James Priest (student) for studies in Ecuador and to Sophieca Piebenga for studies in Indonesia. These were judged as being of direct benefit to Kew as well as increasing knowledge and understanding of conservation matters.

My grateful thanks go to all Guild members who have responded so handsomely to our Appeal and particularly to members of the sub-committee, their wives, and other friends who put in so much hard work to make 1985 such a successful year.

AWARD SCHEME APPEAL — THE HAMPSHIRE INPUT

A special fund raising effort was made in Hampshire through Peter Maunder on behalf of the Award Scheme Committee during 1985.

All Old Kewites living in the County were contacted, and advised of the growing need to have monies available for distribution. The Award Scheme having successfully operated for 10 years, the Committee felt that a special Tenth Anniversary effort could well be made to increase the funds.

The response was most rewarding, and thanks must be extended to all those Old Kewites who answered the appeal so generously. Not only did individuals contribute, but also two horticultural societies which had had Old Kewites as Chairmen for very many years. The Award Scheme Committee are indebted to the generous support of the following individuals and societies who raised over £150.

Catisfield & District Horticultural Society
In commemoration of W. G. Fry (1926)
Portsmouth Horticultural Society.
In commemoration of W. E. Studley (1930)
Geoff Brown (1943)
Ivan Butcher (1952)
Mr. & Mrs. Brian Humphrey (1961)
Jim Heyworth (1955)
Peter Maunder (1954)
John Medcalfe (1948)
Gerald Morgan (1973)
Stan Rawlings (1972)
Hubert Taylor (1933)
John Tregear (1955)

The Appeal Fund is still open, and it is hoped that there will be continuing support from those Old Kewites in Hampshire.

KEW GUILD CENTENARY

A small sub-committee has been set up under the convenorship of the President, Dr. Stant, in order to discuss the celebration and

commemoration of the Guild's centenary year in 1992. Although the enthusiastic members are overflowing with brilliant ideas which will doubtless require much sifting and argument before they are submitted for perusal to your main committee, Dr. Stant will be glad to receive the views and suggestions of anyone else with a contribution to make. Six years may seem a long time ahead but it is important to start planning for this marvellous event in good time. So it's up to you as well as us.

PRESENTATION OF THE KEW DIPLOMAS AND PRIZES 1985 (Course 19)

The introduction by the Director, Professor E. A. Bell, was followed by an address and presentation of prizes by the guest of honour, Mr. Lawrence Banks, M.A.

THE KEW DIPLOMA

Honours

C. Margrave
Ms J. Mercy

M. Reeder
A Snelson

Credit

Ms N. Barr
B. K. Chew
J. Kempster

S. Launchbury
J. Priest
Ms S. Thompson

Pass

Ms J. Bannister

J. Woudstra

International Certificate

U. Dhanasekera
Ms A. Denys

Ms D. Reich

PRIZES

The Ernest Thornton-Smith Travelling Scholarship	J. Priest
Henry Idris Mathews Scholarship	A. Jackson
Hozelock-ASL Prize	M. Sparrow
G. C. Johnson Memorial Prize	M. Reeder
Kingdon-Ward Prize	J. Mercy
Landsman Bookshop Prize	M. Reeder, S. Thompson
Sir Joseph Hooker Prize	R. Mitchell
Donald Dring Memorial Prize	B. Labey
The Metcalfe Cup	A. Jackson
John Gilbert Prize	D. Francis
Matilda Smith Memorial Prize	J. Bannister
Dummer Memorial Prize	J. Mercy
Proudlock Prize	J. Bannister

Prize for the best vegetable plot	M. Reeder
Kew Guild Individual Study Prize	A. Snelson
C. P. Raffill Prize	M. Biggs
Professor Keith Jones Cup	M. Biggs
George Brown Prize	I. Fisher, A. Jackson
Mutual Improvement Society's Prize	Peter Hollington (Wisley)
Lecturer's Prize	M. Reeder
Plant Identification Tests	J. Walker
Students' Union Life Membership	N. Barr, J. Kempster, J. Mercy, S. Thompson

TITLES OF MANAGEMENT PROJECTS (Course 20)

A. Snelson	An investigation into the educational and information services provided for the general public by the Royal Botanic Gardens, Kew. With special reference to the L.C.D. Division.
J. Kempster	Study of the aims, management and functions of Paul Temple Ltd.; as a basis for initiating an internal and external landscape company.
B. K. Chew	An investigation into the problems related to merchandising of houseplants in the display section of Syon Park Garden Centre.
Ms S. Thompson	Public Recreation in Woodlands.
Ms N. Barr	Problems associated with the restoration of historic landscape when opened to the public, with special reference to Painshill Park, Surrey.
J. Priest	Different aims and objectives of two selected florist enterprises, with special reference to the floral arrangement aspect.
Ms J. Mercy	The parkland walk; the study of the uses for recreation use, and ecological study in a disused railway line in a North London suburb.
Ms J. Bannister	A study of the stretch of River Thames from Kew Bridge to Hampton Court Bridge with special reference to the conservation and management of areas used by the public.
C. Margrave	The living classroom; the provision of educational facilities at Harlow Car Gardens, Harrogate. Proposals for a one year training scheme for young people.
S. Launchbury	The exotic collection; a management study of a private botanical collection of cacti and succulents and its nursery, which provides finance for its maintenance.

J. Woudstra

The lessons and benefits of the William Curtis Ecological Park; a site of the Ecological Parks Trust.

M. Reeder

A review of the education and information services for visitors and members at the Royal Horticultural Society's Garden, Wisley.

THE KEW MEDAL AWARDS 1985



The Kew Medal is awarded annually to those whose achievements, contributions or services to the gardens at Kew and Wakehurst Place are considered of outstanding merit and deserving of special honour.

The medal, struck in silver-gilt, was first awarded in 1980, and is inscribed "**FOR MERIT**". The face design illustrates the Palm House (1840 to 1844) with a spray of Oak (*Quercus robur*) and Para Rubber (*Hevea brasiliensis*) leaves above representing both the knowledge and work of the staff of the Royal Botanic Gardens.

The name of the recipient is engraved on the reverse of the medal, together with the year of the award, and is encircled with vine leaves and a crown signifying Kew's links around the world.

MRS. J. STUBBS

Formerly a Guide Lecturer. In recognition of her warmth and enthusiastic work as a Guide Lecturer at Kew, especially with young visitors.

THE KEW STUDENTS' UNION ANNUAL REPORT

by Gavin C. Smith, President

The Student Union had a remarkably active year in 1985, which is quite an achievement, considering the minimal support it gets from the already small body and the lack of social facilities available for its functions here at Kew. During the year the executive committee

continued its hard work to improve the standard of the Kew diploma course. The student year representatives attended the tri-yearly lecturers and examiners meetings to discuss the lecture block content, in relation to the points raised in the reports compiled by the students, at the end of each trimester. This venture has been a great success, bringing to the attention of the lecturers and examiners, aspects of the course which seem to be lacking in importance or not up to the standard required.

On the social scene, there were many parties that were well attended by both staff and students. Up front in the year, was the annual 'Valentines Party' which took the theme of the 'Red Party' — nothing to do with communist infiltration — but a compulsory requirement to wear something red, or a silly forfeit was incurred. A creative display of fancy dress of which the first years made up a prominent part was the result and incidentally it gave me a great chance to put on a pair of red tights and play cupid.

Early September saw the final departure of Course 20, and to celebrate this happy occasion, there was a small quaint affair held in the wood museum. The first social function at the beginning of the new academic year of 1985, was the 'Hallowe'en Party' which again was held in the wood museum. Kew Club organised the bar and there was a splendid turn out of fancy dress to get into the spirit of the occasion. The Conker competition for the second year running was held in the cellar of Gumley Cottage. The final was fiercely fought out between John Donovan (First Year) and Bruce Labey (Second Year) with John becoming the outright winner and then afterwards it was all in the pub for a well deserved pint.

The last major social function of the year was the Christmas Party which for the first time was held in the upstairs room of the Kew Gardens Hotel — well I think it was the first time unless anyone can tell me differently. The event was so successful it is likely we will use this facility for the Valentines Party in 1986.

Now you may be wondering where all the money came from to finance all these enterprising social events. Well in 1985 there were a few very successful fund raising events. In May, the students organised a Sponsored Litterpick, to clean up Richmond Green after the summer fair and in order to raise funds to support the students fête later on.

The summer of 1985, saw the return of the Kew Fête which was solely organised by a handful of eager and competent first year students. The fête took place on Saturday 3rd August on Kew Green and raised £2,300 which was donated to the World Wildlife Fund, Royal Society for Nature Conservation, Association for all Speech Impaired Children and smaller amounts going to the Kew Guild, Kew Students Union and the Kew Club.

The final fund raising event of 1985, was the Sponsored Bulb Plant which was the result of the hard negotiating work of executive member Andrew Jackson. On Saturday 6th December, 20 cwt. of bulbs supplied



The Sponsored Bulb Plant on Saturday 6th December.

by Richmond Borough Council, were planted on Richmond Circus, Kew Green and Barnes Green by members of the student body. The funds raised were donated to the Portcullis Trust, Kew Guild and the Students' Union. Keep a good look out for the colourful display of daffodils each spring!

Finally I would like to thank all those members of staff/students who helped with union activities in 1985 and hope that there will be continued support in 1986.

Student Union Executive Committee 1985/86

Gavin C. Smith	President
Andrew Jackson	Treasurer
Keith Parker	General Secretary
Bruce Labey	Social Secretary
Philip Nicholson	Sports Secretary
Steve Gamble	Fund Raising Officer
Richard Gray	First Year Representative
Allan Forrest	Second Year Representative
Hazel Griffiths	Third Year Representative
Mark Sparrow	Past President

STUDENTS' UNION SPORTS REPORT

by Philip A. Nicholson, Sports Secretary

The first sports event of 1985 was a fiercely contested football match between the students and staff. The students took an early lead through two opportunist goals by Gavin Smith. The staff team fought back and scored from a corner kick but the students scored five minutes before half time to make the score 3-1. In the second half, end to end football was played with the staff team fighting back to level the score at four all later in the half. Just as it looked as if the match would be a draw, Gavin Smith scored his fifth goal by putting the ball into the top corner and making the final score 5-4 to the students.

Later in the season the students travelled down to Surrey University to take part in the Endsleigh Insurance five-a-side football competition but unfortunately we were beaten in all of the three matches.

The annual Kew-Wisley relay race took part in early June with an entrant of five teams this year. The teams of six runners covered the six stages in the sweltering heat of a Saturday afternoon. The first team to reach Kew was the Old Boys yet again, with Merrist Wood, Kew Students, Wisley and Kew Staff coming in later in that order. The trophy and medals were presented to the winners by Mr. Grenville Lucas, Keeper of the Herbarium. After the runners had refreshed themselves with the food and drink prepared by Keith Parker, the Kew Students and Staff organised a football team and played Wisley Village Football Club down on Townsmead football ground. Wisley, having a fresher team, won the match by four goals to two. Those who had any energy left returned to a party, held in the lower nursery.

Later in the same month the students and staff at Kew took part in the Civil Service Sports Day at Dukes Meadows. Kew entered three seven-a-side football teams and one netball team which consisted mainly of staff members. The two mens' seven-a-side teams were beaten in the first round but the ladies seven-a-side team did us proud by winning their way to the final and only just failing to bring home the trophy by being beaten by a single goal scored in the last minute of extra time.

During the warmer part of the summer the students played several cricket matches including games against Wisley, The British Natural History Museum and the Concrete and Cement Association at Slough. Although we didn't win a single match (there's nothing like consistency) we thoroughly enjoyed the summer evenings playing this genteel sport.

The cricket season also included the staff versus student match. The staff team won the match due to the excellent innings of Peter Linn and Steve Coom scoring 47 and 68 runs respectively. The staff team totalled 143 runs for two wickets off 20 overs. The students started well but some fine spin bowling by Charlie Erskine saw four wickets fall for 63 runs and finally the students could only manage 95 runs off 20 overs.



In early September the annual Clog and Apron Race was staged. The first year students turned out in flamboyant style wearing all sorts of fancy dress. The race was won by Glenn Humphreys closely followed by David North and John Donovan. Capital Radio interviewed the President of the Students' Union, the winner Glenn Humphreys and the first lady Emma Hutcheson in their studio in the same evening on 'The Way It Is!' The Curator, John Simmons, presented the prizes (see photograph).

The Round the Gardens Race took place on Tuesday 22nd October on a perfect warm summer evening. Seventeen runners took part with Gavin Smith being greeted with rapturous applause as he broke the finishing tape to take the winning trophy in 16 minutes 32 seconds. Steve Davies and Peter Edwards came in joint second with a time of 17 minutes 27 seconds. The trophy and medals were presented by Professor Arthur Bell (Director).

Finally may I thank all those who organised and participated in Sporting Events of 1985 and hope more people will be encouraged to participate in 1986.



Curator John Simmons kindly provided this photograph of current Lady Gardeners at Kew. *Left to right: Clare Hawking, Caroline Kernan, Abigail Dayton.*

HORTICULTURAL DIPLOMA TRAINING COURSE

Kew Guild Members may well wish to update themselves on current study facilities.

General

The Royal Botanic Gardens at Kew were founded in 1759 by Princess Augusta and were originally about nine acres (3.6 hectares). Today they occupy over 300, (120 hectares), with over five acres (2

hectares) devoted to the growing of plants under glass and together with a satellite garden at Wakehurst Place, Sussex, they form a most comprehensive collection of plant material in unique surroundings. There have been horticultural students employed in maintaining the collections of plants since the time of Sir William Hooker (Director of Kew from 1841-1865) who provided a library for the use of young gardeners and the tradition has continued and expanded.

The aim of the course is to provide students with an opportunity to study and improve their understanding of horticultural, scientific and managerial subjects whilst gaining practical experience and responsibility. The course thus gives an excellent grounding for posts of responsibility in the field of amenity horticulture.

Diploma Course details

The course is of three years duration with the lectures given in three-monthly periods of instruction in the lecture rooms, laboratories etc. with the remainder of the time given to guided practical work within the Gardens. It has a similarity to both sandwich courses and training schemes embodying the secondment principle. The students receive a subsistence allowance which is sufficient to cover the cost of accommodation, clothing, text books etc.

Facilities

The students are provided with all necessary stationery and equipment for use within the course. There are good library facilities: Kew's Libraries have over 120,000 volumes and 3,000 periodicals. There is a specialised Gardens Library and students may also use the Main Library. For the keen student there are a number of valuable prizes for individual effort; the most notable of these is the Thornton-Smith Travelling Scholarship which provides over £1,250 each year for a Kew student to visit the Caribbean, Tropical South America or Polynesia to study the plant life of these regions.

Tuition

This is provided by internal and external lecturers, but students are also expected to do a considerable amount of individual study by reading. They are also expected to prepare and present written projects and a dried and pressed collection of common weeds.

Examinations

The internal examinations are set by external examiners at various stages throughout the course and lead to the Kew Diploma which is awarded at three levels, Honour, Credit and Pass. External examinations, which are frequently taken by students, usually after graduation from Kew, include the National Diploma in Horticulture, Diploma in Parks and Recreation Administration (Intermediate Level), and the Certificate and Diploma of Arboriculture.

Conditions for entry

Both male and female candidates, single or married, may apply and should be between 18 and 26 years of age, be physically fit, and must

have had at least two years practical experience in horticulture. They must also have had sufficient education (normally G.C.E. or its equivalent in four subjects one of which should preferably be a science subject at 'A' level), prior to admission to enable them to manage the academic content of the course. Non-British candidates for the three year Diploma Course must be able to satisfy current entry requirements for employment in the U.K.

Selection of students

The entry in any year is by interview on a competitive basis. An assessment of educational attainments, previous training and confidential references is taken into account.

Fees

There are no fees for this course, nor are parental contributions required.

Applications

Applications are made in each autumn on a special form which is obtainable from, and should be returned to, the Supervisor of Studies, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB.

Other training schemes

a) Advanced level entry scheme for the Diploma Course

Special provision is made for candidates in schools or colleges in their final year of 'A' level studies who although without practical experience, wish to make a career in horticulture. Such candidates, if selected at an interview, must spend a preliminary period of one year in a suitable horticultural establishment before entering the Diploma Course. A limited number of places are reserved for entrants under this scheme. This programme also includes a sandwich year option.

Application forms for this scheme are available from the Supervisor of Studies.

b) International training programme

A limited number of trainees are accepted by competitive entry for a period of one year. Trainees must be able to maintain themselves (or have sponsors who will guarantee them financially). Trainees will not receive any financial reward for their practical duties. Trainees are governed by the same conditions as the horticultural students and have the same working hours.

c) Internship

A more limited scheme is also available for periods of three to four months with similar provisions to those of International trainees.

Special application and sponsorship forms for the International training programme and internship are available. Trainees whose native language is not English must provide documentary evidence of proficiency in the language both spoken and written.

Advice to those seeking admission and their referees

The Diploma Course is an internal sandwich course providing an opportunity for able students who wish to accept increasing responsibilities and to proceed further with their studies without the necessity for applying for grant aid from Local Authorities. Applicants must show drive and enthusiasm with a determination to succeed. They must also be able to express themselves clearly and to be able to show that they have taken steps to gain a grounding of horticultural and scientific knowledge. Previous horticultural experience should be broad-based to allow the mastery of most of the essential practical skills. There is also a need for self-reliance and an ability to work with the minimum of close supervision.

Careers

There is considerable demand for Kew trained students with opportunities occurring in most branches of horticulture. The Supervisor of Studies is able to give advice to prospective students and assist those who are on the course to obtain satisfactory employment.

School of Horticulture, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB.

THE KEW MUTUAL IMPROVEMENT SOCIETY

by Penny Hammond, Chairperson 1985-86

The Kew Mutual Improvement Society is thriving, with an increasing membership and high attendance figures at lectures, held on Monday evenings. Items of interest, given by members and occasional visitors, cover a wide variety of horticultural matters and other subjects. Participation by members from outside the gardens is increasing, to the extent that Peter Harlington, a regular attender from Wisley, won the prize for the greatest number of items given by an individual.

Prizes were announced at the A.G.M., held on April 1st, when Mrs. Beth Chatto spoke on "Plant Association". The C.P. Raffil prize for the winner of the student lecture competitions went to Matthew Biggs, with Andrew Jackson and Ian Fisher as close runners-up. The A.G.M. was held at the last meeting of the 84-85 season, and saw the retirement as Chairman of Robert Mitchell who had done a great deal of work for the Society for which he was awarded the Sir Joseph Hooker prize. Under Robert's chairmanship the Society hosted two musical evenings, piano recitals were given by Yitkin Seow and Angus Morrison. These proved a popular addition to the programme, and as funds allow we plan to have another recital by Angus Morrison in March 1986.

The 1985 winter season began with Joy Larkcom talking on Salad Crops. Since then we have had lectures concerning individual gardens given by Mr. Archie Skinner, Mr. David Mason and Mr. Duncan Donald.

Mr. Ray Desmond spoke about "Some Aspects of Kew's History". Thanks go to Mr. Halliwell who stepped in at very short notice to talk about visits he has made to Japan, an interesting lecture with reference to daily life as well as the plants and gardens. Student lectures have been of a very high standard. Mike Maunder launched the competition with a lecture entitled "How we lost the wolf". Timothy Walker described his trip to Eastern Anatolia, and Caroline Kernan took us for a walk through some of the Renaissance and Baroque gardens of Florence. The interdepartmental quiz took place in October. Countryside conservation was discussed by Mr. V. Hazel in a lecture entitled "The Hampshire Heritage Project". Venturing further afield, journeys to the southern hemisphere were topics for two other speakers. Mr. Tony Kirkham described his expedition to Chile. The season closed with Ms Tarja Ravenhall chronicling her travels through New Zealand.

The final meeting of the season also hosted the Christmas cake competition, admirably judged by Mrs. Bell and Mrs. Hepper. First prize was won by Gail Dayton, with Allan Forrest in second place. The evening ended on a festive note as mulled wine and mince pies were served, along with tasting of some of the Christmas cakes.

COMMITTEE MEETINGS

The Kew Guild Committee met four times in 1985. Subjects discussed included: Guild representation at Students' Prizegiving and better student contact; Annual Dinner arrangements; 1992 Guild Centenary Celebrations (yes, we are thinking ahead!); Computerisation of Kew Guild records (ditto!); soliciting subscriptions from worldwide Botanical Gardens, on a 'corporate' level, also from existing Kew Gardens staff — all eligible members of staff were sent a subscriptions standing order form during 1985; Kew Guild Award Scheme; and liaison with Kew Gardens Trustees.

EDITORIAL NOTE

The Editor advises that, in view of a surplus of 'copy' received in recent years, preference will be given to fully paid up members of the Kew Guild.

LIVING COLLECTIONS DIVISION REPORT 1985

by R. I. Beyer, Deputy Curator

It is but 25 years since I joined the staff of the Gardens and I am already falling into the trap of looking back through rose-coloured spectacles at the past. We seem to have entered into a period within LCD where all that was familiar and comfortable has been disturbed and questioned and at times I long for stability and routine again. Perhaps it is no bad thing to be stretched and maybe when I am finally put out to grass I will be able to reflect back on the small part I have had in helping prepare Kew for the 21st century. In recent years the 'winds of change' have certainly blown within the Division.

Glancing out of my window, I am instantly reminded it is winter, with temperatures fluctuating between cold and very cold, dampness in the air and the distinct possibility of snow before the new year is much older.

Early January 1985 was very similar, and a heating failure in the Ferneries was almost disastrous when the weather changed for the worse. During the autumn of 1984 the boilers were replaced, but the new dual gas/oil burners did not arrive until after Christmas. When one of these was fitted for some inexplicable reason it could not be fired, leaving one boiler with an inefficient burner to heat the whole range of glasshouses. Outside temperatures at this point dropped dramatically and it was not possible to provide enough supplementary heating to maintain minimum temperatures. Wandering through House No. 2 at 3 a.m., wrapped in a heavy coat, the icy air made me shiver and I wondered just how much the delicate plants could stand. The **Selaginellas** looked healthy enough but we knew it would not be long before irreparable damage would be done. Thankfully, with the help of a loyal band of engineers and electricians, sufficient heat was restored next day to keep things alive but tragedy struck again when the new burner was eventually fired only to cause an explosion which blew out the flue and boiler casings. The result was no boilers and complete reliance on supplementary paraffin heating.

This situation continued for about two weeks and only bare minimum temperatures were maintained. However, remarkably, though some plants did suffer, no serious damage resulted, mainly I think because there was sufficient residual heat in the plant beds to protect roots. It would have been a different story if the collection has still been in pots on staging, but in the old days we burned coke and complicated burners with electronic circuits were unknown.

The new tropical conservatory with its modern heating system will be much more reliable. By the late summer we saw the main contractor loading site huts and a miscellany of spare building materials on to lorries, leaving an almost completed glasshouse for gardeners to landscape and plant. Immediate priority was given to retrieving the builders' working areas on the west side and shaping a new mound from 6000 cu.m. of soil excavated when the foundations were laid

down. Though a poor late summer conspired to make this very difficult, the work was completed in time for grass seed to germinate before the onset of winter. Inside, the first rocks were placed to make up planting areas, and to disguise an ugly chimney breast in the fern zone a contractor was commissioned to build a glass fibre rockface as the bearing capacity of the floor above the boiler house would not have taken Sussex sandstone. The end result was very convincing and closely resembles the stone used on the lower levels. The unique character of this house is impossible to describe in a few words so I intend to say little more at this stage. When our work is finally complete and the official opening, which will be some time in 1987, has gone by, all its glory will be self evident. Her Majesty The Queen has graciously agreed that the glasshouse will be named the Princess of Wales Conservatory.

During March David Attenborough of TV fame was invited to bury a time capsule in the floor of the new tropical conservatory, to be left undisturbed until 2085. This contains a collection of seeds of basic food crops and endangered species, plus the publication 'The Green Inheritance' by Huxley which emphasises the need of present day man to take care of the rich but diminishing plant resources available to him. We can but conjecture what state the world will be in by then. (See detailed article elsewhere in this Journal — Ed.)

Following closely on the heels of one major building project are two more, a new reference museum being built between Kew Palace and the Herbarium and the complete refurbishment of the Palm House. By the end of the year construction of the former had advanced sufficiently for a start to be made on the external landscaping of the 10 acre site which will eventually become a public area. Currently the Palm House is surrounded by an impenetrable fence behind which the gradual dismantling process is taking place. Considerable care is being taken to preserve all important elements of the structure for reassembly and these are now overspilling on to the contractor's site outside the Shaft Yard. It is pleasing to record the determination of all those concerned to ensure that when restoration is complete the Palm House will again stand as a unique example of the skills of Burton and Turner and the Victorian glasshouse era.

An exhibit was mounted at the Chelsea Flower Show explaining current building projects at Kew, entitled 'Kew for the visitor in the 21st century'.

Sometime during the silent hours of 18 June Kew received a visitation from determined thieves who removed a large quantity of herbaceous plants from the Rock and Woodland Gardens. They were very discriminating, taking material of considerable horticultural value and when later we heard that the Savill Gardens at Windsor, and Wisley, had been raided during the same week, it was deduced that the same people were responsible. They had the effrontery to return to Windsor and Wisley for a second helping shortly afterwards, but left Kew alone. Whoever they were they had few scruples and do not

deserve to be called gardeners. We have to tolerate small-scale thefts but the professional way this was done is to be deplored.

The introduction of a new Plant Record Database referred to in last year's Journal is now a reality. All the LCD Sections are fully equipped with VDU screens, thus enabling staff to interrogate the record at the touch of buttons on a keyboard. Even those died in the wool traditionalists who initially doubted if the idea was worthwhile have been converted and can now be found looking intently at the screens displaying a mass of information not readily available before. It took a year of hard work and there are still a few refinements to be made; however, we now have a very powerful tool at our fingertips. In the Melon Yard the old glasshouses behind the potting sheds, which were the hub of the old Tropical and Decorative Nursery Sections, have been demolished to be replaced by a multispan structure. Advantage has been taken of the opportunity to include a reasonable amount of modern technology, including mobile benching with integral heating. This is part of the final development programme to bring up to date nursery facilities needed for the Alpine and Herbaceous Section. Over a period of time, depending on funds, all propagation and reserve nursery collections will move into the Melon Yard away from the restricted site behind Museum No. 2.

Iron gates which once were used at the Queen Elizabeth entrance from Ferry Lane and have been stored away for many years have been erected at the southern entrance to the Lower Nursery. This now rather grand entrance has smartened up what was once a back door to an important service area. At the public gates, new notice boards have been erected which we think are more functional than the previous ones with information presented on interchangeable panels which can be varied to meet seasonal needs. Directional signs have been standardised using a common house style and the plethora of ugly notices, which had accumulated over the years, have been removed.

Changes amongst the Garden's supervisory group are inevitable as people move on to greener pastures. Bill Jennison has left the Planning Unit, being poached by the Royal Horticultural Society. Peter Gibbon, who in recent years has looked after the Jodrell support glass, decided that retirement offered many advantages, and Gillian Wynn, in the Micropropagation Unit, has accepted that motherhood demanded her full-time attention. We are pleased to welcome Mark Pitman as Supervisor in Arboretum West, taking over from Pat Smallcombe, who at his own request has been re-graded to Grade I Gardener.

Opportunities to travel abroad are now much more frequent and this is actively encouraged as it is seen as an element of job training and development. Senior staff also play an active representational rôle in various fields overseas. Stuart Henchie and Tony Kirkham undertook a six week field expedition to Chile in the spring and the Curator and Hans Fliegner ventured into China (Guizhou Province) in the autumn for a month. The Chinese authorities invited Leo Pemberton to make a study tour with particular emphasis on horticultural training which hopefully will lead to increased co-operation in this area.

All in all 1985 was a demanding year. A wet summer not making life particularly easy, however, as major projects come to fruition, the Division will look for new challenges which will not be difficult to find. No doubt the report for next year will describe how we have advanced even further to keep Kew what it deserves to be — the best botanic garden in the world.

“SEEDS OF THE FUTURE” TIME CAPSULE

from an R.B.G. Press Release



At noon on March 22nd 1985 David Attenborough buried the “Seeds of the Future” time capsule in the foundations of the new multi-ecosystem plant house under construction at Kew Gardens.

As part of the World Wildlife Fund Plants Campaign 1984-85 the symbolic ceremony publicised the critical threat to the vital life-support systems of our planet.

All our futures depend on the health of the plant kingdom. However, the present rate of destruction is so great that within 100 years (for which the time

capsule is designed to last), unless **ACTION IS TAKEN** we will have sustained a loss of virtually all our tropical forests, our natural grasslands and wetlands, numerous species of plant life and worst of all the seeds of the future themselves — the genetic wealth of our planet.

Out of 10,000 possible edible species of plants we rely on a mere 20 species for 90% of the world's food; on just three — wheat, rice and maize — for over half of it.

The time capsule contents were:

- seeds of basic crops and endangered species from the Kew Seed Bank.

Key publications:

“Green Inheritance” by Anthony Huxley

(The World Wildlife Fund Book of Plants), Collins/Harvill

“IUCN Plant Red Data Book”

“IUCN World Conservation Strategy”

“The Conservation and Development Programme for the United Kingdom”, Kogan Page

"The Gaia Atlas of Planet Management", ed. Norman Myers, Pan Books

To preserve the contents, they were individually vacuum-packed in a heavy duty three-ply plastic laminate. They were then sealed into a clear glass globe for burial in the foundations.

The publications encapsulate a new and urgent understanding of the conservation **ACTION** that must be taken by governments, commercial organisations and individuals as a matter of top priority if we are to save our plant heritage from irreversible destruction.

The new Tropical Conservatory at Kew symbolises the same understanding — the marriage of technology with practical conservation skills and also the educational thrust of conservation and botanic gardens via the new "interpretation" and media centre to be established there.

The Conservatory designed by the Property Services Agency, Department of Environment, is under construction and this event was the first time the media had been invited to view this exciting building as it neared completion.

"We hear daily of so-called disasters, such as the drought in Ethiopia and the Sahel countries, but the fact is that a proper concern for conservation of nature and natural resources over the years might well have limited the severity of the drought and its tragic consequences . . ." (HRH The Duke of Edinburgh, President of the WWF, in his address to the Madrid Conference, IUCN General Assembly, November 1984)

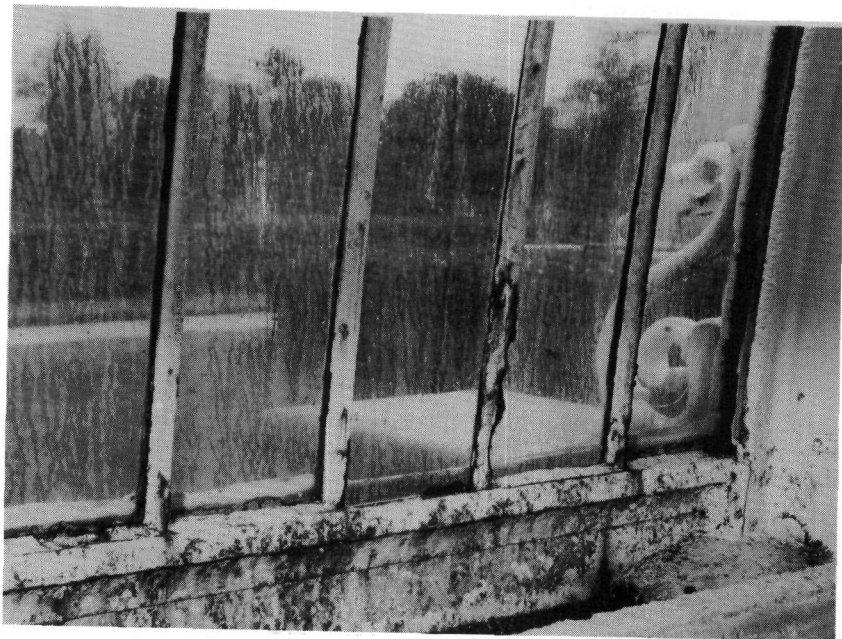
"In 2085 our successors will be able to judge how successful we have been in conserving crops and plants." (David Attenborough, 22nd March 1985.)

PROPERTY SERVICES AGENCY TO RESTORE KEW GARDENS PALM HOUSE

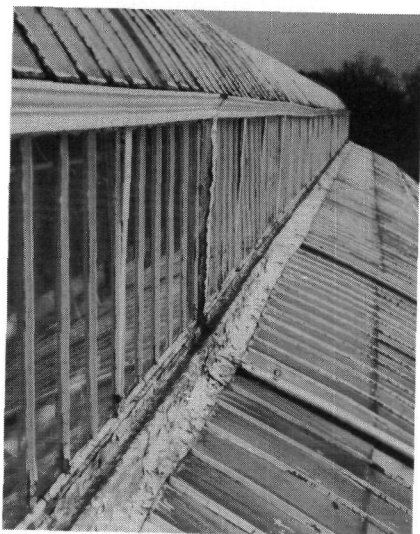
from a Department of Environment Press Notice, August 1985
(see also 1984 Kew Guild Journal page 306-7)

The Property Services Agency has awarded a £5.02 million contract to Balfour Beattie Ltd. to restore the Palm House at the Royal Botanic Gardens, Kew. The work, which includes a new display area in the basement, will start in September and take about two years to complete.

Designed by architect Decimus Burton and the Dublin ironfounder and engineer Richard Turner, the Palm House, built between 1844 and 1848, is the finest 19th century iron and glass conservatory in the world. Despite major renovation in the 1950s and subsequent annual maintenance, the structure, and several secondary cast iron components which act as structural members, were found in 1980 to be suffering progressive deterioration.



Deterioration of glazing bars at lower level.



Deterioration of secondary cast iron structural members at clerestorey level.

Surveys and a rigorous structural analysis were carried out by Posford Pavy and Partners, consulting engineers employed by the London Region Office of the Property Services Agency which provided architectural design and advice. Cost planning and bills of quantities were prepared by quantity surveyors, Ager and Stockwell.

The design proposals were the subject of prolonged consultations between the Royal Botanic Gardens, Property Services Agency and the Local Planning Authority (Richmond with the GLC), the Royal Fine Art Commission and conservation societies.

The restoration proposed aims to maintain as much of the original

fabric as possible, and where some replacements are needed to cast iron members they will be recast to the 1847 designs. The glazing bars must be renewed, and the stainless steel bars will be of the same profile as the original and painted white.

A completely new feature of the Palm House, and a new departure for Kew, will be a display area for tropical marine (seaweeds) algae. This will be housed in a basement reached by spiral stairs descending concentrically around the existing stairs which rise to the gallery.

Heating and ventilating services provided will be similar to the existing installation, and will incorporate a new automatic humidification system.

The layout will now incorporate many more deep planting beds and most of the original cast iron floor grids will be re-used for the new paths.

The Palm House was closed in September 1984 for the major repairs and the collections moved to a temporary house open to the public near the Picnic Area.

LEST WE FORGET — T. J. Dinn

by R. I. Beyer

During the course of taxonomic research Dr. Onno Wijnands, Director of Wageningen Botanic Garden, Netherlands, came across several references to T. J. Dinn and as a result was inspired to find out more about this important but now almost forgotten Dutch horticulturist and landscape architect. As Kew played an important part in Dinn's early training, Kewites will no doubt find this brief biography of interest.

Dinn was a man of considerable stature and was able to influence the Dutch landscape profession but unfortunately, like many others, his achievements have been overtaken by time. Kew, however, will continue to provide leaders in many fields, perhaps inspired by people such as Dinn. Our thanks are due to Dr. Wijnands who amply reminds us of this in the following.

Theodoor Johan Dinn 1876-1931 Horticulturist, nurseryman and landscape designer

Theodoor Johan Dinn was born on 6 December 1876 at Nijmegen, the son of a carpenter. As a boy he lived at Harlingen (Friesland province), where he attended grammar school. His training as a plantsman started in Amsterdam at the Linnaeus horticultural college, 1892-1894. While he was an apprentice Dinn worked in the nurseries of F. H. Buddstedt (Amsterdam), N. F. J. Bolderdijk (Haarlem) and A. C. M. Richard (Naarden). From 1898 onwards he widened his experience travelling to work under Duval (Versailles), A. Martin (London), and K.

Drost, owner of the Kew Nursery, Richmond. In 1898 he published his first horticultural papers and took his first administrative responsibilities.

When in England (1900-1901) Dinn was secretary and afterwards president of the 'Tuinbouwvereniging Hollandia', a society for young Dutch horticulturists staying abroad. A vivid discussion is found in 'Nederlandsche Tuinbouwblad' (1889) between the London minister Becher and Dinn's future employer, K. Drost, on this society. Becher urges Dutch parents to keep their children away from 'Hollandia' since its prime goal is asserted to be the furthering of drunkenness. Drost denies this with sober words.

Dinn's stay with Drost was followed by a studentship at Kew lasting until September 1901; he worked in the arboretum, under W. J. Bean, and in the T-Range. Probably Dinn was involved in the cultivation of **Nepenthes**, on which he published in 1903. In 1902 he wrote an article on Kew and joined the Kew Guild.

In October 1901 we find Dinn as head gardener on the estate of E. S. Philpot, at Puerto de Orotava on Tenerife. Dinn did not simply content himself with caring for the garden. He was introduced to the floristic delights of Tenerife and collected a herbarium of some 300 native and cultivated plants which he sent to Kew for identification. Some specimens were retained at Kew by Otto Stapf, who was Principal Assistant in the Herbarium, the remainder were returned to Dinn and offered by him to the herbarium of the Wageningen Agricultural University (WAG). A few specimens collected on Tenerife are present in the National Botanic Gardens, Glasnevin (DBN); how they came to be there is not known. Dinn's herbarium notebook is conserved at WAG, and it is this herbarium which brought about my interest in Dinn. I encountered some of his specimens when writing up Macaronesian species for 'The Botany of the Commelins' (1983). Some specimens collected in England are present in WAG and DBN.

Dinn left Tenerife in 1903, eventually arriving in Wassenaar, an upper class suburb of The Hague. Through the agency of Otto Stapf Dinn got the position of head gardener at 'Clingendael', the estate of Baroness van Bienen in The Hague, remaining there from 1905 until 1920. Clingendael housed a commercial nursery which was formed into a company on 18 September 1913, with a capital of f.25.000 divided among 100 shares. Baroness van Bienen owned 97 shares. Dinn who was its director had one share. The nursery catalogue printed in 1909 indicated carnations being its main item. In 1912 there was a carnation 'Baroness M. van Bienen'. In 1914 the carnation 'Gorgeous' became available, a cherry red American cultivar that made the nursery pay its way. From 1918 onwards, perennials, rock garden plants, bulbs and indoor plants are offered as well. The last Clingendael catalogue dates from 1920 and Dinn left Clingendael that year. The firm of L. A. Hoek took the nursery on lease in 1930 and it specialised in chrysanthemums. The carnation houses were pulled down in 1962.



T. J. Dinn and assistants.

At present Clingendael houses the Netherlands Institute of International Relations. The horticultural tradition of Clingendael survives in the Japanese Garden which attracts many visitors with its splendid azaleas.

In 1918 the Clingendael nursery had a department of landscape design and it was in this field that Dinn was to spend the rest of his career. He had been a teacher of landscape design at the Academy of Arts in The Hague, 1914-1916, and must have been a talented draughtsman, as witnessed by a watercolour of *Ipomoea tricolor* in the National Botanic Gardens, Glasnevin. No other drawings by Dinn are known to me.

In 1920 Dinn started as an independent landscape designer, directing bulb exhibitions at Haarlem (1922) and Noordwijk (1923). The landscape design department of the firm Van Tubergen at Haarlem was under his direction. He undertook many large projects, mainly in the coastal area of Holland, but also in Twente, Drenthe and Brabant. The economic depression of the late twenties caused a considerable reduction in his commissions, and he could no longer employ assistants; Miss van Os joined the landscape designer H. Roeters van Lennep, who succeeded Dinn at Van Tubergen; Miss Boon continued independently, as did Miss Philipse (now Mrs. Canneman) who is known for her fine garden at Walenburg, Neerlangbroek.

Dinn was a strong advocate of the independent landscape designer. He opposed the practice of mixing the financial interests of landscape designer and nurseryman. This opinion was shared later on (1922) by

the dean of Dutch landscaping of the period, Leonard A. Springer. The Association of Dutch Landscape Designers (Bond van Nederlandse Tuinarchitecten, B.N.T.) was founded in 1922. Hugo A. C. Poortman was its first president and he was succeeded in 1928 by Dinn. The Dutch Dendrology Society (Nederlandse Dendrologische Vereniging, N.D.V.) was founded in 1924. Dinn functioned as a liaison officer between N.D.V. and B.N.T. In those days many landscapers were eminent dendrologists as well (e.g. L. A. Springer, H. A. C. Poortman, S. G. A. Doorenbos), a combination of qualities only rarely met in Holland at present.

Dinn died in December 1931 in The Hague. The funeral was attended by the leading figures in landscaping, architecture, horticulture and dendrology. He is almost completely forgotten nowadays, remembered only by some for his book 'De Villatuin'. Our image of early 20th century landscaping in the Netherlands is dominated by Leonard Springer, but a recent series of papers on 'minor poets' has changed that impression and provided a more balanced image of Dutch landscape design, a profession in which Theodoor Dinn played a significant part.

OPEN LETTER FROM A KEWITE

(Any offers to answer Ernest's earnest pleas in the first paragraph?! — Ed.)

27 The Ridgeway,
Fleetwood,
Lancashire
FY7 8AH

1st November 1985

Dear Editor,

Having spent a number of hours reading many Kew Guild Journals, it occurred to me that someone should attempt a summary or résumé (or something). At first I thought I could make the attempt, but now I realise that it is a task for a keener mind.

When one considers that many, many people have spent years and some even lives in devoted service to the Guild, contemplation of almost a century of Journalism must be approached with great respect; even with awe and reverence. Perhaps it is slightly distressing that so much is "water under the bridge", but how could it be otherwise?

I wonder with what the long series of Kew Guild Journals may be compared. Hansard? A church magazine? Or is it in some respects unique? I think so.

Many national conditions — war and peace, economic climate, urban emergence — not to mention weather and ecological statistics

and observations, are reflected in its pages. Yet there is sympathetic unity in contributions from successive generations. The noble line of Presidents shares space with potted accounts of many members as they passed on. What solid and useful lives of dedicated service so many Kewites have led. Makes one feel honoured and humble to be associated with them in even remote fashion.

Memoirs fill pages from which stories still rise fresh and lively. Reading between the lines also increases volume and pleasure. Now and again a hint is given that many intriguing stories, unfortunately, have remained untold.

There is considerable volume of verse interspersed on the pages of the Journals, and much is of high quality. Take, for instance, the poem written in the Flower Garden in 1918 by Dorothy M. Kermode. Its pleasant Betjeman-like simplicity seems to come straight from the pure heart. I believe this poem, and others, merit reprint in full in future Journals. They are in complete contrast to the robust, meaty, down to earth narrative contributions of William Dallimore and many others.

Before the full century is up, reference should be made and thanks expressed to all editors, secretaries, presidents and the like. My main purpose in writing to you, Mr. Editor, is to suggest that somewhere there is the right person to do it!

Yours sincerely,

E. Chantler

THE TALLEST FLAGPOLE IN THE WORLD

Extract from *Victoria Times Colonist* (British Columbia)
by Wilmer H. Gold, sent by Stephen Parlie, 19th January 1986

During March 1958, MacMillan & Bloedel's Chemainus Sawmill Division shipped to Kew Gardens in London what is said to be the tallest flag pole in the world, now towering 75 metres in the air, it was actually a B.C. centennial gift from the British Columbia coast forest industries.

The large Douglas fir pole came from MacMillan & Bloedel's Copper Canyon Logging Camp. It was towed from Chemainus to Vancouver then manoeuvred aboard and under the forward housing of the 150-metre ocean freighter Wavecrest, bound for the Thames River Estuary.

First, the standing tree had to be limbed and topped by a "high-rigger". Felling the 91-metre tree presented problems: cables and blocks were attached in series; it was a delicate operation; the tree leaned; it took a crew of men three days to rig and fall the tree. If the tree had been allowed to crash down to earth the result would surely be a fragmented or broken pole.

A donkey and a Cat-tractor operator co-ordinated their efforts with precision and slowly lowered the tree without damage.

The company's vice-president said, "It was a tremendous job, working in the cool misty weather."

Holes were bored in the tree trunk, but there was no sign of root rot.

The long pole, reduced to 75 metres in length, was then yarded and loaded on two large Hayes logging trucks, resting false bunks made of logs on either truck, travelling in tandem style.

Then came the arduous task of driving the trucks over 30 km of narrow, mountainous roads with tight corners, allowing less than a metre of leeway on one occasion — a task that was accomplished.

The boom man at the Chemainus log-booming ground described the log as "being perfect — straight and true. One man could easily roll it over," he said.

Then-Premier W. A. C. Bennet, in announcing the gift, paid tribute to the forest industry for a symbol of "the traditional export of timber to the United Kingdom from this Province."

Dimensions of the pole are as follows:

Age — 371 years; standing tree — 91 metres tall; finished flag pole — 75 metres; butt diameter — almost 1½ metres; top diameter — 32 cm; pole volume — 4,000 metre board measure.

There have been no reports of flag-pole sitters at Kew Gardens!

'GARDEN GIRLS AT KEW'

1941-1944 — as printed on page 330 last year



Back row — left to right: Clarke, Victoria Paine (Forewoman Dec' Pits.); Diana Hutchinson; Betty Cooper (1944) Jackson; Mrs. E. M. Jensen (1942); Muriel Speake (1944) Werner; Netta Shallcross (1944) Waller; Constance Bell (1942) Martin; Eunice King (1943) Brabin-Smith; Mary Canning; Kit Cornford; E. Plummer (1942) Melville-Towers; Front row — left to right: E. K. G. Thompson (1944) McCulloch; Jean Sharp (1949) Hingston; Brenda Watts; Barbera M. Tarver (1941) Laking; F. A. Dodo Sharp (1944) Ashby.

Possible Contemporaries:

M. W. Tanner (1942) Squire; P. M. K. Milburn (1942) Brookes Purchas; I. M. Davidson (1941); C. Scott (1945) Bundy; M. H. Lancaster (1942) Wincott; I. E. Bolton (1944) Cranfield; Kelly; Oliver.

GARDEN GIRLS AT KEW 1942

by Peter Maunder



Back row — left to right: Pedgrift, Clarke, F. A. Sharps, Jean Sharps, J. Mundy. Middle row — left to right: Unknown, Hill, Kit Cornford, Diana Hutchinson, Netta Shallcross, Mrs. E. M. Jensen, E. K. G. Thompson, Kelly. Front row — left to right: Constance Bell, Muriel Speake, B. Walls, E. Plummer, Betty Cooper, Barbera M. Tarver, Victoria Paine, Mary Canning, Eunice King.

The photograph of the Kew Garden Girls which was reproduced in last year's Journal, brought a positive response from two former members of that happy group.

All the girls of that earlier group have now been identified, and details are included on the page opposite. The Journal is particularly grateful to both Mrs. Constance Martin and Mrs. Netta Waller for not only providing this vital information, but also much background detail.

Mrs. Martin has also kindly supplied a later group photograph possibly taken in 1942, which is reproduced above, and including the names of those in this larger group. The name of one member still remains unknown, and it would indeed be rewarding if the girl on the left end of the middle row could now be identified. Two girls who were at Kew at this time were Olive Horden and Helen Street, so it could well be that naming will be completed for next year's issue. Members should contact Peter Maunder with information please (Ed.).

Working conditions for these girls were arduous and spartan. Work began at 6.30 a.m. in the summer for the basic pay of 45 shillings per

week. When the Victoria regia pool required cleaning out, a 'dirty money' plus payment of six pence was allowed. To obtain a tea break of 10 minutes during the afternoon, Miss Hill had to make personal representation to Sir Arthur Hill, the then Director.

It was particularly pleasant for the President C. J. Mitchelmore and Members of the Guild to have the company of Mrs. Constance Martin at the A.G.M. at Kew in September.



Mrs. C. O. Martin (1942) sent this photograph, which was originally printed in *Picture Post*, of girls at Kew during the war. *Left to right*: Jensen, Margaret Wincott (née Lancaster), Betty Cooper, ?, Jean Hingston (née Sharps) and Do Sharps.



The house at Haleworth, Suffolk, once owned by Sir William Hooker in which Sir Joseph Hooker was born. Now a dentist's surgery with industrial works and car park at rear where once the garden stretched to the river. (Photograph courtesy of J. B. E. Simmons — 1985). Two plaques on the wall, placed by the Town Council in 1985, commemorate the Hookers. Professor Bell attended the ceremony. Haleworth are also planning a small commemorative garden for the Hookers on a site in the centre of the town.



Mrs. Gail Evans — wife of the Chief of Staff of the Royal Australian Air Force — planting a Grass Tree (*Xanthorrhoea*) in the Australian House. Mrs. Evans arranged to have this rare plant shipped to Kew after a previous visit. March 1985.

EXCERPTS FROM EUROGARDENERS NEWS 1985

with acknowledgement to the Editor

Kew Does It Again!

Following their successes at the Liverpool International Garden Festival, the School of Horticulture has again won a first prize in the Schools of Horticulture Garden Design competition for the 1986 National Garden Festival, to be held at Stoke-on-Trent.

John Sallis 'produced' the winning design. John was the top student on completion of his course in September 1984.

(February 1985)

Book review of note: 'New Scientist' 3.1.85

'Dominance and Affection : The Making of Pets' by Yin-Fu Tuan.
Published by Y.U.P.

Do you know that the Oriental Art of Bonsai is technophilic despotism at its worst? Do you even know what that means? For the information of the unenlightened, the art of Bonsai is an instance, according to Yin-Fu Tuan, of mankind's wish to remake and control, to hold quasi-affectionate domination over 'victims'. This impulse Tuan distinguishes from simple sadism by the masters' desire and effort to ensure that the 'victim' shows a proper pleasure in servitude. Tuan documents the phenomena as it has affected human attitudes to plants and gardens, animals, children, women, slaves, dwarfs and fools. Master gardeners, it is alleged, building formal gardens and pruning trees into topiary, are exhibiting a form of this trait. Other instances cited are the controlled breeding of animals for peculiar aesthetic ends, the turning of women into dolls moulded by domestic tyrants, and people into slaves, pets, and objects of genial fun. Make of this, you affectionate plant despots, what you will . . .

(February 1985)

Kew Gate Admissions 1984 Calendar Year

1984 : Total Gate Admissions — 1,084,291

1983 : Total Gate Admissions — 1,055,477

Admissions up by — 28,814

Highest Admission Month: April—195,670 (vs. 1983: April—121,395)

Lowest Admission Month: December—25,533 (vs. 1983: December—21,790)

1983 and 1984 show roughly similar admission figures throughout the year, with the exception of April 1984, which boosted the year's total.

(February 1985)

"Seeds of the Future" Time Capsule — 22.3.85, New Tropical Conservatory

In a symbolic ceremony, to be held at noon on 22 March 1985, David Attenborough will bury a time capsule containing a collection of seeds

of basic crops and endangered species from the Kew Seed Bank, and a selection of publications concerned with conservation, including "Green Inheritance", in the foundations of the New Tropical Conservatory at Kew. The seeds should last a 100 years, by which time, if the present rate of destruction is allowed to continue, virtually all the tropical rainforests, natural grasslands and wetlands, and with them the seeds of the future themselves — the genetic wealth of the planet, will be lost. The publications encapsulate the new and urgent understanding of the conservation ACTION that must be taken if we are to save our plant heritage from this fate. The New Tropical Conservatory is founded on the same understanding, and is thus an appropriate setting from which to publicise these vital concerns. The event will also be the first time that the media have been invited to view the interior of this exciting building as it nears its completion.

(March 1985)

Kew at The Chelsea Flower Show 21-24 May 1985

Kew's exhibit for the Chelsea Flower Show this year was entitled 'Kew for the Visitor in the 21st Century'. It described the three major building projects currently in progress in the Gardens, namely the new Exhibition and Reference Collection building, the new Tropical Conservatory and the restoration of the Palm House.

The central aim of the exhibition was to convey to the public the future development and role of Kew in the approaching 21st century.

(June 1985)

Kew's Chinese Floral Display at Buckingham Palace

At the request of Vice Admiral Sir Peter Ashmore, Master of the Royal Household, Kew provided a selection of flowers of Chinese origin which made an interesting topic for conversation when the Chinese Premier visited Buckingham Palace on 6 June. Plants of utility and decorative value were used, mostly as cut flowers, but with a few potted specimens.

Beauty Bush (**Kolkwitzia amabilis**), Bamboo (**Phyllostachys viridiglaucescens**), Camphor (**Cinnamomum camphora**), Crepe Myrtle (**Lagerstroemia indica**), Rose (**Rosa Marguerite Hilling**), Lilac (**Syringa reflexa**, **S. villosa**, **S. pinetorum**), Sweet Orange (**Citrus sinensis** 'Lue Gim Gong').

Foxglove Tree (**Paulownia tomentosa**), Maidenhair Tree (**Ginkgo biloba**), Likiang Spruce (**Picea likiangensis**), Dogwood (**Cornus kousa**), Rhododendron (**Rhododendron decorum**), Day Lily (**Hemerocallis flava**), Iris (**Iris laevigata**).

(July 1985)

"Kew Moves to Beat Plant Thieves"

A new angle on the new Tropical Conservatory was reported in the *Sunday Telegraph*, 13.10.85, describing the measures to be taken to prevent thefts of rare and valuable plant specimens. The protection of

choice plants in the cacti, orchid and insectivorous plant sections of the conservatory by plate glass casements was outlined in the article "Kew Moves to Beat Plant Thieves" by Mira Bar-Hillel. A general report on the house was also given. It should be noted that the information was procured via PSA, quite unbeknown to Kew, so any resulting enquiries should be referred to them. We have no intention to cage all our plants!

The following Monday this cartoon appeared in *The Telegraph*, the sense of which must have been obscure to those who had not read the above article the day before.



"We call it 'Thiefrow.'"

(October 1985)

The Institute of Horticulture Descends

On Saturday 19.10.85 the Institute of Horticulture held its AGM in the Jodrell Lecture Theatre. This was followed by a talk given by David Bellamy on the subject of Horticulture and Conservation; lunch was taken in the new Tropical Conservatory. The members were given a guided tour of the Gardens, and their spouses were shown the Herbarium and Library in the morning.

Kew was honoured to host the event, which was attended by an exceptionally large turnout of 450 people. Fortunately the weather was good, otherwise life could have been difficult for all concerned.

(October 1985)

New Kew Diploma Students 1985

Welcome to the 16 new Horticultural students who have gained places on the Kew Diploma, Course No. 23.

Susan Bell	Deputy Manager, Sainsbury's Homebase Garden Centre, Kingston.
Laura Brightman	Landscape Construction/Microprop Manager, Dacca Landscapes, Wilden, Bedford.
Robyn Carter	NCH, Askham Bryan College, York.
Paul Cook	Gardener, Arley Hall Gardens, Cheshire.
John Donovan	NCH Nursery Practice, Merrist Wood Agricultural College.

Helen Duncan	Self employed in private gardening.
Jennifer Evans	Propagator, Binstead Herbs, Binstead, Arundel.
Mark Felgate	Gardener, Wollongong Botanic Garden.
Jonathon Forsyth	Trainee, Tendring District Council, Clacton-on-Sea, Essex.
Richard Gray	Grade I Gardener, Alpine/Herbaceous Section, RBG, Kew.
Glenn Humphreys	Student, County Demonstration Gardens, Truro, Cornwall.
Emma Hutcheson	Trainee, Cardiff Parks Department.
David North	Groundsman/Supervisor, National Agricultural Centre, Stoneleigh.
Gabriella Ransom	NCH Hertfordshire College, St. Albans.
Richard Turnell	Freelance garden design and construction work, Brighton, East Sussex.

Welcome also to five new International students:

Veronique Dorville	Horticultural School in Antibes and Florestry in Paris.
Michael Hüttenmoser	Landscape work in Switzerland.
Cameron Smith	Self employed landscape gardener and nurseryman. Prince William, York County, New Brunswick, Canada.
Sujatha Goonetilleke	Technician in University of Peradeniya, Kandy, Sri Lanka.
Mildred Pinnell	ESU Scholar, Atlanta Botanical Garden, University of Georgia graduate school.

(October 1985)

Gracious Approval

In February permission was sought for the new Tropical Conservatory to be named after the Princess of Wales. The Home Office has now informed Professor Bell that "The Queen has been graciously pleased to approve the Home Secretary's recommendation that the conservatory be named 'The Princess of Wales Conservatory'".

(November 1985)

'St. Helena 'Rescue' is Success Story' — *The Telegraph*, 7.11.85

Experts at the Royal Botanic Gardens, Kew, have pioneered the rejuvenation of the plant life of the remote island of St. Helena in the South Atlantic, in a unique conservation experiment. The project is regarded as one of the most successful conservation stories of the century, having re-established many plants on the brink of extinction. Known as the 'Green Glue' syndrome, plants that are "ugly, green, spikey and poisonous" are being propagated at Kew and transplanted to the island. These plants are re-establishing the soil, which has been

eroded by weather and goats, and endemic flora is also being re-established. Financial aid for the project has been provided by the World Wildlife Fund and Britain's Overseas Development Administration. Mr. Gren Lucas, Keeper of Kew's Herbarium and chairman of the WWF Conservation Review Group, said: "The techniques we are now using could provide the blueprint for other areas. . . This reverses the erosion problem. Its application in other parts of the world suffering from drought and natural decimation is tremendously important".

The Royal Botanic Gardens at Kew are now adopting the role of a century ago when they exported plants to the world, such as the bread-fruit trees and the rubber plant.

(November 1985)

Report on the Curator's Trip to China

Last month the Curator, Hans Fleigner and James Russell from Castle Howard escaped from the reach of the telephone and 'in-tray' to venture into the north-eastern corner of Guizhou Province in China. A small province (with some 40 million inhabitants!) to the north-west is Sichuan, and to the west is Yunnan.

The target area was Fan Jin Shan, an 8,000 ft mountain that rises steeply from densely forested foothills that range from 1,000-2,000 ft. It is home to the Golden Monkey and Giant Salamander and many other creatures, including some 30 species of snake, seven of which are poisonous. One known locally as the 'five step snake' would seem to be accurately named! The flora of the mountain is as rich as a botanical garden. There are between two and three hundred species of fern alone, a huge diversity of trees, shrubs and herbs, *Rhododendrons*, ***Sorbus***, lilies, primulas at the summit, and in the lower valleys the mystical dove tree, ***Davidia***.

Through developing good relations with all concerned, what started as a study visit grew into a full Sino-British botanical exploration of the area with joint collecting. Some 700 herbarium specimens are due to come to Kew and over 300 collections of seeds and plants are already in our nurseries.

Many of the collected plants should prove hardy. Other than the single collecting of an American botanist in the 1930's, the area has not been visited by western plantmen and nothing has previously been brought into cultivation from this particular area. The resultant plants will be watched with great interest. Aside from further enhancing the collections these new collections should yield many valuable garden plants.

(November 1985)

LCD Projects

Work around the Tea Bar and Nursery entrance is now underway. The hoggin paths in this area have not been able to withstand the heavy foot traffic imposed by the attraction of the Temporary Palm House and picnic canopy. At the same time the whole area is to be made visually

more attractive with the re-erection of the Old Nursery (Queen's) Gates. Interestingly these gates are stamped on the bottom as being manufactured by Richard Turner's Hammersmith works. Through the winter a base coat surface will be laid and in spring the new surface coat will be applied. For some years Kew's black tarmac has been criticised as unsympathetic to a garden situation. Alternatives to this functional material are expensive so we have an interest to see if the new surface, gravel bound in tarmac, will prove more effective. Its cost is only marginally more than tarmac, and has been used successfully in St. James' Park.

(November 1985)

EXCERPTS FROM KEW NEWSLETTERS 1985

with acknowledgement to the Editors Mrs. C. Bromley,
Miss L. Ponsonby, Mr. R. B. Hastings

How Do You Like That?

A member of the public approached a gardener at Kew with — "Are you just a gardener, or do you really know something . . . ?"

(Jan Woudstra — January 1985)

A Move for the Better

John Flanagan in the Library has passed on the following new Kew address written on a letter posted from West Germany:

Kew Gardens Library,
HAMPSTEAD HEATH near LONDON
England

John's postscript reads "nice to know we've moved to a *really* posh area!"

(February 1985)

To all My Friends at Kew

I think you all must,
Know of "Johnnie The Dust",
Who clears all the rubbish at Kew,
Be it timber, or scrap iron, or bloody great rocks,
I've shifted them all,
And taken the knocks.
Seven short years, I've worked at these chores,
And my only wish, is for seven year's more.
For of all the different jobs I've had,
And I've had quite a few,
There's nothing so good, as working at Kew,
With the friendliest people, I've ever met,
And the happiest memories I'll never forget.

But when April comes,
 My time will expire,
 For I reach the age when I'm supposed to retire,
 But to stay here at Kew,
 I only get keener,
 So I'm gonna come back as an office cleaner.
 You may think "poor sod, he needs putting away",
 But when you love Kew as I do,
 You've just got to stay.

Johnnie the Dust (The Candy Man) (*February 1985*)

Cold Feet?

I was amused to receive a phone call from Ron Godbold our Head House Steward on Monday 11th February. A very charming American lady, at present on a course in California, asked if she might be allowed to put her bare feet on 'British' soil for 15 minutes. With a kind thought for possible chilblains (with four inches of snow cover outside) Ron directed our visitor to the Australian house. Two thoughts spring to mind immediately — is the soil in the Australian House truly representative and what on earth! is the lady studying? — 'Chiropody' perhaps.

(*February 1985*)

The Kew Magazine

An editorial advisory committee has been set up to help the editor on various aspects of 'The Kew Magazine'. The members of this committee will serve initially for two years and consist of Susyn Andrews, Wessel Marais, Anne Mayo, Tony Schilling, Nigel P. Taylor and John Woodhams.

The Magazine covers a wide range of topics from botany to cultivation, conservation and botanical illustrations and includes additional items such as book reviews and readers' letters.

'The Kew Magazine' production is now well into volume two and has received warm praise from around the world. We are still badly in need of more subscribers, however, and I would welcome any new readers to join. The cost to members of staff is very reasonable at only £20 per year (instead of £32.50). The first volume is still available at £20 inclusive.

(*March 1985*)

No Sex Please — We are a Museum

An amusing article appeared in the '*Richmond & Twickenham Times*' Friday March 15th 1985.

"Plants for Men!"

I hope that the new museum at Kew will not finally emerge with the name 'Plants for Man'. While scientists persist in using 19th century terminology in relation to their specialisms the greater part of humanity — which in this country is Woman — sees the noun Man purely in gender terms.

Many publishers issue instructions to their editors and writers to discontinue the use of the word except for describing a male of the human race as it perpetuates out of date discriminatory practice.

In this case, may I suggest that 'Plants for People' will not only have a more generally popular ring but will be more appealingly alliterative for publicity purposes.

I hope the many women's organisations in the borough will add their objections to mine and inform the Ministry of Agriculture which is providing the two and a quarter million pounds from us for the museum that they find the proposed title both offensive and deplorably anachronistic."

(April 1985)

Kew in Spring

How can you describe them?
the Gardens in spring
Are there words that can
convey everything?
I have sat and thought for a while
of words like beautiful
and wonderful
But they seem futile.
Are there words to describe
the trees?
With their delicate blossoms
of pink and white?
Or the daffodils, so golden
in the morning light
Their subtle perfume
filling the air
Puts a joy in my heart
which is beyond compare.
Oh, there are so many things
of beauty as well
In fact, the whole of the Gardens
are a glorious sight
And the Poet that wrote these
next few lines
I think was perfectly right.
"Take the kiss of the sun for a pardon,
The song of a bird for mirth,
You're nearer to God in a garden,
Than anywhere else on earth."
These few lines I think convey
All the things I've been trying to say
And whoever it was
That penned that short rhyme
Must have been in Kew at the time.

(Johnnie the Dust — May 1985)

Trouble at the Temple

Vandalism is not a purely 20th century phenomenon, as shown by the following paragraph from the Kew Annual Report for 1869, written by Joseph Hooker about 'King William Temple'.

"I regret to add that I am compelled to recommend that this pretty temple be inclosed within a wire fence, as neither entreaty, warning, nor punishment avails to prevent mischievous and vulgar-minded persons from disfiguring its walls with pencils and knives. This practice of writing on the walls, alcoves, etc., and of cutting the seats, is the only serious complaint I have to make of the conduct of visitors; and I very much hope that the public papers will take cognizance of this matter, which public opinion alone can control."

In spite of the attentions of numerous school children, the temple clearly does not suffer so badly nowadays.

(Contributed by Rosemary Angel — June 1985)

Summer Fever in the Enquiry Unit

Summer is again with us. Occasionally the sun shines and as usual it seems to inflict a certain madness on our many callers and correspondents. Admittedly our enquirers' hearing has improved of late. They no longer hear squeaks when they water their **Yucca** plants. Hopefully the tarantulas have packed their sacks and returned to South America on the Marks and Spencers Spider Special. Sunlight, however, does appear to impair the eyesight. Colour blindness is a common complaint right now. Alas we have so many enquirers who are seeing nothing but black pansies. Perhaps one remedy would be R.B.G.-purple-tinted glasses. If you think you have "Bowles Pansy" don't ring us we'll ring you.

One visitor has forwarded us an invoice for shoe repairs. Worn out shoes were the consequence of wandering round the gardens all day trying to see the view of the Temperate House that is shown on the cover of the Souvenir Guide. Unfortunately on the day of her visit the lift on the flagstaff was out of order and Tudor had lost the ladder, which was used when the photograph was originally taken.

One enquirer may be reporting us to the R.S.P.C.A., as in answer to her cry for help we suggested that she shot the cat and bought a new Swiss Cheese plant. The basic problem here, which was eventually unravelled from four lengthy pages of manuscript, was the fact that the plant was dying. Our enquirer felt this may have been because one morning she discovered a cat, that was staying with her, using the flower pot instead of the cat litter tray for its call of nature. Shortly after this event the plant turned yellow and away from the sunlight. Perhaps the Swiss are reserved, or maybe the plant was just blushing and curling up with embarrassment. (The cat was a lady — at the time!)

Then there is the couple that have brought back a banana plant from abroad. For many weeks it has been growing well, although it has not produced any fruit yet but oh dear! It has tear drops on its leaves. Who

but Kew may know why it's crying; maybe it is missing a certificate of entry and anyway if you were a banana plant used to sunny areas wouldn't you cry if you had to endure an English climate.

The correspondence count is still high, but as autumn days draw nigh the experts and the "Kew Spokesman" diagnose that the Summer Fever will subside. Rumour has it that next year the surgery will be under new management and will be bigger for dealing with such complaints, but I daresay they will be just as entertaining.

(Maureen Parker — Public Relations)

A Guide to Completing the 'Annual Report' Form

Those members of staff who have long sought for suitable comments to replace those A-F headings of the Annual Report form may find this Guide to Botanist's Performance of some use!

AREA OF PERFORMANCE

<i>Degree of performance</i>	<i>Quality of work</i>	<i>Promptness</i>
Far exceeds job requirements	Can produce major revision a year	As fast as greased lightning
Exceeds job requirements	Can produce a revision	As fast as lightning
Meets job requirements	Can describe plants if prodded	Needs greasing
Needs job improvement	Needs a year to begin a revision	Needs bolt of lightning to start
Does not meet job requirements	Needs revision	Slips in grease
<i>Initiative</i>	<i>Adaptability</i>	<i>Communications</i>
Can determine plants to species by feel	Walks on water	Talks to other botanists
Can determine plants to species by key	Keeps head above water	Talks to boss
Can determine plants to family	Washes with water	Answers only by letter after six months
Cannot tell leaves from flowers	Drinks water	Loses arguments with new graduates
Cannot tell plants from animals	Passes water in emergencies	Cannot understand question

(From the N.A.S.B.S. 22 (1980) 13, who adapted it from Tarmac Topics 223 (1978). — Ed.)

Abstracted from 'Flora Malesiana Bulletin' vol. 9/2 (38): p. 183. July 1985.

(Article supplied by Prof. K. Jones — August 1985)

Take Your Kew

The following letter was recently published in a magazine.

"A few weeks ago I gave my class of 10 year olds a general knowledge lesson. Upon asking: 'With what do you associate Kew Gardens?' a hand shot up and a boy called out 'Billiards!'."

(Contributed by Freda Hunt — September 1985)

Kew Weather for August — Part of Report

... August did prove to be the wettest August since we started recording in 1980. It also had the lowest average temperature since we started recording of 19.9°C. Perhaps I should have kept my mouth shut when trying to be optimistic for the summer!

Readers might be interested to know that I did receive in a transit a piece of wood with a small piece of rope on it, see below. The accompanying memorandum said "Due to the problems with the wind machine and rain gauge we would encourage you to use the enclosed machine as a back-up facility"; it was signed S. Nowflake. If anybody knows who this person is, I would very much like to meet him or her.

The 'Weather Station — made in Ireland', consists of a back board with a short length of rope hanging on the front, attached at one end. The following key is provided to its interpretation.

Rope Vertical — Calm	Rope Flapping — Windy
Rope Horizontal — Stormy	Rope Dry — Dry
Rope Wet — Rainy	Rope White — Snow
Rope Rigid — Frost	Rope Invisible — Fog
Rope Gone — Hurricane	

(Dickon Bowling — September 1985)

Wakehurst Place or 'Gnome Sweet Gnome'

This letter, delivered by hand, was received by Mr. Gegg on 24.9.85 in response to a recent advertisement for a Nursery Worker and Tree Pruner, at Wakehurst Place.

Clutterbuck House
Sussex

Sir,

I wish to apply for the post of Nursery Worker in your garden at Wakehurst.

I am 72 years old and a former ladies champion all-in-wrestler. I have a Certificate in long distance wellie-wanging and I am an active member of the Sussex Bat Preservation Society. Also I am Chairperson of the local 'Save our Garden Gnome' campaign.

I'm sure your garden is an ideal area for our group to concentrate the campaign. Can you imagine having gnomes instead of administrators? Think of the sense you could get out of them (I refer to the gnomes of course!).

If I should be lucky enough to be selected for interview, I would dearly love to meet your world famous administrator — I believe his name is Mr. Clegg. I am told he is an expert on the art of "Thinking Tall".

As I am 6'4" and weigh 17 stone I'm sure we will get on well together.

If I am the successful candidate for this position I will be able to start work almost immediately — except for afternoons which I need for my punk granny-bashing activities.

I look forward to hearing from you,

Lots of love from

Deidre Clutterbuck

(October 1985)

Round the Gardens Race

The race took place on Tuesday 22nd October on a perfect warm autumn evening. An apprehensive field of 16 runners lined up with a two and three-quarter mile slog ahead of them. The race was started by Mr. Corkill and after the first 1,000 metres the field opened up as G. Smith, P. Edwards and S. Davies stepped up the pace. The route took the runners along the perimeter path through the Cottage grounds to Lion Gate where chalked on the path 'Only five miles to go' greeted the tiring runners.

A diversion had to be made near the Shaft Yard due to roadworks which lengthened the route by several agonising metres.

G. Smith was greeted with rapturous applause as he broke the finishing tape to take the winning trophy in 16 minutes and 32 seconds. P. Edwards, who consistently runs well in this race, came joint second with S. Davies in his come-back race, in a time of 17 minutes 22 seconds.

A. Jackson and Finn the dog, or was it Finn and A. Jackson, finished in eighth place though Andy told me they would have finished first if there hadn't been so many trees about. D. Jones was the first Veteran with a time of 21 minutes 25 seconds. G. Dayton and E. Hutchinson, aided by wheelchairs, finished in 21 minutes 50 seconds.

The silver trophy and splendid medals were supplied by Harry Townsend through the Curator fund and presented by the Director to the winner, second and third placed runners, first girls and veteran winners.

I would like to congratulate the runners who completed the race, and thank the spectators for their support and Matt Biggs for setting out the course.

(Philip Nicholson — Sports Secretary)

Plant Thefts — Nothing New!

Peter Collinson, a wealthy London mercer, acquired a property in 1749 called Ridgeway House at Mill Hill, Hendon, Middlesex. In 1752 he commenced the compilation of a catalogue of plants which he grew in his garden, which was continued until his death in 1768. Eventually this came into the hands of L. W. Dillwyn who, with annotations, rearranged the names using the Linnaean system and published it in 1843 as *Hortus Collinsonianus*.

Whilst browsing through this book, a footnote to two species of Trilliums which had been stolen from his garden caught my eye. This seemed apposite, in view of the recent spate of plant thefts. 'For several years previous, a system of robbing gardens has been carried on, by some thief obviously well acquainted with the rarity and value of plants'. Miller (curator of the Chelsea Physic Gardens), in a letter to Mr. Collinson dated October 22, 1765, says that the person he suspected 'has been twice last week at Williamson's garden at Chelsea; one of his men was so near as to know him, but his gun missed fire'.

(Brian Halliwell — *November 1985*)

Tea in the Herbarium

Phones are left ringing, everything stops,
The place is alive with the hum;
Halt urgent reports and intensive research
For tea in the Herbarium.
From America, Africa, Europe and Ind
Botanic professors are come
To the Mecca of plant life, both dead and alive,
To take tea in the Herbarium.
The atom may split, nuclear war be declared,
Men may land on the sun
But nothing disturbs the Edwardian scene
Of tea in the Herbarium.

(Ted Brown — *Finance, December 1985*)

BIRDS AT KEW GARDENS IN 1985

by Rupert B. Hastings

Eighty-five wild species were seen at Kew during 1985. The following are the more interesting observations made during the year.

Little Grebe. None at all was seen on the Lake and this species seems to have lost all interest in nesting at Kew. One did, however, appear on the Palm House Pond on May 3rd, the first I have seen on this water since I began watching at Kew in November, 1978. Along the Thames there were peaks of four on January 10th and five on December 2nd.

Great Crested Grebe. A pair was again successful at the lake and raised three young which were typically noisy and conspicuous in their black and white 'humbug' plumage. On the Thames there was a remarkable total of 12 on January 22nd during severe weather, falling to eight the next day. Two on May 31st were additional to the pair at the Lake. In the latter part of the year the peak was just two, on October 23rd.

Cormorant. The largest single gathering was 13 in a tree on Brentford Ait on February 13th. Otherwise birds were scattered along

the Thames surface or seen in flight, and the largest composite count was 17 on January 9th. One bird was seen as late as May 7th.

Grey Heron. This bird is still a regular evening visitor to waters in the Gardens but numbers have generally fallen elsewhere. The most seen at one time in Syon Park was only 13, on March 18th.

Mute Swan. While still present on various ponds and reservoirs, this species has declined considerably along the Thames and there were only four sightings all year, all of singles. In addition, an immature flew past the Pond on October 31st.

Canada Goose. In contrast to the Mute Swan, this large waterfowl is doing very nicely in London. Flock sizes seem to have stabilised at Kew, and the largest gathering was of 245 over in Syon Park on January 16th, during hard weather.

Canada Goose x Barnacle Goose. Two hybrids were first noticed at the Lake on October 29th and they remained to the end of the year, keeping with the Barnacle Geese.

Barnacle Goose. Two free-flying birds were present on January 11th, one in February, and one from at least October 29th to the year's end. Full-winged feral birds, as opposed to visitors from north of Britain, are scattered about western and southern London.

Brent Goose. One, presumably of captive origin, was seen occasionally in January and February.

Ruddy Shelduck. Yet another 'escape', the female from 1984 remained throughout 1985 and was often to be seen at the Lake with Kew's captive male. Twice in May it was seen visiting the pond on Kew Green.

Mandarin. Three full-winged birds (a male and two females) were at the Lake on January 3rd, a pair on January 9th, then a male on April 23rd and May 13th. These records continued the series of sightings that began in September 1984. In addition there was a female on the Thames on January 9th and 17th.

Wigeon. This scarce duck appeared for the second year running, with two males on the Thames in hard weather on January 9th and 10th, followed by a female on March 14th. On March 25th a female was on the Lake with a male Shoveler.

Gadwall. In a similar pattern to the Wigeon records, there were two on the Thames on January 9th and 10th, five on 16th and three on 17th, followed by a male on March 28th.

Teal. This duck is much more regular along the river than the above two, especially near the south end of Brentford Ait, where there was a high of 22 on January 22nd. Later large counts included 12 on March 5th and 13 on December 2nd, three of which paid a fly-over visit to the Lake.

Shoveler. This duck was a regular visitor early in the year with peaks of six on the Pond on January 28th and six at the Lake on March 25th. These were lower numbers than usual and in the autumn there was only one sighting, of four at the Lake on October 8th.

Pochard. Hard weather produced 16 on the Thames on January 16th.

Tufted Duck. Freezing conditions also forced this duck to move about, and 47 flew east over the Gardens on January 10th, while on the river there were 64 on January 16th.

Goldeneye. On the Thames there was a 'brown-head' on January 23rd. Surprisingly a female flew in at the Lake in late February but it transpired that it was very tame and clearly an escape from a collection. It stayed about three days.

Sparrowhawk. Once again a pair nested in the southern part of the Gardens, and raised three young which flew in early July. Presumably it was this family party that was still together near King William's Temple on September 4th.

Buzzard? A bird thought to be this species was seen by Peter Taylor circling over the river outside the Herbarium on July 4th.

Kestrel. At least one pair bred inside the Gardens.

Lapwing. One flew upriver on January 7th and three flew west on January 28th.

Snipe. This wader is often present in Syon Park and can sometimes be seen in flight from Syon Vista. Up to seven were visible in March (on 11th) and singles in October and November. Along the Thames up to four fed between January 16th and 28th, having been frozen out of marshy ground.

Woodcock. Once again this elusive bird was noticed in the Queen's Cottage Grounds, where John Bartram saw odd singles at dusk in February and March.

Common Sandpiper. This small wader is regular along the Thames in spring and autumn. The first was seen reasonably early on April 17th, while the autumn passage extended on and off from July 29th to September 2nd.

Black-headed Gull. A leucistic adult was seen along the Thames on March 11th. It had completely white wings and lacked all the grey and black found in a normal adult.

Common Gull. Along the Thames, the peak count for the year was 55 on January 16th.

Lesser Black-backed Gull. The highest count for this gull was ten on August 20th.

Herring Gull. There was the usual scattering of singles throughout the year, except for a remarkable movement of 22 on April 1st. A yellow-legged bird was present on August 30th.

Kittiwake. This seabird occurred for the fifth time in seven years when an immature appeared near Kew Bridge on April 10th and stayed to the 12th. All the previous Kittiwakes had moved quickly onwards, but this one could be watched standing quietly on the towpath outside the Herbarium.

Stock Dove. This small relative of the Woodpigeon was seen between April 2nd and August 23rd. At times there was clearly a pair

lingering in the Queen's Cottage Grounds. On June 28th, nine were seen flying westwards.

Collared Dove. Singles were recorded on just five dates: January 28th and 31st, June 7th and July 1st and 31st. This was a fairly poor showing after last year's nesting attempt.

Turtle Dove. A group of four flew along the river on June 7th. This summer visitor is seen less than annually at Kew.

Ring-necked Parakeet. Seen in most months of the year, usually in ones and twos, but eight flew west on August 7th and five were near Cumberland Gate on September 14th.

Tawny Owl. There are probably several pairs inside the Gardens. Remarkably, one spent the daylight hours of July 21st and 22nd sitting in full view in the ***Pinus canariensis*** inside the southern section of the Temperate House. We will never know if it continued to hunt outdoors or if it decided to 'have a night in' between these two dates!

Swift. Following nesting in the Kew area, there were 60 in the air on July 18th. The last was one on September 2nd, most having departed by August 14th.

Kingfisher. This has now become a rare bird at Kew. One was seen along the Thames on three occasions between October 10th and November 1st.

Woodpeckers. Green and Great Spotted were seen regularly but with no evidence of nesting. Lesser Spotted was seen just six times, including three birds on May 9th.

Skylark. In October, one flew west on 17th, two on 23rd and one on 25th. On December 2nd two flew east and one flew west.

Sand Martin. One flew low over the Lake on May 2nd.

Swallow. The first was on April 16th. Two were present in the north-west part of the Gardens from May 28th to June 7th but seemingly did not stay to breed. Only one was seen in autumn, on September 23rd, a very poor passage.

House Martin. Present from April 11th to October 8th, with a mid-summer count of 31 on June 10th. There was no noticeable autumn movement.

Meadow Pipit. As usual all birds were seen in flight only. One occurred on January 16th. Spring passage lasted from March 25th to April 2nd with up to five birds, and the autumn movement took place between September 24th and November 1st with up to three birds.

Wheatear. This scarce migrant at Kew occurred twice in spring. First was a male on April 3rd which stayed a while in the Rock Garden and the Herbaceous Ground. This was followed by a female on Kew Green on April 30th which stayed near the cricket pitches between at least 12 p.m. and 3 p.m. Both were very nice birds to see in this area.

Blackbird. A strikingly piebald female was in residence near the south end of the Herbaceous Ground between September and December.

Fieldfare. This is distinctly scarcer than the Redwing at Kew and occurs largely in cold weather. In January one was near the Hornbeams on the 10th, 27 flew west on 15th and 16 flew over the Azalea Garden on 16th. A spell of harsher weather brought two or three to the King William's Temple area for several days in the third week of November.

Redwing. The largest counts were probably of passage birds, with 40 on March 7th and 37 on October 17th.

Lesser Whitethroat. A juvenile was in elders not far from Brentford Ferry Gate on September 11th.

Whitethroat. In late September one surprisingly appeared inside the north block of the Temperate House, the only sighting of this species all year.

Blackcap. At least six males occurred between April 30th and July. Possible young birds were seen on July 3rd and 26th. Autumn migrants were noted on August 27th, September 11th and 20th, and October 15th, showing their normal liking for elders. In early December a male was present for at least a week in the Canal Beds.

Chiffchaff. One or more sang at the Rhododendron Dell from April 12th to July 8th, but other records were very scarce, with none staying after mid-May. A late autumn migrant showed itself near Syon Vista on October 10th.

Willow Warbler. At least seven occurred in spring, with a singing male remaining by King William's Temple from late April to mid-May. The only later records concerned an adult on July 18th and an adult with a young bird near Brentford Ferry Gate on July 26th, presumably not a bird hatched within the Gardens.

Goldcrest. My peak lunch-time count was 12 on September 2nd.

Spotted Flycatcher. This summer visitor was much scarcer than usual at some London sites, and Kew's only record was of one on August 27th.

Long-tailed Tit. My highest lunch-time count was 19 on January 9th.

Treecreeper. This sometimes elusive bird was known to have bred when a singing male was seen with a juvenile along the riverside north of Syon Vista on June 10th.

Jay. On January 16th one was heard imitating the 'kewick' call of the Tawny Owl. As usual an increase took place in the autumn, with a peak of 21 counted on November 8th.

Jackdaw. One flew towards Syon Park on April 12th then in autumn, one stayed around the Gardens from at least October 29th to November 4th.

Siskin. None was seen in the early part of the year. In autumn, the first two occurred on October 1st and the species was then seen on six further dates up to the year's end, with peaks of 12 in flight on November 1st and 27th.

Redpoll. The four well-spaced records involved ten on March 7th, three on April 16th, six on November 4th and one on December 6th. As usual there were no sightings in summer.

Finally, there was an attractive all-white *Budgerigar* perched on the wall outside Cambridge Cottage on March 13th!

OPERATION RALEIGH ON THE ATACAMA DESERT

Launched in November 1984, Operation Raleigh is a four year round the world youth endeavour encompassing science, adventure and community work.

Last year Pamela Holt was selected as a staff member to take part in the three month Chilean phase.

Together with 60 venturers and staff she flew out of Heathrow on 18th July 1985 bound for Santiago on the Brazilian national airline Varig. Two days later after the Australian, New Zealand and North American contingent arrived the expedition travelled 800 miles north in a convoy of three coaches to Antofagasta, coastal capital of the second region. Nearby in the calm waters of the Mejillones bay the flag ship the Sir Walter Raleigh, a 1,900 ton vessel sponsored by Hull City Council, lay anchored. Fitted out with scientific laboratories, diving support equipment, landing craft and inflatable boats, her task is to support many of the land-based expeditions with supplies and to carry out independent scientific research.

Pamela's first job was to deploy venturers to the different projects from oceanography, soil sampling and archaeological work to surveying raised beaches or building picnic sites! Next she helped to map and record the unique vegetation around Paposos, a tiny fishing village dominated by rugged hills. The low cloud Camanchaca, occurs during the winter and spring months giving sufficient moisture to permit growth in an otherwise arid area. It is hoped that this area will be designated a National Park being rich in bird life too, owing to the cold Humboldt current where fish are plentiful.

Copiapoa cinerea and **Eulychnia breviflora** are the most commonly occurring cacti whereas the large shrubs **Oxalis gigantea**, **Euphorbia lactiflua** and **Nicotiana** and **Codiaeum sp.** are most dense in a band stretching up the lower mountain slopes. **Nolana**, **Malvaceae** and **Calandrinia** occur closer to the sea. Much of the vegetation had yet to develop giving only a tantalising glimpse of the **Tropaeolum**, **Amaryllids** and **Alstroemerias**.

Living in a tent on an army camp bed, Pamela recalls the crashing Pacific and the generous gifts of locally caught sea food — squid, sea urchin, shellfish, white fleshed Congrio and even a section of porpoise which, when cooked, is difficult to distinguish from beef.

Meanwhile at 8,000 ft. another group were excavating a burial ground near the ancient town of San Pedro de Atacama under the direction of the University del Norte and the staff of the local Archaeological Museum. Twenty-nine mummies were found in 15 days, many dating back to 500-900 years A.D. Apparently the site had been used over a period of four centuries and only came to light when urban development exposed the first bones. Some skeletons were well preserved mummies complete with clothing, beads, elaborate feathered hats and coca outfits. One remarkable find was a basket with lid containing what Colonel John Blashford-Snell, director of Operations, dubbed "The Oldest Cake in the World". Like the Egyptians the Atacamanian Indians believed in providing their dead with sustenance for the after-life — the type and quantity of food being related to social status. Thus the uncovering of cake as opposed to bread and its relatively large size implied that the grave was that of an important personage.

By this time Pamela was writing up the science reports on the various projects and visiting the Lauca National Park where venturers created nature trails and visitor shelters in the literally breath taking altitude of 15,000 ft. on the windswept Altiplano. Here the *Polylepis* growing up to five feet high must take the altitude record for trees while the once threatened *Vicuña* now roams in safety.

At a lower altitude Pamela helped for a short while on another National Park founded in 1984, "Pampa del Tamarugal", an extensive forest straddling the Pan American Highway, composed entirely of ***Prosopis chilensis*** and ***P. tamarugo***. Despite temperatures in the 90°s with soil hard, salt encrusted and dry these giant thorny trees survive the desert climate by abstracting underground water via their long tap roots.

PAPOSO — PROPOSED NATIONAL PARK 25° 12' SOUTH OF THE EQUATOR.

Nearest Town Taltal, city Antofagasta, Chile

by Pamela Holt

The arid northern coast of Chile can bloom at Paposo owing to the phenomenal Camanchaca, a low cloud which occurs during the Southern Hemisphere winter and spring. Extending from the coast to approximately two miles inland this low cloud allows a wide range of plants to flourish.

Close to sea level plant life is limited to the family ***Nolanaceae*** genus ***Nolana*** sp. low growing usually succulent leaved herbaceous plants and certain ***Compositae*** species ***Malvaceae*** occur 40 metres inland along with ***Cactaceae*** mainly of the genera ***Copiapoa***.

Beyond the coast vegetation is most dense from 150 m to 450 m from the sea rising to an altitude of 900 m — and contains the largest

plants: the tall cactus **Eulychnia breviflora**, **Euphorbia bractiflora** and a huge shrubby **Oxalis gigantea**. Often growing on these were **Tilandsia**, **Cuscuta** or **Dioscorea**. Compositae plants feature widely. **Puya copiapina** occurs on rocky outcrops with a large **Nicotiana** sporting 5 cm long yellow tubular flowers, high up in the ravines. Various white flowered forms of **Solanaceous** plant occur in this belt plus **Labiatae**, **Amaryllids** and **Alstroemeria**. **Tropaeolum tricolor** was also recorded.

At a much higher altitude **Ephedra breana** and a yellow flowered viscid pea together with **Lycopersicon** were recorded. Other strange grey-leaved plants with white flowers or fleshy leaved roseattes were also seen.

AN ACCOUNT OF THE TRAVEL SCHOLARSHIP OF THE THORNTON SMITH TRUST 1981 TO PAPUA NEW GUINEA

by Timothy Rees

My trip to Papua New Guinea enabled me to visit most of the major towns in which I met and saw individuals and Institutions connected with the flora of New Guinea. With the patrols I undertook as well, I was able to obtain first hand experience of some of the habitats.

The visit lasted from 20th September to 23rd November 1981, a total of nine weeks and two days. It was unfortunately the quickest nine weeks I have yet experienced but the most enjoyable.

The aim of my visit was to meet a number of people who worked in most of the foremost Botanical Institutes of Papua New Guinea. This, in the main, I was able to do although, inevitable alterations to the itinerary had to be made. This enabled me to assemble some facts and draw some conclusions on the State of Botanical Research in Papua New Guinea. I was able also, to assess at what level and in what form, conservation is applied. Lastly I was able to collect with Tom Reeve, an excellent selection of Alpine Orchids and alpine plants. Some of these were certainly new species and others first time introductions into cultivation in England. Chief of these as far as I was concerned was **Rhododendron saxifragoides**.

I shall start with the Ecological Institute at Wau. A change of plan was forced on me because of the needs of time and the necessity to adjust to the tropics.

The Institute was an outcome of what was a temporary field station of the Bishop Museum (of Honolulu) in June 1961. Subsequent developments have meant that a small zoo, coffee plantation, arboretum,

hostel and a number of offices have been established. Funding comes from a number of sponsors. This is supplemented by a self-generated income from coffee and other vegetables.

It has published a series of handbooks, the first one being concerned with tree planting, the second on common frogs, etc. Lectures are given regularly at the Institute, the students and the staff of the University of Papua New Guinea making the greatest use of this Institute.

In common with some of the Higher Education Institutes in England the future is not absolutely secure. Additional funds are needed for fellowships, traineeships, for publishing and additional books and equipment.

Aside from the above points a most pressing requirement is the need for Government backing to assist in the protection of important study areas (in the form of local habitats) adjacent to the Institute. These could perform the function of providing a lot of information on the flora and fauna of Papua New Guinea. Official protection is a necessary step for these areas of study which in turn requires a positive stance from the Government to establish these reserves. At present their designation as Areas of Interest to the Institute is insufficient.

An attempt was made to meet Neville Hawcroft at Bulolo but phone calls to him established that he was out on patrol. A pity as even a mini patrol with him would have helped prepare me for my work with Tom Reeve in the Highlands later on in the trip.

A long journey by public transport took me to Lae Herbarium from the Ecological Institute. This visit enabled me to familiarise myself with elements of the flora and discuss some aspects of conservation in Papua New Guinea. At the time of my visit the Herbarium was seriously understaffed, vacancies existing for four botanists and two ecologists. Any new appointments had to be justified at length, often other more pressing purposes being found for the resources available.

From my discussions with Jim Croft, the Keeper of the Herbarium on conservation two points emerged on the attitude to this subject. Rather than attempt to conserve individual species an attempt should be made to preserve habitats, the feeling being that the great size and extent of the forests and their remoteness meant that individual species would be duplicated and so greater effort should go into this form of conservation rather than collecting and preserving individual species. The other point was that of finance and the question of how important a subject like conservation was to a developing country with a different set of priorities on its resources. That it is important is not questioned but the gist of the argument (not necessarily from Jim Croft) was that there are other more pressing matters e.g. schools that must be catered for.

From Lae I went upwards in altitude into the Highlands. Firstly stopping at a Highland town called Goroka to stay with Canon Cruttwell and then going on to Laiagam, my final destination. My visit to Canon

Cruttwell being something of a pilgrimage as it was he who was the inspiration, with his articles in the *Alpine Garden Societies Bulletin*, for my visit out to New Guinea.

After a short stay with Canon Cruttwell it was on to Laiagam. This is the last settlement of any size before you disappear into the immense reserves of forests in the Highlands. My host for the rest of my stay in New Guinea was Tom Reeve. He ran the Highland Orchid Collection for the Enga Province (in which Laiagam was situated). In its original conception the collection was to be a staging post for orchids collected in the wild and en route for overseas collections, resale or the National Botanic Garden at Port Moresby.

Its functions had developed somewhat since its original inception. I will briefly discuss them now. The primary purpose being that of a Botanic reserve for the existence of as comprehensive collection as is possible of the Highland orchid flora. That is from 1,400 metres to 3,000 metres above sea level. Thus an invaluable tool for taxonomic, botanical and horticultural work is available. A tourist angle, as at Kew, exists too. Some orchids are collected and displayed that will fulfil this function especially. The collection as a whole will become more visited and used as the infrastructure of roads becomes more established. At present the route to Laiagam can prove to be quite entertaining. A further development is that of seed flasking and propagation programme. A function related to the export of orchid species. Orchid seedlings in flasks travel better and establish at a higher success rate than material collected from the wild. Its programme, including the sale of material from collections taken from the wild, is done under the strict supervision of Tom Reeve. He ensures that no rare or endangered species are sold. The policy as it stands now of selling material from natural sources provides income for some of the remote rural areas, generates goodwill for the orchid collection and helps to foster the attitude of care and husbandry that is normally reserved for the agricultural crops grown in the many 'gardens'. Education is an important aspect. There is a certain amount of training given on the growing and care of orchids at the collection at Laiagam. Income from the collection comes from two sources. The Enga Provincial Government and the sale of plants and seed pods. This has to cover all expenditure such as staff salaries, supplies, transport, purchase of orchids (for resale or as additions to the collection) and visiting botanists or horticulturists.

With Tom Reeve I undertook three major patrols all pretty exhausting but worthwhile in every detail. The first was to an area of grassland and a nearby Mountain called Mount Timtongapip. The second patrol was to an area around a volcanic crater lake called Lake Rau. I personally found that patrol the most interesting both in plants collected and in the scenery. The last, at a slightly lower altitude, involved a stay of about seven days with one long expedition out to a landslide area. It was from these patrols that the bulk of the material now at Kew was collected. Additions were made by Tom Reeve from the collection at Laiagam.

The plant material collected augmented considerably the collection of material at Kew both in Orchid species and Alpine plants. A number are new species, some, while being known, represent first time introductions. For me the principal plant I number in this category is **Rhododendron saxifragoides**. An Alpine rarity known on four other mountains in Papua New Guinea. It was also the first time a student at Kew had gone under the auspices of the Thornton Smith Travelling fellowship to Papua New Guinea. From the point of view of my principal host Tom Reeve, it stimulated an interest in the growing of Alpine plants and thus extended the range of material grown at Laiagam.

One point that I would like to make is the great value to third year students at Kew of the Thornton Smith Scholarship. It is an opportunity rare in these competitive days of obtaining an almost completely financed trip to a part of the world one may not visit again. Kew's contacts can do a great deal in opening up opportunities and so an application is aided in this to a greater extent than for some student applying for a similar sum but outside of any such well connected institution. However, it must also be said that the sum does not totally cover all expenses and so a student must look to his own or another organisation for funds to complete his finances. Another point is that the ability to take two or three months off just to globetrot is not always feasible in these days of job competition. Any student faced with the possibility of losing a job because he will be out of the country has either a difficult choice or none at all.

But having said all this I would recommend every third year student at Kew to consider it very carefully and if at all interested apply for it. It is well worth it.

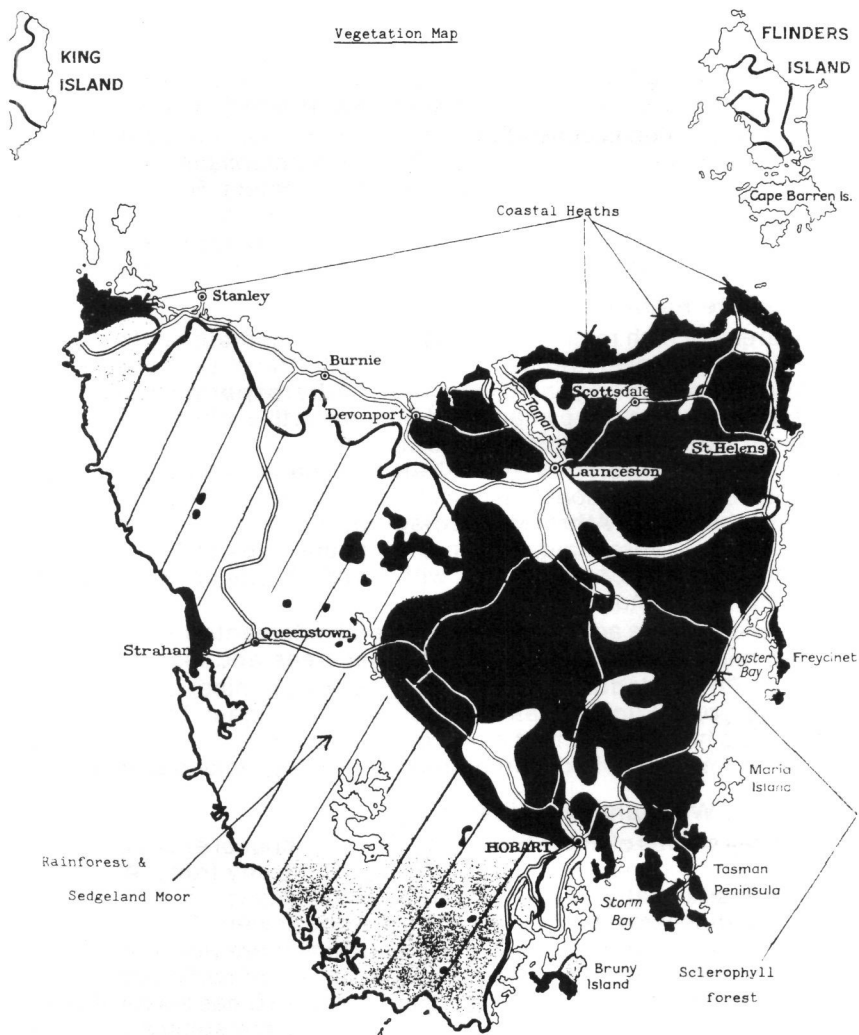
BOTANIZING IN TASMANIA

by David Jewell — 1984 Thornton-Smith Scholarship holder

Tasmania, the smallest of the Australian States is a heart shaped island lying some hundred miles off the south eastern corner of the mainland. Rather less than 26,000 square miles it is mountainous even though peaks only reach 5,000 feet.

On reaching the west coast the moisture laden westerly winds are forced upwards by the mountain chains, depositing much of their moisture, and in summer having a drying effect on the eastern part of the State. A marked rainfall gradient reaches up to 200 inches in the west falling to the mid twenties on the east coast. The whole of the western half of Tasmania is consistently wetter than the eastern half. Rainfall coupled with the higher average summer temperatures in the east results in marked differences in vegetation from east to west.

At the present time about 2,000 species of flowering plants are known to occur in Tasmania, either native to the state or as naturalised introductions. More than 200 native species occur naturally only within the State; that is are endemic.



The vegetation has two components, the antarctic or southern oceanic flora, and the Australian type characterised by **Acacia** spp. and **Eucalyptus** spp. which Tasmania shares with the rest of South East Australia. Many plants regarded as belonging to the oceanic flora are endemic and are often confined to cold wet areas, their nearest relations occurring in similar situations in South America or New Zealand. It is believed that ancestors of these plants existed while Australia, New Zealand and South America were still joined in a

southern land mass which included what is now Antarctica. The Australian flora was shared by the eastern part of mainland Australia and Tasmania during the several times these were joined, but divergence has occurred during times of separation and is still occurring.

The vegetation is constantly changing and programmes of burning off, land clearance, draining of swamps, and establishment of certain types of forest are important factors in that change. Several types of vegetation can be recognised: temperate rainforest or myrtle forest, Sclerophyll or Eucalypt forest usually divided into wet and dry Sclerophyll, mountain vegetation, coastal heath and sedgeland.

Temperate Rainforests

In areas of high rainfall and suitable soils temperate rainforests are found from sea level to an altitude of 3,500 ft. The characteristic trees, **Nothofagus Cunninghamii** (myrtle) and **Atherosperma moschatum** (sassafras), cast a deep shade and undergrowth is often reduced to a surface cover of liverworts, mosses and lichens with scattered areas of ferns. While **Nothofagus** and **Atherosperma** are characteristic and wide-spread throughout Tasmania's rainforests, other species are locally abundant. **Athrotaxis Selaginoides** (King Billy Pine) and **Athrotaxis Cupressoides** (Pencil Pine) are trees of 50-100 feet in height. They may be associated with **Nothofagus** or they may form pure stands on mountain slopes.

Where soils are acid and poor in mineral nutrients and the canopy of the rainforest becomes broken, other trees and also tall shrubs appear. **Phyllocladus Aspleniifolius** (celery top pine) is widespread and **Eucryphia Lucida** (leatherwood) locally abundant. The latter often grows to a height of 40 feet or more. In late summer their flowers may be up to 1½ inches in diameter and provide a spectacular display.

'Laurels', Waratahs and Heaths

The tall shrubs of these forests include a number of endemics, many characterised by showy flowers or by bright fleshy fruits. **Anopterus glandulosus** (native laurel, family escallaniaceae) is a handsome shrub bearing large terminal racemes of white flowers. The proteaceae (Waratah family) and epaeridaceae (heath family) are well represented. From the latter family, two endemic species are of particular interest: **Richea Pandanifolia** (pandani or giant grass tree) has leaves three to six feet long, hard, rigid and drooping, borne at the summit of a trunk which may be 20 to 30 feet high. **Prionotes Cerinthoides** (climbing heath) is a climber of epiphyte. It forms pendant sprays of small evergreen leaves and crimson bell-like flowers.

Impenetrable Scrub

Locally in poor acid soils where the water table is at or very near the surface an almost impenetrable scrub develops, the density of which is notorious. About five species are mainly concerned. **Leptospermum lanigerum** (woolly tea tree) forms dense stands of trees having slender, very tough trunks up to 50 feet high. The Sedges **Gahnia**

psittacorum and **G. Sieberi** appropriately called 'cutting grass', grown in clumps which are often more than six feet in height and breadth. **Bavera rubioides** (family **Cunoniaceae**) has innumerable thin, wiry inter led branches often spreading over other shrubs to a height of 12 feet or more. The most unusual growth form is that of **Anodopetalum biglandulosum** (horizontal), an endemic representative of the family **cononiaceae**. This is a small evergreen tree making a closely packed understorey in the forest or forming pure stands in gullies. The trees sometimes grow erect with trunks up to 45 feet high but, typically, slender saplings arch towards the ground and many erect branches arise from the almost horizontal trunks. The branches in turn bend over, interlacing with each other and with branches from adjoining trees. In this way, dense platforms develop at varying heights above the ground.

Alpine/Subalpine Vegetation

Montane vegetation occurs on plateaux, mountain slopes and summits. It is characterised by plants which can withstand cold conditions — severe frosts, seasonal snow and strong winds. Although cloudy weather is frequent, there is a high light intensity and occasional very hot days in summer. These conditions cause slow growth and water stress so that the plants are short often stunted with small hard leaves and tough celled wood. The exposure to cold winds cuts young growth so that shrubs are rounded, each shoot protecting the next, a habit which reaches its extreme in the cushion plants.

Dwarf mountain forest may contain conifers such as the prostrate strawberry pine, **Microcaerys tetragona**, or the small and erect cheshunt pine, **Diselma archer**, and **microstrobis niphophylus**, both growing to about six feet, or perhaps stands of the deciduous beech, **Nothofagus gunnii**, a 15 feet high tree on sheltered hillsides or a prostrate shrub clinging to the rocky faces of high slopes.

Mountain shrubberies are found in poor rocky soils in exposed situations. They are filled with diverse and interesting plants especially of the daisy heath and protea families which provide a colourful display in summer and early autumn.

An interesting community which may be termed a microshrubby develops on mountain tops, on the margins of shallow pools and on gentle slopes where snow may lie for up to six months of the year. Six species of cushion plant are concerned. The **Pterygopappus lawrencii** with its square stem tips is easily identified, but the other five form dark cushions which are very similar in appearance when not in flower. They are shrubby plants, prostrate with many parallel erect shoots, tightly packed and laced together by roots to make a rounded mound so firm that it does not dent when walked on. Such plants increase and may coalesce to form larger mounds. They grow across small water courses, impeding drainage and slowing run off to prevent erosion.

Coastal Heath Vegetation

Coastal heath is most extensive in the far north west, north east and islands of Bass Strait. It occurs on sandy soils often developed from

windblown sand. Such soil is low in minerals needed for plant nutrition. The characteristic heath vegetation consists of shrubs less than two metres high with hard or leathery leaves. The trees are often small and stunted by strong wind.

Heathland is maintained by burning; if no fire occurs the shrubs become taller forming a scrub forest or eventually an open woodland. Heath species show various adaptations which enable them to survive fire; very many send up new shoots from bulbs, rhizomes, or woody knobbed rootstocks buried beneath the damp soil; some like **Banksia** and **Hakea** produce woody fruits which protect the seeds during fires and need heat to dry and open them.

Button Grass Plains

Extensive areas throughout Tasmania carry sedge moors which are given the descriptive name 'Button grass plains'. The characteristic plant is **Gymnoschoenus sphaerocephalus** (Cyperaceae) which grows in tussocks consisting of hard, narrow leaves, three to six feet long, with long slender flower stalks terminating in spherical heads of flowers and fruits.

This plant community may usually be found on wet, peaty acid soils. Other monocotyledons, particularly representatives of the **Restionaceae**, are abundant and sometimes dominant. The yellow flowered species of **Xyris** (family **Xyriolaceae**) and mauve flowered **Patersonia fragilis** (Iridaceae) are widespread and between the tussocks small herbaceous plants are often frequent. Where the soil becomes better drained, woody shrubs appear **Sprengelia incarnata** (Epacridaceae) is characteristic; others include species of **Leptospermum** and of **Melaleuca**, representatives of the **Myrtaceae**.

Wet and Dry Sclerophyll Forest

Wet Sclerophyll or Eucalypt forest occurs on deep fertile soils in areas of high rainfall. The chief trees are the valuable hardwood species of **Eucalypt** e.g. **E. Regnans**, **E. Sieberi**, **E. Obliqua**.

The open canopy allows the development of a shrubby understorey and in areas where humidity is high rainforest species will grow — myrtle, sassafras, tree ferns, Waratah and tea tree.

With decreasing rainfall wet sclerophyll passes into a more open forest, the dry sclerophyll forest, the most widespread Eucalypt being the endemic black peppermint, **E. Amygdalina**. Other species are rather local, changing with the soil type.

Acacia, **Banksia**, **Casuarina** and **Exocarpus** form the understorey trees; there is often a lower shrub layer of pea flowers and heath species.

STUDY AND WORK VISIT TO JAVA KEW GUILD AWARD 1984

by Sophieke Piebenga

Java is one of the largest of the ca. 14,000 islands which make up the Indonesian Archipelago in S.E. Asia. It lays just south of the equator, roughly 1,000 km (600 miles) S.E. of Singapore. Java is about the same size as England but almost double its population. A chain of volcanic mountains run west-east across the island, dominating the landscape in many places. The average annual rainfall ranges from ca. 4,000 mm in the west to ca. 2,500 mm in the east of the island.

One day in July last year I found myself pedalling away through the sugar plantations of Central Java. Every now and then I would pass the colourful entrances to small villages which lay off the narrow and dusty road, quiet and shaded, hidden by huge bamboos and trees.

Suddenly I came across a field which was the scene of much activity; children were playing about, chewing on short sticks of sugar cane, whilst their elder relatives were busy cutting the cane and loading it onto small trolleys which, when full, would be transported on special rails to the nearby sugar factory.

Upon the sight of a foreigner the children stopped their play and ran towards me, shouting: "Hello mister, hello mister, dari mana (where do you come from)?"

I got off my bike and a simple conversation developed. After explaining that in England we didn't have sugar cane, but yes, lots of potatoes, one bright little lad didn't hesitate and offered me his stick of sugar, whereupon all his friends did the same. And so, after having handed out various postcards (of the Palm House of Kew, covered in snow) I cycled off, chewing my bit of cane — another experience, and several delightful pictures richer.

The above is only one of the many enjoyable and enriching moments I encountered during my stay on Java from May until September 1985. Whilst still in my second year at Kew I had already developed the idea of going to the Botanic Garden in Indonesia on a 'student-exchange' basis, to gain a better understanding and wider experience of tropical plants, their diversity, their environment, their uses and their conservation.

Various technical problems prevented me from going there straight after I had finished the Kew Diploma Course in September 1984 — but finally in May the following year I set off, under the banner of Kew and supported by a Kew Guild Award, to the Bogor Botanic Garden on West Java.

The Botanic Garden (87 ha) was started in 1817 by the Dutch, and as such it became responsible for the introduction and distribution in Indonesia of many economic crops like oil palm (1848), cinchona (1852) and rubber (1876). At the beginning of this century the garden was a well-known, flourishing institute where much botanical research

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was carried out. Unfortunately World War II, the (successful) struggle for independence (1945) and the period of economic and political instability that followed, meant that the garden got into a state of neglect.

Forty years on though, the situation is different. Since 1968 the Bogor Botanic Garden and its three satellite gardens (Cibodas, Purwodadi and Eka Karya) are part of the National Biological Institute which comes under the Government controlled Institute of Science. Active research is carried out once more, mainly in ethnobotany and the conservation of genetic plant material.

Expeditions are undertaken to the far corners of the archipelago to rescue plants which are threatened by the pressures of development and exploitation of natural resources, and by the ever increasing population.

The Botanic Gardens in Indonesia are thus becoming important in the ex-situ conservation of genetic plant material, and their collections are growing rapidly.

The collection of palms at Bogor is one of the largest and best-known in the world. One of the most famous specimens is the hugh oil palm (***Elaeis guineensis***) which is the original plant that came from Africa via Kew to Indonesia in 1848. It subsequently became the mother of all oil palms in S.E. Asia. Today it measures well over 25 metres and towers above all the surrounding vegetation.

The collection of native orchids is impressive too. Many of the 920 species are epiphytic like the chocolate scented ***Dendrobium leonis***. I was as much attracted to the terrestrial ones though, such as ***Calanthe triplicata*** with its length wise folded leaf, and the beautiful ***Paphiopedilum*** spp. like ***P. javanicum*** and ***P. glaucophyllum***, with their fat, purple and green lady-slipper flowers.

The giant orchid ***Gramatophyllum speciosum***, with stems up to 2.5 metres long dangling from trees and branches, is quite a sight too.

Of the other 5,000 species in the garden some of the plants which particularly caught my interest were the massive ***Dipterocarpus*** and ***Shorea*** spp. (single straight stemmed trees up to 40 metres); the many ***Ficaceae*** of which the 'waringin' (***F. benghalensis***) is a well-known village tree; the beautiful specimens of ***Victoria regia***; and a tree called ***Gnetum gnemon***. The last one is botanically very interesting as it is regarded as the most highly specialised of the gymnosperms (compare ***Welwitschia*** and ***Ephedra***), although its flat, green oval leaves are easily mistaken for a broad leaved tree like any other. The flattened and fried seeds are quite a delicacy in Indonesia.

A remarkable though common sight are young, often brightly coloured leaves hanging limp at the end of a branch. Their light colour contrasts strongly with the darker green of the mature leaves, and they thus give the appearance of handkerchiefs. Especially leguminous trees such as ***Amherstia nobilis***, ***Cynometra ramiflora*** subsp. ***bijuga*** and ***Maniltoa*** spp. have these conspicuous leaf tassels.

One thing I thought I ought to suggest to Mr. Simmons is the 'weekly work-out': every Friday at 7 a.m. all garden staff gather on one of the main lawns, and, accompanied by loud Government-composed music, a series of routine exercises start. The curator up in front, everybody jumps, stretches, bends and twists. This communal aerobic activity goes on for half an hour and is followed by glasses of warm orange squash. That's what I call truly caring for the well-being and welfare of the staff!

I made various visits to the satellite botanic garden in Cibodas (80 ha). Only 20 km from Bogor (260 m), this garden at 1,400 metres enjoys a much cooler climate with a temperature range from 15.0°C (min.) to 20.7°C (max.). It can therefore support a collection of plants from tropical mountain areas (such as the native **Rhododendron javanicum** and **Clerodendron** spp.) and from subtropical regions (like **Eucalyptus** spp. from Australia).

Bordering on to the garden is a National Park of more than 1,200 ha. extending up to the summit of Mt. Pangrango (3,000 m) and the crater of Mt. Gede (2,950 m). Both volcanoes are covered by (sub) montane cloud forest, with trees like the coniferous **Podocarpus imbricatus**, and **Schima wallichii** (Theaceae) which in places 'littered' the forest floor with its white flowers.

The undergrowth is rich in **Begonia** spp. and among others the striking **Arisaema filiforme** (Araceae — recently described in the Kew Bulletin). Near a waterfall at ca. 1,675 metres on a rocky vertical wall overgrown with **Sphagnum** moss I saw **Nepenthes gymnamphora** growing healthily and abundantly.

Above 2,500 metres the vegetation becomes more sub-alpine with **Vaccinium varingiaefolium** as the dominant species. Parasitising on its roots, at ca. 2,800 metres, was the rare **Balanophora elongata**.

Near the top of Mt. Gede I saw the 'Javanese Edelweiss', **Anaphalis javanicum**, in abundance. Having been to the top (2,950 metres) three times, on two occasions in thick cloud, I can confidently say that it can be very cold, wet and miserable in the tropics!

High volcano tops like the above are unfortunately the only pockets of original vegetation left on the island of Java, which is almost completely cultivated by man.

Another National Park which comprises a range of relatively 'untouched' volcanoes (Bromo, Tengger, Semeru) is in East Java. These volcanoes are all still active to some extent and their poisonous fumes strongly influence the (absence in certain places, of) plant growth. The top of Mt. Semeru, at 3,675 metres the highest volcano on Java, is completely bare.

Lower down there are still areas of **Casuarina junghuhniana**, a tree with scale-like leaves like **Equisetum**. This tree used to be the dominant species in the dry, semi-deciduous forest which once covered Java.

Not far from this National Park in East Java is another satellite botanic garden in Purwodadi (85 ha.). It has a much lower rainfall than

the other two gardens (2,500 mm as opposed to 4,000 mm), and most of this falls between November and March.

The period from April to October is normally very dry and Purwodadi Botanic Garden has therefore been designated, relatively recently, as a garden for plants from semi-arid tropical regions. The collections are still in their first stages of development but they are taking shape gradually. The third satellite botanic garden, Eka Karya, is on Bali (an island east of Java), but unfortunately I didn't have a chance to visit that.

Space won't allow me to continue telling about all the other things I saw, experienced and visited — the tea plantations, the cassava fields, the sugar factories; the exotic fruit crops and spices; the flourishing orchid trade in Jakarta and Bandung; the magnificent newly laid-out landscape around the famous Borobudur temple in Central Java; and the many, many attractive and interesting tropical plants I came across.

There is no doubt that my stay on Java has given me a tremendous insight into the tropical plant world, and additionally into the functioning of another major botanic garden — it was a most enjoyable, but above all invaluable experience!

SUCHARD, SUCCULENTS AND STRUDEL KEW GUILD AWARD 1985

by Louise Bustard

As any cactophile will admit, once these plants penetrate your interest, you're hooked and usually for life. I first became fascinated by Cacti and Succulents as a student at Kew and eventually spent one year out of the three working with the reserve collection. Then in September 1984 I began my new job as the person responsible for the maintenance of the reserve collection. Having spent the winter months settling in and familiarising myself with the plants and their needs, I began to realise that I had no knowledge of any other Botanic collection of Cacti and Succulents with which to compare and judge the results of my work with the collection at Kew.

To rectify this, I set off in June 1985 partly sponsored by the Kew Guild, to visit some of the best Cacti and Succulent collections in Europe. The four collections I went specifically to see were: The Palmengarten, Frankfurt, West Germany; The State Succulent Collection (Städtische Sukkulanten-Sammlung), Zurich, Switzerland; Munich Botanic Garden, West Germany and the Bundesgarten at Schönbrunn Palace, Vienna, Austria. In an unofficial capacity I also visited Zurich Botanic Garden and the Botanic Gardens of Vienna University within the grounds of Belvedere Palace.

As gardens it would be unfair to compare them as they are all very different in their layout, functions and aims. The Palmengarten is an

extremely successful combination of pleasure park and Botanic Garden, quite the best of its kind I have ever seen.

The State Succulent Collection in Zurich is for the specialist. It consists only of Cacti and Succulents and constitutes probably the best reference collection within Europe. However, it also caters more than adequately for the casual visitor. On the day of my visit a **Selenicereus grandiflorus** or more commonly known as "Queen of the Night", had 19 buds ready to open that night. The gardens publicised this fact in the local newspaper and to accommodate the massive interest shown by literally hundreds of phone calls, the garden remained open until midnight to allow people to view the magnificent spectacle of this night-flowering Cactus. The devotee will discover the sin of covetousness whilst among this collection.

The Munich Botanic Garden is laid out and maintained with Germanic precision and fulfills its botanic rôle superbly whilst also endeavouring to satisfy the horticulturist.

The gardens of Schloss Schönbrunn are as beautiful and grand as one would expect from such an historic and artistic city as Vienna. Once the home of the Emperor of the Austro-Hungarian Empire which stretched as far afield as Mexico, this garden and its fantastic collection of hothouses are responsible for the introduction to cultivation of many plants into Europe. But if Schloss Schönbrunn is famous for just one plant it is the specimen of **Fokea crispa** it has cultivated for the past 200 years making it the oldest cultivated in Europe. The palace hothouses are used largely for the cultivation of houseplants but they also have a quite spectacular Cacti collection.

As a result of this two week tour I put on weight because of sampling the Strudel; felt thirsty after being plied with pretzles; discovered that German syrup waffles are different from the Dutch and realised that one should never go to Europe without a packet of Rennies.

Also as a result of the tour experiments are being undertaken at Kew to produce a compost mix with a much lower soil and peat content and a much higher solid mineral content.

Cacti and succulents are plants which people either love or hate, they are rarely viewed with indifference. By the very bizarre nature of the plants they attract interest, fascination and sometimes even revulsion, but either way they get a reaction. More than any other plants they create in the public's imagination a definitive environment — the desert. They are immensely popular as houseplants for, on the whole, they are easily grown. Yet, because of this popularity with both amateurs and professionals alike they are probably more endangered than almost any other group of plants. Thus, it is extremely important that a botanic collection of these plants be of the very highest quality for us to gain as much knowledge as possible about these plants before the day comes when botanic garden specimens are the only remnants of an environment and its inhabitants.

Editor's Note: A more comprehensive report was also kindly provided but for reasons of space was not used.

A HORTICULTURIST WITH THE ALPINE GARDEN SOCIETY IN SWITZERLAND

by E. A. Grant

Some 16 members of the Alpine Garden Society including myself, travelled to Switzerland on the 21st June 1985 and arrived at the small town of Wengen in the Bernese Oberland district overlooked by the snow capped mountains of the Manlichen, Monch, Jungfrau, Silberhorn and Schilthorn and led by Peter Cunningham of the University of Liverpool Botanic Garden, Ness, who proved a most knowledgeable and efficient leader.

We were broken in to the walking on the first Sunday by a "leisurely stroll" to the Hunnenfluh and Leiterhorn and picnicked overlooking the panoramic view of Lauterbrunnen town in the valley which runs up to Stechelburg. This first expedition produced **Anemone narcissiflora**, **Phyteuma orbiculare**, **Helianthemums**, **Geum rivale** and a good stand of **Lilium martigon**, unfortunately not in flower; however some 33 other plant specie were noted.

On day two the walk proved stiffer — by a steep winding path from Wengen through grass and timber areas during which **Gentiana lutea**, several orchids, **Trollius europaeus**, **Pinguicula leptoceras** and **P. alpina**, **Primula farinosa**, **P. hirsuta**, **P. elatior** and our first **Gentiana verna** and **G. asclepiadea**, also a few Solanellas. The walk provided approximately 72 specie and finished in Lauterbrunnen; we were glad to take the cog railway back up the valley side to Wengen, a wash and brush-up and dinner after which an inquest was held, as on every evening of the tour, to discuss and list the plants found.

Day three was designated a rest day, however, most of the group accompanied Peter on the climb from Wengen to the Wengernalp area, where we came across **Viola calcarata**, **Arnica montana**, the orchid **Corollorhiza trifida**, our first sighting of some **Gentiana acaulis** types and **Primula auricula** which were included in a list of 33 species.

On Wednesday Peter decided we were fit enough to tackle a little higher area and the day commenced with a trip in the cable car from Wengen to the top of the Mannlichen where, though we had seen fields of crocus foliage at lower altitudes, we came across crocus in flower, together with some **Pulsatillas**, **Androcacea chamaejasme**, **A. helvetica**, **Primula farinosa**, **Silene acaulis** and several **Saxifragas**, our walk took us in a far flung string with many "Oos" and "Ahs" from some of the ardent females at intervals and stops to photograph plants, to Kleine Scheidegg, where some of us had overtired ourselves, and so returned by cog railway.

Thursday saw us taking the railway down to Lauterbrunnen and the steep funicular to Grutsch Alp on the east facing side of the valley where we climbed through woods to mountain pastures and found **Primula veris** and **P. hirsuta** on some rocks together with a long leaved primula which caused a deep enquiry but was eventually

diagnosed as **P. hirsuta**, the long leaves occurring due to overhanging vegetation; **Veronica fruticans** with a red eye was present and **Leucorchis albida**. Our wanderings took us eventually, (after Peter was called upon to rescue some straying members of the party who had taken the wrong path), to Murren, where we entrained back to Grutsch Alp.

Day six (Friday) commenced with a train to Wilderswil followed by a short cog rail journey up to Schynige Platte where an area of mountain-side has been formed into an alpine garden containing labelled plants of all those that grow locally in the wild state. Following this we walked and botanised along a ridge overlooking Wilderswil and Lake Brienz; observing a large field of white and yellow Pulsatillas growing together, back through a lower path to Schynige Platte and the journey back to base.

On the Saturday the programme took us to Murren by cable car and a walk to Gimmelwald and the Sefinental valley keenly looking for **Lilium maragon**, which were there but still not in flower and the hope of finding the slipper orchid. However, the St. Bruno's lily **Paradisea liliastrum** was in flower, also **Gypsophilla repens**. During the mid day break at which strange things came out of rucksacks and the girls dabbled their feet in a mountain stream, we found **Moneses uniflora**. On the return to Murren most members took the cable car and bus back while a few hardy ones decided to walk along the rail track in search of a reported slipper orchid, however this proved unsuccessful — someone suggested that it must have been in a pot and moved daily to tease plant hunters.

Sunday was declared a free day and as most of us had by now gained sufficient confidence the party dispersed on separate ways. During the evening inquest it emerged that **Campanula barbata**, **C. rotundifolia**, **Saxifraga aizoides** and some 11 other plants were identified, together with a positive area for the slipper orchid.

The next three days found yours faithfully out of the hunt due to the unforgiveable sin of drinking from a mountain stream. During this period 28 plants were noted by Peter and the rest of the party on trips to the Eiger glacier and Trachselauenen but again no slipper orchid.

Thursday was appointed the day to tackle the Schilthorn and so by bus and cable car we reached the top at 2,960 metres where there is a restaurant and from which great panoramic views of the mountains and valleys can be had. After botanising the crest where **Ranunculus glacialis** and **Thlaspi rotundifolium** were found in flower most members returned to the lower regions while Peter and a few others of us decided to walk. Naturally we took the wrong path which necessitated negotiating down steep shale slopes to an established path which although this meant a longer walk was considered preferable than attempting to return to the intended one. However this area had not been botanised by the Alpine Garden Society before and it proved very worthwhile by finding great numbers of **Soldanella** varieties flowering

immediately where the snow had receded, some large specimens of **Androsace helvetica** in full flower tucked in crevasses of the rocks with **Primula hirsuta**, pink **Pulsatillas** and glorious fields of gentians.

Friday, our last day, was spent exploring Wengenalp where we at last found masses of the elusive slipper orchid **Cypripedium calceolus** in full flower which set the cameras clicking. The rain, which had threatened, then came down in earnest and further botanising was abandoned except for Peter who braved the elements further to find Lilly-of-the-Valley and to search for **Aquilegia alpina** which proved unsuccessful.

The trip was judged a most successful expedition with a final list of some 280 different varieties and species and culminating in a Swiss evening where we sampled the wine and traditional food of Switzerland, together with their music, at which we let our hair down and showed that alpine plant enthusiasts can break out from time to time.

NEWS OF KEWITES AT HOME AND ABROAD IN 1985

Compiled by **MARTIN J. S. SANDS**

George Addison (1938) returned from Western Australia for a summer holiday in England in 1985, staying for a few days with Hubert Taylor (1933) in Hampshire and with Roy Hudson (1945) whom he had met in the Far East during the war. In the mid-thirties George spent a year in the Berlin Botanic Gardens and was later appointed Curator of the Botanic Gardens in Singapore. During the war he spent three and a half years on the Burma-Siam Railway as a prisoner of the Japanese and can still recall the forest orchids, which at the time he noticed despite the conditions. He is a life-member of the Guild and lives in Darlington, Western Australia, where he continues to play golf and remains a keen photographer.

Very sadly we have to record the death of **Kenneth Airy-Shaw** who for very many years worked in the Herbarium under the auspices of the Bentham-Moxon Trust. He died at the age of 83 on 19th August and the funeral service took place in the Christian Fellowship rooms, Halford House, Halford Road, Richmond, followed by cremation at Mortlake Crematorium. He was a member of the Guild and his long life and valuable service to Botany are outlined in an obituary printed in this Journal.

Regrettably, we have to record the death in September, 1985, of **John Allen** who left Kew in 1963 and lived in Englefield Green, Surrey.

With regret we record the retirement on 20th November of **Rose Angel**, Officer-in-Charge of the Economic Botany and Museums Division, after 25 years service at Kew. We wish her a long and happy retirement.

Chris Bailes, formerly our Guild Treasurer, resigned from his position as Garden Supervisor of the Tropical Orchid Unit and took up a

post in March, 1985 under the Eric Young Orchid Foundation, taking charge of the special Orchid collection in Jersey.

Welcome to **Tom Bailey**, who joined the Kew staff on 28th October on transfer from a post in Germany. He is responsible for building and maintenance work throughout the Gardens now that responsibility has passed from the Properties Services Agency to the Royal Botanic Gardens.

Sadly we record the death in New Zealand in January, 1985 of **Bob Balch**, who left Kew in 1939 and was a life member of the Guild.

In February, 1985, **Cath Barker** (1984) completed over two months field-work in Papua New Guinea on a Thornton-Smith Travelling Scholarship. She first spent a while in the village of Kamus, approximately four hours drive from Goroka. There she spent some time assessing the quantity and nature of the bush materials used by the village people, whose main income comes from coffee and whose staple diet is sweet potatoes. Later she visited Enga province and Madang where she participated in a subaqua diving course on the coral reef. After a Christmas break in Goroka, Cath walked northwards from Kamus to the Wessan district to investigate bush trade links between the two. Through her eight week stay in the Highlands she tried to get a comprehensive view of the people's lives and their environment. On 5th January she visited Mount Elimbari, a 3,000 m. limestone peak where she found three species of *Rhododendron* and spent a few days in the village of Gimesave. After her stay in Papua New Guinea, Cath travelled to Singapore and later, in February, she joined John Dransfield (q.v.) and others from Kew on their visit to the Taman Negara National Park in Malaya. She is now back in Britain engaged in freelance landscape design work.

Mr. **C. Bate**, who left Kew in 1930 is a life member of the Guild and is now living in Broadstone, Dorset.

Cheryl Bates joined the Museums staff for a year on 4th January, 1985 as an Information Officer.

The Director, **Professor Arthur Bell** (a Trustee of the Guild) continued to serve on various committees outside Kew during 1985, as well as being a member of the MAFF Working Party on Naturally Occurring Toxicants in Foods, an external examiner for Birmingham University's Botany M.Sc. course, and botanical Adviser to the Commonwealth War Graves Commission. In his capacity as Consultant Director to the CMI he attended the C.A.B. 10th Quinquennial Review Conference in London in September. Earlier in the year, in January, he delivered lectures on the work of the Royal Botanic Gardens, Kew to groups of the Swiss-British Society in Berne, Basel and Zurich. In April he went to the U.S.A. where he visited the National Wildflower Research Centre at Austin, Texas in his capacity as a member of the Advisory Council and spent a weekend at the L.B.J. ranch as the guest of Mrs. Johnson. After calling on various friends in Texas, he travelled to Miami Beach to attend a Symposium of the American Chemical Society on "The

Chemistry and Biochemistry of Natural Resistance of Plants to Pests and Diseases" where he delivered a joint paper. During the year he lectured on several occasions, notably in May, during the bicentenary year of William Hooker's birth, giving an RHS "Out of Town" lecture in Glasgow on "William Hooker: his influence and achievements". With the Regius Keeper of Botany in Glasgow, he also unveiled a plaque on Hooker's house there and then in July, joined a gathering of the Hooker family at the house in Halesworth, Suffolk to which William retired. In November, with other senior members of the Kew staff, the Director attended the IUCN Conference in Las Palmas de Gran Canaria on "Botanic Gardens and the World Conservation Strategy". In 1985 he was elected to the Council of the Royal Horticultural Society and succeeded the late Professor Brenan as Chairman of the Scientific Committee. He was also elected to membership of the select Garden Society and attended the Annual Dinner in October in the presence of the Society's Patron, H.M. The Queen Mother.

Sadly we record the death in 1985 of **J. R. Bett**, who left Kew in 1952 and was, for some time, living near Newark in Nottinghamshire.

John Beswick (1967) continues to work with the Highway Department of South Australia and has been very busy landscaping the new O-bahn transport route through the N.E. suburbs of Adelaide, a system which is to become operational in 1986.

James Beverley (1979) has moved from Addington in Buckinghamshire to Daventry, Northamptonshire and is a permanent full-time lecturer in Horticulture (City and Guilds) at Northamptonshire College of Agriculture. He is currently taking a course for his Certificate in Teaching and was married in July, 1983.

Ian Beyer (Deputy Curator) with the Curator (q.v.) and Charles Erskine, represented Kew at a celebration of the 60th Anniversary of the Bedgebury Pinetum on 5th June. Later, between 27th August and 3rd September he attended the second meeting of the European and Mediterranean Region of the International Association of Botanic Gardens in Durham at which he presented a paper. The theme of the meeting was "Botanic Gardens into the 21st Century". Later, in November, he delivered a joint paper with the Curator at the IUCN-organised Conservation Conference in Las Palmas de Gran Canaria.

Frank Blennerharsett (1977) was reported in 1985 to be working in Dublin.

Barrie Blewett, Scientific Officer in charge of the General Service Unit in the Herbarium, travelled to Sabah, East Malaysia in November, to take part for several weeks in the Royal Society Danum Valley project. On his return journey he spent a few days in Singapore.

Frances Booth (Herbarium) joined a party of Kew staff leaving on 22nd February, 1985, for an expedition to Malaya, where much of the time was spent in the Taman Negara National Park.

Sadly, but belatedly, we record the death on 29th August, 1984, of **K. W. Braid** of Inverness, who left Kew in 1925 and was a life member of the Guild.

It is with very great sadness that we record the death on 26th September, of **Professor J. P. M. Brennan**, formerly Director, a Trustee and past President of the Guild. A funeral Requiem Service was held at St. Anne's, Kew on 3rd October and a Memorial Service on the 23rd. An account of his life and distinguished and dedicated service to Kew is given in an obituary in this Journal.

Steve Bristow (1980) is engaged in a re-afforestation project with nomadic tribesmen in the Sudan where the average summer temperature during the day is 47°C and at night 30°C. He and his wife Andrea and two sons are the only foreigners in a small town of 15,000. Steve is also raising plants from seed of native species such as *Balanites aegyptiaca* and *Acacia tortilis* which are favoured browsing for animals, and is working with local schools.

On 4th February, 1985, **Gail Bromley** moved from the Herbarium to begin her new post as a Guide Lecturer in the Gardens based in the Museums.

In June, **Dr. Dick Brummitt** (Herbarium), with several colleagues, attended a Conference of the 'Association pour l'Etude Taxonomique de la Flore d'Afrique Tropicale' (A.E.T.F.A.T.), at St. Louis (Missouri Botanic Garden), and on 29th and 30th September he was a representative of Kew at a meeting in Geneva to discuss standardisation of input fields in data bases.

With regret we record the death in 1985 of **A. A. Cavanagh** (1923), who was a life member of the Guild and lived in Camborne, Cornwall.

Congratulations to **Dr. Derek Clayton**, a Senior Principal Scientific Officer, on his formal appointment from 1st July as Assistant Keeper in charge of the 'Monocot' families in the Herbarium. On 29th and 30th September, with Dick Brummitt (q.v.), he was a representative of Kew at a meeting in Geneva to discuss standardisation of input fields in data bases.

In March, 1985, **Jerry Coleby-Williams** (1983) was successful in his application to take the G.L.C.'s management trainee scheme, passing two sets of interviews with a view to being placed in the Recreation and Arts Department. The scheme stresses 'on the job' training rather than theoretical work.

Jim Comber (1955) of Bangkok, on leave in May and June, visited the Herbarium at Kew from time to time pursuing his interest in Asiatic orchids. Later, in October, he joined Jeff Wood (q.v.) on an expedition in search of orchids in the Sipitang District of Sabah, East Malaysia.

Dave Combes (Special Gardener, Arboretum Section) was interviewed by Thames Television on 24th October for a programme investigating the psychology of work, scheduled for screening in February, 1986.

Sadly **Percy Conn** (1923), who was a past President and life member of the Guild, died on 3rd June, 1985, at the age of 85 whilst on holiday in the Algarve. An obituary is printed elsewhere in this Journal outlining his active and interesting life.

Congratulations to **Mark Coode** (Herbarium) on his promotion to Principal Scientific Officer on 11th March, 1985. Since 1977 he has been Editor of the 'Kew Bulletin'.

David Cooke (Temperate Section) joined several others of the Kew staff on an expedition to Malaya in February and March, 1985. An extensive visit to the Taman Negara National Park occupied much of the time.

Anna Coombes who left Kew in 1983, was working at Hidcote Manor during 1985, completing a contract period in November.

George Coombes a life member of the Guild living in Caanoga Park, California, wrote to the Secretary in November, and recalled his days in the Alpine department working with 'Jackie' Sparrow (1919) who later became a Squadron Leader. When George left Kew in 1915, he went to Natal.

Sadly we record the death of **Arthur (Bill) Corney** in late December. He was Keeper Emeritus of Portsmouth's City Museum Service and had been a fellow officer and colleague to Peter Maunder (1954) for many years when with the City Council. Bill Corney specialised in the history and development of coastal defences, and had been closely associated with the finding of the Roman Palace at Fishbourne as well as the restoration of Southsea Castle, Palmerston Forts, the Round Tower and the Sally Port. His early training was at the Oxford Botanic Garden and at Kew (dates unknown). Clearly his early horticultural training led him to take his digging a step deeper into archaeology, the field in which he was to become nationally known and respected.

In 1985, **Ian Cowe** (1980) passed the Diploma of the Institute of Parks and Recreation Administration and applied for a post in Exeter.

Dr. Phillip Cribb (Herbarium) travelled to California in January, 1985, on a lecture tour and later, in June went to the Black Forest region of Germany to collect the Library of the late Professor Brieger for Kew.

Dr. Barbara Croxall (Fern Section, Herbarium) left on 22nd February, 1985, to begin a short expedition to Malaya, especially the Taman Negara National Park. Barbara was one of several Kew staff taking part. Later in the year, on 10th November, she again travelled to the Far East to take part in a Royal Society field project in the Danum Valley, Sabah until 6th January, 1986.

In October, **Dr. David Cutler** (Jodrell Laboratory) travelled to Utrecht and Leiden with Peter Gasson (q.v.) to examine wood collections in connection with their study of tropical timbers and their native uses. Later, in December, he gave a series of lectures for the M.Sc. course at the Institute of Archaeology in London, on the identification of plant fragments.

Barbara Dickinson (1979) took up a post on 2nd January, 1985 as a Lecturer A1 at Hadlow. Previously, since leaving the University of Sussex, where she obtained a degree in Geography, she had been working on landscape design and maintenance contract work.

In June, 1985, a letter published in the *Journal of Arboriculture* from William Brenneman of Wyoming tells of an impressive Japanese Katsura tree (*Cercidiphyllum japonicum*) flourishing just inside the entrance to Fort Wayne, Indiana's historic Lindenwood Cemetery. The Lindenwood Katsura is 81 ft. high with a girth of 8 ft., and the writer believes that, with other exotics, it was planted over 100 years ago by **John Dorwell** who was Lindenwood's first superintendent and landscape gardener, and who trained on estates and at Kew, leaving in May, 1851.

Mrs. **Ella Drabik** retired in May, 1985, after 10 years service as a photocopier in the Library. We wish her a long and happy retirement.

Between 8th and 24th January, 1985, **Dr. John Dransfield** (Herbarium) worked in the Bailey Hortorium, Cornell University, preparing his *Genera Palmarum* for publication. Soon afterwards, on 22nd February he travelled to Malaya accompanied by his wife, Soejatmi, to lead a Kew training expedition. The team spent a considerable portion of the time in the Taman Negara National Park. Later, in June, he joined several other Kew staff members in St. Louis, to attend an A.E.T.F.A.T. (African taxonomy) Conference, and spent 10 days in November working on Palms in the herbarium of the Botanical Institute, Firenze.

Stephen Droop who, since 3rd October, 1983, has worked as a Research Officer for Africa in the Conservation Unit at Kew, attended an A.E.T.F.A.T. (African taxonomy) Conference in St. Louis in June and later, in September, a conference at the Royal Botanic Garden, Edinburgh, on S.W. Asia.

Welcome to **Dr. Clyde Dunlop** of the Darwin Herbarium, who took up his duties as Australian Botanical Liaison Officer in September, replacing Nicholas Lander (q.v.) Clyde Dunlop has research interests in Compositae (*Inuleae*).

David Dupuy, who for a number of years visited Kew in connection with his work on Orchids towards a Ph.D at Reading University, began work on 1st July on the flora of Christmas Island (Indian Ocean) as part of the Flora of Australia Project. The post is administered by the Bentham-Moxon Trust and funded by the Australian Biological Resources Survey (A.B.R.S.), Canberra. Our congratulations to David and to **Blaise Clifford**, a second-year student, on their marriage on 7th December in Cowden parish, Kent. They spent their honeymoon travelling in India.

In February and March, 1985, **Peter Edwards** (Fern Section, Herbarium) was one of several members of the Kew staff taking part in an expedition concentrating on the Taman Negara National Park in Malaya.

Charles Erskine (Assistant Curator, Arboretum) joined the Curator (q.v.) and Deputy Curator in representing Kew at a celebration to mark the 60th Anniversary of the Bedgebury Pinetum.

Dr. Steve Evans attended the Phytochemical Society Symposium on Plant Products and the New Technology at the University of

Swansea in 1985. Later in the year, on 30th September, he resigned from his post as a Scientific Officer in the Jodrell Laboratory.

In a communication from Mrs. Mary Tyler of Texas received in April, 1985, **William Falconer** was noted as a Kew man who played a part in the founding of the Baker Bros. Nursery in the early 1800's. He and W. A. Yates (q.v.) worked with James Beanland Baker, Mrs. Tyler's grandfather in the early days of the nurseries at Brenham and Fort Worth in Texas.

In 1985, **Dr. Linda Fellows** visited Zimbabwe to give a paper on "Clues to a new strategy of pest control from the chemicals of wild plants" at the Commonwealth Science Conference on Medicinal plants.

Congratulations to **James Ferguson** (1978) on being one of six who passed, out of 17 taking Course 13 in 'Turf Culture' for the National Diploma of Horticulture in 1985.

Congratulations to **Dr. Keith Ferguson** (Palynology Unit, Herbarium) on his promotion to Senior Principal Scientific Officer from 1st June, being appointed Assistant Keeper responsible for the second half of the 'Dicot' families in the Herbarium.

David Field (Herbarium) a member and sometime Auditor of the Guild, transferred to the Economic and Conservation Section (ECOS) of the Herbarium on the day of its formation, 2nd September. Soon afterwards, in October, he attended the "Arid Lands : Today and Tomorrow" Conference in Tucson, Arizona, where he presented a joint paper by Mr. Lucas and Dr. Wickens at a session chaired by the latter author.

Laura Fitt (Herbarium), with several other Kew staff members, began an expedition to Malaya on 22nd February, 1985, spending much of the time in the Taman Negara National Park.

In June, **Sylvia FitzGerald** (Chief Librarian and Archivist) attended the 7th World Congress of the International Association for Agricultural Libraries and Documentalists (I.A.A.L.D.) in Ottawa, followed by the Annual Meeting of the Council on Botanical and Horticultural Libraries. In the same year, because of concern about the permanence of paper, she arranged for the illustrations collections at Kew to be surveyed by an expert paper conservator who has made practical recommendations for the preservation of the collection.

Hans Fliegner, Assistant Curator of the Temperate Section, was in the Guizhou Province of China during October to collect seeds from woody plant species. He was accompanied by John Simmons, the Curator (q.v.) and Mr. James Russell of Castle Howard. Their primary objective was Fan Jin Shan, an 8,000 ft. mountain with a very rich flora including two to three hundred ferns and a great diversity of trees, shrubs and herbs. They collected some 700 herbarium specimens and over 300 collections of seed.

Hugh Flower (1976) was ordained as a priest on 11th May, 1985, in Arundel Cathedral, Sussex. The ceremony was performed by the

Bishop of Arundel and Brighton before a congregation of 1,000 people, some of whom were Kewites. The Service, which lasted for almost two hours, was rich in music for the Easter season, which was led by the choir of St. John's Seminary, Womersley, where Hugh studied for five years leading to his Diaconate in 1984. The Ordination Mass was followed by a reception for 140 invited guests in the new parish centre in Shoreham and the following day Hugh celebrated his First Mass for the parish of Our Lady of Ransom, Eastbourne, where he had served as a Deacon. He has now been appointed to the Parish of St. Dunstan, Woking in Surrey, where, he says, any Kewites will be most welcome.

From time to time in 1985, **Rowena Gale** (1983) returned to the Jodrell Laboratory to look at charcoal specimens of archaeological interest that she was examining for the British Museum.

Ian Galloway (1952), who is Director of Parks and Reserves in Wellington, New Zealand, welcomed Noel Lothian (q.v.) on a visit there in 1985, and arranged for him to see the many improvements which Ian and his staff are making in and around Wellington. Of especial interest was a median strip planting of annuals and other colourful plants in the middle of the main street.

Congratulations to **Peter Gasson** (Anatomy Section, Jodrell Laboratory) on being awarded a Ph.D. by Reading University in 1985. In October he travelled to the Netherlands with David Cutler (q.v.).

It is with deep regret, that we record the death on 12th June, 1985, at the age of 65, of **John Gilbert** at his home in Wansford, Northamptonshire. Before his retirement in 1980 he was in charge of the Spirit collection in the Herbarium and for a long time he was a member of the Guild and was a frequent contributor to the Journal. During his 25 years at Kew, he worked in various capacities in the Herbarium, and was, in addition, a prolific writer, contributing a large number of articles on a variety of topics to various periodicals. He also published some booklets on his native village and maintained a comprehensive private museum. When he retired he generously donated a £50 prize to be awarded annually for the best published work by a Kew student.

William Neil Gilmour (1952) was elected President of the Institute of Leisure and Amenity Management for 1985/86, at its AGM in June. He is currently Chief Officer for Recreation, Culture and Health with the South Yorkshire County Council, and Vice Chairman of the National Turf Grass Council as well as an adviser to the Arts and Recreation Committee of the Association of Metropolitan Authorities. His present duties include responsibility for several country parks, one of which is the 300 hectare Rother Valley Country Park managed by a joint committee of five authorities to which he is responsible as the Recreation Officer. He commenced his career with the Glasgow Parks Department and trained at Kew and then, before his present position, he held posts with the London County Council, Scunthorpe, Torquay and Sheffield Councils.

Peter Green, formerly Deputy Director, Keeper of the Herbarium and a past President of the Guild, spent the first part of 1985 in

Australia working in various Herbaria (Sydney, Canberra, Brisbane and Melbourne) on the Flora of Norfolk and Lord Howe Islands. He also briefly visited the Herbarium at DSIR Lincoln, New Zealand. The first two weeks of February were spent on Lord Howe Island itself and the last two weeks on Norfolk Island, studying the plants in the field. On the way back to Britain in mid-April he broke his journey for a week in Thailand to visit the herbaria in Bangkok in association with work on the *Oleaceae* for the Flora of Thailand.

In September and October, **Dr. Chris Grey-Wilson** (Herbarium) travelled in China studying in various botanical Institutions and undertaking field work in Sichuan and Yunnan.

In August it was made known that **Mary Grierson**, who was for 12 years the official Botanical artist at Kew until her retirement in 1972, has accepted the invitation by the University of Reading to receive an Honorary Degree of Master of Philosophy in July, 1986.

John Halhead (1954) took early retirement from his work in Surrey and moved to Snettisham, Kings Lynn, Norfolk in September.

Congratulations to **Pat Halliday** (Herbarium) on her promotion to Higher Scientific Officer with effect from 1st January, 1985.

John Hancock (Assistant Gardener, Services) retired on 19th April, 1985, after five years working at Kew. He has continued in the Gardens as a volunteer worker.

After just over two months taking part in field work on the montane "Campo rupestre" flora of eastern Brazil, in conjunction with the Department of Botany, University of São Paulo, **Dr. Ray Harley** (Herbarium) returned to Kew on 10th January 1985. Later in the year, in November he travelled to Geneva to examine a Ph.D. thesis on the taxonomy of *Nematanthus* (Gesneriaceae) in Eastern Brazil.

Belatedly we record that **Madeline Harley** (Palynology Unit, Herbarium) was promoted to the grade of Higher Scientific Officer on 1st January, 1984. Later in that year on 26th August she left to attend and give a paper at the sixth International Palynological Conference in Calgary, Canada. At the end of the Conference, on 1st September, before returning to Kew, she went to Chicago to spend a short period at the Field Museum.

Welcome to **Yvette Harvey** who joined the staff of the Herbarium as an Assistant Scientific Officer on 1st April, 1985.

On 2nd September, **Rupert Hastings**, who for a number of years has worked in the Museums, transferred to the Herbarium to join the team of staff in the Economic and Conservation Section (ECOS) newly formed on the same day. Earlier in the year, on 9th February, he had begun a 20 day birdwatching holiday with friends in Venezuela. He subsequently reported that it had been a great success with 68 bird families and well over 500 species being seen. He spent the first five days in the Henri Pittier National Park which is a section of the coastal cordillera about two hours drive west of Caracas. Afterwards he travelled east to visit El Guachero near Caripe, a vast cave-home of

10,000 Oilbirds. A week was spent in forest areas in the south-eastern state of Bolivar, before journeying to the great high plain of Gran Sabana and then across the Llanos plain with a quick visit to the Andes on the penultimate day of the trip.

Congratulations to Mrs. **Joyce Heath** on her promotion to Clerical Officer on 14th January, 1985. Joyce, who has worked for many years at Kew, moved on promotion from the Museums to the Accommodation Section.

Stewart Henchie (Assistant Curator, Services) and Tony Kirkham (q.v.) returned from an expedition to Chile in April. they had been helped in arranging their trip by Sandra Leche (1977) who met them on their arrival at Santiago Airport. On 22nd February, Stewart, Tony and Sandra headed south for Puerto Montl. During the next few days, Stewart collected in cool temperate forest, where he saw *Eucryphia cordifolia* in full flower up to 40 m. high, *Podocarpus*, *Nothofagus nitida* and *Chusquea* in impenetrable masses and *Crinodendron hookeriana* was collected. Further collections were made in Alerce Andino National Park and on a volcano in Viconte Peroz Rosales National Park, before they were flown to Laguna San Raphael National Park. Later they travelled on horseback in the National Park on Chiloe Island (43,000 hectares) where only the edges have been explored. Stewart and Tony returned to Kew with a good harvest of seed.

On 23rd February, **Nigel Hepper** (Herbarium) and a Vice-President of the Guild, travelled to Egypt to work on *Solanaceae* for the Flora of Egypt. He gave several lectures at Cairo and Aswan Universities and visited a number of oases. Later, in June, he joined several other Kew staff members in St. Louis for a Conference of the 'Association pour l'Etude Taxonomique de la Flore d'Afrique Tropicale' (A.E.T.F.A.T.) and in September he attended a Conference on S.W. Asia at the Royal Botanic Garden, Edinburgh.

Welcome to **Nicholas Hind**, who joined the staff as a Scientific Officer on 7th October to work on *Compositae* in the 'Dicots II' section of the Herbarium.

From July to September, 1985 **Pamela Holt** (1974) was in the Atacama Desert of northern Chile with 'Operation Raleigh' serving as Scientific Co-ordinator, and assigning the young participants to specific projects in various disciplines. Towards the end of her stay she spent two weeks on the coast of Chile in a proposed National Park area which has a unique flora. She has subsequently been planning her own expedition (to take place in 1986) to Bolivia where she hopes to climb a mountain and undertake botanical research.

Heartiest congratulations to **Professor Holttum**, an Honorary Research Fellow in the Herbarium, who celebrated his 90th birthday on 20th July. The occasion was marked by a party held in the Herbarium on the previous afternoon and a special part of the Kew Bulletin is to be a lasting tribute.

Martin Howard (1983) took up a post on 1st April, 1985 at Piers Court, Slinchcombe, leaving his previous work at Bilbury Trout Farm.

On 16th September, **John Jelleyman** (1981) began a new post as Senior Horticultural Instructor for Colham Green Adult Training Centre, West Drayton, where he manages a three-acre site with one Assistant (agricultural) Instructor and 14 mentally handicapped trainees. The priorities of the Centre are personal development of the trainees through horticultural, domestic, social and educational training. Since he left Kew in 1981, John spent one year with Ealing Social Services, from which he went on to work in different educational and training units for another three years. In 1985, before taking up his new post he passed the City and Guilds Teachers Certificate in Adult Further Education with credits.

Bill Jennison resigned from his post as Gardens Supervisor in the Planning Unit on 24th May, 1985.

Dr. Laurie Johnson, Director of the Royal Botanic Garden, Sydney, Australia and a member of the Guild, was at one time Australian Botanical Liaison Botanist at Kew. In early July he paid one of his occasional visits to the Kew herbarium, en route to the International Congress of Systematic and Evolutionary Biology at Brighton.

Congratulations to **Margaret Johnson** (Jodrell Laboratory) on her promotion to Higher Scientific Officer on 1st January, 1985. In the summer of last year she travelled together with members of the Herbaceous and Alpine Garden Society, on a very successful expedition to Turkey, bringing 600 bulbs back to Kew.

Robert Johnson, Financial Controller, resigned from Kew on 26th March, 1985, to join the staff of the Royal Ordnance Factory in Nottingham.

Dr. Ronald Keay, who was attached to the herbarium from 1951 to 1957, working on the Flora of Tropical Africa, retired in the summer, 1985, from his post as Executive Secretary of the Royal Society.

Jeff Kempster, winner of the 1984 Hozelock Prize gave a talk at a Mutual Improvement Society meeting on 18th March at which Mr. Eastwood, Sales Manager of Hozelock-Ash was present. The results of Jeff's visit to Tenerife apparently impressed him and he was well pleased with the publicity the award attracted. Jeff subsequently completed his course at Kew in September, 1985.

Welcome to **Michael King** who took up his post as Financial Controller on 25th February, 1985, replacing Robert Johnson (q.v.).

Tony Kirkham (Supervisor, Arboretum) joined Stewart Henchie (q.v.) on an expedition to Chile in February, 1985. Although he was confined to hospital in Puerto Montl from Salmonella poisoning for a few days, during their stay in Chile they managed to collect in several National Parks including Chiloe Island where they explored on horseback. They returned to Kew in April.

Welcome to **Sabina Knees** who took up the post of Conservation Officer (Scientific Officer) on 2nd September in the Economic and Conservation Section of the Herbarium (ECOS), newly established on the same day.

Very sadly we record the death on 11th March, 1985, of **Frank Knight** (1929) a past President and life member of the Guild and at one time Director of Wisley. His life and work, not least as a staunch member of the Guild is outlined elsewhere in this Journal.

Congratulations to **Lynn Knight** who for several years worked in the Herbarium. On 1st April, 1985, she was promoted to Personal Secretary taking up her new post in the Curator's Office.

Nicholas Lander completed his term of office as Australian Botanical Liaison Officer at the end of August, 1985, after working towards a revision of the Australian genus *Olearia* (Asteraceae) during his year at Kew. He was replaced in September by Clyde Dunlop (q.v.).

Dr. Edmond Launert, who is a member of the Guild and has worked for many years on the 'Flora Zambesiaca', attended an A.E.T.F.A.T. (African Taxonomy) Conference in St. Louis, in June.

In February, 1985, **Sandra Leche** (1977), who has worked in Chile for several years, joined forces with Stewart Henchie (q.v.) and Tony Kirkham, to collect in several National Parks in the country. Having helped them arrange the trip, Sandra met them at Santiago Airport and took them to her home within the Airforce Base at Colina, 20 km north of Santiago. During their stay she helped as a translator, for although Chileans can speak English, they are often reluctant to do so.

Ian Leese (1982) left his post as a lecturer at Hadlow College at the end of 1985, to take up a new appointment in January, 1986, as Head of the Horticultural Department at Capel Manor.

Gwilym Lewis (Herbarium) returned in February after two months field work in eastern Brazil. Later in the summer he took leave to travel for five weeks in India.

John Lewis (1957), who after leaving Kew, worked for many years in the British Museum (Natural History), paid one of his periodic visits to the Herbarium in April.

At the end of July, after three years in the Herbarium as South African Liaison Botanist, **Peter Linder** and his wife Clare set out on a prolonged journey taking their time to drive home through Africa. We extend our best wishes to them. His place at Kew has been taken by Brian Schrire (q.v.).

Congratulations to **Simon Linington** (Seed Bank, Wakehurst Place), on his promotion to the grade of Higher Scientific Officer with effect from 1st January, 1985.

Welcome to **Katherine Lloyd**, who took up an appointment as a Scientific Officer in the Herbarium on 28th May, working on the Index Kewensis.

In June, **Noel Lothian**, a life member of the Guild, and formerly Director of the Botanic Gardens, Adelaide, gave an address to launch the Tasmanian Arboretum Inc., which is establishing a temperate climate Arboretum in the Davenport area. He visited the site of about 110 acres which has a varied topography that includes two streams,

hills, rocky outcrops and a flat area for a lake. It is intended that a herbarium and library will also be developed. Later he travelled for a month with his wife in New Zealand where he met Ian Galloway (1952) and John Taylor (1947) (q.v.).

Over the last 25 years, **Brian Lowe** (1960) has worked on landscape and horticultural projects with the G.L.C., the Ministry of Transport, Merrist Wood and Geo. Wimpey. He is now an established and highly experienced Horticultural and Landscape Consultant and is an Associate of 'Vennel Professional Services'.

In early February, 1985, **Gren Lucas** (Keeper of the Herbarium and formerly a member of the Guild Committee), spent two days in Switzerland on IUCN business. Later, in April, he travelled to Washington to take part in two meetings with the Center for Plant Conservation and the Office of Technology Assessment and then flew to St. Louis for discussion on future projects of mutual importance to both Missouri and Kew Botanic Gardens. In June he was once again in St. Louis, with several colleagues from Kew, to attend the A.E.T.F.A.T. Conference (Association pour l'Etude Taxonomique de la Flore d'Afrique Tropicale). Mid-August saw him in Edmonton, Canada, chairing meetings of the Species Survival Commission (SSC) Zoological Chairmen, and from 26th to 30th November he attended the Botanic Gardens World Conservation Strategy meeting held in Las Palmas de Gran Canaria. During that time he also attended a meeting of the IUCN Plant Advisory Group and chaired a special meeting of the plant group chairmen of SSC.

Congratulations to **Philip Lusby** (1981) and his wife Eleanor (formerly of the Micropropagation Section) on the birth of a daughter, Marianne Linnae Frances, in November.

Belatedly, but with regret we record the death on 9th April, 1984, of **J. McCartan** who left Kew in 1939 and lived in Denbigh.

Sue Macdonald (1984) formerly Supervisor in the Palm House, visited the Library during the early months of the year (1985) researching various projects in which she is involved as a freelance horticulturist. Much of her time has been taken up with lecturing in several institutions including Capel Manor, Denman College, the Inchbald School of Gardening and the North London Polytechnic.

Welcome to **Ann McNeil** who took up an appointment as a Librarian on 9th September, 1985.

Welcome to **Andrew McRobb** who joined the Photographic Unit at Kew on 17th June, 1985.

In March, 1985, **Wessel Marais** (Herbarium) recorded a short talk about the Gardens for the French Language Service of the BBC World Service.

Judy Marques (née Brace), who formerly worked in the Planning Unit, Aiton House at Kew, is now living in Brazilia. She and her husband have two children.

Mike Marsh (Gardens Supervisor, Tropical Section) took part in a 'Gardeners World' BBC Television programme shown on 22nd November.

Mrs. **Constance Martin** (1942, née Bell), while supplying a 1942 photograph of girls who were then working in the Gardens, recalls that working conditions were arduous and spartan at that time. Work began at 6.30 a.m. in the summer for the basic pay of 45 shillings per week. When the *Victoria regia* Lily pool required cleaning out, a 'dirty money' plus payment of sixpence was allowed. To obtain a teabreak of ten minutes during the afternoon a personal representation to the director, Sir Arthur Hill, had to be made.

Jim Mateer (Supervisor in the Arboretum) was interviewed on 24th October for Thames Television in connection with a programme investigating the psychology of work, scheduled for February, 1986.

Brian Mathew (Herbarium) travelled in Canada in November on a lecture tour and met several members of the Guild including Allen Paterson (1958) (q.v.), David Tomlinson and Trevor Cole (1977).

On 1st January, 1985, **Simon Mayo** (Herbarium) was promoted to Senior Scientific Officer. We extend our congratulations to him.

Welcome to Miss **Kim Meacher**, who joined the Library as an Assistant Librarian on 12th August, 1985.

With deep regret we record the death at the age of 82, of **Dr. Ronald Melville** (1968) formerly a member of the Herbarium staff and a member of the Guild. He died on 6th August and the funeral took place on the 12th at Mortlake Crematorium. An obituary outlining his life and work appears in this Journal.

Dave Menzies (Tropical Orchid Unit) attended an Orchid conference in Auckland, New Zealand in October.

Sue Minter who was appointed a Gardens Supervisor in the Temperate Section on 4th February, 1985, was interviewed early in the year on T.V. a.m. 'Good Morning Britain' breakfast television which visited the Temporary Palm House.

Hilary Morris, who joined the staff as an Assistant Librarian in 1981, was married to Dick Parmenter (Administration) (q.v.) on 13th July, 1985. Our very best wishes to them both.

Welcome to **Peter Morris** who joined the Temperate Section staff on 3rd June, 1985, as Marine Display Project Manager. His responsibility is the development of the present marine experiment, set up in October, 1983, which when he came to Kew, consisted of two 350 litre tanks containing about six species of algae grown under different environmental conditions. He is going on to provide more technical data for a detailed design brief for the engineers, who are designing the proposed Marine Display Unit for the basement of the Palm House.

In 1985, **Brendan Mowforth** (1975) passed the Diploma of the Institute of Parks and Recreation Administration.

We were sorry to lose **Molly Norman** from the Accommodation Section of Administration, when she left on 1st November to take up new duties working at MAFF, Guildford, Surrey. Apart from a short break from 1977 to 1979, Molly had given valuable service on the Kew since 1967.

Anthony O'Grady left for Ireland in September to work in Dublin for a year supervising the transformation of an inner-city cemetery into a public park.

Congratulations to **Sarah Oldridge** (Herbarium) for achieving the Gold Award under the Duke of Edinburgh's Scheme. It was presented to her personally by Prince Philip at St. James's Palace on 1st May, 1985. Earlier in the year, on 22nd February, she had joined a Kew training expedition to Malaya where much of the time was spent in the Taman Negara National Park.

Since 1977, **David Painter** (1970) has been Senior Technical Officer for the London Borough of Ealing where his main duties are concerned with landscape design and construction and all contract work including horticultural maintenance. After leaving Kew, he briefly worked for the Richmond Authorities. He then spent a year at the IPRA College obtaining the DIPRA final in 1974 while working as a Chief Technical Assistant for the London Borough of Waltham Forest, where he spent five years before moving to Ealing. David is married and lives in Greenford and is a Fellow of the Institute of Leisure and Amenity Management.

Congratulations to **Dick Parmenter** (Administration) on his marriage to Hilary Morris of the Library staff on 13th July, 1985. After their wedding they travelled to Italy for a two-week holiday.

On 31st October, **Allen Paterson** (1958), formerly a Guild Committee Member, was at Kew to deliver a lecture entitled 'The Empire Strikes Back: Canada's Royal Botanic Gardens' about the Botanic Garden, Hamilton, of which he is Director. His lecture took place during an autumn visit to Britain to stage an exhibition in Ontario House.

After serving from April, 1984 for six months as a 'Contract Supervisor' in Hong Kong with Brian Clouston & Co., **Andrew Paterson** (1973) was 'handed on' to Mansell's, the Consulting Engineers who are developing the new towns and highways of the New Territories in Hong Kong. With Mansell's he is a 'Landscape Officer' which involves plans interpretation and supervision of the landscape contractors.

Graham Pattison (1981) formerly Supervisor in the Tropical Section and Events Officer of the Guild, returned to Kew briefly in November on his way to take part in the Botanic Gardens and the World Conservation Strategy meeting in Las Palmas de Gran Canaria. Graham is Curator of the botanic garden of the Instituto Nacional de Investigaciones Sobre Recursos Bioticos in Xalapa, Mexico.

Between 12th and 17th September, **Dr. David Pegler** (Herbarium) was in the United States of America, attending as Principal Mycologist, the North Eastern Mycological Foray, held at Oneonta, New York State, before paying working visits to the herbaria at Albany, Cambridge (Farlow), Amherst, New York Botanic Garden and Beltsville.

Leo Pemberton, Supervisor of Studies and a former Vice President of the Guild, was in Durham at the end of August to present a paper at the Second Meeting of the European and Mediterranean Region of the

International Association of Botanic Gardens. Earlier in the summer he was senior examiner for the first examination of the M. Hort. (R.H.S.) Stage I and also became the Gardens representative on the Arboriculture Association Council for a three-year term. With his School of Horticulture students from Course 20 he visited the German Garden Festival in Berlin in May using a converted double-decker ex-London bus which served as transport, dormitory, kitchen and dining room for 18 students and staff. In September he visited China for six weeks, lecturing at the Peking University of Forestry, Nanjing (including the Botanic Gardens), Kunming, and the Xishuangbanna Research Institute. He also visited the cities of Suzhou and Chengse.

In June, 1985, **David Philcox** (Herbarium) travelled to St. Louis (Missouri Botanic Garden) to attend an A.E.T.F.A.T. (African Taxonomy) Conference. He was accompanied by several other staff members from Kew.

Barry Phillips (1972) has worked for several years in Bermuda, more recently as Horticultural Course Organiser in the Botanical Gardens. He visited Kew briefly in September and presented a paper on his work with *Juniperus bermudiana* at the Arboricultural Society Conference. More recently he was planning a lecture tour during January, 1986 in Philadelphia, New York and Florida.

Cherry Phillips left the Library at Kew in June to take charge of MAFF's main library at Whitehall Place. At Kew she had, for two years, occupied a librarian post being responsible for information retrieval.

During the summer in 1985, **Sophieke Piebenga** (1984) spent four months visiting Indonesia as a 'Horticultural Associate of the L.C.D. at Kew' to study the tropical flora and vegetation types of the country. During her stay she was based mainly at Bogor Botanic Gardens in West Java, working in several departments but she also spent some time in the Cibodas Mountain Garden. Her visit was financed in part by a grant from the Guild Award Scheme. Between the time she left Kew at the end of her course in 1984 and her stay in Indonesia, Sophieke gained valuable experience working as a self-employed horticulturist, undertaking historical research for the National Trust, gardening in a large private garden and lecturing at the Capel Manor Institute of Horticulture.

Andrew Pierce who left Kew in 1960, is Assistant Director of Denver Botanic Gardens, Colorado.

Congratulations to **Dr. Roger Polhill** on his promotion to Senior Principal Scientific Officer from 1st June when he was appointed Assistant Keeper for the first half of the 'Dicot' families in the Herbarium. In the same month, together with several other members of the Kew staff, he travelled to St. Louis (Missouri Botanic Garden) to attend a Conference of the Association pour l'Etude Taxonomique de la Flore d'Afrique Tropicale' (A.E.T.F.A.T.).

Lizzie Potts (1983) began working as a Horticultural Supervisor at the Hammersmith and Fulham MIND's Project in 1985. When fully

developed the project will provide horticultural employment for 13 people and it is intended that 50 per cent of the places will be for those who have suffered from mental health problems. Employment is for three days a week for up to a year, including an intensive training programme. The horticultural work is undertaken in the Borough of Hammersmith and Fulham and is concerned with gardens of elderly and disabled people.

From September until the end of 1985 **James Priest** (1985) was in Ecuador. He arrived in Quito on 29th September and left for the Oriente with Dr. David Neill of Missouri Botanic Garden. They climbed to an altitude of 4,000 m. before descending to Tena where they were joined by Robin Markes from the University of Illinois, Chicago, undertaking Pharmacological fieldwork. With the help of an Ecuadorian botanical artist they visited local Brujos or Curanderos, people renowned for their knowledge of medicinal plants. While in the Oriente James went to a village of the Shuar, formerly a headshrinking tribal people and later he visited the western coastal region of Ecuador.

We extend congratulations to **Dr. Robin Probert** (Plant Physiology, Wakehurst Place), on his promotion from 1st January, 1985, to Higher Scientific Officer.

John Reed (1971) is now Director of Parks and Recreation at the city of Prahran, one of Melbourne's extensive suburbs. On 15th April, 1985 he visited Kew to learn how the Kew Horticultural Education scheme was developing.

Congratulations to **Mark Reeder** (1985) who, while still in his third year as a student attained the highest marks of any candidate in the intermediate examination for the Masters Diploma in Horticulture (previously N.D.H.) and who received the Chittenden Award.

We congratulate **Steve Renvoize** (Herbarium) on his promotion to Principal Scientific Officer with effect from 1st January, 1985.

In 1985 **Dr. Tom Reynolds** (Jodrell Laboratory) gave an interview on Aloes for a BBC World Service programme to Africa. Earlier he attended the Phytochemical Society Symposium on Plant Products and the New Technology at the University of Swansea.

Philip Robinson (1978) is still working at the Dublin Botanic Garden in 1985.

Timothy Rogers (1984) commenced employment on 7th May, 1985 as Head Gardener at Ince Castle in Cornwall. The castle is situated on the River Lynher, a tributary of the Tamar, and is on a small peninsular with a garden of about 5½ acres and a three-mile coastline. he has three permanent and two trainee gardeners working with him and there are very good propogating facilities. The garden contains several specialised areas including a water garden, a walled garden and herbaceous grounds. At the entrance, a specimen Turkey Oak is claimed by Alan Mitchell to be more than 300 years old.

Sue Ryder, who was an International Student at Kew from September to December, 1984, was at Longwood Gardens, U.S.A. in 1985, as an

'outdoor intern' until the end of November. Previously, during the semester at Perdue, she announced her engagement to John Groot.

Congratulations to **John Sallis**, who was the top student of his course in September, 1984, on his entry in the Schools of Horticulture Garden Design competition for the National Garden Festival, to be held at Stoke-on-Trent in 1986. Early in 1985 it won first prize for the Kew School of Horticulture. In March it was learnt that John had established himself as an independent 'Landscape Design Consultant' at that time employed by the Banque Indo-Suez, in Woking, to work on a three-year programme of renovation, reconstruction and design on the remains of a spectacular mansion garden.

On 16th March, **Martin Sands** (Co-ordinator in the Herbarium and Honorary Assistant Secretary of the Guild), left for three weeks in Australia where he was involved, as Deputy Leader, in the early stages of planning a joint Royal Geographical and Linnean Societies multi-disciplinary field project in the Kimberley Region of N.W. Australia in 1988. The occasion will mark the bicentenary of the Linnean Society and the first settlement in Australia at Port Jackson. On the reconnaissance, he was accompanied by the Leader, Professor Andrew Goudie (School of Geography, Oxford) representing the R.G.S., and together they spent five days in the field area after discussions in Perth, Sydney, Canberra and Darwin. On 15th and 16th April, he visited Glasgow Botanic Garden to discuss with the Curator, Eric Curtis (1956), the development there of a National Begonia Collection and to deliver a lecture on Begonias at the University.

Tony Schilling (Deputy Curator, Wakehurst Place), and his staff together with the Museums Division, prepared an exhibit on the plant collecting of the late Frank Kingdon-Ward in celebration of his centenary. It was staged at the RHS Rhododendron Show in April, 1985, and won particular praise from Jean Kingdon-Ward, Frank Kingdon-Ward's widow and the President of the RHS. Later, during the autumn, Tony spent an exciting month in the Himalaya, leading a party of people to the Everest base camp.

Brian Schrire (B.R.I. Pretoria) took over from Peter Linder (q.v.) as South African Liaison Botanist at Kew in July, 1985. In addition to his duties as Liaison Officer he is continuing his research into Legumes (*Desmodieae* and *Indigoferae*).

Tom Seager (1955), formerly of Alexandra Park, Oldham and now living in Teignmouth, Devon, took early retirement in March, 1985, after serving 23 years as Chief Amenities and Recreation Officer at Oldham.

On 1st April, 1985, we welcomed **Dr. Monique Simmonds** from Birbeck College, who took up a post as Higher Scientific Officer in the Jodrell Laboratory. She is working on plant-insect interrelationships.

During 1985, **John Simmons**, the Curator, was elected Vice President of the Institute of Horticulture and was appointed to the Council of the National Council for the Conservation of Plants and Gardens (N.C.C.P.G.). He also became a member of the RHS Veitch

Memorial Medal Selection Committee. Early in the year he completed a full TV programme about Kew for the 'Nature Watch' series with Julian Pettifer which was transmitted nationwide in April. On 5th June, he was one of three staff members at a celebration to mark the 60th Anniversary of the Bedgebury Pinetum, which maintains close and important links with Kew. From 1925-1965, the Pinetum was jointly managed by the Forestry Commission and the Royal Botanic Gardens, William Dallimore having played a valuable founding rôle in its establishment. In the autumn, setting out on 1st October, the Curator, along with Hans Fliegner (q.v.) and James Russell (Castle Howard Arboretum) participated in a joint Sino-British expedition to Fan Jin Shan, a remote mountain in Guizhou Province (S.E. China) not previously visited by Europeans. A very rich collection was made and large numbers of resultant plants are now growing at Kew and in many other arboreta. Shortly after his return, he travelled to the Canary Islands and, with Ian Beyer (q.v.) gave a joint paper on the strategy for botanic garden training and liaison, at the IUCN-organised Conservation Conference in Las Palmas.

Welcome to **Dr. David Simpson**, who joined the Herbarium staff as a Scientific Officer, to work on *Cyperaceae*.

Sadly we record the death on 10th March, 1985 of Mrs. **Mary Smith** who for many years served in the Herbarium Office. The funeral took place at Hanworth Crematorium on 19th March and her ashes were scattered in the Duke's Garden on the following Sunday.

At the beginning of January, 1985, **Lloyd Snellgrove** (1984), began full-time work as a Horticultural Co-ordinator for the Chapel Green Community Project in Sheffield which was given funding for three years. The idea of the project is to build up a nursery team to grow and sell plants and a landscape team for outside contracts.

Congratulations to **Mark Sparrow** a second-year student in 1985, and Student Union President, who was the winner of the Hozelock Travel Scholarship prize which was presented to him on 16th April at the Hozelock-ASL Company's head office at Haddenham. With his scholarship he undertook a study trip to the Arnold Arboretum of Boston's Harvard University in September. Mark was also one of the winners in a nationwide competition organised by the American Express organisation. The prize of £500 in traveller's cheques was awarded for a written submission with detailed plans and objectives for a trip abroad which would directly enhance his studies. 1985 was the first year of this bursary scheme and it is intended to become an annual award.

Congratulations to **Brian Spooner** (Mycology Section, Herbarium) on being recommended in May for the award of Ph.D. at Reading University. On 10th November he left to undertake fieldwork for two months on the Royal Society Danum Valley project in Sabah, E. Malaysia.

On 10th January, 1985, **Brian Stannard** (Herbarium) returned after just over two months of fieldwork on the montane 'campo rupestre' flora

of eastern Brazil and then, on 22nd February, he left for Malaya with several colleagues to take part in a training expedition to Malaya where much of the time was spent in the Taman Nagera National Park.

In 1985, **Geoffrey Stebbings** (1982), took on the formidable task of restoring the garden created by the famous plantsman E. A. Bowles at Myddleton House, Enfield. When he began, he found none of Bowles' famous plants except his 'Golden Grass'. Most of the Bearded Irises mentioned in his book were gone, but members of the British Iris Society are helping to trace them and it is hoped to re-create the Iris beds as they were in 1915 and to establish a national collection. After Bowles' death in 1954, the property was bought by the London School of Pharmacy and Medicine and then in the 1970's they sold the property to the Lea Valley Regional Park, retaining only the medicinal garden. Geoffrey intends to complete the restoration work in five years with the aid of three gardeners. Dredging the lake was one of the first main projects. The alpine meadow, where Bowles grew so many of the bulbs for which he is famous, has survived well, but the rock garden was totally overgrown and when cleared is to be planted with Bowles' collection of hardy Geraniums. The Cactus bank is to be saved in a reduced form, the conservatory is to be planted with *Sempervivums* and the revival of the 'lunatic asylum' of botanic curiosities will be a priority.

Joyce Stewart, who for some time worked in the Orchid Herbarium supported by the Bentham-Moxon Trust, became a Sainsbury Fellow on 2nd September, working more specifically on Orchid conservation and related matters.

Charles Stirton, formerly a South African Liaison Botanist in the Herbarium and currently on a long term Krukoff Fellowship to study Legumes, joined Kew staff members in St. Louis in June to attend the A.E.T.F.A.T. (African Taxonomy) Conference.

After four years working on the Survey of Economic Plants for Arid and semi-Arid Lands (SEPASAL), **Jo Storey** left at the end of February, 1985 to take up a post as Information Officer with MAFF Food Science Division.

Congratulations to **Jane Stubbs** (1984) on being awarded a Kew Medal in 1985, particularly for her work, over many years at Kew, lecturing to visiting parties of school children.

Together with several colleagues, **Barbara Swain** (Herbarium) joined an expedition to Malaya, setting out on 22nd February, 1985. The party spent much of its time in the Taman Negara National Park.

Hugh Syngé (Threatened Plants Unit, Herbarium) left for Mexico on 31st August as a member of the Unesco Scientific Advisory Panel for Biosphere Reserves, which met in Cancun from 2nd to 6th September. Later in the month, on 29th and 30th, he represented Conservation interests at a meeting in Geneva to discuss standardisation of input fields in data bases. On 22nd November he left, with other members of the Threatened Plants Unit, for Las Palmas de Gran Canaria, to attend

the Botanic Gardens and the World Conservation Strategy meeting which he and his unit had been instrumental in planning.

Les Syrratt, retired in May, after serving for nearly eight years as a Messenger in the Herbarium since September, 1977. As a former accountant, he was always willing to help in such matters and once or twice gave the Guild expert advice.

In November, **Soo Tasker** (Gardens Supervisor, Tropical Section) travelled in Mexico for three weeks primarily to study Orchids growing in the wild. On her journey she visited Mexico City, Oaxaca and Graham Pattison (q.v.) at Xalapa.

Noel Lothian (q.v.) spent a month travelling in New Zealand in 1985, and reported that he spent a few days in Christchurch where **John Taylor** (1947) arranged visits to various places. John plans to retire soon from his position at Lincoln University where for a number of years he has been lecturing to degree and diploma horticultural students. He has purchased some land on which he proposes to grow blueberries for the market.

Nigel Taylor (Herbarium) attended an Inter-Congress meeting of the International Organisation for Succulent Plant Study, in Zurich in the summer, 1985, to discuss generic delimitation in *Cactaceae*. In September, 1985, his book 'The Genus *Echinocereus*' (RBG, Kew and Collingridge) was published.

Mrs. **Shirley Taylor**, at one time an Assistant Scientific Officer in the Herbarium, returned to Kew in November to help her husband Peter (Herbarium) with the large quantity of specimens of *Utricularia* on which he has worked for many years, before his retirement in 1986.

Congratulations to **Leonora Thompson** on her appointment on 18th February, 1985, to the permanent post of Assistant Librarian (Archives) which until late 1985 had been only temporary.

From 1st April, 1985, **Stephen Torode** (1982) was appointed Head Gardener (formerly a Curator's post) at Dyffryn Gardens, St. Nicholas, near Cardiff.

Cliff Townsend, until June an Assistant Keeper in the Herbarium, left Kew on 8th January, 1985 to spend six weeks in Kenya where he visited the mountain areas in an attempt to resolve problems in the *Umbelliferae* in connection with the preparation of his account of the family for the Flora of Tropical East Africa.

On 27th July, **Marie-Therese Trolliet** (1980) was married to Bernard Delmas. In 1985 she was still working at the Bordeaux Botanic Garden and visited Kew in August.

In November, **Bernard Verdcourt** (Herbarium) visited one of the herbaria in Lisbon in connection with his work on the family *Rubiaceae* for Flora Zambesiaca.

With regret we record the death on 15th March, 1985, of **Frank Walker** (1937) in his garden at Sandy Bay, Tasmania. He was formerly Chief Horticulturist in the Department of Agriculture, Hobart, Tasmania.

He will be remembered particularly, not only for his contribution to fruit and vegetable industries, but also for his keen interest in and knowledge of floriculture. A more extensive obituary is given elsewhere in this Journal.

In February, **Sally Waltham**, who left Kew in October, 1984, joined several of her former colleagues, led by Dr. John Dransfield (q.v.), on a field trip which she had helped to organise to the Taman Negara National Park in East Malaysia.

In late December, our Editor, **Richard Ward** (1963), met up with Malcolm Leppard (1971) and Tom Müller (1956) in Harare, Zimbabwe. He spent an enjoyable evening with Tom and encourages other Kewites passing through Harare (where an interesting visit can be made to the National Herbarium and Botanic Garden) — to make a point of contacting Malcolm and Tom. Richard reports that the Rotary Club of Kew Gardens, which in 1985, made the Director an Honorary Member, had 27 members at the end of the year and continues to meet every Wednesday evening at 8 p.m. at the Kew Gardens Hotel; visitors are welcome — contact the Editor!

Sadly we record the death on 2nd April, 1985, of **B. B. Wass**, who left Kew in 1937 and lived in Eaton Bray, near Dunstable.

With regret we note the death in 1985 of **J. W. Watson** of Hexham, Northumberland, who left Kew in 1923 and was a life member of the Guild.

Norman Waumsley (1948), who lives in Shepshed in Leicestershire, is currently undertaking some arboricultural consultancy work and is Chairman of the Leicestershire Branch of 'The Men of the Trees'. He retired in August, 1984, after serving Leicestershire County Council for 36 years, first as Horticultural Officer and later as Senior Forestry Officer after Local Government reorganisation.

John Whitehead (1972), who is a member of the Guild Committee, visited Algeria and Peru last year. After spending Christmas, 1984 in Sicily with Barry Phillips (also 1972) — where they had a difficult time tracking down the rare Sicilian Fir in knee-deep snow — he travelled to Algeria in April. In the south of the country he visited the Tassali Adjer mountains in search of the 'Saharan' Cypress. Later in the year, in August he was in Peru involved in heading a group in the Amazon jungle and up the Andes. A highlight of his trip was a one-week expedition to northern Peru to find the 'Giant Buttercup', *Lacopetalum giganteum*.

Tony Whitehill (1962) is Tree Advisory Officer at Adelaide Botanic Gardens and has been responsible for extending the Experimental tree plantations throughout the State. He is also deeply involved with the Historical Garden Society of which he is a council member.

Dr. Gerald Wickens took charge of the Economic and Conservation Section in the Herbarium (ECOS) when it was newly formed on 2nd September. Whilst retaining the data base on arid land species built up for the Survey of Economic Plants for Arid and Semi-arid Lands (SEPASAL), the new Section has diversified to cover all potential

economic and known economic plants of the world by expanding the existing Museum card index system. The transfer of the collections to the new Museum building will be a major task facing the team over the next two to three years. Gerald left on 12th October for Tucson, Arizona, where he attended the Desert Vegetable Symposium and the 'Arid Lands: Today and Tomorrow' Conference. Before returning to Kew on 31st, he visited the U.S. Department of Agriculture at Beltsville, Maryland.

Jo Wicks, as a second-year student in 1985, was awarded a £500 travel scholarship from the Study College Trust and in mid-September she spent a month travelling in Honshu, Japan.

C. J. Wilmot (1947), writing in October, 1985, recalled Kew days 40 years ago. Even 50 years ago he knew the Gardens well when he was a student at the John Innes Institute in the 1930's.

Melanie Wilmot-Dear (Herbarium) was promoted to become a Scientific Officer with effect from 1st January, 1985. Congratulations!

Jeff Wood (Orchid Herbarium) left in October for several weeks field work in Sabah, East Malaysia. He was joined by Jim Comber (q.v.) as well as George Argent (Edinburgh) and Tony Lamb, Andrew Bacon and Anthea Phillipps, who work in Sabah. Together they travelled to the Sipitang District of Sabah not far from the Sarawak border and later Jeff reached the top of Mt. Kinabalu which lies further to the north in the Crocker range. It is intended that the results of his field work will contribute towards an Orchid flora of Sabah.

Andrew Woolfson, who joined the staff as an Assistant Librarian in 1983, left on 12th April to take up a new post as an Information Officer with a Shell oil-exploration team.

We are very pleased that **Winifred Worth** agreed, after assisting for several months, to take over as our new Secretary from September, 1985. She joined the staff in 1975 and until 1980 worked in the Museums. Since then she has been in the Conservation Unit based in the Herbarium serving as Co-ordinator for the Botanical Gardens Conservation Co-ordinating Body.

Congratulations to **Gillian Wynn**, who resigned from her post as Supervisor, Technical Propagation in 1985, on the birth of a son, Oliver, on 7th October.

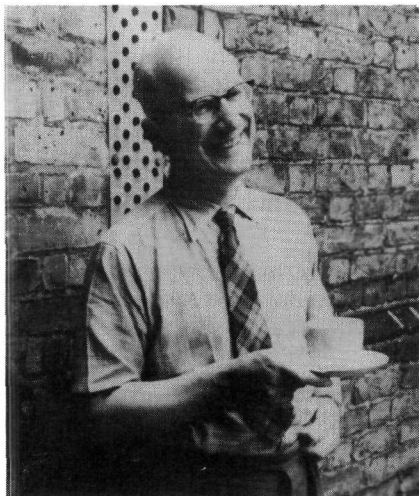
Jin Xiabai, an International Trainee at Kew since September, 1980, returned to the People's Republic of China on 25th February, 1985, where he took a month's holiday before recommencing work in the Beijing Botanic Garden.

According to Mrs. Mary Tyler of Texas, who wrote in April, 1985, **W. A. Yates** and William Falconer (q.v.) were two Kew men who worked with J. B. Baker (her grandfather) in the founding of the Baker Bros. Nursery in the early 1800's at Brenham and Fort Worth in Texas.

Judy Zyk, who studied some years ago in Kew on an internship sponsored by the English Speaking Union, is Director of the Arthur Voyt Scott Horticultural Foundation, Swathmore College, Pennsylvania, and on 7th July, she returned to Kew with a group from the Foundation.

OBITUARIES

KENNETH AIRY SHAW (1902-1985)



As a member of the Herbarium, at the Royal Botanic Gardens, Kew, I should like to say a few words, on behalf of his colleagues, at the passing of a much-loved and esteemed associate and friend.

Of his earlier life, there are few of us now left who have any recollections, as his association with Kew started in 1925, after reading botany at Cambridge, under the influence of that great teacher Humphrey Gilbert-Carter.

His first few months at Kew were spent at the Museums, but he soon moved to the Herbarium, to find himself working under W. B. Turrill and C. V. Marquand,

and among those he counted as his friends were the late Noel Sandwith and Edgar Milne-Redhead, who was later to marry his sister Olive Shaw, both of whom are with us today.

During the war years, he was evacuated, with the collections from Wing C of the Herbarium, to Gloucestershire, where he continued his researches in the company of several of his colleagues. It was during this period that he first became interested in the important and complex plant family — the **Euphorbiaceae**, of which he was later to become a leading authority.

His career at Kew was interrupted, however, from 1952 for six years, during which period he devoted himself to his Christian commitment, editing various Christian publications. He returned to Kew in 1958, at the invitation of the then Director, Sir George Taylor.

For most of us at Kew, it was at this latter stage in his life that we first got to know him, as he began work on the enormous task — with much trepidation, as he later recounted — of compiling the 7th edition of *Willis' Dictionary of Flowering Plants and Ferns*. This finally appeared in 1966 with a further edition in 1973. The meticulous care with which he carried out this work ensured that it became an essential work of reference, not only to the herbarium botanists but to many working in related fields. Today it is difficult to imagine how we coped without it!

The dictionary completed, he was at last able to devote his time to his favourite plants: the **Euphorbiaceae** and he continued to publish many works on that family.

Although concentrating on the Asiatic species, his study of those from Australia ultimately led to two visits to that continent, in 1974 and 1976 — visits that gave him enormous pleasure and added further stimulus to his work.

Mention should also be made of Kenneth Airy Shaw's life-long interest in Entomology. Over the years, he contributed very many notes to various entomological journals and, between 1948 and 1973, he compiled and edited "Additions to the wild Fauna and Flora of the Royal Botanic Gardens, Kew" in which many of the records were his own.

He continued working actively in the Herbarium until shortly before he died, at the age of 83.

In these latter years, he was surrounded by many colleagues, far his junior, who were charmed by his avuncular and good-humoured manner and who relied on and respected him for his extensive knowledge of flowering plants.

Kenneth Airy Shaw was of a retiring disposition but with an underlying sense of humour that easily came to the surface. Perhaps we may share a little with his real niece and grand-nieces, who are here today, some of those family emotions that are evoked at his passing.

His empty desk at the top of Wing C is a sad reminder to us, that we have lost a friend and mentor, to whom we can no longer bring our problem plants, nor our Latin texts for translation.

Our memories and *his* scientific works will ensure that he will not be forgotten.

(Text of an address given by R. M. Harley, during the funeral service for the late H. K. Airy Shaw, at Halford House, Richmond. — 28 August 1985.)

JOHN R. BETT — KEW 1950-52



Kewites of the early fifties will be sad to hear that John passed away in January 1983. He was a real character, always had a serious look on his face, but underneath, he was one of the most humorous and good natured people you could wish to meet.

He was particularly well known for his sporting talents, an excellent footballer and cricketer and no mean performer at tennis and running. He revelled in the secretarial work of the sports clubs

and the notice boards were full of announcements signed John R. Bett Hon. Sec. He enjoyed the Kew social life to the full and was one of many of us at that period who went to the 'Mutuals' on a Monday evening in the old 'Iron Room' and then adjourned to the local pub by the side of Kew Bridge 'The Boathouse', now demolished. We would have a beer (or two) and a sing-song with John always in good voice.

We offer our sympathies to his wife and family in their sad loss.

Ken Evans

PROFESSOR J. P. M. BRENNAN



It was with great sadness that we heard of the death of Professor Brennan on 26th September 1985.

He graduated from Oxford in 1940 with first class honours in Botany. After a period with the Imperial Forestry Institute and field work in Africa, he came to Kew in 1948, and remained until his final illness. He joined the Herbarium Staff as a Senior Scientific Officer and became in turn Principal Scientific Officer in charge of the Tropical African Section; Keeper of the Herbarium; Deputy Director; Director; and, following his retirement, Honorary Research Associate of the Royal Botanic Gardens.

Pat was known and admired as an eminent botanist throughout the world but we knew him better than that. We knew him as a kindly, gentle man who enjoyed the amusing things of everyday life. We knew him as a person who carried his scholarship lightly and shared it generously. We knew him as a modest unassuming scientist who showed the same consideration to the most junior student enquirer as he did to his most distinguished visitor.

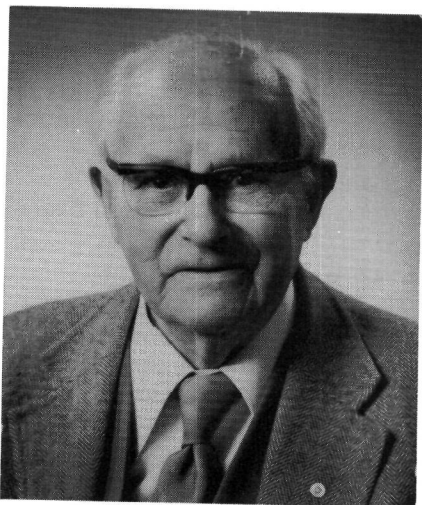
Pat's ambitions were not for himself but for learning and for Kew. We have lost a scholar, a gentleman and a friend but may we never lose what he represented.

We extend all our sympathy to Jean and his family.

Professor A. Bell

PERCIVAL WILLIAM HENRY CONN — "PERCY"

Mr. Conn died whilst on holiday in the Algarve on June 3rd 1985 at the age of 85 years.



As a boy he grew up amongst flowers, his father was head gardener at Borde Hill, Sussex.

Like many loyal lads he enlisted, under age, in the First World War and served in the Royal Flying Corps and Scots Guards.

After the war he came to Kew, working as a Student Gardener. In 1923 he left for Cambridge Botanic Gardens. In 1925 he was appointed Parks Superintendent at Tredegar, South Wales, later taking a similar position at Gateshead. He then went to Coventry where he stayed for most of the war. His horticulture was on a war footing, many other

parks being put down to food production. In this respect he served on the War Agricultural Committee. He was also an advisor of airport camouflage. In 1947 he was appointed Director of Parks, Liverpool where he served until his retirement in 1965. He rebuilt the Botanic Gardens and everywhere enhanced the plant collections. The City exhibited regularly at Chelsea and the City's displays of Orchids and Tropical Plants won many Gold Medals.

In 1952 he was awarded the A.H.R.H.S. and in 1965 the University of Liverpool conferred on him the Honorary Degree of Master of Science for his services to the City.

He was a founder member of the I.P.R.A. of which he became President. He was also President of the International Federation of Parks and Recreation Administration. In addition he was elected a President of The Kew Guild. After retirement he became Flower Manager of the Royal Show of England and was also a judge in The Britain in Bloom Competition.

To his widow, Diana and a son, Christopher, we offer our deepest sympathy.

JOHN GILBERT

John Gilbert passed away on 12th June 1985 aged 65 years.

The fact that his family's building business was over 200 years old could not draw John away from his primary interest in Flowers and Plants. As a boy he explored the countryside naming plants and it was at this time he started his own Private Museum. He led Botanical outings of the Peterborough Museum Society and the Hunts Flora and Fauna Society when he sketched many of the plants seen. At the age of



was not affected by his failing eyesight. He missed all his Kew friends in latter years as they will indeed miss him. To his sister Mary we offer our deepest sympathy at the loss of her beloved brother.

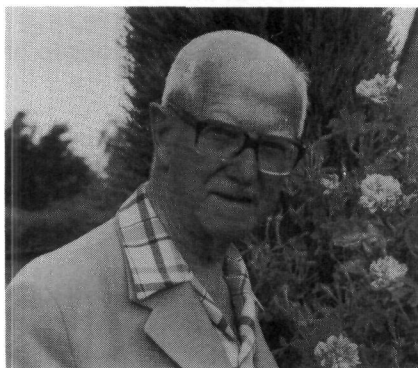
18 he had articles published in *The Nature Reader* and *Nursery World*, complete with his own drawings.

He was to lead walks along the towpath at Kew showing students the local flora. In 1972 he was awarded a prize by the Civil Service for Further Education. He published booklets on "the History of Wansford Stibbington and Peterborough"; "Wansford Paper Mills; their History and Romance" also a Brief History of the Lakes at Kew.

He commented on Laundons work on Kew's Lichens.

John was a most patient and kindly man and his positive attitude

MR. F. P. KNIGHT, F.L.S., V.M.H.



Mr. Frank Knight passed away at his Suffolk home, in the spring of 1985 at the age of 82 years.

He was ninth of a family of 12 and his distinguished career began as a Garden Boy aged 14 at Werrington Park in Cornwall, then Devon. The estate, as well as that at Caerhays Castle was owned by the late J. C. Williams, one of the men who helped finance Forrests collecting expeditions in China. Richard Gregory was the Head Gardener

and he had undergone a refresher course at Edinburgh where most of Forrests plants were being named. It was he who encouraged Frank to apply for a post at Edinburgh and this he did, commencing as a probationer in 1919.

At Edinburgh he was fortunate to work under the great propagator L. B. Stewart. His observation was not confined to the plants for in the office of the Regius Keeper he was to meet Helen Gillon who he subsequently married.

After completing his training at Edinburgh he wished to pursue his career and go onto Kew and this was arranged between the two gardens. In 1923 he entered the Arboretum Nursery under Osborn and Bean. With these men and the quantities of new seed from China he learned quickly. He was promoted to Arboretum Propagator and thus for four years lived in the plantsmans bliss. He was Secretary of the Mutual Improvement Society and won the Hooker Prize twice.

Frank then left Botanics for a spell in the world of commerce. He answered an advertisement for a post with the Alpine Department of Bakers Nurseries where he gained experience in managing commercial contracts. This was to stand him in good stead for his job as Nursery Manager at Waterers Nursery at Knaphill. He subsequently became General Manager there and stayed until the outbreak of war when he took up a post as Horticultural Officer to the Directorate of Camouflage. In 1944 he joined Notcutts as General Manager, later becoming Managing Director.

He became deeply involved with the Committees of the RHS and was elected as Fellow of the Linnaean Society.

Nature dealt Frank and his wife a bitter blow in 1950 when they lost their daughter Joyce at the age of 17.

Towards the end of 1954 the RHS advertised for a Director for the Gardens at Wisley. Frank Knight applied and was appointed. Here was a job that combined all his previous experience. A large collection of plants comprising Botanical and Garden forms, all in need of assembling so as to educate the members of the Society. His skills in communication were manifest at the International level but also at the local level, he was always at Kew functions.

In 1958 he was awarded the V.H.M. and in 1965 the Associate of Honour of the Royal New Zealand Institute of Horticulture.

He was Kew Guild President 1967-68.

Frank Knight leaves many personal and professional friends with fond memories and many thousands of RHS members with a well organised garden at Wisley, where his successors carry on the tradition.

We offer our condolences to his family.

W. J. LAWRENCE, O.B.E., V.M.H.

Horticulture lost one of her most distinguished scientific horticulturists when Lawrence passed away on October 25th 1985 at the age of 86 years.

We now live in a world of highly sophisticated growing mediums but it was all based on the pioneer work carried out at The John Innes Institute. Lawrence joined the establishment, then the John Innes Horticultural Institute, in 1913. The war soon took him away and it was after this that he spent a period at Kew. From Kew he returned to John

Innes as a member of the scientific staff and there he remained until his retirement in 1963. With John Newell he formulated the John Innes Composts which even today hold their own, for they were based on best scientific principle combined with good horticultural husbandry. He also carried out research into colour inheritance in Dahlia and Streptocarpus.

In 1932 he was made Curator of the Institute and in 1954 became Head of the Department of Physiology and Plant Culture.

He was a prolific writer and keenly respected and loved by his colleagues. Through his understanding of nature Lawrence designed a series of composts that today allow millions of gardeners to grow beautiful plants. Few men achieve such beautiful ends in the short span we have available to us.

He was married with three sons and a daughter and to them we send our deepest condolences.

JOHN McCARTAN, N.D.H.



Mr. John McCartan passed away in April 1985 aged 70 years after an active and varied life in Horticulture.

John entered Kew in 1937. this was the year that Women Gardeners returned to Kew and one of the hottest years in Kew's records. In the October he gave an "outstandingly practical" lecture to the Mutual Improvement Society on The Commerical Propagation of Shrubs and Alpines. He won the Sir Joseph Hooker Prize and within six months was appointed Foreman in The Temperate Department.

Prior to joining Kew he was employed by the famous Donard Nurseries, hence the commercial interest and later at Dartington Hall as a Propagator.

He proved that the practical excellence was equalled by academic ability for in 1938 he gained a Distinction in Plant Physics and Ecology.

In 1939 he left Kew to become Senior Horticultural Instructor to the Home Office Schools Service, working at St. Benedicts School, Mortimer, Nr. Reading and Aycliffe School, Nr. Darlington.

In 1946 John moved to Local Government Service as Parks Superintendent to Rhyl U.D.C. Whilst in this post he designed and laid out the Garden of Remembrance and Promenade Gardens.

In 1948 he served with The Imperial War Graves Commission as Area Superintendent North Italy and Austria where he assisted with the work of laying out the War Cemeteries.

In 1951 he returned to Rhyl, throwing his energies into major, post-war developments of one of Britain's most popular holiday resorts. He created the Royal Floral Hall and developed much of Rhyl Promenade.

The leaflet handed out from the Pompeian garden at Chelsea 1957 was a powerful selling document for the resort and the theme of the exhibit no doubt influenced by John's experience in Italy.

Retirement in 1974 gave him more time for The Wales in Bloom Foundation of which he was a founder member, Secretary and Trustee and the Rhyl Horticultural Society which he started.

We offer our deepest condolences to his wife, Helene.

DR. RONALD MELVILLE



Sadly we record the death, at the age of 82, of Dr. Ronald Melville on 6th August 1985, after a period associated with the RBG Kew, spanning 50 years. His funeral took place at Mortlake Crematorium on 12th August and was attended by members of his family and friends from Kew.

Ronald Melville was born in Bristol on 12th March 1903, but after six months the family moved to Cardiff and it was there that he spent his childhood.

Although originally intending to follow a career in medicine he studied pharmaceuticals and in 1924 gained a Diploma of the Pharmaceutical Society. He then moved to London and held several pharmaceutical posts, at the same time studying for a degree in Botany at Burbeck College.

Some years later he gained a scholarship to study for a Ph.D in Plant Physiology at Imperial College and in 1934 joined the staff at Kew, completing his Doctorate in the same year. He was married to Elsie Sharpington in 1935 and they had two children.

At Kew he worked at first in the Museums Department with William Dallimore and John Hutchinson and throughout the war he served in

the Home Guard and continued to work at Kew when others were evacuated. At that time he represented the Royal Botanic Gardens on several committees, including the Vegetable Drugs Committee of the Ministry of Health. In this capacity when the country's supply of Vitamin C from citrus fruits was threatened he recommended the use of Rose Hips and undertook a detailed survey of the British roses. He became deeply involved in directing the development of Rose Hip Syrup production and his was indeed an extremely important contribution to the dietary welfare of the Nation.

After many years working in the Museum he transferred to the Herbarium, in 1950, to take charge of the Australasian Section, a responsibility he retained until his retirement. As a taxonomist he specialised notably in Elms and Roses and worked extensively on Australian plants, an expertise greatly stimulated by a year spent in Australia, from 1952 to 1953, during which he collected more than 20,000 specimens. From 1956 he was engaged in researching Floral Evolution, publishing his new theory of the Angiosperm Flower in 1962 and 1963 and he continued at various times to undertake field work, notably in South Africa, Somalia and New Zealand.

In the New Year's Honours List of 1968 Dr. Melville was made a Companion of the Imperial Service Order for his services and retired as a Senior Principal Scientific Officer in March the same year with some 90 published papers to his credit. Nevertheless he continued to be actively involved as a botanist, working regularly at Kew until his recent months of declining health. He had a long standing interest in conservation and during his retirement he worked for the International Union for the Conservation of Nature from 1968-1973 and was responsible for compiling the first ever Red Data Book of threatened plant species.

He turned his interests more recently to studies of leaf venation linking his findings with theories of Angiosperm Evolution and Paleobotany.

Ronald Melville was exceptional in his depth of knowledge in a wide field of Botanical Discipline and Theory.

Those who have known him during his many years at Kew will remember him with pride as a distinguished and valued colleague and with great affection as a friend.

GERALD RODWAY

Gerald Rodway, for nearly 30 years the orchid specialist at Glasgow Botanic Gardens, died very suddenly on 7th December 1985.

The very fine collection of orchids at Glasgow was built up through his enthusiasm and commitment. Although the collection is mainly of species, he raised a number of hybrids, and **Cattleya** 'Gerald Rodway' was named as a tribute to him in recent years.

He was the author of the book '*Starting with Orchids*'. He was involved in the founding of the Scottish Orchid Society and its first meeting was held in his home.

He was a student at Kew between 1949 and 1951 and he left to join the orchid firm of Sander where he worked at both their St. Albans and Bruges establishments.

E. W. Curtis, Curator, Glasgow Botanics

FRANK WALKER, A.O., V.M., F.L.S., F.A.I.A.S., NDH HORT.

Frank died in his garden at Sandy Bay in Tasmania on 15th March 1985, aged 71 years.

He was born into the sixth generation of family that was deeply involved in horticulture. The nursery, which his father had put his soul into, was taken over the Lands Department of the Government of Tasmania and opened as The W.A.G. Walker Rhododendron Park. Frank's particular interest was pome fruit. He travelled widely gaining experience. This took him to New South Wales, New Zealand, Canada, the United States and finally England.

He studied at London University, Kew and at the East Malling Research Station in Kent. He gained the NDH in 1938.

He returned to the Tasmanian Department of Agriculture in 1939. In 1954 he became Chief Horticulturalist and remained so until his retirement in 1976.

He was awarded life membership of the International Society of Horticultural Science for his contributions to that organisation. He lobbied strongly for the 20th Congress to be held in Sydney. He succeeded and then characteristically put all his energies into persuading people all over the world to attend. His efforts were rewarded with an attendance of 2,000 delegates. He was Branch Secretary (1946) and President (1949) of the Australian Institute of Agricultural Science and an Honorary member of The American Society for Horticultural Science.

He was made a Fellow of the Linnaean Society and an Officer of the General Division of the office of Australia.

In February 1984 he received the Wilhelm Veitch Gold Medal, the highest award given in the field of Horticulture. Frank remained keenly, actively promoting the concept that horticulture plays a vital rôle in our society. We send condolences to his wife Marianne and family.

We are advised that the following members have passed away and their obituaries may be published in a future Journal, or information may not have been forthcoming following correspondence with relatives:

J. Allen
R. W. Balch
K. W. Braid
A. A. Cavanagh
A. Corney
J. Smith (died 1981)
Mrs. M. Smith
B. Wass (died April 1985)
J. Watson

Any further information about these and other Kewites who have passed away should be advised to the Secretary, Kew Guild, Richmond, Surrey as soon as possible. Photographs would also be appreciated, together with career and other information.

KEW GUILD INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st DECEMBER 1985

Year to 31.12.84		INCOME	Year to 31.12.85	
£	£		£	£
1,688.05		Annual Subscriptions and arrears	2,074.01	
159.00		Donations — General	35.67	
2,270.00		Donations — Award scheme	1,077.00	
	4,117.05			3,186.68
		Dividends from Charities Investment Fund:-		
580.22		General Account	504.23	
217.23		Award Scheme	437.70	
	797.45			941.93
139.19		Bank Interest — General A/c	213.21	
190.81		Bank Interest — Award Scheme	509.81	
	330.00			723.02
567.30		Wakehurst Booklet Receipts	1,564.00	
(198.28)		(Less value of stock)	(308.00)	
	369.02			1,256.00
43.32		Sale of Emblems	45.50	
(34.39)		(Less value of stock)	(35.00)	
	8.93			10.50
	181.40	Award scheme soiree and raffle		284.00
	48.81	Sale of Journals		54.50
	12.50	A.G.M. Tea		10.00
—		Annual Dinner Receipts	1,251.67	
(105.95)		(Less cost)	(1,448.42)	
	(105.95)	Annual Dinner Deficit		(196.75)
—	—	Journal Adverts		220.00
—	—	Welsh visit receipts	261.00	
(—) (—)		(Less cost)	(235.00)	
				26.00
	<u>5,759.21</u>			<u>6,515.88</u>
		EXPENDITURE		
	1,780.00	Kew Guild Journal — Printing	2,359.00	
	95.00	Prizes awarded by the Guild	104.00	
	92.91	Hon. Officer's expenses	96.20	
	524.90	General Printing, Postage, Stationery etc.	577.83	
	257.00	Award Scheme Prizes	400.00	
	9.38	Insurance	14.06	
	—	Bank Commission	22.70	
	390.00	Award Scheme Raffle Prizes (Paintings)	—	
	<u>3,149.19</u>			<u>3,573.79</u>
1984		SUMMARY	1985	
£			£	
5,759.21		Total Income	6,515.88	
(3,149.19)		Less total expenditure	(3,573.79)	
<u>2,610.02</u>		Excess of income over expenditure for the year	<u>2,942.09</u>	

KEW GUILD BALANCE SHEET AS AT 31st DECEMBER 1985

Year to 31.12.84		Year to 31.12.85	
£	£	£	£
INVESTED ASSETS			
Charities Official Investment Fund:-			
4,000.00	General Fund	4,000.00	
2,000.00	Award Scheme Fund	2,000.00	
	6,000.00		6,000.00
CURRENT ASSETS			
658.07	Stock — Emblems	623.07	
1,737.88	— Wakehurst Booklets	1,429.88	
2,395.95		2,052.95	
2,073.87	Bank — General Deposit Account	2,087.08	
4,998.83	— Award Scheme Deposit Account	8,321.75	
151.20	— Current Account	100.16	
9,619.85		12,561.94	
LESS CURRENT LIABILITIES			
Life Subscriptions			
	£		
	48 @ £1.00 Half rate — 24.00		
	41 @ £2.00 Half rate — 41.00		
	73 @ £3.15 Half rate — 114.97		
	4 @ £5.25 — 21.00		
(200.97)		(200.97)	
	9,418.88		12,360.97
	15,418.88		18,360.97
NET ASSETS			
FINANCED BY			
12,808.86	Balance brought forward	15,418.88	
2,610.02	Add Excess income over expenditure	2,942.09	
	15,418.88		18,360.97

W. E. Storey
Hon. Treasurer

Audited and found correct

Jill Cowley
David V. Field
21st January 1986

ROYAL BOTANIC GARDENS, KEW

SENIOR SCIENTIFIC, TECHNICAL AND ADMINISTRATIVE STAFF

(31st December 1985)

This list will be printed in the Journal every second year—alternating with the Rules of the Kew Guild. Compiled by Winifred Worth and Martin Sands.

Designations and qualifications have been omitted after all names owing to the administrative difficulties in updating them.

BOARD OF TRUSTEES: The Hon. John D. Eccles (Chairman), Professor W. G. Chaloner, Professor E. C. D. Cocking, J. P. Cousins, Sir Philip M. Dowson, Professor G. E. Fogg, Sir Leslie Fowden, Professor V. H. Heywood, Sir Charles Pereira, Professor Elizabeth B. Robson, Commander L. M. M. Saunders Watson, Sir Huw P. Wheldon.

Director: Professor E. A. Bell
Personal Secretary: Mrs. M. P. Churcher

Deputy Director: Professor K. Jones

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HEO M. A. Arnold Gilliat, Miss J. A. Collins, R. E. R. Gegg (Wakehurst Place)
EO Ms M. P. Long, Miss M. Parker
Sergeant Constable: E.G. Killick
Senior Superintendent of Typists: Mrs. M. J. Brind
Book Shop Manager: Miss E. French
Office Keeper: Miss C. E. Lodge

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Principal: M. King
EO R. Pearson, R. Parmenter

Computer Project Management

SEO W. Loader
EO (Programmers) M. Jackson, S. Coom
Senior Data Processor: A. P. Lister

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Keeper, (DCSO): G. I. Lucas
Deputy Keeper, (SPSO): Dr. I. K. Ferguson
Herbarium Co-ordinator (SSO): M. J. S. Sands

Honorary Research Associates:

Dr. R. W. G. Dennis, P. S. Green, Professor R. E. Holttum, Dr. C. R. Metcalfe

Dicotyledons I

SPSO Dr. R. M. Polhill (Assistant Keeper)
PSO L. L. Forman, Dr. C. Grey-Wilson, Dr. D. R. Hunt, B. F. Mathew, C. C. Townsend, Dr. B. Verdcourt
SSO Dr. F. G. Bell, Mrs. D. M. Bridson
HSO G. P. Lewis
SO Miss M. Bywater, Miss S. M. Andrews

Dicotyledons II

SPSO Dr. I. K. Ferguson (Assistant Keeper)
 PSO Dr. R. K. Brummit, Dr. R. M. Harley, F. N. Hepper, C. Jeffrey, D. Philcox,
 A. R. Radcliffe-Smith
 SSO Mrs. S. Holmes (P/T)
 HSO Miss P. Halliday
 SO Dr. J. N. Hind, B. L. Stannard, Miss C. M. Wilmot-Dear

Monocotyledons

SPSO Dr. W. D. Clayton (Assistant Keeper)
 PSO Dr. P. J. Cribb, Dr. J. Dransfield, W. Marais, S. A. Renvoize, P. G. Taylor
 SSO Dr. T. A. Cope, S. J. Mayo
 HSO Dr. B. S. P. Croxall
 SO Mrs. E. J. Cowley, P. J. Edwards, Dr. D. J. Simpson, J. J. Wood

Mycology

PSO Dr. D. A. Reid (Assistant Keeper), Dr. D. M. Pegler
 SSO B. M. Spooner

Palynology Unit

SPSO Dr. I. K. Ferguson
 HSO Mrs. M. N. Harley

Kew Bulletin and Index Kewensis Unit

PSO M. J. E. Coode
 HSO Miss R. A. Davies
 SO Mrs. V. Chidzey, Mrs. S. Dickerson, Miss K. M. Lloyd, Mrs. D. M. Polhill
 (P/T)

Economics and Conservation Unit

PSO Dr. G. E. Wickens
 SSO D. V. Field
 SO Miss S. Knees, Miss F. E. M. Booth

Flora Zambesiaca Unit

PSO Dr. O. G. E. Launert

General Services Unit

SO J. B. J. Blewett

Gardens Verifier

HSO N. P. Taylor

Quarantine

PSO A. G. Bailey

Artist in Residence: Miss S. Wendon

Photographic Unit

Principal Photographer: T. A. Harwood
 Senior Photographer: M. Svanderlik

Liaison Botanists: C. Dunlop (Australia), Dr. B. M. Wadhwa (India), E. R. Guest
 (Iraq), B. Schrire (South Africa)

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 Deputy Librarian: J. P. Flanagan

Indexing Services Librarian: Miss A. McNeil

Assistant Librarians: Miss A. M. MacDonald, Miss K. Meacher, Miss H. C. Morris,
Miss L. E. Thompson

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Keeper (DCSO): Professor K. Jones

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SPSO Dr. D. F. Cutler (Head of Section)

PSO Dr. S. J. Owens

SSO Miss M. Gregory

HSO Dr. P. J. Rudale

SO Dr. P. E. Gasson, Miss S. McGrath, T. J. Lawrence

Cyto-genetics

PSO Dr. P. E. Brandham

HSO Miss M. A. T. Johnson, Dr. A. Kenton

Biochemistry

PSO T. Reynolds (Head of Section), Dr. L. E. Fellows

HSO Dr. M. Simmons

SO Miss J. V. Dring

Plant Physiology (Wakehurst Place)

PSO R. D. Smith (Head of Section)

SSO D. J. C. Fox

HSO Dr. J. B. Dickie, S. H. Linington, Dr. H. W. Pritchard, Dr. R. J. Probert

ECONOMIC BOTANY AND MUSEUMS DIVISION

PSO Dr. R. B. Burbage (Head of Division, early 1986)

Guide Lecturers (HSO): Miss L. M. Ponsonby, Mrs. G. R. L. Bromley

Exhibition Officer: P. Reid

LIVING COLLECTIONS DIVISION

Curator: J. B. E. Simmons

Deputy Curator: R. I. Beyer

Tropical Section

Assistant Curator: J. R. Woodhams

Gardens Supervisors: P. T. J. Bradley, A. J. Hale, M. J. Marsh, Miss S. Tasker

Temperate Section

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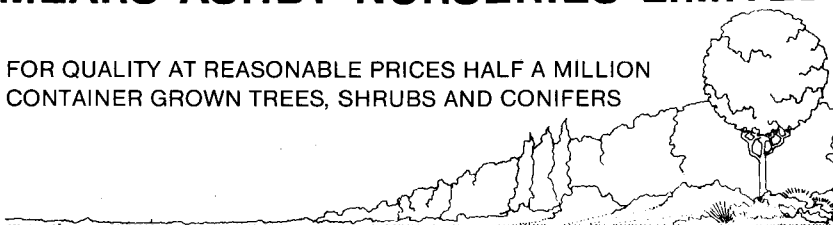
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