

# **THE JOURNAL OF THE KEW GUILD**

**Founded in 1893**

The Association of members of the Kew staff past and present

## **Events of 1994**

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**Royal Botanic Gardens  
Kew**

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# ROYAL BOTANIC GARDENS, KEW

## THE KEW GUILD

Patron: Her Royal Highness Princess Alexandra

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Award Scheme Chair: N. Hepper  
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 Students' Union Representatives: B. Murrell, D. Webster

### EDITORIAL

Subscriptions went up considerably at the A.G.M., but this enabled us to mail all members monthly copies of the *Kew Guardian*. Thus you now get up-to-date news of Kew and Kewites. **The Kew Guild cannot subsidise you! Despite several written reminders, many members have ignored updating their standing orders at the bank. (A direct debiting system is not practicable for the Guild — the Committee have looked at this alternative.) Those failing to pay the new subscription 1st January will not received *The Journal* in May/June. Subs are £15 (Staff £12, students £6).**

Our Recruitment sub-committee continues to help improve communication, P.R. and membership of the Guild. Please do *your* bit and encourage non Guild members to join the Kew Guild. It is as easy as a telephone call to our Membership Secretary!

Regrettably no-one has volunteered as Advertising Manager this year and my personal and business commitments do not allow enough time to do this myself. Consider, please, if *you* could help.

Guild fellowship is on a high! You have a splendid, gifted, influential and willing committee who have moved mountains on your behalf this year. Use us, write to us, tell us about yourself, your old colleagues, your family, your experiences, and give us an even better *Journal* next year. Come to the next A.G.M. or Annual Dinner.

Keep in touch!

Richard C. Ward  
*Hon. Editor*

Guild Secretary: Kenwyn Pearson (Tel: 01444 232973)  
Membership/Subscriptions: Jill Cowley (Tel: 0181 332 5296)  
Editor: Richard Ward (Tel: 0181 948 2970)

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### ADVERTISE IN YOUR JOURNAL

Your support matters. We suggest a 'donation' of £40 quarter page, £60 half page and £100 whole page. Cheque payable to "The Kew Guild". Add £10 for non-members if a *Journal* is required, incl. p & p, and send to the Editor. Enclose your advertisement (sizes at the back of this *Journal*) together with logos etc. We will return your copy if requested, and you will be sent the proofs for checking before publication.

Your advertisement will reach about 600 Kewites around the world! Do it!

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**JOHN SALES, V.M.H., F.I.Hort., M.Hort. (R.H.S.)**

President 1994/95



John Sales was always interested in growing things, but the idea of horticulture as a career did not crystallize until teenage whilst at grammar school in central London, to the despair of his teachers.

1945 saw the school, Westminster City, return to Palace Street, Westminster, between the National Trust's Head Office in Queen Anne's Gate and the R.H.S. in Vincent Square, organisations which would influence his later life.

He started work in nurseries near Swanley in Kent growing cut flowers and salad crops, first commercially and then for the Kent Horticultural Institute where he also attended day-release classes.

Two years of National Service in the R.A.F. were spent reasonably agreeably in Malta, horticultural interest being sustained by a correspondence course. In 1953 John went back to Swanley for a one-year National Certificate course in general horticulture, did well and stayed on for a second one-year course in Commercial Glasshouse Crops. At this time his mentors were Roy Gunton, later Head of Horticulture at Oaklands and Kewite George Brown, who subsequently returned to Kew as Assistant Curator and was for many years a distinguished Editor of this *Journal*.

More importantly, John met his future wife Lyn (née Thompson) at Swanley and they were married in 1958. Since then he has enjoyed Lyn's loving and constant support, personally and professionally, including her being his secretary for 17 years of his career with the National Trust. They have three sons and two grandsons.

Deciding, after all, that his main interest lay with plants and gardens he applied to be a Student Gardener at Kew. Following a few weeks of summer work at Hampton Court and six months as an Improver at Kew, John began his course in spring 1956. Colleagues on the course included Alan Hart, Tom Risely, Allan Paterson, Hans Overeynder, Tom Müller and Ben Jacobsen. John enjoyed spells in the Tropical Pits, Decorative Department, "T" Range and Temperate House Pits. At that time Sir George Taylor was Director and Bill Campbell Curator.

John realised his ambition to pass the National Diploma in Horticulture (now M.Hort.(R.H.S.)) in 1957 and he received prizes for his work as Secretary of the Mutual Improvement Society and for the best overall performance on the course.

On leaving Kew in spring 1958 he spent a few months working for Ealing Parks Department before becoming Assistant Lecturer in Horticulture at the Essex Institute of Agriculture (now Writtle College) under Austin Healey. Once settled, John enjoyed his teaching career, was promoted and stayed for 12 years. Much of the pleasure came from being in charge of the rapidly developing garden and grounds.

At Writtle John was responsible for introducing one of the first (Ordinary) National Diploma sandwich courses in Amenity Horticulture. After leaving he went on to be National Educational Assessor for the four O.N.D. courses then in progress.

With his long-standing interest in historic gardens, architecture and the arts, a job as Horticulturist with the National Trust, assistant to Graham Stuart Thomas, sounded almost too good to be true. The culture change was profound and the learning curve steep but after three years John was appointed to succeed Graham Thomas as (Chief) Gardens Adviser.

Since 1973 and his move to Cirencester, the historic garden conservation movement has rapidly gathered strength and sophistication, the National Trust always playing a leading role. With his colleagues, the Chief Gardens Adviser is responsible for all kinds of advice in more than 160 historic gardens and landscape parks throughout England, Wales and Northern Ireland.

Since joining the Trust John has travelled widely, not only within Britain for his regular visits to the Trust's gardens, but also abroad for conferences and lecture tours to most West European countries; also Poland, Australia, New Zealand, Canada and the U.S.A. In the late 1970s he edited a series of books on the Gardens of Britain and wrote *West Country Gardens* (Gloucestershire, Wiltshire, Somerset and Avon). On behalf of the Trust he has been a Council Member of N.C.C.P.G. since it began and served on the Council of the Garden History Society for several years. He completed a five-year spell as a Governor of Pershore College and was a member of the R.H.S. Gardens Committee for a similar period. For the R.H.S. he is also a member of the Examinations Board, V.M.M. and A.H.R.H.S. Committees and is Chairman of the Assessors for the Judging of Gardens at the Chelsea and Hampton Court shows.

As well as professionally, John is an enthusiastic weekend gardener, with a two and a half acre garden near Cirencester, recently featured in *The Garden* and with Roy Lancaster in the Channel 4 *Garden Club*. A keen photographer, John is a frequent lecturer at conferences of the Garden History Society, Institute of Horticulture and other bodies, R.H.S. and at universities and colleges.

In 1990 John was awarded a Medal of Honour by the International Castles Institute (now part of Europa Nostra) and in 1991 he received the Royal Horticultural Society's highest award, the Victoria Medal of Honour.

## ROY K. MOWFORTH (1934-37)

Vice President (1994-95)

### Notes and Reminiscences

Born in Hull, Yorkshire, May 26th 1911. Moved to Ripon in 1913 when my father was appointed Head Gardener at Sharow Hall, near Ripon. Educated in village school and Ripon Grammar School.

Worked with my father for two years before being awarded a Ministry of Agriculture Scholarship which enabled me to take the Certificate Course at Reading University. Not a difficult course but very useful as a starter.

Worked on a private estate in Kent to get some glasshouse experience. Mr. C. Raffil was a friend of the Head Gardener and a frequent visitor. After two years I moved to Clacton-on-Sea Parks Department where I was a propagator, chiefly of bedding plants.

A Kewite, W. Franklin, was Deputy Chief. He moved to Coventry and was replaced by Jock Douglas, famous for his talk to the Kew Mutual which started with him playing Mendleson's Spring Song on his violin.

After two years at Clacton I was told to report at Kew Gardens in 14 days' time. This meant the first week in December. Not really the best time to dive into the lecture courses.

I had a very enjoyable few weeks in a team which included George Addison and a South African chap named Paddy Wonfor. This came to an abrupt end when C. P. Raffil walked in and said "You worked with Mr. Wood in Kent". I said yes. The reply was "I have made arrangements with Mr. Stenning and will expect to see you in the Temperate House in the morning".

I went down to the Temperate House and met Jim Leath, he was Deputy in Charge. He took me to the base of the iron staircase and said "I want all this cutting down, it is just a nuisance". I did as he said, made a real good job and walked up the centre path with the evidence in my arms. The door of the office opened just as I was about to pass and out walked Charlie — he really frightened me. It appears the plant was **Semile androgyna**, had taken him 25 years to grow and it had taken me 25 minutes to cut it down. I never forgot the name of that plant and was convinced that the flowers should be red.

All the lectures were enjoyable. I always thought Dr. Turill was outstanding.

I was Lecture Clerk for Mr. Dallimore. He liked to look at notebooks almost every week. It was not an easy job getting them all in on time. When he decided that we should visit Bedgebury I was put in charge of the coach. Although it was April, it snowed most of the time on the way down. It was a very slow journey and he was nearly frozen waiting for us to arrive.

Towards the end of my two years as a Kew student I started looking at jobs. There were not many being offered and I enjoyed Kew so much I am afraid my efforts were a bit half-hearted.



I applied for an extension and got it but about two months after that a job came up in Bristol. This was teaching gardening to boys in an Approved School. I was the Assistant. This was a real change but I got used to it and managed to get several of the lads through the R.H.S. general examination.

After about two years an H.M.I. came to see me and said "We are opening a school at Nantwich in Chesire. I want you to take charge of a really run down garden". This was really good. There were 22 acres, including the playing fields, a marvellous soil, younger boys than Bristol who were much easier to fill with enthusiasm about the work in hand.

As the war had just started, vegetable growing was important. The soil and general layout was very suitable so we were able to produce some first class crops. Also, as the army said they did not want me, I was fortunate in being able to really get the place back into good condition.

It was here I met the lady who has been my wife for over 50 years. She was the school nurse.

After some three years I was given the chance to join the War Agricultural Department and was posted up in the Cleveland and Whitby part of the North Riding. The work was strenuous. Market growers were visited during the day, some three nights per week were spent talking to Gardening Societies, W.I.'s etc. and, at weekends, we inspected gardens entered for the Dig for Victory Certificate.

The winter of 1947 was one I shall never forget. It just snowed and snowed. At one crossroads, where the snow had been cleared into a heap, it gained height every day from snow blown off the heather and eventually finished up being over 20 feet high. At the end of this winter I moved to Penrith to become Assistant Lecturer in Horticulture at what was then the Cumberland Farm Institute. This was an interesting job with a lot of very long night journeys, often over rough country, as we gave talks in both Cumberland and Westmorland.

In 1949 I was appointed Head of Horticulture at Penkridge (now the College of Agriculture). I stayed there for 28 years. This proved to be an interesting job in a county full of enthusiastic gardeners. Perhaps one of the most fascinating jobs was removing the old private garden type glass and replacing it with Cambridge aluminium, thus enabling us to build up an extensive plant collection attracting large numbers of amateurs.

Now, having retired from it all I still spend most of my time gardening. As my youngest son followed me into horticulture and has been a Kew student, I am still able to keep in touch. I like to attend the Annual Dinner and meet some of the people who were at Kew with me. Unfortunately, they are becoming rather thin on the ground!

## ANNUAL GENERAL MEETING OF THE KEW GUILD

By **Kenwyn Pearson**, Hon. Secretary

On Saturday September 10th, 1994, 43 members attended the Annual General Meeting of the Kew Guild in the Jodrell Lecture Theatre. The Vice President, Colin Hindmarch, was in the Chair and in the absence of the Secretary, Sandy Atkins, Kenwyn Pearson recorded the minutes.

*Apologies for absence:* Kenwyn Pearson informed the meeting that 31 apologies had been received.

In opening remarks the Chairman thanked all for attending and praised the commitment of members to the Guild, and thanked the Committee for its hard work and the support that he had received throughout the year from Sandy Atkins, the Secretary, and Rebecca Bower, the Treasurer, particularly in the President's absence. The Chairman praised the continuing fellowship of the Guild and the improvements in communication, since the *Kew Guardian* was being sent out to all the members.

*A period of silence* was observed while Nigel Hepper read out the names of members whose deaths had been announced. They were A. H. V. Borrett (1948), J. Clark (1946), Capt. R. Findlay (1929), M. Truman Fossum (1936) and B. A. Martin (1960).



*The minutes* of the Annual General meeting held on 11th September, 1993, and which had been printed in the *Journal* were approved as a true record. Proposed by Leo Pemberton and seconded by Gren Lucas with unanimous approval.

There were no matters arising other than those covered elsewhere on the agenda.

*The Secretary's Report:* The Secretary's report was presented by Nigel Hepper who said: "The Committee met for the first time on 26th October, 1993 and has met three times since. During the year a great deal of work has been achieved and some of this will be covered by the Vice President and sub committee reports.

The work on the restoration of William Aiton's tomb in St. Anne's churchyard on Kew Green has been completed. The cost of the work was met equally by Richmond Council and the Kew Guild. The work was carried out with the full approval of the Vicar and the Church Authorities and was organised and planned by a local architect, Mr. Donald Insall, who lives on Kew Green and specialises in restoration.

A most important development this year has been the setting up of a Recruitment Sub-committee. This committee has been brimming over with new ideas about expanding the membership and the work of the Guild, and it is they who are responsible for the mailing to all members of the *Kew Guardian* every month. The Guild has received many letters praising this initiative.

This spring saw the second glorious flowering of the daffodils planted on Kew Green to commemorate 100 years of the Guild. Unfortunately they were mown too early by accident — by contractors, not Gardens' staff — and some of the effects will not be known until spring 1995.

Our President, John Taylor, from New Zealand, attended the Annual Dinner and chaired a Committee meeting in July, but had sent his apologies for the A.G.M.

The Committee owes a debt of gratitude to Colin Hindmarch who, as Vice President, ably chaired the Committee meetings in John's absence.

This year also marked the unveiling in the Kew Guild Room in the Herbarium, of a donor Board which carries the names of major benefactors to the Kew Guild.

Let us hope that the Kew Guild continues to be as productive in the future."

Martin Sands confirmed, to a question by John Woodhams, that the mistakes made on the Presidential Boards in the Guild Room had now been corrected.

Martin Sands proposed adopting the Secretary's Report and Don MacGuffog seconded and the meeting unanimously approved.

*Membership Secretary's Report:* The Membership Secretary, Jill Cowley, stated that there were 560 members of the Guild at the time of the A.G.M. as opposed to 544 at the same time in the previous year. There were 66 Staff members, 33 Student members, 391 Standard members, of which 11 are Trustees, 61 Life members and 9 Corporate members.

Ten members have been deleted from the database due to non-payment or underpayment, and where they have had at least two reminders.

The Membership Secretary made an appeal for the supply of addresses for the following: E. Baverstock (1954), H. Fitzgibbon (1984), D. W. Francis (1983), Scott C. Green (Staff — 1993), M. Jackson (1976), Miss R. M. Styles (1990). All the above are paid up members but their addresses are unknown.

One hundred reminder letters were sent out in March to all members who do not pay by standing order.

Nigel Hepper suggested that a membership form should be sent out to all members with the next *Kew Guardian*. John Foster was very keen to encourage Kewites to join the Guild and offered to assist in his area of the country (Hampshire) to encourage members. Richard Ward pointed out that a considerable amount of work had been done in recent years to encourage Kewites all over the world to become members, but still there was a need for more recruitment and to sell to Old Kewites the benefits of membership.

Jean Griffin proposed that the Membership Secretary's report be accepted and this was seconded by David Hardman and adopted by the meeting.

*The Treasurer's Report:* The Treasurer, Rebecca Bower, presented her report and made reference to the accounts printed in the *Journal* on pages 332 and 333. It had been an expensive year with various centenary activities. The donation from Network South East to the Award Scheme had been well received and recent investments were now yielding around £3,500 for the Award Scheme funds, enabling the Guild to make fairly sizeable donations.

*The Kew Plantsman* book had made £2,000 and it was hoped that this would generate further income.

All surplus cash was invested with the Charities Investment Fund and it was felt this was the most reliable place for investment. Nigel Hepper proposed accepting the Treasurer's report, with Mike Clift seconding and it received unanimous approval.

*Editor's Report:* In presenting his report the Editor, Richard Ward, appealed for help in advertising for the *Journal*. The Chairman pointed out that this was an important source of income for the *Journal* and would be of great support to the Editor. Harold Hayward offered to assist in this role and was thanked for offering.

The Editor particularly thanked the Committee for their support. The meeting thanked Richard Ward for his continuing work with the *Journal* and praised him for the standard of its publication. This was proposed by Winifred Worth and seconded by Martin Sands and received unanimous support.

*Events Officer's Report:* The Events Officer, Tom Risely, reported that 103 members, guests and friends had attended the Annual Dinner held at Imperial College in May. This had been an excellent occasion and Sir Colin Spedding had made an excellent after-dinner speaker.

It was hoped that in 1995 the Annual Dinner would be held in Kew. After discussion with the incoming President, John Sales, it had been suggested that the Dinner in 1995 should have a theme on Historic Garden Conservation and perhaps subsequent dinners should follow on these lines with a new theme each year. The speeches would be geared to the theme of the dinner.

The number of students attending the Dinner had been a little disappointing considering the subsidised ticket.

The Events Officer particularly thanked the Director of Kew for his support over Guild activities and also in helping to organise the 1995 Dinner.

The members at the meeting welcomed the chance to hold the dinners in future at Kew. The Secretary of the meeting was asked to write to Imperial College to thank them for their past assistance in organising Kew Guild dinners. Gren Lucas proposed acceptance of the Events Officer's report and this was seconded by Leo Pemberton and accepted by the meeting.

*Award Scheme Report:* Kenwyn Pearson reported that there had been three Committee meetings in the year. Many applications for awards had been considered and with an increased amount of money available, including the Network South East Award, some amounts granted were of a substantial nature, as much as £500.

Nigel Hepper was taking over as Chairman of the Award Scheme Sub-Committee. Kenwyn Pearson thanked the Committee for all the hard work they did for the Award Scheme. Leo Pemberton was interested to learn of the support of other charities, and awards given to recipients could be used for pump priming other organisations into giving money. Martin Sands also reminded the meeting and the membership that the Award Scheme is open to all the membership of the Guild.

David Hardman proposed accepting the Award Scheme Report and this was seconded by John Gaggini and accepted by the meeting.

At this point in the meeting the Chairman introduced the subject of Trustees for the Guild, which needed to be addressed in the light of the death of Sir George Taylor. The Trustees

have an important role to play and the Committee, in the past, has been grateful to the Trustees for assistance and guidance. Four members were required and it was hoped at this A.G.M. to appoint a new Trustee. It had also been suggested by the main Committee that the present was a good time to determine the future role of the Trustees and to ask them to define their role for the long term benefit of the Guild.

Don MacGuffog spoke on the paper that had been circulated to the membership prior to the A.G.M. and improving services to the membership. The trial period for the circulation of the *Kew Guardian* had been very successful and the Guild appeared to be stronger than ever.

Tom Risely indicated that further information was being considered of benefit to the members, such as the *Kew Scientist*.

Richard Ward said that careful consideration should be given to post overseas. Diane Owens said that all mail went surface mail unless it was urgent. This kept down the cost. She was thanked for her help with the mailing of Guild items and the support of the Friends of Kew.

John Sales welcomed the immediacy of the information provided by the *Kew Guardian* and also believed that this regular communication kept the name of the Guild in peoples' mind.

After discussion, John Sales proposed adopting the subscription increase (£15 full, £12 staff, £6 students) and Gren Lucas seconded the proposal. Forty-one members were in favour with one voting against and one abstention.

*Students' Prize Day:* John Sales reported on his attendance at Prize Day on Friday 9th September, 1994, and the Guest Speaker had been Professor Chris Baines, who had given an excellent thought-provoking illustrated talk. He was impressed with the diversity and range of prizes and the achievements of the students.

The Kew Medal had been awarded deservedly to Laura Ponsonby and Robin Herbert, Chairman of the Trustees, had given the vote of thanks. Alan Hulme, a Student Gardener, also gave a vote of thanks and appreciation on behalf of fellow students.

The retiring members of the Committee were thanked for their hard work in assisting to keep the Guild progressing forwards.

*Election of New Trustee:* Don MacGuffog proposed Martin Sands and this was seconded by Winifred Worth and received the full approval of the meeting. The Vice President offered congratulations to Martin Sands who, in reply, said that he was very honoured to be asked and looked forward to serving in this capacity.

*Election of Officers:* As no other nominations had been received and there were no further nominations from the meeting, it was proposed by the Chairman that the new members of the Committee should be approved en block as detailed in the A.G.M. notice of meeting and this was seconded by Richard Ward and accepted in full by the meeting.

*Auditors' Report:* The Auditors reported that they had examined the accounts of the Guild and found them to be in order. Ian Leese was re-appointed as auditor and Colin Hindmarch was newly appointed as Auditor for the ensuing year.

*Any Other Business:* Martin Sands reported that he and his wife and Richard Ward and his wife had attended a Buckingham Palace Garden Party. There they had met the Guild Patron, Princess Alexandra and had had a marvellous day. There would be a report in the 1994 *Journal*.

Stuart Henchie informed the meeting that he had emblems, ties and badges for sale.

Nigel Hepper drew attention to the fact that members of the Guild could become Friends of Kew at half price and the good value that this represented.

*Installation of new President:* Colin Hindmarch paid tribute to the Committee and the outgoing President and then invited John Sales, the new President, to take the Chair and receive the Presidential Chain.

John Sales said that he was aware of the great honour to be elected as the President of the Kew Guild and that he would serve the Guild to pursue the objectives of the Guild. In paying



Colin Hindmarch (Vice President 1993/94) hands over the Presidency on behalf of outgoing President, John Taylor of New Zealand, to incoming President John Sales. (Photograph: Tom Risely)

tribute to John Taylor, the outgoing President, he read the following letter:

"Dear John,

It would have been a great pleasure for me to be present at the Annual General Meeting of the Guild and to install you as our President for 1994/95. This is not to be, so please accept my apology for absence. Nevertheless I would like to be the first to congratulate you and wish you a very successful and enjoyable year of office.

I would be grateful if you would convey to the meeting my everlasting thanks for the trust which was placed in me during the past year and I would especially like to thank all those who extended so many kindnesses to my wife and me during our eventful return visit to England.

If any Kewites are able to visit New Zealand in the years ahead, I would like to hear from them so that I may be able to extend hospitality and help to make their visit as enjoyable as our visit was to your country.

With greetings and best wishes from all Kewites 'Down Under'."

*Date of next Annual General Meeting* was announced by the President, to be Saturday 9th September, 1995.

The President thanked everyone for attending and closed the meeting.

### KEW GUARDIAN EXCERPTS

Members should note that this section of the *Journal* will no longer be printed in this or future *Journals* since members receive the *Kew Guardian* month by month.

(Perhaps regrettably though, much of the interesting items will be lost to history in this way!)  
Editor

## PROFILE OF THE NEW KEW GUILD SECRETARY, KENWYN PEARSON

Kenwyn Pearson was born in Bath in 1952 into an ecclesiastical household. This meant many moves around the country. At the age of nine Kenwyn and his family moved from Lancashire to East Anglia to a Rectory with a well laid-out garden and an enormous collection of plants. This, plus encouragement at school, meant it was no surprise to find that a career in horticulture followed.

Leaving Cawston College, an independent school, in 1968, Kenwyn Pearson went to the Norfolk School of Horticulture for a three year apprenticeship where he passed the City and Guilds Examinations and a Royal Horticultural Society General Examination. He then went to Lancashire College to take a National Certificate in Horticulture. In 1972 he entered Kew on the three-year Diploma Course.

After two years with the Milton Keynes Development Corporation as a Landscape Supervisor, he became Head Gardener to the Cadogan Estate in Chelsea in 1978, where he stayed until 1993. He is now a Horticultural Consultant, working in many diverse areas for local authorities, private trusts, contractors, private gardens, colleges of further education, City and Guilds and lecturing. His specialism lies in the maintenance, restoration and management of Heritage Landscapes.

Kenwyn was Chairman of the Professional Gardeners Guild for four years and is now a Vice President. He was Vice Chairman of the National Council for the Conservation of Plants and Gardens from 1988-1990. Kenwyn was Chairman of the Kew Guild Award Scheme until taking over as Secretary of the Guild

at the 1994 A.G.M. He is a Vice Chairman of the Gardeners Royal Benevolent Society, and Chairman of its country home in Sussex, for Retired Gardeners, and now responsible for the rebuilding of this home.

He is a London Gardens Society Judge and judges for London in Bloom. He is also an external Examiner to several horticultural colleges and the National Trust. He is a Council Member of the Institute of Horticulture and also serves on the Professional Affairs Committee, and is a committee member of the Metropolitan Public Gardens Association.

Kenwyn Pearson enjoys many leisure pursuits and the dinner parties are famous and almost legendary. He also enjoys music, is a keen skier and enjoys fell walking, gardening, reading and travel.



President John Sales, left, looks towards our newly elected Secretary, Kenwyn Pearson at the Guild A.G.M. in September 1994.

(Photograph: Tom Risely)

## GUILD COMMITTEE DELIBERATIONS

During 1994 your Committee discussed many and varied matters including Guild Trustees; students' subsidy at the Annual Dinner; the Annual Dinner generally; *Journal* format, contents, indexing and cost; Guild A.G.M.; Kew Guild Award Scheme; selection of Committee Members; membership recruitment and P.R. generally; subscriptions; mailing costs; Royal Patronage of the Kew Guild.

## NEW KEW GUILD COMMITTEE MEMBERS SPOTLIGHT

### GRACE ELNA LOFTHOUSE

After completing a two-year Foreign Correspondents' Course at the Manchester High School of Commerce (which later became the College of Commerce), Grace obtained a post in the *South American Department of a firm of textile manufacturers and shippers*. This was a happy period of working with people who had a vital part in the trade developed between Lancashire and South America and whose working knowledge of the Spanish language was a source of great encouragement and enjoyment to her in its daily use.



Grace Lofthouse.

Unfortunately, the 1939-45 war intervened and for a number of years she was occupied with family responsibilities at home. This period lasted until 1967 when she was able to realise a long-held ambition and come to live in London.

After two years of finding her way around London and its environs she decided to settle in the Richmond area and was successful in acquiring a home at Kew. Having arrived, it followed quite naturally that her target was to work at the Royal Botanic Gardens! This was accomplished in 1970 when her efforts were successful and she gained a post working in the Technical Services Department based in the Arboretum. Here she stayed for two and a half years, working as one of the first Records Assistants at Kew, dealing with the Arboretum index of plants. Her language studies helped greatly with botanical Latin. After this period she was transferred to the Alpine and Herbaceous Department where she remained until her retirement in 1982.

Subsequently, though officially retired, she gained a post with the Tradescant Trust and Museum of Garden History at Lambeth, dealing with the labelling and listing of the 17th century plants in that garden.

More recently she has worked with the Environment Trust for Richmond-upon-Thames and was delighted when invited to join the Kew Guild Committee.

### ROGER STORR, N.D.H., Dip.Hort.Kew (Hons.)

Roger was born in Colne, Lancashire, in 1945. After attending local schools and a technical college, he worked for the Burnley Parks Department prior to taking an N.C.H. course at the Lancashire College of Agriculture at Hutton — now Myerscough. He then moved to the Yorkshire College of Agriculture at Askham Bryan, taking an Advanced Course in Amenity Horticulture prior to entering Kew as a student in 1967. Unwilling to give up the student life, he then took the N.D.H. course at Writtle.



Since 1971 he has been in business on his own account, based in Richmond. (His mother still hopes he will eventually get a proper job!!) His company has worked on a variety of projects, mainly in London and the South East but ranging as far afield as the Channel Isles, Egypt and Canada.

He lives in Teddington with his wife Sheila and three children.

Roger Storr.

## MEMBERSHIP REMINDER

Members are reminded that they will not receive a *Journal* in May/June if they have not paid their subscription (due 1st January each year). In case of queries about membership matters please contact Jill Cowley, Membership Secretary, Royal Botanic Gardens, Kew, Surrey TW9 3AB (Tel. 0181 332 5296).

## REPORT ON THE KEW GUILD ANNUAL DINNER 1994

By Tom Risely

The 1994 Annual Dinner was held at Imperial College, Exhibition Road, London, on Wednesday 25th May. One hundred and two members and guests attended, including 12 students. The event was deemed by those present to be one of the most successful of recent years, due to the high quality of food and service and to the entertaining and informative after-dinner addresses.

The evening began with a sherry reception during which members were introduced to the President, John Taylor and his wife, Morag. The formal proceedings after the meal commenced with the loyal toast and the toast to the President by Past President, C. J. Mitchelmore.

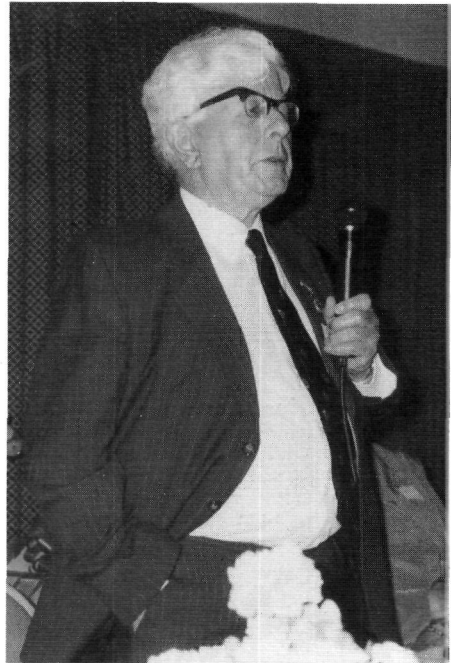
During his response the President referred to his time at Kew during 1946-47 and to his outstanding memories of that period, not least the sub zero temperatures of the longest and coldest winter in recent memory. He recalled the spartan conditions: food rationing, the 6.30 a.m. start, the scarcity of heating in digs and the iron room, and the low wages — £4 a week, less 12 shillings income tax. He also referred to the positive things: the strength of the long-lasting friendships made, the tennis and the cricket, the value of the training he received, the pleasure of working in the Gardens, and the memory of 79,000 visitors in one day (25th May, 1946). John thanked the Guild for the honour of the Presidency which he greatly cherished. He represented many Kewite New Zealanders, and the honour belonged to them equally. In concluding his address, he laid emphasis on the need for Kew to maintain its world leadership in plant conservation and in the protection of endangered species, for the simple reason that there is no other organisation with the background or the authority to match Kew's capabilities.



The President, John O. Taylor.

(Photograph: courtesy of Cyril 'Mitch' Mitchelmore)

The President proposed the toast to the Guild and Colin Hindmarch, Vice President, to the guests. Replying on behalf of the guests, Sir Colin Spedding, Emeritus Professor of Agricultural Sciences, University of Reading, entertained members and guests with a witty and thought-provoking discourse. He, as had the President, stressed the importance of Kew as a scientific organisation, and especially its research in taxonomy. He drew attention to the need to make use of knowledge gained from research and experiment, especially at a time when



Colin Hindmarch, Vice President, *pictured left*, and Cyril Mitchelmore, Past President (1984/85), *pictured right*.  
(Photographs: courtesy of Cyril 'Mitch' Mitchelmore)



Arthur Woodward, Past President 1984/84.  
(Syphoning off the Toastmaster's wine Arthur?!)

there is both public concern and confusion on environmental issues. He illustrated this by asking who, preaching conservation at all costs, would volunteer to conserve a species of flea which could only survive on living human beings?

Professor Spedding spiced his talk with many "ancient Chinese proverbs" — all of which he assured us were genuine — such as the proverb to illustrate that research needs patience, "Chinese peasant he have to wait long time on hillside with mouth open before roast duck fly in". He drew attention to how environmental issues test democracy with a public having strong views on topics about which it is entirely ignorant.

The evening concluded with a welcome to overseas members and a toast to absent friends by the Students' Representative, Benedict Murrell. The evening was guided, as always (it seems), by Toastmaster Richard Ward whose guest was a representative from Rowling Printers, Judy Friedlander, who has typeset the *Journal* for more years than she cares to remember.



## PUBLICITY AND PROMOTION

By Don MacGuffog

The Sub-Committee set up last year to examine ways of improving services to Guild Members was particularly pleased to note the reaction of members to the monthly circulation of the *Kew Guardian* and the enthusiasm with which this has been received. Many members offered to undertake recruitment duties within their own areas and to attempt to re-awaken an interest in the Guild and to play a greater part in Guild activities.

On financial grounds alone it is vital not only to retain members, but also to recruit all those persons who are qualified but for various reasons are not in membership at the present time. It is felt that those members in the regions are best fitted to seek and identify new recruits and the Committee are appreciative of the efforts that have been made both at home and overseas.

An increase in subscriptions was agreed at the A.G.M. in 1994 in order to meet the additional cost of monthly postage. The further circulation to members of the twice yearly publication *Kew Scientist* is another bonus which has been widely commented upon and the Guild must be appreciative of the Director's generosity in making this prestige production available to us.

It has long been recognised that many members feel somewhat isolated from the Guild when they live considerable distances away and can only visit Kew infrequently. The aim, therefore, in circulating publications and information, is to try to draw members closer together and to make membership of the Guild even more worthwhile. There is much more that we can all do and attempting to recruit new members can be a significant first step.

All members of the Guild will have noted the high profile publicity which Kew has been receiving in recent years. Staff members at all levels appear to be increasingly contributing, on a worldwide basis, to horticultural and scientific research and are making a significant contribution in disseminating information. We can all be proud of our association with Kew, whether recent or distant. Involvement with the Guild in whatever capacity can only serve to increase our contribution and at the same time will repay by enhancing the benefits which we can all receive from membership of this fine institution.

Members of the Sub-Committee are Don MacGuffog, Tom Risely, Nigel Hepper, Martin Sands and Hugh Flower. Contact Don on Tel: 01892 531295.

**Editor's Note** The subscription rate from January 1995, as agreed at the A.G.M. in September, is £15 (£12 staff and £6 students). Membership of the Friends of Kew is normally £32 but reduced to £16 for Guild members. Telephone 0181 332 5922 for more details, or write to Friends of Kew, Royal Botanical Gardens, Kew, Richmond, Surrey TW9 3AB.

For Kew Guild information contact the Membership Secretary, Jill Cowley on 0181 332 5296 or write c/o R.B.G., Kew. *NOTE:* the telephone number for R.B.G. Kew main switchboard is 0181 332 5000.

## THE KEW GUILD AT BUCKINGHAM PALACE

By Martin J. S. Sands

Last year (1994), our Patron, Her Royal Highness Princess Alexandra, very kindly invited the Kew Guild to be represented at one of the Royal Garden Parties which are held each summer at Buckingham Palace. It was the Guild Committee's decision that two of the longest serving officers should attend and the choice was made: Richard Ward, Editor of the *Journal* for nearly 20 years (1976-) and Martin Sands, Assistant Secretary (1967-1987) and Chairman of the Centenary Sub-Committee (1986-1993).

Accordingly, on Tuesday, 19th July, in response to the formal invitations from the Lord Chamberlain on behalf of Her Majesty the Queen, Richard and Wienna Ward and my wife, Jill and daughter, Heather and I duly arrived outside Buckingham Palace on a fine summer's afternoon. Walking towards the main archway of the Palace, we ourselves became, very briefly,



At Buckingham Palace in July, 1994 — *from left to right*: Richard and Wiena Ward, Jill, Martin and Heather Sands.

a subject of interest and curiosity to tourists and members of the public. Then, with the many other guests, the five of us passed into the quiet privacy of the large courtyard. From there we walked up the broad carpeted steps of the Grand Entrance, through the elegant Bow Room and out onto the wide, sunlit terrace which forms an integral part of the impressive west facade designed by John Nash. Below us, on the wide lawns, guests in smart suits, armed forces uniforms or vivid red cassocks mingled with those in a myriad of bright dresses and hats or national costumes.

Joining this colourful throng, we relaxed for some time near the refreshment marquee and, to the sound of military band music, enjoyed iced coffee, sandwiches and cakes. In time a contingent of Beefeaters in their splendid uniforms descended from the terrace preceding the emergence from the Palace of the Royal party. By this time the guests had formed a denser crowd, parting then, under the direction of the gentlemen ushers, to create two green vistas leading from the terrace steps. Very soon, the Queen, Prince Phillip and Prince Charles would make their way slowly towards the Royal marquee, meeting and conversing with their visitors along the way.

Meanwhile, moving nearer to the bandstand, with the magnificent herbaceous border visible beyond, we joined several other guests who had been invited to meet Princess Alexandra and, before very long, we were presented to our Patron. During the course of conversation, she enquired about Kew, its students and the Guild and recalled with pleasure the occasion of our Centenary Reception and Dinner, not least because of the unusual setting — the huge Central Hall of the Natural History Museum dominated by a massive Dinosaur skeleton!

Later, while the Royal Family and their special guests were having tea, there was an opportunity to wander away from the main lawns and explore the rest of the garden, which has important historical links with Kew. William Townsend Aiton worked closely with Nash in landscaping the present Buckingham Palace garden in which the picturesque lake is a notable feature. Furthermore, it was while he was still in charge of the Gardens at both Kew and Buckingham Palace that, in 1836, one of four conservatories in the Palace garden was moved to Kew where, until recently, it was known as the Aroid House.

Before the ushers politely began directing everyone back to the terrace, we were able to stroll round the lake, where several pink flamingos stood motionless in the shade. Then, on our way back to the Palace we passed the imposing 15-foot Waterloo Vase which was carved from a single block of marble, given by the Duke of Tuscany to the Prince Regent in gratitude for Britain's defeat of Napoleon. It would have been good to remain longer and look more closely at the interesting collections of trees and shrubs but the afternoon had come to an end and it was time to leave the tranquil garden of Buckingham Palace and return home through the busy streets of London.

The Royal Garden Party was certainly a memorable occasion on which it was indeed a privilege to be representing the Kew Guild.

## THE KEW GUILD AWARD SCHEME REPORT FOR 1994

By Kenwyn Pearson

The amount available for award has grown considerably in recent years and it is very encouraging to think that the Award Scheme can now support many interesting projects with fairly substantial sums of money.

The amounts available for award in 1994 were from the Dallimore Award (£800), The Tom Arnold Bursary (£180), The Edna Redman Fund Award (£1,400) and £1,500 from general funds. For the first time in 1994 the British Rail Network SouthEast Award of £280 was awarded to Ms Brigitte Laliberté to assist in further studies towards an M.Sc. course in Conservation at Birmingham University.

Other awards made were as follows: Chris Bailey £500 for a study tour to Australia to study **Proteaceae**. Wolfgang Bopp £300 for a study tour to Western Australia to look at **Drosera**. Fiona Dennis £300 studying the Flora of Klamath and Shasta in California. Lance Ingram £300 to study Rhododendrons and native plants on the East Coast of the U.S.A. Suzanne Michal £300 to carry out conservation work on the Galapagos Islands. Benedict Murrell £300 for a study tour to India and in particular to the Trivandrum Tropical Gardens. Colin Parberry £750 to study horticultural techniques in Japanese gardens. Tim Upson £100 for a botanical expedition to the Atlas Mountains of Morocco, studying **Lavandula**, **Rosmarinus** and **Thymus**. Annette Wickham £500 for a study trip to the U.S.A. looking at arboreta. Graham Pattison £250 for a plant collecting trip to Mexico. Rachel Martin £70 for a trip to the Joseph Reynold O'Neal Botanic Garden, British Virgin Islands. Clive Foster £70 for the study of glasshouse practices in the U.S.A. and Janet Burnell £70 for a study tour to India.

The main time when awards are made is in March, but proposals are presented to the Committee throughout the year and if funds are still available and the project is worthy of support, they will assist. The Committee is always keen to publicise the Award Scheme and also to ensure that all members of the Kew Guild are aware that they can apply for assistance on any project to further their career or study.

The Committee organised a successful A.G.M. day with members and guests enjoying tours of the Rock Garden and also of St. Anne's Churchyard to look particularly at the newly restored Aiton Tomb. This was followed by a buffet Supper.

Kenwyn Pearson resigned as Chairman of the Award Scheme to move to pastures new within the Guild and Nigel Hepper has taken over this position.

The Committee for 1994/95 is comprised of the following:

Nigel Hepper — Chair  
 David Barnes — Secretary based at the School of Horticulture  
 Hugh Flower  
 Don MacGuffog  
 Mark Pitman  
 Benedict Murrell — Student Representative

## A SERIES OF REPORTS OF AWARD SCHEME AND OTHER GUILD FUND RECIPIENTS

Collated alphabetically by author, by David Barnes, Award Scheme Secretary

One of the conditions of the Awards is that winners submit their reports for publication in *The Kew Guild Journal*.

### VISIT TO THE SOUTH WEST OF WESTERN AUSTRALIA Between the 13th August and the 29th September, 1994

By Wolfgang Bopp

The first two weeks were spent visiting different organisations in order to establish contacts and learn about their work involving the flora of Western Australia. Amongst those organisations were the Department of Agriculture, where Dr. Alison Fuss explained their involvement with the cut flower industry and Curtin University, which are also involved in the breeding and trialing of new species and cultivars for the cut flower trade and other commercial interests. With the University of Western Australia, Wolfgang was able to join a three day field trip to collect **Boronia megastigma** samples. This species is used as a cut flower and more importantly the oil, produced by the flowers, is used for perfumes and cosmetics. The U.W.A. hopes to identify the highest yielding genotypes and introduce those into cultivation and thereby taking the pressure off the remaining natural populations of this plant, which is found in some wetlands of the extreme south west.

Wolfgang was also invited to visit a rehabilitation site of the Alcoa Ltd. Corporation, an aluminium mining company. It was interesting to see how an open cast mining site can be turned into a semi-natural woodland (forest) by using direct seeding techniques. The company is presently using more than 60 tree and shrub species for this work, all of which are of the right provenance origin.

The second part of the scholarship time was spent travelling the south west of the state to see the different vegetation types and, in particular, to study and collect **Drosera**. Wolfgang travelled north to Kalbarri National Park and then south via Southern Cross to the Fitzgerald National Park, returning to Perth via Mt. Barker. This enabled him to see the vegetation of the Southern and Northern Sandplains, the Wheatbelt, Transitional Woodland, Albany District, Stirling Range and the Jarrah and Karri Forest. All these are home to different species of sundews, many of which are endemic to relatively small areas. Wolfgang is extremely grateful to Dr. Neville Marchant, Acting Director of the Western Australian Herbarium, who enabled him to make more than 90 herbarium specimen collections for the Western Australian Herbarium. Duplicates of this material have been donated by the W.A. Herbarium to Kew and also to the University of Reading, which also received D.N.A. samples to facilitate further research and promote a closer collaboration between Reading University, the Western Australian Herbarium and The University of Adelaide.

On his travels, Wolfgang visited several National Parks. These play an important part in conserving the landscape and the flora and fauna within it, especially in the south west where development, farming and mining have been a constant pressure on the land. As each National Park has its own habitats, which are often not found anywhere else, the monitoring of the flora and fauna within these Parks is vital and most are therefore in the process of building their own herbaria, to which, whenever possible, a duplicate of Wolfgang's collection has been added.

Towards the end of the stay in Western Australia, Wolfgang visited Nindethana Seed Service, a seed company near Mt. Barker who offer seeds of about 3,000 Australian taxa. In view of the planned new Australian House Display at Kew, Peter Luscombe, the company owner, has offered to provide seed for trials in support of this project.

Wolfgang would like to thank the Kew Guild for the support which enabled him to visit this unique country.

## THE CHITRAL GOL NATIONAL PARK

By Janet Burnell

The Chitral Gol National Park (7,750 ha) is situated in the northernmost district of the North West Frontier Province (N.W.F.P.) of Pakistan, 3 km west of Chitral town. Originally it was a hunting reserve owned by the Mehtar (ruler of the former State of Chitral), it was declared a national park in 1985, primarily to protect the markhor (large mountain goat) and other wildlife such as ibex, snow leopard, black bear, wolves and urial. The objectives are: to preserve the landscape in its natural state; protect the indigenous flora and fauna; manage wildlife populations and to develop facilities for research and tourism.

The park includes the narrow valley of the Chitral Gol, the broad basin and its head (summer pasture) and the surrounding slopes up to the high peaks. The altitude ranges from 1,500 m to 4,979 m. The rock is shale and limestone and although the soil of the valley floor is quite deep, on the slopes it is shallow and easily eroded and in many areas landslides have formed large scree slopes.

The monsoon rains do not reach this part of the Hindu Kush range and so the conditions are dry and temperate. The mean annual rainfall is 450 m while the temperature ranges from a maximum of 43°C in July to a minimum of -12°C in January.

As part of my study tour to Northern Pakistan I spent the last week of July in Chitral, where I was looked after by Mr. Faraz Khan, the District Forest Officer, Wildlife Division. I spent three days in the Chitral Gol National Park with staff from District Forest Office. From the town we walked to the first lodge (2,780 m) through *Quercus ilex* and *Artemesia* scrub. After a night's rest we scrambled across scree slopes and walked through *Cedrus deodara*, *Pinus gerardiana* and *P. wallichiana* forest to more dense vegetation by the nullah (2,187 m). We then climbed over a ridge (3,130 m) to the summer pastures (2,781 m). The pastures were heavily trampled by domestic animals, although there were few plants in flower some did have seed (*Eremurus*, *Podocarpus*).

The following day we walked up through the dry scrub of *Prangos*, *Viburnum cotinifolium*, *Cotoneaster nummularia*, *Nepeta podostachys* to a pass at 3,757 m. Between the rocks on the open scree slopes deep rooted plants such as *Corydalis crassissima* and *Rumex hastatus* were growing. Having crossed the pass it took seven hours to walk down to the village of Shoghor (2,165 m). At the top of this north-facing slope (where snow still lay around), *Cousinia Juniperus* and *Ephedera* dominated the vegetation. Further down we stopped by some springs where shepherds had their summer huts, *Swertia*, *Podocarpus*, *Mentha*, *Salix* and *Epipactis* were growing in the moist turf. The last few miles into the village we walked by the side of an irrigation channel which snaked around the contour of the mountain side, *Salix*, *Sophora*, *Sorbaria*, *Tamarix*, *Hippophae*, *Althea*, *Spiraea*, *Acer*, *Juniperus*, *Populus*, *Elaeagnus* and *Mentha* were growing along the banks.

No families live in the park but the inhabitants of the seven hamlets on the periphery may collect dry firewood but no trees or scrub are allowed to be cut. These people may seasonally graze a limited number of animals in the park. The park is divided into a buffer zone and a core zone. In the core zone no grazing or collecting of wood is permitted.

In 1985 all grazing was banned and this had an adverse effect on the wildlife. The wolves and snow leopard that normally fed on the domestic animals started to take more ibex and markhor. When the population of these animals became very low the numbers of wolves and snow leopard also decreased. Limited grazing is now permitted and the number of ibex and markhor are said to be on the increase. No study has been made into the effect of grazing on the pastures. When I was there the summer pastures were being very heavily grazed by sheep, goats and cattle and the ground was badly poached and compacted, especially near the corrals.

This trek enabled me to see the many plant habitats and vegetation types and to appreciate the fragility of the environment in the Chitral Gol. I would have liked to compare the vegetation of the summer pastures inside the core zone to that in the buffer zones, but this was not possible because all the pasture land is in the buffer zone and therefore it is all grazed. There

is illegal grazing, poaching and felling of trees but with few staff in such a rugged and remote area this is impossible to control without the co-operation of the local people.

The Aga Khan Rural Support Group (A.K.R.S.P.) has, through local village organisations, many forestry plantations near the villages in the Chitral area. It is hoped that in time quick growing tree species will provide fodder, firewood and timber for the locals and that the pressure will be taken off the natural forests.

## CALIFORNIA — A STUDY IN DIVERSITY

By Fiona Dennis

I departed for California in June 1994, on a six week journey that was to both enrich my knowledge of America's native flora and to broaden my horizons in horticulture. It was also to prove challenging in a number of other ways too!

My first stop was Los Angeles, City of Angels, where I managed to find the seediest of hostels which afforded me a mattress on the floor. The next morning I discovered there had been a triple killing in the next block down and a number of enlightening facts about this area were revealed in details not for the squeamish. I determined to hire a car that day and head for the State Park in Malibu.

Learning to drive an automatic car on the right hand side of an eight-lane freeway in central L.A. brought its own rewards. It was with great pleasure that I pitched my first tent of the trip, noting the ever present danger of catching Lyme Disease, picked up by walking in tick-infested grassland. The Malibu Creek State Park was my first observation of chaparral, an ecological niche so characteristic of this region. Typical plant species include **Artemisia rothrockii**, **Penstemon sp.** and **Argemone**. There is also riparian woodland, containing **Quercus agrifolia** and **Salix sp.** as well as the rocky foothills which support, among other species, the rare **Dudleya transkiae**. Malibu Creek State Park is of national significance as it encompasses one of the last remaining fragments of primary Valley Oak woodland (**Quercus lobata**).

Then I attended a conference, 'Common Ground', in Pasadena. This was arranged by the American Association of Botanic Gardens and Arboretums and hosted at the Huntington Botanic Gardens. This is a superb botanic garden with a large cacti and succulent collection (outside, of course). These include specimens of **Fouqueria splendens**, **Opuntia sp.** and **Euphorbia sp.** of massive dimensions. There is also an authentically designed Japanese Garden with a Zen bamboo garden, a moon bridge and a traditional, raked, gravel garden. The conference consisted of a number of lectures and workshops. Emphasis was on the conservation of native species both in-situ and ex-situ. Other topics included the role of botanic gardens in relation to the local people. Discussion focused on how a botanic garden could meet the needs of the local community as well as the botanical community.

My next destination was the Mojave Desert. This was as far south as I was to travel and at 126°C it was to be one of the briefest of my visits! However fantastic the cacti collection at the Huntington Botanic Garden was, it had not prepared me for the experience of an entirely xerophytic environment. The range of **Opuntia sp.**, including the Jumping Cholla Cactus, (**Opuntia biglovii**), and **Mamallaria sp.**, defied my humble efforts to record all that I saw. The wildlife was unexpectedly rich. During the daytime I saw Roadrunners and Jack Rabbits galore. Snakes were not uncommon and I was lucky to observe a three foot long Rattle Snake stretched across my path (it would have been very unlucky if I hadn't!). At dusk the Tarantula spiders come out and at night the Desert Mouse, the bats and the night owls inhabit the environment. I drove through the Joshua Tree State Monument and observed the tree-like Yuccas (**Yucca brevifolia**), stretching out their branches, looking like Joshua pointing to the west — according to the pioneer Mormons. Momentarily, and much to my amazement, it began to rain. Here in the desert, I experienced the only rain of the trip.

On the drive from the south I passed through much Sagebrush country and spent some time counting species variety and density of the native species growing in this dry and frequently burnt, environment.

The next area I visited was Mono Lake. This is a saline freshwater lake that is replenished annually by the snow-melt from the High Sierras. It has a unique ecological system because of its high salinity. Migrating birds flock here to feed on the Brine-Fly that breed in this brackish water. It is one of the only breeding sites for the Californian Seagull and it is a vital refuge for a number of rare breeds of other birds that depend on the site for rest and food. This beautiful, blue lake has tall, statuesque pillars of carbonated limestone protruding from the surface. These indicate the falling level of the lake. This has resulted from the siphoning-off of the water to supply the city of L.A. and the irrigated agricultural lands of the San Joaquin Valley. The arguments of 'Man versus Nature' continue and this was to be only one of the many debates about water and its utilisation that I was to come across during my travels.

I then camped in the Yosemite National Park, in the shade of the mighty pines found in this region. The primary health hazards here, (to my health), were Bear and Cougar — small fry after the Rattle Snake. I was lucky to catch the end of the flowering season in Tuolumne Meadows. There were plenty of **Dodecatheon sp.**, **Cammasia lietchnikii** and **Polygonum bistortioides** to be seen. In the woodland and riparian parts of the park there were many specimens of **Aquilegia formosa**, **Delphinium consolida**, Rein Orchid (**Harbenaria sp.**), **Lilium sp.** and the heavily scented **Azalea occidentalis**. It was whilst looking for the source of the Yosemite hanging waterfall that I experienced my next close shave with death: in the true tradition of plant hunters, I was reaching over a white-water rock pool to take a photograph, only to find myself tumbling, concussed, under water. Myself and my camera, though both dented, survived.

The conifers of California are varied and extraordinary. The Bristlecone Pines, **Pinus aristata**, of the White Mountains are over 4,000 years old, whilst the Sugar Pine, **Pinus lambertiana**, has cones of up to 26" long. This is only matched by **Pinus coulteri**, which has the world's heaviest pinecone. The small Pinyon Pine, **Pinus monophylla**, has interest as a food source for the native peoples, who would travel considerable distances to harvest their pine kernels.

At the northern extreme of my trip I climbed Lassen Peak, 3,187 m, and observed those plants that had managed to evolve survival strategies for such a punishing climate. (This is also an area that has a problem with plague-infested Chipmunks, curiously enough). I also walked in the fog-enshrouded forests of the mighty Coastal Redwoods, **Sequoia sempervirens**, and visited the Pacific Lumber Company (well known for its particular interest in these trees). I also found the Banana Slug, a striking invertebrate of about 8" long and bright yellow.

I took the coast road back south and camped in Point Lobos Reserve. Here I saw the remaining two stands of the Monterey Cypress, **Cupressus**, clinging precariously onto the cliff faces.

Throughout this journey I was welcomed and guided around botanic gardens. I visited Rancho Santa Ana in the southern part of the State, where I was kindly shown around by the Curator, Dr. O. Mistretta and Bart O'Brien. Here they grow exclusively the flora of the State and their efforts to protect, preserve and develop protocols for cultivation of rare and threatened plants shows the greatest commitment. I also visited Tilden Botanic Garden, part of the East Bay Regional Parks. Stephen Edwards, the Curator, kindly spent a few hours showing me around and explaining the finer taxonomic issues raised by the latest publication of 'The Flora of California' by Muntz — the definitive book on Californian flora. Also Berkley Botanic Gardens, where Roger Raiche, Curator and Holly Forbes, Deputy Curator, spent much of their time showing me around their Garden. At Santa Barbara Botanic Garden, I met Betsy Collins, the Living Collections Manager and Dieter Wilkens, the Director of Research. They introduced me to their extensive native plant collections, including a serpentine bed, an ecological niche often overlooked for its botanical interest.

The trip has been a great enlightenment to me. I have not only observed the native plants of California and the protocols for their cultivation, but also been able to appreciate the efforts being made to protect them, both in-situ and ex-situ. In addition I have discovered the geological diversity of the State and its evolutionary effect upon the great many endemic species unique to California. Above all, perhaps, I have learnt about the ecological diversity of the State, its

significance to the flora and fauna and its vulnerability to change, both natural and manmade. Much of what I have learnt was unforeseen in my original objectives: many of the issues facing the conservationists in California, for example; the naturally occurring problems caused by fire and drought and those caused by man; land development and irrigation. I also discovered something of the history of the plants themselves, through documentation about the native peoples of the State and their sustainable use of plant products.

I would like to extend my sincerest gratitude to the Kew Guild without whose kindness and generous support I could not have undertaken the trip and have benefited in so many different ways.

### **REPORT OF VISIT TO THE U.S.A. AND CANADA TO STUDY THE GLASSHOUSE MANAGEMENT OF FIVE LARGE PUBLIC CONSERVATORIES**

By Clive Foster

In October, 1994, I travelled to the U.S.A. and Canada to study the glasshouse management of five large public conservatories. The rationale behind this was to assess the current status of conservatory management in light of the recent spate of new large scale constructions and in relation to the development of modern growing methods.

Since the 1960's and, in particular during the last ten years, there has been an upsurge of interest in the amenity conservatory due to a variety of technological, social, economic and political factors, i.e. the burgeoning leisure market; corporate or municipality status; engineering developments with glass skinned buildings and increased horticultural and environmental awareness. These are almost identical factors to those present in the heyday of conservatories in the Victorian era when architects such as Joseph Paxton (among his many talents) and Decimus Burton respectively, first designed such magnificent structures as the Crystal Palace and Palm House at Kew. However, as a result of the decline in fortunes supporting many gardens of that time and also the change in tastes to a more naturalistic style of horticulture, that trend did not continue and consequently there have been very few new large scale developments until the recent period. In contrast with this decline, glasshouse management has progressed enormously since that time, as a result of vast post-war scientific and commercial research into plant growth, response and pest control. Additionally glasshouse equipment and computerisation developments have provided horticulturists with tools undreamt of by the Victorians.

Five conservatories were chosen to study methods of environment control, plant husbandry and pest control. The conservatories visited were at Longwood Garden (near Philadelphia, Pennsylvania), The Opryland Hotel (Nashville, Tennessee), Montreal Botanic Garden (Montreal, Quebec), the Myria Gardens (Oklahoma City, Oklahoma) and Mitchell Park (Milwaukee, Wisconsin).

The findings from the trip are contained in a more extensive report enabling the description of technical details. However, my overall impression of the management of these structures was of the high standards of excellence achieved within a variety of different contexts. Longwood is a fine display garden; the Opryland Hotel a magnificently landscaped atrium; the Myriad Gardens and Milwaukee Domes are botanic oriented displays within unique structures; and the Montreal Biodome an imaginatively ambitious "environmental museum". Plant husbandry in particular was of a very high order through a combination of modern environment controls and old fashioned horticultural craft.

The greatest changes in glasshouse management, however, related to the control of pests. Integrated pest management practices are developing across the Atlantic as dramatically as in Europe. The success and increasingly skilled use of such practices by horticulturists has led (as a result of low biocide use) to opportunities to combine flora and fauna in exciting new displays. This was clearly exhibited by the "environment museum" concept in Montreal and to a lesser extent by the Milwaukee Domes and Myriad Gardens which used frogs, lizards and a variety of birds to enhance their displays and educational programmes. As a consequence of this and in combination with new and improving technology, the role of horticulture within conservatories is widening and methods of management changing to accommodate new objectives and possibilities.



## REPORT ON THE STUDY OF RHODODENDRONS, AZALEAS AND NATIVE PLANTS ON THE EAST COAST OF THE U.S.A.

By Lance Ingram

This report has been written on the completion of a travel scholarship to the East Coast of the United States of America by Lance Ingram, Diploma student at The Royal Botanic Gardens, Kew. The duration of the visit was for approximately four and a half weeks and throughout the time spent in the country the study of rhododendrons, azaleas and native plants was undertaken in both cultivated situations and in the wild.

The start of the visit was in Asheville (North Carolina), where the Appalachian chain of mountains are found just west of the city. These are the tallest on the east coast (Mt. Mitchell being 6,000 feet), in addition to being some of the oldest in the world (believed to be 600 million years). Parallel to the Appalachians range is the Blue Ridge Mountains with a parkway winding through scenic views and a botanical paradise and advantage was taken of these treasures whilst visiting the area. These factors, put together with half a million acres of America's most popular park, the Great Smokie, provide a region where it is not surprising to see over 1,400 varieties of flowering plants, including 11 native Rhododendrons. The Great Smokie National Park is also a sanctuary for the world's finest example of temperate forest.

The annual American Rhododendron Society convention was held in Asheville this year, which I attended. The aim of the convention was to group together enthusiasts from all over the world to cover all manner of topics from propagation to pest and diseases as well as visits to near by gardens of interest to see these plants growing.

The National Arboretum in Washington, D.C., was visited next. Here they hold a botanical collection which has educational and research uses, as well as considerable high horticultural value. A network of roads in the grounds enables the visitor to travel from place to place in comparatively short times.

Longwood, in Philadelphia, was the following stop over. This garden is not a botanical garden, but one for display and currently the construction of a native Azalea display is under way. This garden differed in their approach to the way plants are used as it was ornamental only, as opposed to a botanical collection. Both types of gardens are of importance to my study.

Long Island, New York, was the last part of the States before returning to the U.K. and this area gave the opportunity to visit a nature reserve, thus giving an introduction to the flora and fauna of the island.

The information gained from discussions, observation and from reading literature on these plants has enabled the progression in a systematic project on rhododendrons and hopefully too in assisting Kew and Wakehurst Place in their work with rhododendrons.

To conclude . . . the time spent in the United States of America was of benefit to the work I am undertaking at Kew and to my future career. I hope that the information that was collected will be able to be of some use to both Kew and Wakehurst Place in the rhododendron and azalea collections that they hold. It is also hoped that valuable contacts have been made that will be of use to all parties in the future. I have thoroughly enjoyed this opportunity to visit the States, where people are friendly and welcoming and the country has so much to offer. No wonder I came away feeling impressed with not only the places visited, but also horticulture in general.

To end I wish to thank everybody who have supported me financially and who have helped me to organise the arrangements which enabled this travel scholarship to be possible.

### M.Sc. COURSE AT BIRMINGHAM — DESALINATION PROJECT IN TENERIFE

By Brigitte Laliberté, Agr., M.Sc.

Four years ago I came from Canada to work in the Tropical Department of the Living Collection Division. As with most people coming to Kew, being part of this great botanical institution was a fantastic opportunity to learn. In my case, the famous saying of the Tropical

Department "It is only once you leave Kew that you realise how much you have learnt", has never been so true. Kew seems to have made an indelible mark and a definite influence to my career and I can only be grateful that events took such a turn.

I had two years to get to know as many people as possible involved in horticulture, conservation and taxonomy and this has been the real challenge for me. By the time my work visa expired I was ready and willing to further my education and plant conservation was to become my next career move. The M.Sc. course in Conservation and Utilisation of Plant Genetic Resources, at the University of Birmingham was the perfect choice for me, tying my background in Agricultural Sciences and my botanical experience acquired at Kew. I was not disappointed, even though I had very high expectations.

I am grateful to the crop genetic resources network for setting such high standards in plant conservation. The course has a practical approach to conservation as well as a strong emphasis on plant genetics, which is the real basis for conservation. The course has a three-months final thesis project for which I undertook a survey and analysis of seed banks in botanic gardens worldwide at the office of B.G.C.I. (Botanic Gardens Conservation International) at Kew. Botanic gardens are ideal institutions for setting up wild plant seed banks with the aim of preserving rare or threatened plants and of making available plant material for research.

The results of the survey were revealed to be very interesting, with a good response to the questionnaire sent to the 1,600 botanic gardens worldwide. It was found that 30.7% of those seed/genebanks surveyed have some form of low to cool storage facilities, with at least 255,832 accessions of germplasm stored and 17,096 accessions in field genebanks. Of the genebanks 20.4% were of long-term storage with the majority of their accessions stored at  $-18^{\circ}\text{C}$  or less. The long-term seed banks surveyed have an average of 77% of their collections directly collected from the wild. Drying methods and the types of containers used by seed banks remains a concern and more investigation would be needed to assess this situation. At the present, there is no central register of what their collections contain and it is of primary importance to create a network of seed banks for wild plant conservation.

There is also a great need for guidelines for the management of small collections of wild species with limited resources. From the survey it was also found that botanic gardens have to improve their capacity to store the information generated from the seed bank accessions on computer database systems, in order to create an international database and maintain an overview of botanic garden seed holdings. This survey can be used to prepare a draft strategy for the development of an International Botanic Garden Seed Bank Network, including a list of long-term data requirements and a forum for the exchange of ideas and news, and to help create new institutional links with the crop genetic resource sector.

But how can such training lead me to work on a desalination greenhouse project on Tenerife? The Canary Islands have an amazing flora with a wide range of variation over a very small area. They have more endemics than most islands, with over 500. In Europe, only mainland Spain and Greece have more endemic species, many times greater in area. The Canary Islands, like other arid lands of the world, have a major problem of water for agriculture. The Seawater Greenhouse for Arid Lands project in Tenerife has, for scientific objectives, to design, develop and demonstrate a cost effective means of producing both crops and pure water in hot, arid coastal regions.

The project exploits both the high solar radiation and prevailing wind to drive most of the processes. The pumped sea water is evaporated inside the greenhouse, creating a cool and humid environment suitable for a temperate vegetable crop such as lettuce and French beans. The humid air, carried by the wind through evaporation pads, is then condensed on the other side and fresh water is produced. The greenhouse itself produces enough fresh water to irrigate a crop inside and a shade tent area four times greater. It is hoped that enough water will be produced to support xerophytic plantings as well.

The brackish water generated from the process will be used to irrigate halophyte gardens. Several natural salt tolerant species are found on the site and the project will look into the

conservation and re-establishment of indigenous halophytes on disturbed coastal lands in Tenerife. The project is only in its first phase and already exciting results are obtained. Once a gardener . . .

*Editor's Note:* Brigitte received £280 from the Guild's Network SouthEast Fund to assist with travel during her M.Sc. course in Birmingham.

### **"RESETTING THE JEWEL"**

#### **Plant Conservation on Mauritius By Wayne Page**

*"The soil is extremely rocky but fertile as can be judged from the large numbers of trees which are so close together that one can hardly walk in the forest. The trees are mostly black, red and yellow ebony and the high mountain tops of which are often shrouded in mists have thick forests of ebony — smooth boled, the heartwood of which is of as beautiful ebony as may be found in any land, as black as pitch and as smooth as ivory."*

The above description gives the earliest account of the forests of Mauritius by van Warwijck during his visit in 1598. Unlike today, the island was uninhabited, undisturbed and unburdened by the influences of man.

Known to the Arabs and first discovered by the Portuguese, the volcanic island of Mauritius was un-colonised until the Dutch took occupation at the start of the 16th century, whereupon the systematic exploitation of the lowland forests, and particularly the ebony, which was considered by many as the "best in the world", took on a "destructive rage". The Dutch abandoned the island 112 years later after denuding most of the lowland forests, leaving the island open to continued exploitation and development by both the French (1715-1810) and the British.

Three hundred and ninety-four years on and the legacy of the early colonisers presents us with a very different island than van Warwijck experienced in 1598. The exploitation of lowland forests and palm community not only plunged many plant species into extinction, but also numerous endemic animals such as the giant land tortoises and the very symbol of extinction itself, the dodo, from whose disappearance saw the dawn of modern conservation consciousness. The fertile volcanic soils and insular tropical climate provided ideal components for cultivation once the land had been cleared, and sugar (the main export) had already claimed 53% of the land mass by 1965 with much of the remaining forests being cleared for tea and forestry plantations. It is currently estimated that less than 8% of the indigenous forests remain.

Today, modern Mauritius is heavily populated and developed (some 900,000 inhabitants) with a healthy economy and little or no unemployment. It is referred to as the 'Jewel of the Indian Ocean' and this is hardly surprising given its magnificent mountain ranges, turquoise lagoons and white sandy beaches. Indeed, it is these very mountain ranges that confronted early explorers with an impenetrable natural barrier to the interior and so ensuring that some of the biological jewels of this unique island could make an independent stand against extinction. However, these remaining forest areas have also felt the influences of man, albeit indirectly. The first arrivers to Mauritius brought with them the seeds of a very different "destructive rage" — that of exotic plants and animals. The introduction of rats, cats, mongoose and monkeys has caused the dramatic decline of many indigenous animals which evolved without any natural predators. The remaining indigenous forests are under attack by foraging pig, browsing deer and exotic weeds which choke and prevent regeneration, in some cases leaving a sparse native canopy which becomes susceptible to cyclonic winds and subsequent erosion.

Within a few centuries the unique forests of Mauritius have been drastically depleted and the dependent fauna significantly reduced, adding to a long list of world islands whose unique ecosystems have been radically altered by biological invasions. With this knowledge, many may suggest that conservation intervention may be futile and a waste of resources, but it is the very isolation and uniqueness of such islands that offer enormous scope for habitat restoration and species recovery programmes. Mauritius still has vast tracts of remnant forest which have the potential for full recovery. In addition its diverse flora is still relatively intact and although past

centuries have seen the extinction of many animals (particularly the avifauna and reptiles), there still remain nine endemic bird species, 11 endemic reptiles, one endemic fruit bat and a diversity of invertebrates yet to be fully documented.

Armed with this knowledge and a suitcase of horticultural supplies, I ventured off to Mauritius to undertake plant conservation work on the island. Financed by the Thornton Smith Travel Scholarship and additional financial support from the Kew Guild, I flew out to this tropical island for an initial period of 12 months. I have been captivated by the country since my arrival and convinced of the importance of our intervention to conserving the island's wildlife.

From October, 1993, I have been working with the Mauritius Wildlife Fund, in collaboration with the Conservation Project Development Unit of the Royal Botanic Gardens, Kew with support and encouragement from the National Parks and Conservation Services, Ministry of Agriculture, Fisheries and Natural Resources, Government of Mauritius. The important field work is now generously sponsored by the Friends of Kew.

Established in 1984 in an effort to save the last remaining endemic wildlife of Mauritius from extinction, the Mauritian Wildlife Fund (M.W.F.) has succeeded in saving many of the endemic avifauna on the island and providing valuable biological data for the island's entire ecosystems. Birds such as the Mauritian kestrel, *Falco punctatus*, the pink pigeon, *Columba mayeri* and echo parakeet, *Psittacula eques*, have all been brought back from the very edge of extinction. The important work that allowed these species to avoid the same fate as the dodo involved comprehensive field work, captive breeding, re-introduction, habitat restoration and most importantly, long-term commitment. With an ecosystem so inextricably linked, the plant project follows an equal parallel, offering the opportunity to work closely with all biotic components.

The flora of Mauritius consists of between 700 to 800 indigenous plants, including pteridophytes but excluding bryophytes, algae and sea weeds. Some 250 species are considered endemic to the island, many of which are critically endangered, often restricted to off-shore islands, mountain peaks or inaccessible ravines. The diversity of the flora provides a challenge to any newcomer, particularly when so many families contain almost identical looking genera only distinguishable when in fruit or flower. *The Flore des Mascareignes*, although incomplete and still being revised, has therefore proven invaluable. The flora boast some extraordinary plants unique to the island and adapted for various biological mutualisms — many of which are little understood. The most recognisable trees are those that the Dutch most favoured for timber, including the true black ebony, **Diospyros tessellaria (Ebenaceae)** of which there are 12 endemic species, yellow ebony, **Elaeodendron orientale (Celastraceae)** and red ebony, **Mimusops spp. (Sapotaceae)**. The latter species, although not true ebonies, constitute some of the largest trees on the island along with unique members of the **Sapotaceae** such as the 'bois der fer' **Sideroxylon boutonianum** which are occasionally found some 30 m tall with a circumference of 4 m! Such giants may be as much as 1,000 years old and when first stumbled across one realises immediately why it took the Dutch and French 300 years to extract most of the lowland timber . . . by axe and saw! The few remaining dry evergreen lowland forests appear to be areas that for some reason were left, possibly for early deer farming, or were indeed felled but uncultivated and able to regenerate. Many of these remnant lowland forests have a relatively intact canopy mostly composed of ebony. On estimation most of these trees may be some 250 years old, which would have been seedlings or juveniles of no commercial value during the early colonising years.

In the uplands, remaining forest tracts are generally wet and evergreen, with epiphytic ferns, orchids and mosses which festoon many trees. There is often an obvious vegetation stratum with many microphanerophytes including many endemic **Rubiaceae** such as the wild coffee, **Coffea macrocarpa**. Epiphytic orchids include many **Bulbophyllum**, **Jumellea** and **Angraecum** species, while terrestrial species include **Phajus** and **Calanthe**. The dominant canopy species are generally of the families **Myrtaceae (Eugenia and Syzygium spp.)**, **Ebenaceae (Diospyros tessellaria, D. boutonianum)**, **Burseraceae (Canarium and Protium spp.)** or **Sapotaceae (Labourdonnaisia, Mimusops and Sideroxylon spp.)**, the latter family includes the infamous 'dodo tree' or 'Tamblacouque', **Sideroxylon grandiflorum**.

Since the early part of this century it has been realised that the best forest remnants on Mauritius that include many of the dominant species and most stratum levels, have the potential to fully recover if weeded of exotic plants and fenced to deter foraging pig and browsing deer. Small forest plots were initially set up as study plots, but over the years these plots have grown in numbers and size with 15 of these management areas on the island. In addition several offshore islands with equally unique biotic communities receive ongoing restoration management.

The process of managing these forests begins with a selected area being manually weeded of exotic plants which are uprooted and stacked to decompose. The area is then fenced, gridded and a preliminary inventory on all plant species compiled. This 'basic' method allows canopy trees to regenerate immediately and often within one year, regenerating seedlings appear, dormant seeds of species not seen for years suddenly emerge and the endemic wildlife returns. Many of these areas are now the key work sites for the endemic avifauna. Ongoing management of these areas include the seasonal removal of weeds which are still able to enter the plots from neighbouring forests, continual monitoring of all floristic components, and re-introductions of endangered taxa. Due to the absence of certain trophic levels, exotic animals such as rats, monkeys and cats are able to fit in readily where they still continue to prey on endemic bird species in addition to damaging forest trees. Therefore it is important to adopt certain control measures both within and surrounding the areas such as trapping and poisoning, ensuring these birds can breed successfully. Unfortunately we have not developed a successful control for monkeys which, in addition to eating bird eggs and juveniles, readily destroy much of the native fruits before they mature, and strip trees of foliage and branches.

There are still large tracts of forests on Mauritius that have the potential for recovery and part of my work has been to formulate a vegetative assessment of the island and identify key areas to be rehabilitated. The island's vegetation generally follows a horizontal zonation with respect to precipitation and altitude, with many of these remnant forests located in the uplands, where they are tropical and evergreen. Mountainous terrain and often unfavourable conditions seem to have prevented many from exploring these areas, which now mostly occur in the Black River Gorges National Park (S.W. Mauritius). Field work can therefore be very hard going, but much more importantly, it is extremely rewarding and often very exciting. On almost every occasion that these forests are prospected, endangered taxa are located and on several occasions new, undescribed species have been discovered.

In December 1993 I was lucky enough to discover a 'hidden' forest on the southern slopes of Mt. Cocotte. The Cocotte region receives over 5 m rain annually, and is chiefly composed of cloud forest. The new site was found to be almost pristine, with few exotics and a host of unique plants not only endemic to Mauritius, but endemic to this mountain. Several of the endemic birds such as the Mauritian fody, *Foudia rubra*, pink pigeon and echo parakeet have also been recorded here and the area offers tremendous scope for not only conservation, but further exploration into all biotic communities.

In addition to habitat surveys and restoration assessments, one of the most important tasks has been to identify plant taxa in urgent need of conservation strategies. In collaboration with personnel on both Mauritius and overseas we have been able to identify priority taxa and formulate a management regime based on a conservation and management plan developed for the island of St. Helena. This island is also under similar environmental pressures and, with some modification, most of the Mauritian plant species could be categorised into management criteria using the same system. These criteria include: endangered species requiring a full species recovery programme (where in-situ management will not guarantee the survival of the taxon and intensive ex-situ management is therefore required); endangered species requiring in-situ and supporting ex-situ management; threatened species requiring in-situ management and those taxa requiring no direct management.

Having identified these criteria, preliminary lists of flowering plants requiring urgent attention have been made and are constantly upgraded. Currently 48 taxa are classified in criteria 1, where many are known from less than 10 individuals. The majority of taxa fall into category 2 with approximately 142 species. Due to the number of taxa requiring active field work, and

availability of resources/personnel, it has been necessary to further divide these categories to reflect (where known) their current population numbers. These groups have been identified as those known from 10 individuals or less; those known from between 10 and 50 individuals and those known from 50-250 individuals.

When an endangered species is located in the field, all biological data is collected where available. This includes morphometrics, sex, surrounding vegetation and propagation assessment. Each individual then receives a code which is recorded and marked on site for future work and re-location. Where available, propagation material is collected from all individuals. Generally seed is preferred, or at least 20 cuttings from each genotype, but often there is insufficient material to fulfill these desired requirements. A herbarium specimen is also taken (where material allows) if the area is a new location for the taxa, and seed is banked if plentiful.

The basic field work tasks of location and collection has proved extremely successful, as not only can we guarantee a well documented account of each endangered species, but also obtain a diverse genetic representation of each taxa in cultivation for eventual re-introductions. Since October, 1993, 56 endangered endemic taxa have been successfully propagated, (for many the first time) and these will be re-introduced to our managed areas during the rains in March 1995.

In addition to plant conservation work in the uplands, similar work continues in the lowland, dry, evergreen forests. Unfortunately, little of this forest type remains intact today, but several areas within sugar estates or crown land leased privately for deer management, offer areas where conservation management can be adopted.

One type of ebony forest now lost on the mainland still occurs on the off-shore islet of Ile aux Aigrettes. This 25 ha coralite island is leased to M.W.F. and a management programme of weed clearance, rat eradication and re-planting has been in operation for several years. The island boasts the only remaining populations of many endemic littoral plants that are now lost or severely fragmented on the mainland. Many of these, such as the 'bois boeuf', **Gastonia mauritiana**, 'bois rat', **Terrene borbonica** and the dominant hardwood ebony **Diospyros eggretarum** readily regenerate once selected areas are weeded, providing dramatic results very quickly. Ile aux Aigrettes along with Round Island (situated off the north coast of Mauritius), are rat free, offering tremendous scope for avifauna and reptilian re-introductions. Round Island, although severely degraded due to goats and rabbits is now free of these pests due to intensive shooting! Although once covered in a mixed hardwood/palm forest, the island now only consists of a unique palm savanna which until intervention did not regenerate. Today this unique palm community is chiefly composed of the endemic species, **Latania loddigesii**, **Hyophorbe lagenicaulis**, **Pandanus vandermeerschii** and the one single wild individual of **Dictyosperma album** var. **conjugatum**. Regeneration of these plants is now widespread on the island, offering future habitat for the island's endemic reptiles of which there are seven species.

Management trips occur four times a year where assessment and monitoring of all the island's biota is conducted, along with weeding of exotic plants, seed sowing and formation of soil traps on the exposed slopes. Seed collection of the endemic palms is now possible, offering material for re-creating a similar palm community on Ile aux Aigrettes, where it was once also found.

In the long term, islands such as Ile aux Aigrettes and other restored outer islands will offer a safe habitat for reptilian, avifauna and floral re-introductions. Often these islands were the last places to feel man's influences and subsequently harbor the last remaining populations of this unique type of wildlife. Although islands such as Round island can boast to be the last recorded place where animals such as the giant tortoise occurred, the element of surprise still exists. During an expedition in 1993 to the nearby island of Ile Serpent a new species and sub-family of nocturnal giant tarantula was discovered, feeding exclusively on the island's endemic night gecko!!

Although we will never know what pristine Mauritius may have looked like, we have enough remaining components to ensure that the remaining and unknown unique biodiversity of this

beautiful island will remain for generations to enjoy and learn from. Unfortunately it may be true to say that few natural areas of the world will remain unless they are actively managed. For Mauritius this is certainly true, but unlike the dodo pictured on every Mauritian matchbox, the effects of intervention have, and will continue to ensure its unique wildlife has a prosperous future and will not be easily extinguished.

### ALPINE AND WOODLAND FLORA STUDIES IN JAPAN

By Colin Parbery

Colin Parbery, third year student, returned in July from a six week visit to Japan, studying the alpine and woodland flora of Northern Honshu and Hokkaido, as well as looking at the methods employed in the commercial production of alpine and herbaceous plants. The visit was jointly funded by the International Plant Propagator's Society, Alpine Garden Society, Merlin Trust, the Stourhead Summer Events Committee and the Kew Guild.

The visit was centred around the activities of Hokkaido University Botanic Garden, Sapporo. Colin assisted in the monitoring of **Primula yuparensis** populations and the associated flora on Mount Yubari, which supports many endemics due to the rock's high chrysotile asbestos content.

Work was also undertaken with Dr. Fujita, (Hokkaido University Botanic Garden), and students from the Faculty of Agriculture, monitoring plant species in a deep snow wetland at Nakayama toge, south of Sapporo. The wetland was reached after half an hour's hike through **Sasa** which gave way to a totally secluded area of **Hemerocallis**, **Hosta** and **Lysichiton camtschaticense**, amongst other species.

He also spent time collecting seed of **Viola vaginata**, uncommon in Hokkaido, and **Polemonium careuleum** subsp. **yezoense** var. **nipponicum** for Hokkaido University Botanic Garden. Several days were also spent working within the alpine nursery of the Botanic Garden.

In Northern Honshu a five day visit to Tohoku Regional Office of National Parks and Wildlife, Aomori, enabled him to botanise Towada-ko, the Oirasse river gorge, Mt. Hakkoda and visit Tohoku University's research station. Two further days were spent in the Hachimantai area, where visits to Mt. Iwate and Tazawa-ko were made with rangers from the National Park.

The last week was spent in the Tokyo area where he visited temple gardens in the ancient capital of Kamakura. Photographs of bamboo constructions were also taken to assist in the redevelopment of the Japanese Garden at Wakehurst Place.

Throughout the journey he visited several alpine and herbaceous specialist nurseries to study the techniques and materials used in the plant propagation and production.

### AN EXPEDITION TO THE ATLAS MOUNTAINS OF MOROCCO

By Tim Upton

Morocco offers an immediate and enduring fascination. Although on the doorstep of Europe, its Islamic and traditional cultures seem a world away. Although intrigued to experience this culture, it was research work on the genus **Lavandula** that took me to Morocco during February and March of 1994. Morocco has one of the greatest diversities of species of this genus, including four endemic species. Our aim was to collect both living and herbarium specimens to provide much needed material for my Ph.D. research on the biosystematic **Lavandula**, being undertaken at the University of Reading.

Accompanied by my supervisor, Dr. S. L. Jury, we jointly organised the expedition with the Institut Agronomique et Veterinaire, Hassan II, (I.A.V.), Rabat, continuing the long standing collaboration between the institutes. Together with Ms Bushra Tahira from I.A.V., Rabat, working on the genus **Thymus** in Morocco, we squeezed both the luggage and ourselves into a Renault 4 supplied by the institute and headed south.

After negotiating the heat and crowds of Marrakesh, the gradeur of the High Atlas loomed before us. Climbing up towards the Tizi-n-Test pass the landscape was at times awe-inspiring

Berber villages cling to the steep hillsides with the snow-capped mountain peaks rising beyond. Amongst this scenic grandeur we found some of the last stands of the endemic **Cupressus atlantica**, which probably once covered much of the now denuded hillsides.

One of the first plants to catch our attention was the magnificent deep red flowers of the scrubby **Polygala balansa**. In searching the steep banks we found our first endemic lavender, **L. maroccana**, along with the more common **L. dentata** and **L. multifida**. Although a rather straggly bush it bears attractive deep purple flowers. As we reached the top of the pass at 2,100 metres, the Sous Valley and the Anti-Atlas beyond were spread out before us.

Making a short diversion up the western coast, we visited the area around Cap Rhir, just north of Agadir. Here the vegetation is more closely related to that of the Macronesian islands than the rest of Morocco. Dominated by the succulent **Euphorbia regisjubae** and **E. anteuphorbia**, it boasted populations of **L. maroccana**, **L. multifida** and **L. dentata** var. **candicans**. This latter species is a distinct variant, with densely tomentose leaves giving it an almost white appearance.

Moving south into the Anti-Atlas both the vegetation and people changed. Amongst the drier but equally spectacular hillsides we were able to find another Moroccan endemic **L. mairei**, a fine shrubby plant with deep purple flower spikes. Nearby were two other endemics, **L. brevidens** and **L. stoechas** ssp. **atlantica**. Amongst the equipment we took with us was a Global Positioning System (G.P.S.), enabling accurate longitude, latitude, grid reference and altitude to be recorded for each of our collection sites. This proved particularly valuable on this stretch of the journey, with few landmarks, villages or detailed maps from which to locate and record our collecting sites.

Further south the landscape was transformed, palm oasis's appearing in dry valleys and the stratigraphy of the hills contorted into weird and wondrous patterns. As the Anti-Atlas gave way to the hamada, the beginnings of the Sahara desert, we encountered another of Morocco's endemic lavenders. **Lavandula coronopifolia** var. **humbertii** was common in the desert wadis, the annual stems rising from a woody base to bear the light blue flowers. Now the familiar goat and sheep herds had given way to camels, the local people no longer Berbers but Sahrawi and many of the plants now belonging to unfamiliar genera.

Unfortunately, time prevented us from continuing further south but, pleased with the specimens we had managed to find, we turned north again. As we traversed the High Atlas and then the Middle Atlas the wonderful forests of **Cedrus atlantica** provided a last botanical highlight before heading home.

Back in the U.K. the herbarium material of all the plants collected is proving to be a valuable addition to the collections already held from Morocco. Duplicates are being distributed to Kew, the Natural History Museum and European Herbaria. Seed collected has germinated enabling a survey of the chromosome numbers to be completed, with many of the species not previously counted. Living plant material, much not previously in cultivation, is being grown at Reading and has been distributed to the N.C.C.P.G. national collections and to Kew to be principally held by the Herbaceous Section.

The culture, landscapes and plants of Morocco certainly left us intrigued to see more.

Tim received funding from the Kew Guild Edna Redman Fund for this project — Ed.

## A STUDY TRIP TO THE UNITED STATES OF AMERICA

By Annette Wickham

In March, 1994, I applied to the Kew Guild for funding for a study trip to the United States of America. My application was successful and so my proposals were about to be a reality.

My reasons for applying were to look at propagation techniques, facilities and work practices and compare them to those used in the Temperate Nursery at Kew. I achieved this by securing placements for one week in each of the two arboreta recommended to me, being the Morris Arboretum, Philadelphia and the United States National Arboretum, Washington D.C. I also wanted to visit gardens for one third of my travel time.



The Morris Arboretum is part of the University of Pennsylvania and the official Arboretum of the Commonwealth of Pennsylvania. The 175 acres offer a wide range of garden developments and design. The collection contains some of Philadelphia's rarest and largest trees such as *Circidiphyllum japonicum*, *Fagus engleriana*, (collected by Wilson), *Stewartia pseudocamellia*, and *Cedrela chinensis*.

For one week I had the pleasure of working with Shelley Dillard, Propagator at the Morris Arboretum. Together we experimented using various methods and treatments to propagate *Rhododendron bakeri*, and *Enkianthus perulatus*.

After completing my study of the Morris Arboretum I still had four days left to visit gardens in the region. The intern students at the Morris had planned a trip to the Delaware Valley, a region famous for its gardens. That day I visited two very interesting gardens. The first was Mount Cuba, a unique garden of 230 acres privately owned by Mrs. Lammot du Pont Copeland. Mount Cuba is a safe haven for Piedmont flora. The Piedmont is an expanse of land which extends a thousand miles from the Hudson River, south to central Alabama. It is bordered on the west by the Blue Ridge and Appalachian mountains, and to the east by the fall line and coastal plain. Mount Cuba cultivates many of the 3,000 species, half of which are considered to be of ornamental value. It became a centre for Piedmont flora in 1983 and is a woodland garden with many wonderful specimens including the native American *Liriodendron tulipifera* providing shade for such plants as *Aquelegia canadensis*, *Astilbe biternatum*, *Corydalis lutea* and *Trillium grandiflorum*, to name but a few.

Another garden very close to Mount Cuba was the Frederick Stroll Garden. It was very different to anything I had seen before. I think the best way to describe it was, many gardens within a garden. What I really liked about the garden was the scale of planting and, for a change, clashing plant colour associations. Bold and daring. Frederick had a novel way of growing his *Wisterias*. Supports in the shape of a branching tree supported superb specimens which, I believe, are a spectacular sight in spring. Unfortunately, I was a few weeks too late.

Having spent nine very enjoyable days in Philadelphia, it was now time to make my way to Washington D.C. My remaining nine days were spent at the United States National Arboretum, working in close association with the Propagator of the Shrub Research Programme, Ruth Dix, and visiting other places of horticultural interest. The U.S. National has long been a leader in the development evaluation and distribution of new shrubs and trees for landscape use. My time was spent trying various methods of propagation of selected plants as a result of controlled pollination. We needed to see if selected plant forms such as *Liriodendron tulipifera*, *Viburnum rhytidophyllum* and *Lagerstroemia fauriei* could be propagated asexually with a high percentage of rooting. Commercial growers are not interested in new introductions unless rootability is high.

In between my work at the U.S. National Arboretum, I took in some more gardens such as Mount Vernon, home of the late George Washington. Washington was a keen gardener and even had his own botanic garden at Mount Vernon, which he tended to himself. My favourite feature there was a lovely red-brick Orangery, built to house exotic fruits, trees and plants. Other gardens visited were the William Paca garden in Annapolis. A recently developed two-acre garden with a very attractive Pavilion. Last but certainly not least was Dumbarton Oaks. Gardens designed by Beatrix Ferrand. It incorporates elements of the traditional French, English and Italian gardens which the owner, Midrid Bliss, admired. I was impressed by the formal features, especially the Pebble Garden.

My three weeks were up and it was now time to return to Kew. I was very happy in the knowledge that I had achieved most of my aims and objectives, except for one very important objective. A proposed reciprocal visit to the Arboretum Nursery, Kew, by the Propagator of the Morris Arboretum, Shelley Dillard. One week after my return Shelley arrived and spent a week at Kew studying our methods and facilities, and some time learning about ferns in preparation for the newly built Victorian Fernery at the Morris. Shelley's visit was a great success and it gave me the opportunity to return some of the hospitality afforded to me during my trip.

My study trip to the United States has been a highly enjoyable and satisfying time. I am very grateful to Barbara Allen, Shelley Dillard, Ruth Dix and Sylvester March and all the other contacts and friends I have made, for their generosity and kindness. I strongly recommend travel, wherever, whatever.

## SCHOOL OF HORTICULTURE KEW DIPLOMA PRIZE DAY 1994 SPEECH

By Ian Leese, Principal, School of Horticulture

Your Worship, Professor Baines, Chairman, Director, Lady Lennox-Boyd, distinguished guests, ladies and gentlemen, it gives me great pleasure to welcome you here today and to review the many successes which have occurred during the past academic year.

The career progression of former Kew Diploma graduates is a very useful guide for current students as to what can be achieved by them. This time last year I reported that Terry Sunderland, who graduated in 1991, was near to completing an M.Sc. in Forestry course at the Oxford Forestry Institute, University of Oxford. The result came through a little afterwards. It was an M.Sc. Distinction award, the only one for last year's course, and the first Distinction award in the course's history. Terry is now Horticultural Officer at Limbe Botanic Garden, Cameroon and will return to Kew after that.

Another Kew Diploma graduate from 1991, Madeleine Groves, who has been working as Assistant Botanist at the Fauna and Flora Preservation Society, will be starting the same course this October. I think you can guess what will be expected of her!

Work-wise, there have been a number of advancements this year. Journalism is a popular career. Cathy Buchanan, from 1989, has been appointed Editor of *The Gardener* magazine after having worked as Technical Editor on the same publication for a short time. Rebecca Ransom, from 1988, has joined Kew graduate Matthew Biggs, with Roy Lancaster, as a presenter on Channel 4's Garden Club series. Another Channel 4 series, Plant Life, featured John Anderson, a Kew graduate from 1991, who is Head Gardener of Mount Usher Gardens, Ireland.

Apart from journalism, there are many varied directions taken by other Kew graduates. Mike Burridge, from 1982, has this week started work as Commercial Manager of Norwood Hall, a nearby horticultural college. Blaise du Puy, from 1986, was appointed Programme Officer for Botanic Gardens Conservation International. Paul Cook, from 1988, became Head Gardener at Arley Hall, Cheshire. John Chesters, from 1990, was appointed Superintendent of the Royal Horticultural Society's Garden at Rosemoor in Devon, joining three other former Kew graduates there, including Christopher Bailes, the Curator of the Gardens.

David Gilbert, from 1991, has gained a post as Project Officer with The Groundwork Trust, which is a national network of local charitable companies regenerating the environment by harnessing the resources and skills of the whole community. Amanda Lind, from 1992, became Head Gardener for St. Paul's Girls School.

After completing a six-month scholarship at Jerusalem Botanical Garden, Mark Poswillo, from 1993, quickly found work as a design assistant with Lady Lennox-Boyd in her landscape design practice based in London. Another enterprising person from last year, Matthew Vincent, has opened a plant shop and landscape design, maintenance and consultancy business, 'The Kew Gardener', near Kew Gardens station. Business is doing so well that he has donated a cash prize which will be announced later. I hope that others about to leave us will follow his example.

With all these successes of former Kew graduates to report, what have current Kew students achieved through the year?

Sixth-form entrant Anna Bayley, won a competitive internship position for a year's work experience at Longwood Gardens, Philadelphia. She returned to Kew earlier this week for the final two years of the Kew Diploma, having impressed all at Longwood. This year's sixth-form entrants, Stewart Lester and Stefan Czeladzinski are about to leave for their 12 months' work experience in America and France respectively.

First-year student Darren Webster took the opportunity to join on an expedition to Lesotho. Another colleague, Markus Radscheit, has passed the written examinations of the first part of the Master of Horticulture (R.H.S.). He now awaits the results of the practical examinations taken this week.

Second year students have been particularly active. Three study trips were undertaken in the United Kingdom. Earlier this year, there was a Cornish gardens tour with Barry Phillips and Roy Lancaster. In April, they joined students from St. Mary's College, Twickenham, for an ecology field trip to Dorset. In June, a study tour of gardens in Lancashire and Cumbria was made.

Several of the group have been successful in obtaining additional funding from the Kew Guild, the Merlin Trust and the Studley College Trust, to supplement their School of Horticulture travel scholarships. Mention should be made of Colin Parbery who also received the £1,200 Mary Helliar Award from the International Plant Propagators' Society, and Darrin Duling who was given £500 by the Royal Horticultural Society.

More local involvement of second years came through their landscape design project set by tutors John Sallis and Brita von Schoenaich. The assignment involved collaboration with teachers, pupils and parents of West Hill Primary School, Wandsworth, to produce plans to transform a tarmac wasteland into an environmentally friendly play garden, which was co-ordinated by the environmental organisation, Ripples. An exhibition of the students' work was held in Wandsworth Town Hall and a design of one of the students, Janet Burnell, was featured in the specialist journal *Landscape Design*.

The abilities of our third-year students have been equally well recognised by organisations external to Kew. Alan Hulme is to undertake the M.Sc. in Plant and Fungal Taxonomy course at Reading University, which will be funded as a scholarship from Kew. Annabel Chantler has been awarded a scholarship by London University's Wye College to attend their M.Sc. in Landscape Ecology, Design and Management course. Annabel also entered a national landscaping competition organised by Newark Town Council in Nottinghamshire for the re-design of a cemetery area, and won the £500 second prize. This is a major achievement considering that students, including graduates, of the Landscape Institute and the Royal Institute of British Architects were permitted to take part.

Rachel Martin won the Tresco Abbey Gardens Scholarship, funded by Studley College Trust, for a year's placement in the Scilly Isles. During this time she will also travel to the botanic gardens in Tortola, British Virgin Islands, where she has been awarded a six-week internship position.

Further external recognition may follow because the management theses of Annabel Chantler and Rachel Martin have been entered into the Institute of Horticulture's Aberconway Medal competition. The results will be known at the end of this month.

As well as administrating the Kew Diploma course, the School of Horticulture is also responsible for co-ordinating a three-month internship programme of practical work experience in the gardens for suitably qualified candidates from overseas. During the past academic year we have been hosts to two candidates each from Canada, France, Germany, Italy and Spain, and one each from Australia, Japan, Sweden and Switzerland.

Another important aspect of our work is the International Diploma Course in Botanic Garden Management which is run for two months during the summer in association with Botanic Gardens Conservation International. This was the second time the course has been held. The course manager, Dr. Colin Clubbe, built on the firm foundations laid last year and developed a very successful professional training package for middle and senior overseas botanic garden managers. The participants this year came from Australia, Cameroon, Hawaii, Hong Kong, Mexico, Thailand and the United States of America. All were successful in obtaining their diplomas on completion of the course last Friday, and two distinction awards were made.

In concluding, I would like to say a few words about the School of Horticulture itself. I believe that our effectiveness has been enhanced by the appointment of Chris Downes to the School last October. Our work has, however, been independently scrutinised in two different ways during the past year. Firstly, a former Her Majesty's Inspector, Mr. John Bennett, a member of the Independent Panel, the overseeing body of the School of Horticulture, has conducted a review of the Kew Diploma. He concluded that "The day to day running of the

course, and the mechanism in place for the necessary checks and balances to be quickly effected, are reliable and work well. In particular, the management of the many changes that have been introduced in recent years and still continue, is exemplary. It is particularly noted that the Director of Studies can fully rely on the enthusiastic and professional support of so many Living Collections Department staff. The high quality of the students' experience and the effectiveness of the various elements of the course owe much to this interdisciplinary unity and rapport."

My thanks go to all those who contribute to the course from L.C.D., other departments at Kew and from outside. It is a measure of your effort and high standards that this report was so positive.

Secondly, the Living Collections Department, of which the School of Horticulture is a part, was subjected to an inspection by Staff Inspectors of the Ministry of Agriculture. Their comments about the School of Horticulture's position within the Department were as follows: "In addition to the obvious practical value of this arrangement, the presence of these highly motivated and flexible students is also of considerable benefit to Kew in revitalising the work of the Department. They also provide a quality recruitment pool for permanent technical and scientific appointments".

So, to each of you who are graduating today, thank you sincerely for your contribution to Kew during the years that you have been here. We look forward to watching your career progression in the future and we know that you will carry with you the mission of the Royal Botanic Gardens, Kew.

## **PRESENTATION OF KEW DIPLOMAS AND PRIZES 1994 (Course 29)**

We begin with the presentation of Kew Diplomas and prizes to our third year students. Thanks must go to all sponsors of our prizes, many of whom are in the audience today.

PETER BLATT

*The Kew Diploma*

ROBERT BRETT

*The Kew Diploma*

*The Kew Mutual Improvement Society's Prize* for participation as Secretary of this student lecture society.

ANNABEL CHANTLER

*The Kew Diploma*

*The G. C. Johnson Memorial Prize* administered by the Bentham-Moxon Trustees on behalf of the magazine *The Grower*, in memory of an ex-Kewite. The prize is for the best overall performance on the Kew Diploma course.

*The Matilda Smith Memorial Prize* donated by the Kew Guild, an association of past and present students and staff, in memory of a botanical artist at Kew and given to the best practical student.

*The Kingdon-Ward Prize* given by Miss Winifred Kingdon-Ward, in memory of her brother, Frank, a noted plant collector, to the student attaining the highest mark in their management thesis.

*The Dummer Memorial Prize* awarded by the Kew Guild for the best Herbarium Weed Collection project.

*Landsman's Bookshop Prize* awarded for the best third year Landscape Design project.

*The C. P. Raffill Prize* given by the Kew Guild to the winner of the Kew Mutual student lecture competition.



Kew Diplomas and award winners pictured with, (from left to right) Ian Leese, Director of Studies, Her Worship the Mayoress, His Worship the Mayor, R.B.G. Director Professor Prance, Professor Chris Baines, Mr. Robert Herbert, Chairman of the Trustees, Lady Lennox-Boyd, Trustee, and Mr. John Simmons, Curator.

#### ESTHER DAMM

*The Kew Diploma*

*Life Membership of the Students' Union* for services rendered during the past year.

#### RUTH DAVIS

*The Kew Diploma*

*The Tony Kirkham Aboricultural Prize* donated by Matthew Vincent, whom I mentioned earlier. The prize is named after the main lecturer of the arboriculture course, Tony Kirkham, who is also a Supervisor at Kew.

#### ANN FORRET

*The Kew Diploma*

*The Donald Dring Memorial Prize* presented by the Bentham-Moxon Trustees in memory of a former mycologist of the Jodrell Laboratory, to the student obtaining the highest marks in their Crop Protection project.

*The Proudlock Prize* donated by the Kew Guild to the runner-up in the Herbarium Weed Collection project.

#### DORIS FRANCIS

*The Kew Diploma*

*The Metcalf Cup* donated by the late Dr. Metcalfe, a former Keeper of the Jodrell Laboratory, to the student attaining the highest second year examination marks.

*The Kew Guild Individual Study Prize* given to the student with the second highest mark for their management thesis.

*The Lecturers' Prize* awarded by Drs. Nicholas Hind and Phillip Cribb of the Herbarium, to the student obtaining the highest mark for their Systematic Botany project.

DAVID HIGGON

*The Kew Diploma*

*The Plant Identification Tests Prize* donated by the Students' Union to the person attaining the highest marks overall in these tests.

*Life Membership of the Students' Union* for outstanding services rendered as President during the past year.

*The Rotary Club of Kew Gardens Prize* awarded by the local club to the person who has done the best work towards charity, in this case for helping the National Trust.

ALAN HULME

*The Kew Diploma*

*The Kew Diploma Post-graduate Fellowship* consisting of a funded M.Sc. in Plant and Fungal Taxonomy course at Reading University, followed by a year's paid appointment in the Living Collections Department at Kew.

KATE JACOBS

*The Kew Diploma*

SHELAGH KELL

*The Kew Diploma*

*The Prize for the best vegetable plot* given by the Kew Guild to the student obtaining the highest marks in this practical first year project.

*The Ernest Thornton-Smith Travelling Scholarship*, which is the major final year travel award, presented by the Ernest Thornton-Smith Young People's Trust to allow a Kew Diploma graduate to travel overseas, in this case to Colombia.

SIMON LITT

*The Kew Diploma*

RACHEL MARTIN

*The Kew Diploma*

*The George Brown Prize* donated by the Kew Guild in memory of a former Assistant Curator, to the runner-up in the Kew Mutual Improvement Society's student lecture competition.

SIMON MILLER

*The Kew Diploma*

MERCE TRIAS

*The Kew Diploma*

BIRGIT WIEDWALD

*The Kew Diploma*

SARAH WILSON

*The Kew Diploma*

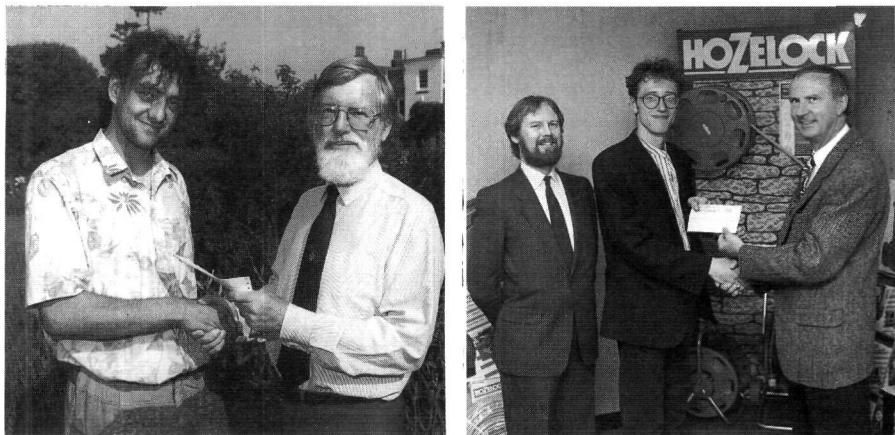
That concludes the presentation to our third year students. We turn now to second year students who have been awarded travel scholarships. We begin with:

WOLFGANG BOPP

*The Henry Idris Matthews Award*. This is given by the Trustees of the Bentham-Moxon Trust to allow a second year student to travel overseas. This year's winner, Wolfgang Bopp, is currently in the south-west province of Western Australia where he is studying *Drosera* or Sundews.

## COLIN PARBERY

*The Hozelock Prize* is donated by the manufacturers of garden irrigation equipment to fund a student to travel abroad. This year's winner has just returned from a trip to Japan where he studied the horticultural techniques employed in the maintenance of botanic gardens, and the commercial production of alpinas and herbaceous plants.



*Pictured left:* Wolfgang Bopp, winner of the Henry Idris Matthews Award, being presented with his cheque by the Director. *Pictured right:* Kew Diploma student, Colin Parbery (centre), received the 1994 Hozelock Prize from the company's Technical Director, Peter Fewell. Looking on is Ian Leese, Principal of the Royal Botanic Gardens' School of Horticulture. (Photograph: Courtesy of Prototype Communications)

## CHRISTOPHER BAILEY

*The David Dalziel Travel Scholarships* are given by Mr. Dalziel who lives in Florida.

Later next month a trip to the rainforest of north-east Queensland, Australia, to study the Proteaceae family of plants will be made by Christopher.

## JANET BURNELL

Janet has returned recently from the mountainous regions of northern Pakistan, where she studied the ecology of the area together with visiting conservations schemes.

## DARRIN DULING

Darrin is soon to leave for a study of the rainforests of Brunei, Darussalam and Singapore. If luggage space allows, he will also be able to take with him the *Sir Joseph Hooker Prize*, which is presented by the Director in memory of his famous predecessor to the student who has done most for the Kew Mutual Improvement Society as Chairman for the past year. The prize is augmented by a cup presented by Hazel Hyde, who retired as Administrative Officer of the School of Horticulture in 1993.

## LANCE INGRAM

Lance has already returned from an earlier trip to the eastern U.S.A. to study rhododendrons and azaleas.

## BENEDICT MURRELL

Benedict is leaving later this year, after the rainy season has ended, for a study of botanical institutions of Southern India, including the Tropical Botanic Garden and Research Institute, Trivandrum.

## CARL NELSON

At the same time as Benedict Murrell, Carl will make a trip to help in the establishment of an orchid display house at the Parc Botanique et Zoologique de Tzimbazaza, Madagascar.

The achievements of two first-year students are recognised today. One is here due to the generosity of a lecturer, Mr. Tom Reynolds, of Jodrell Laboratory.

## SARAH HIGGENS

This year's winner of the *Tom Reynolds Prize for Plant Biochemistry and Physiology*. Sarah achieved the highest marks in the subject in the first year examinations.

## MARKUS RADSCHKEIT

The Committee of the Kew Mutual Improvement Society have awarded Markus joint-winner of the *Professor Keith Jones Cup*, presented by a former Keeper of Jodrell Laboratory, to the person giving talks on the most items of interest to the Society.

## CHRIS KIDD

Chris is the other joint-winner of this award and is a member of staff who, when a Kew Diploma student, was Chairman of the Society.

## PETER SIMS

*The British Friends of Jerusalem Botanical Garden Scholarship* is a six-week placement in Jerusalem which has been available to students for several years now. This year, for the first time, Mrs. José Dent, the Chairman of the British Friends, made the award to Peter, a member of staff, who had a very successful visit earlier this year.

## OLGA MEDVEDEVA

Finally, The School of Horticulture is co-ordinating the *International Dendrology Society Bursary* for the third year running. The award was established to help young dendrologists travel and study abroad. Previous winners have come from Slovakia and Slovenia. This year's winner, Olga Medvedeva, is from the Main Botanical Garden, Moscow.

That ends the presentation of Kew Diplomas and Prizes. I now hand over to the Director who will read the citation for the award of the Kew Medal.

## THE KEW MEDAL AWARD 1994



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 inscribed "FOR MERIT". The face design illustrates the Palm House (built 1844-48) 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.



Laura Ponsonby (foreground), winner of the Kew Medal, pictured with (from left to right), The Mayor of Richmond, the Director, Professor Prance, Professor Chris Baines and Mr. Robin Herbert, Chairman of the Trustees, at the Kew Diploma Prize Day on 9th September, 1994.

Laura Ponsonby, Kew's Education Officer for the past seven years, is this year's winner of the Kew Medal.

Laura, who retires later this year is well known to many staff. The Medal Selection Committee said: "Laura has a wealth of knowledge about Kew, from the serious scientific to the trivia, and she shares her knowledge and enthusiasm freely with others. Her lectures and broadcasts, both at Kew and outside, have stimulated visits from many different organisations and societies and have made an invaluable contribution to the education of both young and old. She has become a leading authority on the Victorian traveller and artist Marianne North.

Laura is a true ambassador for the work of Kew."

## THE KEW STUDENTS' UNION ANNUAL REPORT 1994

By Darren Webster

Looking back, 1994 passed all too quickly. No sooner had the new year's celebrations ended than it seemed as if it was time to bid farewell to another batch of students, whose time had come to experience the big wide world outside Kew.

This year the pranks night prior to prize day saw the addition of an inflatable whale to the tropical fish in the Princess of Wales Conservatory. A surprise was brought to the Supervisor of West Arboretum, Mark Pitman as the contents of his office had been moved to one of the islands on Kew Lake and arranged ready for him coming in to work.

The next few months will see changes to the Diploma course. This will result in the new intake of students going into the gardens after a fortnight's induction period. Following this period, the first year students will then go into lecture block. These changes are designed to allow Diploma students to pass onto a B.Sc. course, following completion of the course at



NEETH ABEYGUNAWARDANA

DAVID BARNES

NICK BIDDLE

ROGER FISCHER



MARCUS DE LA FLEUR

DINA GALICK

TOPHER MARTIN

MATT McWHIRTER



JUNKO OIKAWA

MARK PATERSON

AZRA SECERBEGOVIC

DANIEL SLACK



JOHN SWARBRICK

JOANNA WALMISLEY

VANESSA WELLS

COURSE 32

Kew should they wish. The Students' Union continues to play an active role in working towards these improvements.

The new intake of first year students seem to have overcome their shyness problems of the first week when they all ran the annual Clog Race with bags on their heads.

The yearly student plant sale on Kew Green, during the Kew Fayre in September, was a great success. After a slow start on a dull, drizzly day a dazzling total of £814.00 was eventually raised. This will be used for a third year study trip in the future.

A new design of T-shirt is now available from the Students' Union. This year's theme is 'leaves' and sales, so far, have been brisk although stocks of the old style are still available in limited numbers.

The future of the Edinburgh exchange lies in the balance when the final year of students leave in mid 1995. It is said, however, that alternatives are being looked into.

Kew students have travelled far and wide this year. Lance Ingram returned from the east coast of America in the spring and Darrin Duling visited Brunei, Sabah and Singapore. Jan Burnell spent several weeks in Pakistan whilst Colin Parbery travelled to Japan. Wolfgang Bopp and Chris Bailey visited eastern Australia, I visited the Drakensburg mountains in South Africa and Benedict Murrell spent the last part of the year in India. All wish to thank the Guild for the funding they received towards these trips and the student body as a whole wishes to thank the Guild for their continuing help and support.

The present Committee is as follows:

President	Carl Nelson
Secretary	Guillaume Batte
Treasurer	Markus Radsheit
Fund Raiser	Jayu Venn
Sports and Social Representative	Harvey Stephens

## **STUDENTS' UNION SPORTS AND SOCIAL REPORT 1994**

By Harvey Stephens

1994 started as it was to carry on. The weather was not in our favour, causing disruption to many of the events throughout the year.

The calendar started with the traditional running of the pancake race down the Broadwalk. This took place only after it had been cleared of snow and gritted. The event was a big success, with many participants from all departments of the Gardens braving the weather. An equally large crowd watched Stefan Czeladzinski win the race with Caroline Ross close behind.

A team of enthusiastic athletes were gathered to represent Kew in the traditional Round Bredon Race, organised by Pershore College. Sadly, due to injury problems, we had to pull out of the competition.

With summer just around the corner, May saw the staging of a darts competition. Much pre-match hype filtered round the Gardens, but inevitably all the favoured competitors failed to produce their much talked of form and the competition was eventually won by Tony Lune.

The football team has seen a lot more interest from members of staff and has consequently been a very strong team. In the spring of the year the team travelled to Edinburgh, optimistically confident of carrying off an unheard of away win, which inevitably occurred. In a high scoring game Graham Madill, known as 'Captain Scarlet' to his team mates, scored a first half hat trick. The final score was R.B.G. Edinburgh 3, R.B.G. Kew 7. A six-a-side team were entered in the M.A.F.F. sports day and, although the team had some early success, they succumbed to some good performances from other teams.

Once thought of as an old mans' sport, this rumour was certainly put to rest as David Barnes entered and won the annual Bowls Competition for the third year in succession.



*Left to right:* Daniel Slack, winner of the Clog and Apron Race, John Swarbrich, third place, Junko Oikawa, first female winner and Marcus de la Fleur, second place.

The summer saw what should have been the cricket season. With the purchase of some new equipment, the staff were looking forward to long, hot summer afternoons playing cricket on the green. Unfortunately this only turned out to be a dream. Edinburgh cancelled a planned match, and the traditional L.C.D. versus the rest game was postponed twice due to bad weather and the crease conditions. Consequently the cricket season never got under way.

September saw the start of a further 15 students on the Diploma course. They all participated in the traditional custom of the Clog and Apron Race, adding their own novelty to it by deciding to run blind folded. This caused one or two competitors to loose their sense of direction and veer off the Broadwalk and run into nearby rubbish bins. The race was very close and eventually won by Daniel Slack, with Junko Oikawa the first lady home. The race was completed by everyone in appalling weather conditions.

This summer saw Sue Ellison valiantly try to encourage staff to play soft ball on the green. Although there was a lot of early interest, busy summer timetables, holidays or the weather caused the interest to die, although not before one game had been played.

To round the season's events off, the Round the Gardens Race seemed a suitable climax. Although there was a great deal of interest before the race, only six competitors continued this annual tradition, possibly due to bad weather once again, surprisingly. The race was won by Nigel Rothwell, with Melissa Simpson and Joanna Walmisley crossing the finish line together.

Looking to next year, I hope there is continuing interest, leading to more support and more fixtures. I would like to take this opportunity to thank all those who have helped and supported the various events throughout the season without whom there would have been nothing to report.



Ian Leese (seated centre) pictured with participants on the International Diploma Course in Botanic Garden Management, who came from Thailand, Hawaii, Cameroon, Mexico, U.S.A., Australia and Hong Kong. Dr. Colin Clubbe, the Course Manager, is pictured on the far left.



At the soirée, following the Kew Guild A.G.M., members visited the refurbished Aiton's Tomb in Kew churchyard, led by Ray Desmond (back to camera).

## THE KEW MUTUAL IMPROVEMENT SOCIETY 1994 REPORT

By Benedict Murrell

1994 saw the start of the 125th year of the 'Mutual' lectures. The Standing Committee remained the same as last year — Dickon Bowling (Micropropagation Unit), Peter Brandham (Jodrell Laboratory), David Cooke (Palm House) and Chris Kidd (Princess of Wales Conservatory). Each year four committee members are elected from the student body to organise the day to day running of the Society and these were: Benedict Murrell (Chairman), Harvey Stephens (Secretary), Sarah Higgins (Assistant Secretary) and Marcus Radscheit (Treasurer).

The Society's finances started and have remained in a good state, even though we have kept the admission fees at last year's level. The £7 season ticket for 28 lectures is still great value and often illicit the accolade 'one of the best kept secrets in London'. The links with the Friends of Kew were strengthened this year. Co-ordination of lecture series and advertising has led to reduction in overlapping of subjects and has increased audience sizes.

The welcoming party for the new intake of students took place in the Kew Gallery this year. Members of staff from all levels and all departments came along and the exotic cheeses and fine wines (and plenty of beer!) provided a pleasant start to the year and broke the ice for the 15 freshers of Course 32.

The lectures started off with a look at the origins of the domestic apple by Dr. Barrie Juniper from the Botany Department of Oxford University. A fruit close to our hearts was shown to have a long history, including places like Mesopotamia and the silk routes and stretching back even to the garden of Eden! He also brought along samples from his orchard of old apple varieties.

Bill Tomlins of the Painshill Trust gave an informative talk on the history and restoration of Painshill Park, with particular emphasis on the plantings. Very few members knew much about the Park, or were aware of its proximity to London and the talk encouraged a group from Kew to pay a visit during an open day in October.

'Brazil Nuts and Other Amazonian Fruits' was the title of Professor Ghilleen Prance's (Director of R.B.G. Kew) talk. The diversity of fruits from the rainforest and other South American biomes was tied in with the ecology of these areas and the economic potential of crops was explored — not only the domesticated fruits, but wild ones harvested by man and those consumed by other animals. The dispersal role of such fructivory was clearly illustrated.

It was decided this year to include speakers from R.B.G. Kew for about half the lectures and the next of these was a talk on the Drakensburg Mountains by Darrin Webster (second year Diploma student). He gave a detailed account of a collecting trip he made with a former colleague of his from Houghal College in County Durham, during which he visited this ancient range of mountains on the eastern edge of Lesotho, bordering South Africa.

An intriguing 'sideways look' at the role of fungi in the health of trees was given by Tec Green (Conservation Officer to English Nature). Far from being the destructive factors we often assume, many fungi were shown to be essential parts of a tree's ecology and necessary for healthy growth.

As part of the Diploma course, many second year students at Kew undertake a travel scholarship application and this year a full complement of the successful students, now in their third year, gave talks about their trips. These talks are assessed by a panel from the Mutual Standing Committee and first year students. The first of these fascinating accounts was given by Lance Ingram, who visited the eastern coast of the U.S.A. to study, amongst other things, rhododendrons.

'Can Americans Garden?' was the provocative title of Tim Walker's lecture, in which he covered the history of gardening and garden design in the U.S.A. He clearly demonstrated that, although beauty may be in the eye of the beholder, Americans do have a great commitment to gardening and a bold and imaginative attitude to modern garden design.

Another member of staff at Kew called on this year to share their knowledge and experiences, was Nigel Rothwell from the Tropical Section of the Living Collections Department. Nigel has worked at Kew since the hurricane of 1987, when he came as a volunteer to clear up fallen trees. He now runs the nursery side of the huge fern collection at Kew and he talked to the Mutual about a collecting trip he made to a little explored region of Northern Malaysia, in conjunction with Peter Edwards from the Kew Herbarium.

Kew Guild President, John Sales, gave an interesting talk on the conservation of historic gardens, drawing on his experience in the N.C.C.P.G. and as Chief Garden Advisor to the National Trust. We also had, for the second year running, a speaker from the W.W.F., Alan Hamilton, talking once again on the conservation of tropical forests — taking forward the Mutual's commitment to conservation issues. The importance of raising awareness of the environment was stressed by the BBC Natural History Unit's Sarah Blunt, giving an account of 'Career Paths from Horticulture into Radio'.

The Christmas lecture was given by the Curator of another of Europe's top Botanic Gardens, Wolfram Lobin of Bonn Botanic Gardens (Germany). He gave a talk on 'The First Approach to Save Paradise — Cape Verde Islands'. We ended Christmas week with the traditional party in the School of Horticulture and once again the music was provided by past Kew student and Mutual Committee member, Alan Hulme and his band, Blue Canvass.

The new year started off with another Diploma student's trip — Wolfgang Bopp described his travels in Western Australia to research and collect herbarium specimens of **Drosera** and other insectivorous plants. He also made an interesting slide collection of idiosyncratic Australian letterboxes!

The final lecture before going to press was a return visit from retired cardiologist and Fellow of the Linnean Society, Dr. Arther Holman. The wealth of excellent modern medicines discovered from plant extracts and the amazing stories behind their discoveries, proved fascinating and very topical for Kew Mutual members. Many of his slides of medicinal plants were taken at the Chelsea Physic Garden, on whose management committee he is a member.

Lectures still to come include trips to Pakistan, Southern India, Japan and Eastern Australia by the Diploma students (many of whom have received Guild funding for their study tours). There is also a talk planned on the Lost Gardens of Heligan in Cornwall. Ex-student Ralph Wickham and his daughter, Annette Wickham, from the Temperate Nursery of Kew Gardens are also due to give talks.

We hope that the good attendance at our lectures is a sign of the continuing popularity of the Mutual lectures both from Kew staff and students, from past Kewites and from members of the public. I would strongly encourage Kew Guild members to come along to the Mutual lectures if at all possible (Monday evenings 6.30 p.m. September-March), not least to see the talks on some of the trips generously funded in part by the Guild. Please contact Barbara Hanson at the School of Horticulture (Tel. 0181 332 5545).

## THE DIRECTOR'S ACTIVITIES DURING 1994

The Director has had another busy year, following his usual busy schedule, with amongst other things, travelling and lecturing.

In January he attended the N.E.R.C. Institute of Terrestrial Ecology North Review at Penicuik, Edinburgh, Banchory and Grange-over-Sands, and he also went to Copenhagen to participate in a review group of the Botanical Museum at the University of Copenhagen. He went to the United States in February to Fort Worth, Texas for the 50th Anniversary of the Botanical Research Institute of Texas and he spoke at their banquet and gave two scientific seminars. He attended the G.A.I.A. conference held in Oxford in April and chaired one of the sessions. In July he went to the Bogor Botanic Garden conference, Indonesia, to advise them on the future work of botanic gardens and they presented their conclusions to the President. Whilst there he went on a field trip to see sustainable forestry practices in Kalimantan and East Java.

In April he visited Port of Spain where he spoke to the Royal Agricultural Society of the Commonwealth and also visited the President's garden and a rainforest reserve. He was also present at the Urban Growth and Environment World Congress held in Hong Kong in November, where he met Prince Charles and also managed to fit in some lecturing too whilst there. In August he and Mrs. Prance accompanied a group of Friends of the Royal Botanic Gardens, Kew, on an Amazon Cruise. He came back from that a little under the weather and had to take things easy for a while and was, therefore, unable to attend the Latin American Botanical Congress held in Argentina in October. Later in October, when he was fit and well, he went on a field trip to Madagascar with Dr. John Dransfield and Dr. Henk Beentje. He also went to Amsterdam in September to oversee the examination of two Ph.D. candidates.

In 1994 he was elected to the Council of the Linnean Society of London and also became a Corresponding Member of the Botanical Society of America. He was also presented with the Patron's Medal of the Royal Geographical Society. In June he took part in the Natural History Museum Review Group for Biodiversity, Systematics and Evolution.

During 1994 the Director received three honorary doctorate degrees; these were at the University of Kent, University of Portsmouth and at Kingston University.

The Director receives many requests to lecture and so spends quite a lot of time fulfilling these demands, lecturing on his South American interests and the work of Kew. He gave a careers lecture to the British Ecology Society in Birmingham and the Sixth Pilkington Lecture at the School of Biological Sciences, University of Manchester. He lectured to the Belfast Natural History Society at Queen's University, Belfast, to sixth formers at Ampleforth School, the Essex Wildlife Trust, the Hampshire Wildlife Trust, the Geographical Association, W.W.F. in Winchester and Munich University. He chaired an R.S.A. lecture given by Robin Pellew on the conservation of endangered species. He also lectured in Scotland to the National Trust of Scotland, Universities of Dundee and Stirling and the Glasgow Natural History Society.

In August his Secretary, Pauline Churcher, retired after a long and dedicated service to him and his predecessor, Professor Bell, and she has been succeeded by Eleanor Bunnell (see separate article).

The Director continues to serve on various organisations, which include the Royal Horticultural Society, Botanic Gardens Conservation International, the Horniman Museum, the Margaret Mee Amazon and Lovaine Trusts, the Plant Sciences Advisory Committee of Reading University, the Church of England Synod Board for Social Responsibility, the Advisory Committee of Pro Natura and The World Humanity Action Trust. He continues to be a Botanical Advisor to the Commonwealth War Graves Commission, to be President of the U.K. Chapter of the Society for Economic Botany and have an advisory role in the Environmental Change Unit of Oxford University.

The first presentations of the new Kew Award were made to Sir Robert and Lady Sainsbury and Baroness Trumpington for all the help they have given to Kew over the years. An electric, solar operated vehicle, which was donated by the Sainsburys to transport less mobile visitors around the gardens, was launched by the Duchess of Grafton in September.

The Director also continued his research on the **Chrysobalanaceae**, **Caryocaraceae** and **Dichapetalaceae** and published several scientific papers.

Professor and Mrs. Prance continue to host many lunches and dinners in order to promote the work of Kew to persons of influence.

### Visitors

The Gardens had their fair share of royal visitors this year with the Queen opening the new Jodrell Laboratory extension in March and the Duke of Kent opening the Rock Garden in April.

The Rt. Hon. Gillian Shephard, the then Minister of Agriculture, Fisheries and Food, came to visit Kew in March and she will also attend the launch of the Kew Teachers' Pack at the House of Lords next January, but this time in her capacity as Minister of Education. Mr. Richard Packer, Permanent Secretary for M.A.F.F., visited Wakehurst Place in September, the same day



as a Board of Trustees meeting and was able to join them for lunch. The Hon. Nicholas Soames, Parliamentary Secretary for M.A.F.F., came to look round Kew, having already been impressed with Wakehurst Place where he opened the new restaurant. The Japanese Ambassador was also a visitor to Kew during December.

## THE DIRECTOR'S SECRETARY, ELEANOR BUNNELL

When I was offered the job of Director's Secretary one of my first reactions was how could I possibly follow in Pauline Churcher's footsteps? — what an act to follow! Having worked for Gren Lucas as Keeper's Secretary for two and a half years, I felt I knew the Herbarium side of Kew and wondered what it would be like on the other side (as they say). I must say that I enjoy being the other side of the Green!

I was brought up in Carlisle, Cumbria, where my father was a vicar and a Canon of Carlisle Cathedral. When I was in my late teens, we moved to Ambleside in the Lake District, which was a beautiful place to live and I carried on working at the Midland Bank — transferring from Carlisle to the Windermere branch.

I was soon drawn to swinging London and went on a secretarial course, had various secretarial jobs and met my husband Phil. We have three children: Tim (19), Bridget (16) and Harry (9).

After a gap of a few years, I started to think about working again and became a part-time secretary for Kingston Education Authority, Hearing Impaired Unit. Four years later I was ready to work full-time again and that was when I came to Kew.

In our spare time, when we have some, we like walking, especially in the Lake District and the coastal paths. Harry has become an excellent walker — not that he has the choice! I can't say that gardening is one of my hobbies, but I appreciate gardens and there is nothing better than going outside at lunch time for a walk in the gardens.



## LIVING COLLECTIONS DEPARTMENT REPORT 1994

By David Hardman, Deputy Curator, Head of Living Collections (Kew)

In closing my report last year I mentioned the pending arrival of the M.A.F.F. Staff Inspectors, whose appearance had been scheduled from early March 1993, but postponed because of various reasons. Well they arrived in early January and spent three months looking closely at the work of most of the staff in L.C.D. The report was waited for with eager anticipation by all! The impression they had gained about the Living Collections Department was very positive, recognising the immense wealth of knowledge, commitment and motivation of everybody they had met. The process of replying to the report is still to be completed, although many of the recommendations have already been introduced.

The development of a new format to the Corporate Strategic Plan has continued and is readily referred to throughout the Department. It gave us a clear focus in presenting our report to the Staff Inspectors and provides structure to the presentation of the Annual Management Returns enabling individual staff to see their own role at Kew. The Corporate Strategic Plan is set out in eight programme areas which are: 1) Collections, 2) Research and Dissemination,

3) Conservation, 4) Visitor Attraction, 5) Education, 6) Heritage Support, 7) Institutional and Management Services, 8) Income Generation. These programmes are then split into sub-programmes. It is interesting to record that L.C.D. has input into nearly every one of these sub-programmes.

Out in the garden many projects are in train and at various stages of completion. Members attending the Annual General Meeting in September were treated to a conducted tour of the Rock Garden by Charles Shine, Supervisor, being able to enjoy at first hand some of his anecdotes concerning this important construction project. The more open views through the Rock Garden give it an interesting new dimension.

The Cascade and North American section were officially opened by H.R.H. the Duke of Kent. It proved to be an interesting occasion with literally generations of Assistant Curators and Rock Garden Supervisors in attendance. It was a pleasure seeing George Preston, Brian Halliwell and Alan Cook, as well as present staff Charles Shine and Mike Sinnott, Assistant Curator, relating stories about the size of rocks. The planting of the British native area in the Rock Garden was also completed during the year allowing staff to move on to other areas of work.

Phase II of the Azalea garden has seen the area cultivated and reseeded, which is now looking very green — the new beds were prepared in autumn — and the permanent irrigation system has been installed. Planting will follow next year as Mark Pitman's team strive to complete this project. Incidentally Mark undertook a study tour of American arboreta and gave a paper on the 'Oaks at Kew' to delegates at the 1st International Oak Conference in Chicago.

The Australian House was cleared early in January to await the arrival of the American construction specialists di Giacomo Incorporated of California. These artists arrived and worked



H.R.H. the Duke of Kent at the official opening of the Cascade and North American section of the Rock Garden.

tirelessly to produce the new landscape. The now named Evolution House has progressed well throughout the year. The Arboretum staff have reinstated and re-sown the lawns on both sides of the building. Internally the Horticultural Group has moved and planted the large Cycads into the house. This has been filmed by Blue Peter as part of a planned project to be screened in 1995. Other plantings are progressing well and the team of Temperate and Tropical Section staff, including Mark Sparrow, Pete Bradley, Richard Weekly, David Cooke and Jane Allen have worked well together. I must also mention the great support this team has been given by the Services Section, led by Stewart Henchie, as well as Mike Lucie and Ron Bicheno. Plant material from Edinburgh was collected and is now at Kew ready to be planted.

The Secluded Garden is progressing well, although the variable weather conditions has affected the timetable. A working team has been established to undertake the soft landscape works now the site has been handed back to L.C.D. from the Building and Maintenance Department's contractor.

The mapping of the tree holdings on the grid pad system was completed in July. The data has been recorded and the co-ordinates linked to the C.A.D. system in Technical Section. Soon it will be possible to utilise all this information in the Gardens using portable computers and then relate the data back in the office to the main database and plans. Other exciting opportunities are also available using this equipment.

In the North Arboretum the Berry Border close to the Tea Bar has been completed. The Lilac project has seen all the existing beds removed in order to create a more attractive feature with added educational benefit. The first beds were dug out and planted. During the summer the largest areas were cultivated and grass sown. The next Phase will see new beds created. Meanwhile Martin Staniforth, in the Temperate Nursery, has been propagating all the material ready for planting.

The Queens Cottage grounds strategy to develop the whole site in harmony with its conservation requirement is proceeding well as is the **Philadelphus** collection for improved interpretation and display at the new site to the south of the Pagoda.

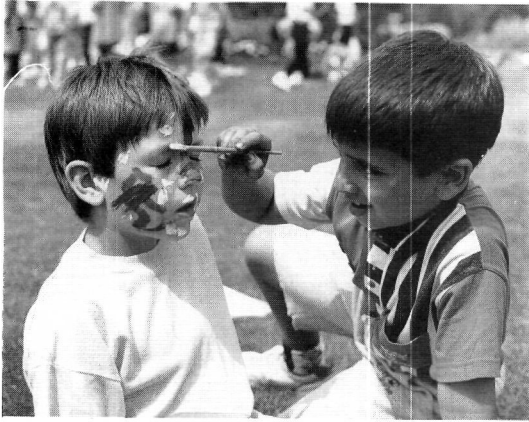
The **Amorphophallus titanum** received from Leiden B.G. last year has been potted up and is growing well in the Princess of Wales Conservatory. Unconfirmed reports to the writer suggest that bets are now being taken as to when it will flower! This exciting addition to the collection will, no doubt, receive even more attention after David Attenborough's television programme on plants is shown next year.

Interesting plants in Herbaceous Section included **Roscoea purpurea** (Red Forms) which flowered extremely well. An article on this was published in the Bot. Mag. with Graham Walters contributing to a joint publication of **Roscoea** with Jill Cowley. These are the first red **Roscoea** ever in cultivation and are very significant ornamentally and scientifically. The clone **Roscoea purpurea** 'Red Gurkha' received a Preliminary Commendation award from the R.H.S.

A number of other first time flowerers at Kew this year include **Launea cervicornis**, an unusual spring caespitose endemic species of Compositae from the Balearic Islands. **Ambrosinia bassii** flowered and fruited and **Spathanthem intermedium** from Peru, both Araceae. **Rhodophida** flowered well generally including a new Argentinean species **R. elwesii**. Sichuan expedition collected material of **Rosa murielae** and **Rosa prattii** which were both of interest in the Arboretum through May and June. Others included **Phaedranassa dubia** (Amaryllidaceae), **Combera paradoxa** (Solanaceae), **Iris staintonii**, **Lilium lophophorum** and **Vagarja parviflora** (Amaryllidaceae), from Syria in Herbaceous Section.

Links to St. Helena continued through further development of a Sustainable Environment and Developmental Plan for the island. Other conservation assessment strategies are being used and developed to support this project including such processes as Population and Habitat Viability Analysis (P.H.V.A.) and a Conservation Assessment and Management Plan (C.A.M.P.).

A **Sophora tomiro** project management group was established and is being co-ordinated by Bonn Botanic Garden. Mike Maunder represents Kew on this group.



Face painting — a family night out at the Friends' Summer Picnic on the Temperate House Lawn.

organised by the Royal Society for Nature Conservation. David Hardman (Deputy Curator) welcomed delegates to Kew. Mike Sinnott had assisted in organising the day. The seminar considered the potential use and development of peat alternatives. Speakers included Professor Chris Baines, who appeared again later in the year at the Student Prize Day.

L.C.D. staff supported a number of events for the Friends and Foundation including a Founders Evening tour of the Lower Nursery, Queens Garden, and economic plantings around the Banks Building. The evening was very successful. The Friends' Stand at the Hampton Court Show was supported by L.C.D. who helped provide the landscape features and plantings. Similarly, the Friends' sponsored walk around the Gardens was supported by staff in preparation, organising and clearing up after the event.

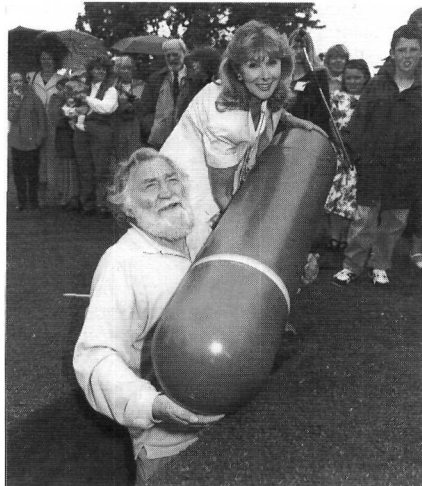
A new event in July was a Friends' Evening Picnic, directed at families. This again was well supported and created great excitement for children as they marched off with the band.

L.C.D. staff were again in evidence at the very successful Jazz Concerts on the evenings with stewarding as well as clearing the site daily.

A constant flow of visitors have been received in L.C.D. and include over 200 delegates from the 25th Fleuroselect Annual International Conference. They represented the major proportion of the world's seed producers and distributors for bedding plants. They were shown round the Gardens by staff from the Herbaceous and Technical Sections. The regional representatives of the G.M.B. Union came to look at the sponsored bedding display on the Broadwalk roundabout.

The trial extended opening hours in the display glasshouses proved to be very successful. The preliminary observation showed zero complaints about the houses being closed; a major

Biological control in the glass houses continues and the process is now known as Integrated Pest Management, being a constant challenge due to the diversity of the pests as well as the plants. The various pests are not always attacked by the 'beneficials' and further collaboration between L.C.D., Jodrell and Wye College is ongoing. The central purchasing system organised by Dave Davies (Supervisor, Decorative) and Fiona Dennis (S.B.H., Herbaceous) with one supplier has been successful giving a departmental wide overview of the situation, and the regular forum to exchange ideas and observations is now achieving good results. A successful seminar 'Growing Wiser' was held at Kew,



David Bellamy and Susan Hampshire preparing to bury the time capsule in the mound in front of the Orangery.

achievement since this item was the second major complaint in 1993. The success of this trial rests entirely with all the staff who put so much effort into supporting this task.

Once again many L.C.D. staff have made presentations to the students attending the International Botanic Garden Management Course. This proved to be even more successful than the previous course. Staff made some excellent contacts as well as new friends.

Sarah Smith, Robert Allison and Charles Shine attended the Systematics module on the Diploma course. This is to be developed further as the Diploma course is made more accessible to staff.

Our expedition teams were away again this year with Hans Fliegner (Temperate) and Charles Erskine (Arboretum) spending five weeks out in South West Sichuan, whilst the other team of intrepid explorers, Mark Flanagan (Wakehurst) and Tony Kirkham (Arboretum), made a successful expedition to Sakhalin and Ussuri.

In concluding my report for 1994 I am sure to have left out many events since the year has proved extremely eventful. On reflection it has been successful. The long period that autumn seemed to be with us and the continued pressure to cut the grass areas right up to Christmas leaves me wondering what 1995 has in store for the Living Collections Department.

## **KEW'S EDUCATION OUTREACH UNIT**

By John Ellison, Education Officer, RBG Kew

The mobile education Unit at the Royal Botanic Gardens, Kew, began its work in October 1993. The aim of the unit is to provide outreach education, on plants and the Royal Botanic Gardens, to schools unable to visit Kew, or currently unaware of the resources of Kew and their potential for the development of environmental education.

In instigating this new programme the education staff at Kew felt that more emphasis needed to be placed on schools, both locally and further afield, that were not benefiting from the resources available. The reasons for this were identified as being varied. These included support for outside visits, having a limited understanding of the value of plant based teaching, or particular special needs of the pupils. To address this situation and to promote environmental education across the curriculum, an outreach programme was seen as a suitable development of Kew's core education programme.

The unit is staffed by a full-time teacher and is used for outreach to schools nationally, on an advance booking basis, both for direct teaching and INSET teacher training courses. It will also be used at a variety of education events, conferences and exhibitions. The unit will base itself at a central place within a local education authority area, usually a teacher's centre, or a school which is accessible for other schools to reach. The unit will remain for a week working with local schools during the day and training courses in the early evening for teachers. These events will be organised in consultation with each local authority schools advisory service and in partnership with the local Botanic Garden or environmental groups.

The work of the unit supports and highlights the Botanic Garden Education Network. It encourages schools to investigate resources at their local botanic garden, aiming to raise the understanding of international conservation through Development Education. The project will encourage schools to instigate Local Agenda 21 initiatives by addressing local conservation issues. This will offer the opportunity for community involvement by highlighting the uses and importance of the school grounds and the local built environment. The unit's role as a networking facility is paramount. In each area it will be working alongside local groups to provide them with resources from Kew to complement their work and highlight their role within the school.

The seven metre long exhibition unit, built to Kew's specification and towed by a Land Rover, expands to provide an open stage area to one side, study benches, video, TV and slide projection facilities, laboratory equipment, and a small specialised library changed frequently to

complement particular themes. Much of Kew's education programme is delivered using 'Economic Botany' as a focus. Live plant material and interesting botanical artefacts from around the world are carried in the unit.

The Unit is booked to begin its work with schools in March 1995. The pilot project, which took place during the initial months of operation in 1994, gave schools the opportunity to say what they would like from this resource and then followed through with activities to meet the demand. The pilot project assessed the success and long term sustainability of particular themes, operated through this national outreach programme. It forms the basis for the developing menu of activities which the unit offers.

There is a choice of themes for the workshops. These are as follows:

- Use your senses: textures, sounds and scents.
- Musical instruments from around the world.
- Economic botany; how we use plants every day in all aspects of our lives and how plants are used in other parts of the world.
- Symmetry, pattern and shape in plants.
- Plant diversity and their adaptations to their environment.
- Rainforest and Amazon peoples with optional face and body painting.
- Spices and history of the spice trade.
- Cellulose plant products.

The teacher working with the Unit is available to discuss organising a topic of your choice to complement your school curriculum.

To encourage schools to use their local botanic gardens and develop further teaching through plant based information after the initial work of the Unit, a schools' pack looking at 'Plants Across the Curriculum' has been produced and is on sale to schools using the Unit.

The pack, containing teaching activities and resources, will promote knowledge and uses of plants from around the world, emphasising the multi-cultural relevance of plants within all aspects of the school curriculum.

Events in 1994, when pilot projects were run, included a week of activities in Birmingham's Centenary Square as part of the Primary Focus Year, events at Wakehurst Place and teachers' centres in Sussex and open days at Kew, as part of the British Association for the Advancement of Science, National Science, Engineering and Technology Week.

Schools interested in taking part in events for the Royal Botanic Gardens, Kew, Outreach Education Programme, and teachers wishing to know more about Kew's educational resources, should contact the Outreach Education Officer, John Ellison, R.B.G., Kew, Surrey TW9 3AB, on 0181 332 5627 or, by Fax on 0181 332 5610.

## **FIFTY YEARS AGO (1944)**

By Graham Burgess

Advert: Our Tree and Shrub catalogue now out of print (Until after the War), Hilliers.

The Guild elected Miss E. Wakefield as President. Women had filled the breach formed by men going to war and the Guild sought to recognise this in its most honourable way. The *Journal* recorded the early deaths of six more men killed in action. The 'Dig for Victory' campaign drew on men and women from Kew and several *Journal* advertisements expounded the virtue of safeguarding against shortage.

Monsieur Gagnepan wrote from Paris to say that no bombs had fallen upon the new herbarium and the specimens which had been sent far away for safety were now returned safely. Frank Kingdon Ward wrote from R.A.F. Indian Command in Calcutta saying that he would like to be back on the frontier. Obviously plant collecting was not stimulating enough to fill a whole year. Gordon Groves wrote from Georgetown, British Guiana, (now Guyana), a long way from the war. He spoke of the flooding along the sea coasts and of propagating 10,000 citrus plants; Mangoes and Avocadoes.

Richard Suddell, one of the Founders of The Landscape Institute, wrote about Kew as a Landscape. He "forgave" the Pagoda, which, in spite of being "out of place it is full of meaning for us". He noted that visitors do not molest trees, grass and flowers if they are handled sympathetically.

The Director described certain aspects of the Garden philosophy but the next *Journal* article was 'In a Japanese Prisoner of War Camp' an exciting, real war story by Gunner R. A. Hudson. The first Mutual of that year was by Professor E. Salisbury. The topic illustrated Kew's up-to-date awareness 'Woodland Ecology'. Charles Metcalfe gave the seventh lecture on 'The Influence of Industrial Pollution on Plant Life'. Both were lantern lectures. (The modern lecture would be high-tech and probably delivered on Japanese systems.)

Heavy explosives and rocket sleeves fell in the Gardens and for the third time the Temperate House lost all its glass. All the glasshouses were closed to the public in June because of flying bombs.

Flying Officer H. R. Cocker wrote a lengthy and illuminating article about horticulture and life in India.

Viruses are familiar to us now but they were a novelty in 1944. A list common to the Kew allotments was given.

The Women's Gardener Movement was cursorily mentioned in 1943, but Lucy H. Joshua, N.D.H., who had left Kew in 1915, came back strongly with an article about the Women Gardeners at Kew during the War. She speaks of the underlying sexism and the Decorative Department almost completely run by women and called 'Coutts Harem'. William Watson would not attend Lucy's Mutual but afterwards asked to see the notes and sent them to the *Gardeners' Chronicle* where they were published.

Too many young faces peer out from the Obituaries Section of the 1994 *Journal*.

## **NEWS RELEASE — NEW EFFORT TO SAVE INDIAN OCEAN FLORA AND FAUNA**

A new joint effort is being made by a number of organisations concerned with conservation to preserve and restore the unique species of animals and plants on the Indian Ocean islands of Mauritius and Rodrigues. A unique set of conservation skills have been brought together to ensure an integrated approach to conservation.

Isolated oceanic islands contain species found nowhere else on earth, yet many have been either wiped out or decimated by environmental destruction.

In collaboration with the Government of Mauritius, the Royal Botanic Gardens, Kew, Jersey Wildlife Preservation Trust, the Mauritius Wildlife Fund and the Fauna and Flora Preservation Society have signed an agreement to support habitat survey and management in the area, as well as species re-introduction, captive propagation and professional training. This builds on the long standing involvement of the Jersey Wildlife Preservation Trust with conservation on Mauritius.

Progress has already been made through an established project in the successful recovery of the Mauritian kestrel, once described as the rarest bird in the world. The botanical programme will give priority to saving and restoring forest areas on Rodrigues, Ile aux Aigrettes and the highly degraded, but recovering, Round Island.

The work in Mauritius is regarded as a model of what must be done in many island areas, such as the Caribbean, Polynesia and the Philippines, to ensure the survival of threatened species and essential features of the landscape such as the retention of watersheds.

## NEWS RELEASE — IN RAINFOREST AND DESERT WITH KEW'S BOTANISTS. A VIVID DISPLAY OF 'ON TRAIL' PHOTOGRAPHY

Botanists on jungle rivers and many splendid examples of the exotic flora they are seeking, were featured in an exhibition of photographs from expeditions mounted by the Royal Botanic Gardens, Kew, at Kew Gardens Gallery from 21st October, 1994, until 29th January, 1995.

The photographs were taken during three expeditions by Kew's Media Resources photographer, Andrew McRobb — the first to have a professional photographer as part of the team to record plants and their habitats and the fieldwork involved in botanical research.

An important feature of Kew expeditions is co-operation with botanists and horticulturists of host countries. They participate in discovering and bringing into cultivation plants and seeds for scientific and horticultural study and collecting information about habitats, the value to humanity and what conservation action needs to be taken.

The vivid images in the exhibition take the visitor to Brunei, where Kew is producing an inventory of the estimated 4,000 plant species in the extensive rainforest, to eastern Brazil, an area of outstanding montane flora and to the predominantly semi-arid area of north-eastern Brazil, where Kew has for some years been working in a programme aimed at the sustainable development of natural plant resources.

### MEMORIES STIRRED BY READING 'A CENTURY OF KEW PLANTSMEN'

By L. J. Foster

I have recently acquired a copy of Ray Desmond and Nigel Hepper's *A Century of Kew Plantsmen* which I, being an old Kewite myself, found most interesting. In fact I was one of the 'bloody boys' having spent three years as an apprentice over the period 1937-40 and my name appears in the *Journal's* lists of Old Kewites up to about 1969 when, presumably, I stopped paying my subscriptions.

Mainly for the benefit of the grandchildren, I wrote a brief autobiography a year or so ago, which I entitled *The Gardener's Apprentice* and included in it is a brief account of my time at Kew, of which I attach a copy. Most of the work covers my experiences during the war, then in the Colonial Service and with the Commonwealth Development Corporation (C.D.C.) from which I retired in 1980 as Deputy Natural Resources Adviser. There is also an account of several gardens I planted up. An edited copy is lodged with the Empire Museum at Bristol.

The account of working hours in 1847 (page 6 of the book) compared with mine showed that conditions had not changed much over a hundred years; neither had pay, my starting wage being about 25/- (£1.25) per week. We were, of course, still issued with clogs and aprons (page 7) and could get new soles (like horseshoes, which were nailed on) when they wore out and if the storekeeper (Ruck?) was disposed to let one have them. Lectures were still held in the Iron Room and those fortunate enough to get home to change did so, but not as formally as in the picture on page 11. Dallimore was one of our lecturers and he was particularly interested in developments at Bedgebury. Hubbard was another lecturer and Dr. Turrill's most interesting lectures and field excursions read like his book *British Plant Life*. I cannot remember what was the prize for the best collection of dried plants but, in any case, an apprentice would not have been eligible! I believe Stan Rawlings won the prize.

Stan Rawlings and Peter Benton were both good photographers and they lent me slides for my talk, which was chaired by Sidney Pearce. Later, after I had joined the Colonial Agricultural Service, I sent a small collection of plants from Nyasaland to Brenan in the 1950s and gave a lecture to the Mutual Improvement Society during one of my leaves from Africa (either 1952 or 1956), but have had very little recent contact with Kew.

I have photographs of the removal of the *Jubaea* in the Temperate House and of the plane crash in 1938 (page 69).



The chapter on Kewites abroad made interesting reading. During my travels with C.D.C. I visited the Aburi Garden in Ghana. Among other old botanic gardens I have visited are Bogor, Indonesia, Singapore and Victoria, Cameroon.

Congratulations to you both for reviving such memorable occasions!

Here are my memories:

"It was not until November, 1937, that I could start work as an apprentice at The Royal Botanic Gardens, Kew, so I found temporary work as a clerk and studied botany in the evenings at Acton Technical College.

"Our working hours at Kew were long and would never be tolerated by the present-day youngster. Students and all labour started at 6.30 a.m. and finished at 5.00 p.m., with a half-hour break for breakfast at 8.00 a.m. and an hour for lunch. In the winter, work started at 8.00 a.m. and there was overtime at weekends. From 1938 onwards I kept a diary at Kew noting plants of interest, useful as we were expected to name selected plant specimens at regular plant identification tests. Lectures were mostly in the winter and were from 6.30 p.m. to 9.00 p.m. and those of us who did not live in digs nearby spent our time at a teashop in Kew Green. It was here that a colleague, John Downing, and I met Kenneth Airy-Shaw, a botanist at the Herbarium, through whom I learnt something of the nomenclature of mosses and lichens and, later, of plants in the Far East as he was an authority on the flora of South-East Asia. Those of us who lived some distance took sandwiches for breakfast and lunch. John Downing and I would meet up and it was very peaceful and satisfying to cycle through the Gardens before they were open.

"Lectures were compulsory to students and optional for apprentices; they covered Systematic and Economic Botany, Plant Pathology, Genetics, Soils and Manures, Arboriculture and Forestry, Plant Nomenclature, Land Surveying, Parks Administration and Landscape Gardening. As might be expected for a botanic garden, the grounding in systematic botany was excellent and a very wide selection of members of the plant kingdom was encountered. Among the lecturers were some well-known authorities: Dallimore for trees and shrubs and Hubbard for grasses. The most interesting lecturer was Dr. W. B. Turrill, the Keeper of the Herbarium, who was an enthusiastic botanist. He was an ecologist — ecology in those days being a comparatively new science — and he organised botanising expeditions. In his book *British Plant Life*, which was published in 1948 and reprinted in 1989, are mentioned several of the localities for special plant associations to which he had introduced to us and, in particular, I remember Ham Common, where we did an ecological survey.

"Unusual for an apprentice, I was persuaded to read a paper in the old Iron Room (now replaced by a modern lecture hall) to the students' Mutual Improvement Society on 'Smaller Hardy Trees and Shrubs', a case of reading up a subject if you wanted to talk about it! However, with the help of some fellow students' colour slides, my first ever discourse seemed to go down well enough.

"Various extra-mural activities in the summer included botanising expeditions, for a collection of dried, mounted and named specimens of the British flora. There were also visits to gardens of interest in southern England such as Bedgebury (then part of Kew), the Royal Horticultural Society's Gardens at Wisley, Dartington Hall at Totnes, Savill Garden near Windsor and Cambridge Botanic Garden. Bedgebury was planted mainly to conifers and other trees and shrubs which could not stand the autumnal London fogs which prevailed in those days. Wakehurst Place had not yet been acquired by Kew. There were also horticultural students at Wisley and we met each other in debates and social activities.

"In those days fog was a severe problem. Factories belched forth smoke from their coal-fired furnaces and, across the River Thames at Brentford, the gas works contributed its share of pollution. In November thick peasoupers made getting home very difficult and vehicles travelled in convoy, usually with a bus leading. Another hazard at Kew was water. The Gardens were licensed to draw water from the river and irrigation on a limited scale was usually necessary in the summer as the soil was gravelly. One summer the river was so low that the ebb tide brought brackish water as far as Kew and several trees, such as an old mulberry, were killed.

"Propagating techniques were beginning to change. For the first time we were experimenting with chemical compounds, called growth hormones, to aid rooting particularly in difficult subjects like holly; indole-acetic acid was one of the most promising and it significantly reduced rooting time. A spell of about a year was spent each in the Temperate House Pits, which was the propagating centre for plants grown in the Temperate House, the Arboretum and the Alpine Pits. These three departments provided a good grounding in hardy and half-hardy plants. An old *Jubaea* palm was threatening to grow through the Temperate House roof and had to be moved sideways. This was a massive operation; the roots had to be encased in a large ball of soil weighing many tons and the whole plant was then winched on rollers.

Whilst in the Arboretum we planted the tulip trees *Liriodendron* in Broad Walk; they are now fully grown and make a magnificent sight when in flower and for their autumnal foliage.

One Bank Holiday a broken-down biplane towing an advertising sleeve crashed into a maidenhair tree (*Ginkgo biloba*) in the avenue to the Palm House. It was one of C. P. Raffill's, the Assistant Curator, treasures as he had planted it years ago and his first question was "Has he damaged the tree?" with no thought of the pilot! The leader had been damaged and eventually produced two shoots. It was too high to get a ladder up to prune it so one of the students from New Zealand did the job with a boomerang!

"The Curator was Bill Campbell, who came from one of the big Municipal Parks Departments and George Preston was Assistant Curator (Alpines). I was not co-operative and ended up on the Curator's carpet where I was threatened with the sack and the end of my burgeoning career in horticulture, but nothing came of it. Several years later, after I had graduated from Reading and when Campbell had retired, he tried to get me to help with his Horticultural Correspondence Course.

"C. P. Raffill was the Deputy Curator for the Arboretum and he occasionally made visits for Kew. He travelled light and boasted of packing not much more than a toothbrush, something I have never forgotten.

"Early in September, 1938, the family moved from Chiswick to Whitton and I cycled to work. In October 1938, there were very strong winds and many trees were blown down; I had difficulty in cycling home, particularly across Twickenham Bridge. Such weather was repeated with even greater ferocity in the gales of October 1987 and January 1990.

"The German Nazi dictator, Hitler, had now started his marches across Europe, annexing territories as he advanced and the first preparations for war had begun. Trenches and air-raid shelters were being excavated by hand and by mechanical excavators on the commons and greens. London Transport had introduced emergency services and six tube stations in London were closed so that they could be prepared as air-raid shelters and for storing important documents.

"I was due to complete my apprenticeship at Kew at the end of March, 1940. At Kew I got a distinction for my British flora collection, which contained about 300 specimens; some years later, at Reading, I gave it to the University's Botany Department library. The Government was offering scholarships in agriculture and horticulture and I applied through Middlesex County Council to enter Reading University. Unfortunately, I was turned down on the grounds that I was not in a reserved occupation, i.e. not engaged in food production, so on 1st April I started work at Hillier's Nursery."

*L. J. Foster, Maydene, Old Litten Lane, Froxfield, Petersfield GU32 1BG.*

## NEWS OF KEWITES AT HOME AND ABROAD IN 1994

Following the publication of 'A Century of Kew Plantsmen' for our centenary, a most interesting article was received by Ray Desmond from **L. J. Forster**. Thanks to Nigel Hepper for editing the article for us. (See preceding article in this *Journal* — *Ed.*) He was an apprentice at Kew between 1937-1940 and seems to have lost contact with the Guild after 1969.

**Pauline Himson** wrote to tell us of her change of address to Sandy Bay, Tasmania. She also told of the publication of the final volume of five of the *Student's Flora of Tasmania* which was launched on 19th September. Her husband, Arnold Himson, whom she met at Kew as an ex-serviceman student, has contributed to the work started by Dr. Winifred Curtis in 1948 and can be said to be a definitive authority on the Tasmanian flora.

**R. S. Davies** has moved house, but remains near Shrewsbury, having recently retired. He has spent 45 years working in private, public and mainly commercial horticulture. He looks forward to some years now growing plants for himself.

**Mike Griffin** wrote after visiting the I.F.P.R.A. (Europe Congress) which was held 20th-24th June in Berne, Switzerland. **Errol Scarr**, **Reg Harrison** and **Gilbert Briscoe** also attended and **Ian** and **Sheila Gilmour** were to have attended, but were later unable to. A highlight of the Congress was the Alpine Garden, planted high in the alps of the Bernese Oberland on the Schynige Platte, in the setting dwarfed by the mighty Eiger Mönch and Jungfrau. It boasts some 500 different species of alpine flora in a totally natural setting.

Mike is in semi-retirement from Brighton Borough Council and now works for two and a half days a week for Sussex Rural Community Council as their Countryside Officer, networking environmental information to local groups, individuals and parish councils; also acting as Secretary of the Sussex Local Environmental Action Forum and other voluntary consultative committees. He also works as Sussex Administrator of 'Rural Action', a grant scheme which incorporates funds from the Countryside Commission, English Nature and the Rural Development Commission. Over 50 schemes have benefited from £50,000 in and around East and West Sussex. Mike is to be Organiser too, of the Sussex Best Kept Village competition which he finds, amongst other things, stimulates a tremendous amount of social and community activity.

**Patrick Nutt**. We heard twice from Patrick this year; in June, when he wrote amongst other things, of the extraordinary weather they were experiencing in Pennsylvania, for example in May the severest frost known for 20 years, to be followed by temperatures of 95°F two days later. Congratulations to Patrick for the award of Silver Medal at the Massachusetts Horticultural Society for "... a broad range of horticultural skills constantly demonstrated in the floral displays under glass at Longwood Gardens and shared with students there". The award was to have been made in October at Boston.

He included mention of **Anna Bayley** who had settled at Longwood from Kew and the fact that they were now able to share the *Kew Guardian* and so keep in touch. **Mike Fay** had also visited for a few days. Pennsylvania Horticultural Society has presented its Certificate of Merit to Patrick, too, in recognition of his more than 35 years dedicated work at Longwood Gardens since his arrival in 1957. **Ken Evans**, recently deceased, **George Fuller** and **John Betts** were all part of a group at Kew between 1951-52. Patrick included an article on **George Fuller**, now in New Zealand.

**George Fuller** (1953) had been busy working for orchid growers prior to his time as a student at Kew, which concluded in 1953. Up until 1950 he had worked for Sanders at St. Albans. In 1952 he was awarded the Hooker Prize. He married in 1953 in Auckland. 1954 saw George move to Sweden to S. Rygaard, where he was employed in hydroponics. At the same time he was photographing orchids, many of his works appearing in publications.

Between 1960-64 he was in Malta setting up, with others, an A.Y.R. Chrysanthemum Unit for Sparkes of Angmering, West Sussex. Whilst in Malta he photographed the Maltese orchid flora. He returned to New Zealand in 1964 with his wife and three sons. Alex Hawkes Encyclopaedia of cultivated orchids, published in 1965, contained more of his work. The same year he joined New Plymouth City Council Parks and Recreation Department. 1966 saw him appointed Curator of Pukekohe Park. He joined what became known as the Soil Association and organised New Plymouth's floral festival. In 1969 he qualified for the N.D.H. with a thesis on methods of propagating orchids. Two years later he joined the Taranaki Orchid Society, eventually becoming patron in 1985. During this time he worked particularly on *Disa uniflora*, a South African terrestrial species he believed well suited to cultivation in New Zealand. His breeding programme continued through the following years. In 1990 he both retired from Pukekohe Park and was awarded the M.B.E.

**Lester Searle** has also moved house and is now employed as General Manager of Civic Trees, based in Sydney, performing commercial landscape work. They specialise in the internal installations of large trees and growing a range of advanced specimens.

**Andrew Pierce** (1960) left Denver Botanic Garden after 18 years, taking early retirement. However, he soon found another challenging position as Director of Horticulture and Programme Development for Hudson Gardens in Littleton, Colorado. The garden which is being developed will open in 1996. They had Trevor and Brenda Cole from Ottawa to stay in the summer of 1993.

**Hugh Flower** (1976). In January Hugh moved once again! This time as Parish Priest to St. Teresa's Merstham. Hugh now has responsibility for this parish and continues to work as Chaplain to High Down and Downview prisons. At High Down this year they have maintained some of the bicycles for Kew, as well as made plant label stands and irrigation equipment, all for the Gardens! The parish is somewhat small and, with no recent development, a little stagnant. However, Hugh hopes to reverse that trend in the years to come.

**Robert Carrington** (1976), with his wife Jenny and children, moved during early 1994 to Malawi to take up a new post. That has somewhat changed with the change of Government and so more moves were planned as the year was closing. Jenny and the children have adjusted well to their life from Shropshire.

**Roy Rumford** of New South Wales has moved to a retirement village, having sold his property in Dural. Sadly, after 57 years of marriage, his wife now has to live in a nursing home. At the time of writing he was mindful of singing carols at Christmas in 1929 when at Hilliers.

**Andrew Paterson** (1973) wrote with a potted history. In 1979 he completed an M.Sc. at Bath and returned to Ghana, working for Tate & Lyle, investigating alternative non-sugar sweeteners, especially one from the plant *Thaumatococcus deniellii*. Soon funds began to run out and so Andrew became redundant in 1980. Then came a year in Saudi Arabia beautifying military installations in Tabuk and Riyadh with other Kewites. After that two years in Hong Kong working on New Territory developments. 1986-87 saw Andrew in Pakistan on a small farmer development project, working on the introduction and promotion of improved deciduous fruit varieties and rootstocks.. Also in 1987 he worked on the Maraca Rainforest Project. Then in the following two years he was back to landscaping in Kuwait and so to a number of short term consultancies in 1990 and 1991. A further M.Sc. course in agricultural studies was completed in 1992 and hopefully the study has proved fruitful for his family, with two children under three, for they are now in the Gambia, where Andrew is working for U.N./F.A.D. as a Technical Adviser on a project improving extension services for women's horticulture.

**Kenwyn Pearson** (1975). Having been made redundant in 1993, Kenwyn has in the past year begun to establish himself as a Gardens Adviser and Consultant and now finds himself travelling widely throughout the country. He still manages some work 'hands on' to maintain skills learnt and well used.

**Mitch Mitchelmore**, after retirement from the Principalship of the Welsh College of Horticulture, was appointed Chief Assessor to the National Examination Board for Agriculture, Horticulture and Allied Industries. He held this post for five years and then resigned upon his appointment as External Examiner for Singapore. Mitch will not only be concerned with examination structures and evaluation, but will also be investigating the possibilities of affiliation and links with educational establishments in the U.K. He is also currently involved as a Visiting Assessor to colleges in Northern Ireland and Lancashire.

Hon. Editor **Richard Ward** reports that during his year as President of the Rotary Club of Kew Gardens the Club were able to donate £900 to the Kew Education Outreach Project. John Taylor, Guild President 1993-94, who is also a Rotarian, visited Richard's Club during May together with his wife, Morag. Richard and his family moved house from Richmond to Kew in late 1992, temporarily, prior to completion of their new 'Earth-sheltered' house in Kew Gardens Road during 1995. Watch this space!!

**Jonathan Allin** (1991) wrote to Ian Leese from his home in Sydney, Australia, to say that he had recently started his own landscaping business. He mentions that he still keeps in touch

with Russell Forbes, who was best man at his wedding (but isn't a member of the Kew Guild! — *Ed.*). Jonathan also "bumped into a guy named Lester Searl" who was at Kew before Jonathan and now manages a company in Dural. (Another non-Guild member! Jonathan — we need these guys as members forthwith please! — *Ed.*)

**Ken Burras** (1954) Committee Member of the Kew Guild 1967-71 and Vice President 1986-88 has, since retirement from the Curatorship of the Oxford Botanic Garden in 1989, been active as an horticultural adviser, consultant and lecturer. He is an elected Fellow of Wolfson College, Oxford and is honorary gardens adviser to several of Oxford's colleges. He is a member of Floral B and the Award of Garden Merit Sub-Committee of the Royal Horticultural Society and is Consultant Editor for the R.H.S. *Manual of Climbing and Wall Plants*, to be published in the spring of 1995. Ken and Hon. Editor **Richard Ward** are currently combining on the care and treatment of a well known and magnificent *Wisteria sinensis* (a particular favourite of the Queen Mother's), which occupies a Christopher Wren wall being restored at Marlborough House, London, for the Commonwealth Secretariat.

In November 1994, **Graham Burgess** flew out to Israel at the invitation of one of the local authorities. A Garden of Eden Project is being planned south of Tiberius.

Whilst researching ancient maps of Jerusalem in the Hebrew University, Graham discovered two showing maze designs on the site of King Solomon's Garden. This is new maze data, reason enough for making the visit. Additionally a friend of **Richard Ward** required a roof garden in Jerusalem so, in exchange for accommodation, Graham designed one. It is anticipated that Richard and Graham will supervise construction during 1995.

**Tom Risely** (1958) is now Business Manager for the City of Liverpool's Environmental Services. This is a contracting organisation (under C.C.T. legislation) and is responsible for the maintenance and landscape construction in the City's parks and open spaces, with an annual turnover of around £15,000,000. Prior to moving to Liverpool early in 1994, he worked for several years in Spain on landscape works, including a spell as Project Manager on a £1¼m landscape project in Barcelona, leading up to the 1992 Olympic Games. Since leaving the Civil Service he has worked chiefly in landscape construction, including ten years in the United Arab Emirates and Saudi Arabia as Project Director on major landscape, irrigation and sportsfield construction works.

Amongst his colleagues in Liverpool are Neil Goddard (1967) and **Tom Watt** (?). (Neil is not a Guild member Tom! — *Ed.*)

Tom and his family live in Heswall on the western side of the Wirral overlooking the Dee estuary. His elder daughters will be remembered by some Guild members. Jane is an Assistant Vice President of Chemical Bank and lives in Manhattan; Catherine teaches 'A' Level Physics in Yorkshire; Rachel is a London businesswoman, whilst Sarah and Rebecca are in full-time education.

**Nigel Hepper**, former President and Hon. Secretary of the Guild, still regularly works in the Herbarium, although he retired several years ago. During 1994 he completed and published *The Plants of Pehr Forsskal's Flora Aegyptiaco-Arabica*, with Professor Ib Friis of Copenhagen. It is the botanical account of the Royal Danish Expedition to Egypt and Yemen, 1761-63.

Nigel's other botanical activities include an account of the Solanaceae for the *Flora of Egypt*, the botanical ecology of the Commune of Cipières in the Alpes-Maritimes (an archaeological project), and the flowering dates at Kew. The latter is the formation of a database at Kew and eventual publication of his phenological observations from 1954 to the present, which lists several thousand species.

## OBITUARIES

Kindly prepared by Graham Burgess, unless otherwise noted

### KATHLEEN CLARK (NEÉ EPERON) AND JAMES CLARK

James was born on the 27th December, 1914, in the Cemetery Lodge, Rawtenstall, Lancashire as his father was the Cemetery Superintendent. In his youth he assisted with grave-digging and it always amused him "that his career started below grass-roots level". He trained initially at Cambridge Botanic Gardens before moving to Kew on 28th December 1938.

Although his name appeared under the student category from then until 1945, it had against it a notation which meant 'On His Majesty's Service'. He was a keen swimmer during his days at Kew. Wishing to serve his country, he volunteered for overseas service with the R.A.F. and was posted to Stornoway in the Outer Hebrides. After being demobbed he returned to the flowers of Kent and there picked one, Kathleen Eperon, a woman gardener from Hampshire and one of the 31 ladies who kept Kew going throughout the War. They were married at Kew and there was a bouquet of flowers from Kew at the wedding. Kathleen left Kew in July 1948 and in December James followed to their new home at the Recreation House in Colchester.



Kathleen and James Clark.

James was Deputy Parks Superintendent at Colchester but almost died from an attack of T.B. It cost him his job but he recovered. In 1953 he was appointed Parks Superintendent at Littlehampton, now being fully qualified under the aegis of the Institute of Parks and Recreation Administration. In

1961 he moved to Dover where he served the Borough and District Council. He implemented many innovative Bedding Schemes including those for the Queen Mother's Innauguration as Lord Warden of the Cinque Ports. Childrens' play areas and a garden for the blind were particular interests.

He retired on Christmas Eve 1979 and entered into a very active retirement with his wife and four children. They travelled widely in this country and abroad and enjoyed Yoga, music and lovely grandchildren. As his father influenced him, so he influenced his own children, for one of his sons is in Local Government Parks and another in the Landscape Industry.

Kathleen died in December 1993, shortly after a stroke and James followed her the following February. He was out in the open on the grass at the Kingsdown Golf Club enjoying a round of golf. The letters from their family speak kindly of Kew and Kew friends and we send our best wishes to the family who are truly children of Kew.

### CAPTAIN ROBERT FINDLAY — 1904-21.10.1993

Robert Findlay entered Kew on the 4th April 1927 from Exbury Gardens near Southampton.

He joined the Kew Running Club and was always up with the front runners. In the Physics and Chemistry Examination he achieved 90%. In March 1929 he returned to Exbury where he was Head of the Woods Department.

Early in 1940 he joined the Army. During the War he served with the 8th Army, first in Egypt and then in Italy, where he became a Forestry Officer. He attained the rank of Captain before returning to civilian life. In 1943 he was recorded as 'address unknown' but in 1944 he returned

to Britain taking up residence in Wales. Until his retirement he served with the Ministry of Agriculture in Flintshire.

To his wife, Hilda, and two daughters, we send our condolences.

### FRANCIS G. MACKANESS

Francis Mackaness died in 1993.

He studied at Kew in 1937 and 1938 and left in July of 1938 to take up the post of Director of Horticulture at Dillard University, New Orleans, U.S.A.

In 1944 he left to take up a post with the Portland Glen Electric Company.

He was a Life Member and, according to his wife, was ever proud of his Kew training and looked forward eagerly to his annual *Guild Journal*. He sent a generous donation to the Award Scheme fund in its first year.

He retired from the Electric Company in 1972 and lived in Oregon until his death.

To his wife and family we offer our deepest condolences.

### ANDREW HUGH PETTIGREW 1912-1994

Grandfather: Andrew Pettigrew, Head Gardener to the Marquis of Bute at Cardiff Castle. Father: Hugh Allan Pettigrew, Head Gardener to the Earl of Plymouth at St. Fagans Castle, near Cardiff. Uncle: William Wallace Pettigrew, General Superintendent of Parks, Manchester. Author of *Municipal Parks: Layout, Management and Administration*. Uncle: Andrew Alexander Pettigrew, Superintendent of Parks at Cardiff.

On leaving school in 1929 he commenced horticultural training in Castle Gardens, St. Fagans under his father.

In 1930 he joined the staff of Wm. Treseder Ltd., Nurserymen, Cardiff. In 1934 he commenced duties at Swansea Parks Department, taking up duties as Journeyman at Singleton Park.

In 1935 he entered the Royal Botanic Gardens, Kew, as Student Gardener. During his training at Kew he spent a year in the Luxembourg Gardens in Paris, returning to Kew in 1937.

He served as a Commissioned Officer in H.M. Forces for six years, seeing action in France and Burma.

In 1946 he joined the staff of Cardiff Parks Department as Head Gardener and was later promoted to District Superintendent.

In 1950 he was appointed Parks Superintendent to the City of Worcester, where he remained until his retirement in 1977.

He died on 20th October 1994.

*The above details of Andrew Pettigrew were kindly provided by his wife, Margery, to whom we extend our condolences — Ed.*



### BRYAN SAVAGE

We belatedly report the death of Bryan Savage who passed away on St. David's Day in 1992.

He entered Kew from the Wisley Garden on the 3rd October 1949. His keen interest in British Flora led him to take on the Secretaryship of the Kew Botany Club a year later. This was a year of extreme weather for Kew, with six inches of rain falling in October. On one dreary day only 17 people visited the Gardens. It did not stop Bryan gathering and mounting a superb plant collection which was given a special prize.

His Mutual in February 1950 was on Rhododendrons for the Garden. In 1951 he left to take up a teaching career. He went to Wales, his country of birth and from there to Brookley in Leicestershire, where he took up a post of Assistant Lecturer.

He returned to Wales to take up a Teaching Post in the Horticultural Section of the Faculty of Science at the South Glamorgan Institute of Higher Education. He had a strong involvement in the Royal Welsh Show, initially as Steward in 1979 and, four years later, as a Chief Section Steward. He retired from lecturing in August, 1990.

To his relatives and friends we send our condolences.

#### **MORE ON JOCK SLATER: DECEASED**

I was pleased to read Simon Mayo's appreciation of Jock in No. 98, p. 329. He was indeed 'a character'. When I arrived at Kew in 1943 he was working in the Tropical Orchid Houses, after being invalided out of the Royal Navy. I went into the Temperate Department, where he was later to join me, so for about 13 years I saw him almost daily. Our talk was not always confined to horticulture. It could not be with Jock.

His real name was James, but I never heard it used. He came from Broughty Ferry, near Dundee and had lost his mother early in life. His relations with his father were strained and he lived for some time with a grandfather in considerable poverty. He had the beginnings of a High School education, worked as cook on trawlers operating out of the Tay, had written short stories for a Scottish newspaper and had been on a large nursery near the Moray Firth. This is all I ever learned of his past and how he came to be at Kew is a mystery.

He was a true autodidact with that range of knowledge and ignorance which Edward Gibbon recalled in himself on his arrival in Oxford. He lived at Chingford and made the daily journey to Kew by train, this being an opportunity for reading. If something had impressed him that morning, I might be greeted by a talk on a mathematical topic or Jung's psychology. On other days he could be taciturn or furious with the folly of humanity.

I was please for him, though a little anxious for her, when invited to his wedding to Margaret Brown, a charming young lady of a family nursery firm at Chingford and an authority on Fushia cultivars. Fortunately she had a large measure of patience and understanding and sometimes came to the Gardens with several young children. Jock was then working in the Australian House, which he had planted and looked after from the start.

Worse than anyone I have known, Jock reminded me of the Scholar Gypsy who, like him perhaps, "Came, as most men deemed, to little good". Each pursued some apparently ill-defined goal of his own in defiance of the values of the society and age in which he lived.

He wrote to me during his last illness, but rejected with impatience my offer to visit him. Peter informed me of his father's recent death in hospital, on 5th December 1992. At his bedside he had "a volume of the collected poetry of Yeats (probably his favourite poet) and *Barnaby Rudge*". Margaret had died some years previously.

I endorse Simon Mayo's concluding remark that Jock made life more interesting for those who were lucky enough to know him well.

*John Souster*

#### **LEONARD GILBERT THOMAS 1920-1994**

Len was born in Cornwall. At the age of six he had cataracts on both eyes. He lost two or three years of schooling after the operations, but with perseverance he caught up with his education when his sight became stronger. His headmaster encouraged him to take up gardening in the school.

His first job was as boot, under a butler, and to collect the fox terriers for hunting in the early morning. It was suggested that he took a five year apprenticeship in private service on the same Estate. This was a basic training in fruit, flowers and vegetables.



His next move was to Hattons Nurseries on wartime food production, tomatoes etc. all the year round. Then to Treseders of Truro, world famous at that time, where the plant collection was wonderful and from there to East Ham Parks Department, as a Propagating Gardener.

From 1948-1950 he was at Kew Gardens. He worked in the Temperate House and was addressed by C. P. Raffill as 'Young Tommy'.



Leonard Gilbert Thomas with his wife, Easter 1993.

Afterwards he went to Ilford Parks Department where there was an outstanding collection of stove and tropical plants and then to Coventry Parks Department, where he was one of Mr. Shirran's staff. After a period at Wolverhampton Parks, where he created formal bedding schemes, he went to Blackpool Parks as the Inside Foreman Gardener.

In 1958 he went to Ebbw Vale, Gwent, as a Park Superintendent, enjoying the challenge of the Welsh Valleys — the poor soil and industrial pollution, plus trespassing ponies and sheep. The floral displays throughout the area were appreciated by the local people and visitors to the town.

In the late 1970s, after the 1974 re-organisation to Blaenau Gwent, he became the Tree Consultant with the Tree Planting Project and for the last two years of his working life (1983-85), he was the Horticultural Instructor for the Manpower Services Commission.

In February 1986 he retired to Blackpool, but in May of that year he had a stroke, a tragic blow to all our retirement dreams. However, in 1988 he gradually got stronger and was able, with a little help, to fill his greenhouse with colour and perfume. He got quite a lot of pleasure sitting quietly or reading amongst his flowers.

During our married life I often accompanied him when he gave his talks to garden clubs and institutions. He always finished by saying that gardening had helped him physically, mentally and spiritually.

Mr. Thomas died in June 1994. To his wife and family we offer our deepest condolences. Mrs. Thomas has advised us that she will be attending the next Kew Guild Dinner in May, 1995.

*The obituary is by Leonard Thomas's wife, Mrs. G. Thomas.*

### **M. TRUMAN FOSSUM**

We sadly announce the death on 16th February 1994, of M. Truman Fossum.

He left Kew in May 1936 and spent all his working life in Washington D.C., U.S.A.

He was a keen Kewite, doing a stint on the Committee and attending the Kew Dinner in 1976. He was also a Life Member of the Guild.

We are still gathering information for a fuller Obituary, which will be out in next year's *Journal*.

### **KENNETH WHARTON**

Kenneth Wharton entered Kew on 4th October 1948 from Wakefield Parks Department. Kew was beginning to come back to life after the War with 100,000 more visitors, making up the figures to 1,700,000 people. During his year at Kew he served as a Trainee.

Ken left Kew in October 1949 to take up a post at Dewsbury Parks Department, Yorkshire. The job and the locality must have suited him for he remained there until his death in 1994. During all this time he remained a paid up member of the Kew Guild.

To his friends and family we send our condolences.

## KEW GUILD INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st DECEMBER 1994

**INCOME**

	31.12.94		31.12.93	
	£	£	£	£
Annual Subscriptions .....	5,133.57		5,156.19	
Donations — General .....	421.68		1,854.83	
— Award Scheme .....	65.00		90.00	
— Centenary .....	—		11,392.00	
Centenary Raffle .....	—		1,142.15	
Aiton Memorial .....	—		1,000.00	
		5,620.25		20,635.17
Dividends from Charities Investment Fund				
— General Account .....	1,197.85		1,167.56	
— Award Scheme .....	3,674.23		2,864.10	
		4,872.08		4,031.66
Bank Interest				
— General .....	30.86		295.50	
— Award Scheme .....	—		249.64	
— Centenary .....	—		237.61	
— Charities Deposit Fund .....	144.20		777.72	
		175.06		1,560.47
Sale of Kew Plantsmen .....	1,622.00		4,181.96	
Less: value of stock .....	(897.45)		(2,170.47)	
		724.55		2,011.49
Sale of Emblems .....	4.50		103.00	
Less: value of Stock .....	(2.88)		(83.08)	
		1.62		19.92
Annual Dinner Receipts .....	2,327.50		9,697.50	
Less: cost .....	(2,257.12)		(16,005.87)	
		70.38		(6,308.37)
Award Scheme Soirée .....		231.50		184.74
Journal Adverts .....		610.00		1,155.00
Centenary Photographs .....		44.81		—
<b>TOTAL INCOME</b> .....		12,350.25		23,290.08

**EXPENDITURE**

Kew Guild Journal — Printing .....	5,454.00		7,988.00	
Prizes awarded by the Guild .....	380.00		380.00	
Printing, Postage, Stationery .....	1,547.71		1,135.51	
Award Scheme Awards .....	4,120.00		3,503.13	
Insurance .....	40.57		40.57	
Bank Charges .....	—		394.80	
Honorary Officers' expenses .....	60.00		60.00	
Centenary Expenses .....	52.50		1,817.46	
Presidents' Boards and Cupboards .....	—		4,786.66	
Tropics exhibition .....	—		8,586.00	
Aiton Memorial .....	763.75		—	
Sundry .....	110.51		—	
		12,529.04		28,692.13
<b>TOTAL EXPENDITURE</b> .....		12,529.04		28,692.13
<b>SHORTFALL OF INCOME</b> .....		(178.79)		(5,402.05)

## KEW GUILD BALANCE SHEET AS AT 31st DECEMBER 1994

	31.12.94		31.12.93	
	£	£	£	£
<b>INVESTED ASSETS</b>				
Charities Official Investment Fund				
— General Fund .....	4,200.00		4,200.00	
— Award Scheme Fund .....	69,910.82		45,400.00	
Charities Deposit Fund .....	<u>2,400.00</u>		<u>13,370.00</u>	
		76,510.82		62,970.00
<b>CURRENT ASSETS</b>				
Stock — Emblems .....	691.70		699.42	
— Past Presidents Jewel .....	250.00		300.00	
— Centenary of Kew Plantsmen .....	<u>3,901.35</u>		<u>4,798.80</u>	
	4,843.05		5,798.22	
Bank — General High Interest Account .....	—		7,634.52	
— Current Account .....	2,137.11		7,600.60	
Debtors .....	<u>30.89</u>		<u>385.13</u>	
	7,011.05		21,418.47	
<b>LESS CURRENT LIABILITIES</b>				
Life Subscriptions .....	(107.10)		(119.70)	
Creditors .....	<u>(274.79)</u>		<u>(950.00)</u>	
		6,629.16		20,348.77
<b>NET ASSETS</b> .....		<u>83,139.98</u>		<u>83,318.77</u>
<b>FINANCED BY</b>				
Capital Fund .....		83,318.77		88,720.82
SHORTFALL OF INCOME .....		<u>(178.79)</u>		<u>(5,402.05)</u>
		<u>83,139.98</u>		<u>83,318.77</u>



Rebecca M. Bower  
Hon. Treasurer

Audited and found correct



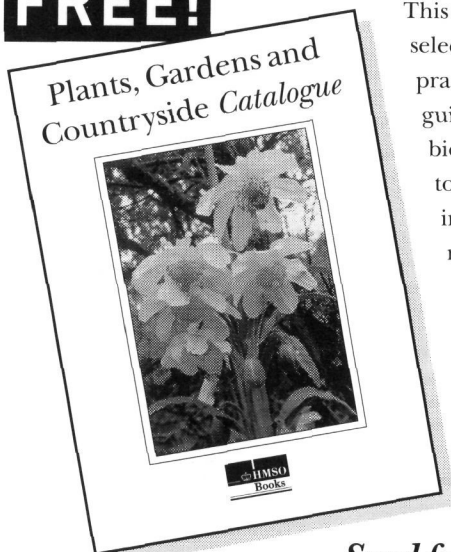
Ian Leese



C. Hindmarch  
17th January 1995

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