



THE
JOURNAL
OF THE
KEW GUILD

AN ASSOCIATION OF
MEMBERS OF THE KEW STAFF
PAST AND PRESENT

1955 (Published 1956)

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EDITORIAL

This is the 60th Edition of the Journal. Since the founding of the Guild in 1893 it has kept together Kewites throughout the world, indeed it has been the only link for many, and with past publishing difficulties now largely overcome it is hoped that there will be no further breaks in publication.

The basic problem in publishing has been lack of funds and it is therefore pleasing to record that financial stringency is now less acute. Further hard work by our staunch Treasurer was followed by more help from members, particularly life members, and this, in addition to publishing economies and increasing advertising revenue, has resulted in the heavy debt to the Permanent Security Fund being much reduced. Before our finances can become really sound, however, regular payment of subscriptions must be ensured, and to this end a form is enclosed to simplify payment, either direct to the Treasurer or by means of a bankers' order: it is hoped that members will make full use of this.

We are pleased to include a second instalment of Mr. Dallimore's reminiscences of Kew, which have proved so popular. Wild bird life at Kew has always been of interest, and an historical account of this by Mr. Souster is included in this edition, and will be followed next year by an article on the birds found at Kew to-day. It is our wish to acquaint members with the varied activities at Kew and we are glad to include a short article by Miss Hooper, who is responsible for the National Dianthus Collection. In lighter vein is an item from Mr. Macdonald, who gives us some of the results of his studies of the public, made whilst in charge of the Succulent collection.

We appeal to members for news and views. The co-operation of all is needed to maintain and improve the Journal; short notes of interesting experiences and such like items are in most demand. It is hoped to include a full and accurate list of paid-up members in the next edition and we ask that any alterations for this be sent to us.

Finally, we would express our thanks to our predecessor, Mr. E. Nelmes, for his ready aid and valued advice.

THOMAS SARGEANT.

Thomas Sargeant was born in London on May 13th, 1890, and a year later his father, the son of a miller at Isleworth, settled on the Essex estate of Mr. J. H. Tritton, one of the founders of Barclay's Bank. His mother, descended from an old Ayrshire family and true to Scottish tradition, maintained a great interest and influence in his life.

In his early days our President made friends with Mr. C. Wakeley, an old Kewite who, knowing his interest in horticulture, advised a course at the East Anglian Institute of Agriculture, where he was eventually trained. On the laboratory technical staff of the Institute was Mr. F. J. Chittenden, who ultimately became one of the foremost figures in horticulture of his time. He took a personal interest in Mr. Sargeant and always remained a kindly advisor and one particularly interested in his progress.

In those days it was customary for sons to follow father, but on his mother's intervention our President was sent to serve three years' training under glass at Brasted Park, near Sevenoaks in Kent. He derived considerable experience from his stay at Brasted Park and later went to the Nurseries of Messrs. Saltmarsh, Chelmsford, Essex.

About this time Messrs. J. Veitch were distributing plant material from their collections of Chinese trees and shrubs, and Mr. Baring Gould, then living at Merrow Grange in Surrey, had become well-known for the remarkable collection of these plants that he had amassed from Veitch's and many other sources. On Mr. Chittenden's advice he applied for a position at Merrow Grange and being successful continued his work and study there until he was selected to come to Kew as a student in February, 1911. He was very successful during his period here as a student and on leaving Kew in October, 1912, he decided to take up a commercial career, commencing this work with the late Mr. Ronald Skelton, at The Nurseries, Pirbright, Surrey. This successful commencement was marred by the 1914-18 war, where our President served with the original Royal Flying Corps and later with the Royal Air Force. On completion of his service in H.M. Forces he returned to Pirbright and as the war had brought many difficulties to horticulture Mr. Sargeant accepted the kind invitation of the late Mr. Joseph Cheal to go and work in his Nursery at Crawley. Here splendid experience was gained of plant propagation and cultivation, salesmanship and exhibition work.

The next opportunity to gain added experience came when our President moved to Ferndown, Dorset, to take up a post with the Stewart Brothers, whose Nursery had a very good reputation, and it was from this establishment that he moved to Carters Tested Seeds, Ltd., to take charge of the Nursery and Garden Construction Department. Thirteen apparently enjoyable and

fruitful years were spent with this firm, the duties involving an average of about 20,000 miles a year by car and the solving of the multifarious requirements of the customers. Mr. Lavender, another old Kewite, was there when Mr. Sargeant joined the firm, and firm friends they have been ever since.

When the second world war ensued in 1939 the patient work of many years was interrupted, life became even more strenuous for our President, who became one of four Wardens training and caring for the safety of the staff in the day time, whilst his evenings were occupied by his becoming a full member of the Home Guard. As the war approached its end Mr. G. R. Jackman invited him to join his firm as co-Director and colleague at the famous Jackman Nurseries at Woking, and since November 1st, 1943, this has proved to be a very happy association.

A very quiet and unassuming personality, ever helpful to his colleagues and those with whom he comes in contact, our President is extremely well esteemed in the gardening fraternity. His reputation as a horticulturist stands very high, and over the years he has never forgotten that in his early days he owed much to Kew. All will wish him a very happy year of office and a long continued successful life ahead.

ANNUAL GENERAL MEETING, 1955.

The Annual General Meeting of the Kew Guild was held on Saturday, 27th August, 1955, at 3 p.m., in the Iron Room, when the President, Mr. T. D. Maitland, presided with 55 members present. The notice of Meeting and the Minutes of the previous Meeting were read and approved, whereupon the President called upon the members to stand in silence in memory of Messrs. F. C. Mack who left Feb., 1904; J. W. Miles—June, 1896, and T. Oliver—Oct., 1908, who had passed on since the previous year.

The Committee Report was then presented and on the proposal of Mr. A. J. Brooks seconded by Mr. F. G. Preston, was adopted. The election of President then took place and on the proposal of Mr. E. F. Coward, seconded by Mr. F. Flippance, Mr. T. Sargeant was elected President for the ensuing year, the voting being unanimous. Election of Committee members then took place, there being four vacancies for the ensuing year. The nominations of Messrs. E. Nelmes, T. D. Maitland, M. J. Barnett and S. A. Pearce were approved. Mr. W. M. Campbell was re-elected Hon. Secretary and Mr. L. Stenning Hon. Treasurer, whilst on the recommendation of the Committee it was decided to dispense with the position of Assistant Hon. Editor and Mr. E. Curtis was then elected as Hon. Editor of the Journal. One Hon. Auditor was due for election and the name of Mr. F. S. Sillitoe was submitted and carried unanimously. Mr. R. Millard was proposed as Students' representative and agreed.

Mr. Stenning, Hon. Treasurer, then submitted the Financial Statement, a copy of which had been made available to the members present. He apologised for the fact that this had not been sent out in advance owing to pressure of business. He reported that the funds of the Guild were gradually improving and felt that given the support of the members the money which had been temporarily borrowed from the Permanent Jubilee Security Fund would be repaid and the Guild finances put on to a sounder basis. A Bankers Order was to be sent out with each Journal, and with this operating there should be less difficulty in obtaining annual subscriptions at the end of the year. He was pleased to record the payment of 5 guineas each to Messrs. P. Jew and J. Chapman, who had been successful in passing their N.D.H. Final Examination. It was also proposed that in view of the satisfactory financial position of the Dümmer Memorial Prize Fund, the first prize should be increased to 3 guineas, and this met with the full agreement of all present. Mr. Leith formally moved the adoption of the Financial Report, which was seconded by Mr. Wells, and this was carried with an appreciation of the work Mr. Stenning had so ably carried out.

Mr. E. Curtis, Editor Kew Guild Journal, spoke of the difficulties occasioned by the lack of adequate information being afforded by members and hoped that there would be an improvement in this respect. He also asked that where members died, efforts should be made by those conversant with them to furnish full information to him. He also mentioned that photographs were again to be included in the obituaries and outlined the proposed buildup of the next Journal which the Committee felt should again have a list of alterations to addresses rather than the complete list of all old members.

The Secretary then read a letter from Mr. Stock who was acting as corresponding secretary in the Kent area, in which he gave details of the steps he had taken to create interest in the formation of county units of the Guild, and the Meeting endorsed the action that Mr. Stock had taken, and hoped that at the next Annual General Meeting it would be possible for other areas to give a more complete picture of this new aspect of the Guild's activities.

The proposed alterations to Rules, as circulated to all members at home, were then submitted to the Meeting, and each rule was taken one by one, and after considerable and lengthy discussion finally approved, with very minor modifications, and on the understanding that the Committee would go into the question of qualifications of membership and report their views at the next Annual General Meeting.

There being no other business, the Meeting closed at 4.30 p.m. with a vote of thanks by Mr. F. S. Sillitoe on behalf of those present to Mr. T. D. Maitland who he felt had so ably carried out his duties as President during the past year.

THE ANNUAL DINNER, 1955

Once again the Windsor Castle, Victoria, was the venue for the Annual Dinner which was held on Wednesday, 25th May, when a record number of nearly 180 sat down to dinner. The Dinner gave pleasure to all, and upon its conclusion the toast of Her Majesty the Queen was proposed by the President (Mr. T. D. Maitland, M.B.E., A.H.R.H.S.). Mr. C. E. Hubbard then proposed the toast of the President and instanced how over the years Mr. Maitland's links with Kew had been forged and maintained until after many, many years of service in the tropics he had once more returned to the fold. Our President belonged to an ancient Scottish family which had given more than its quota of leaders who explored distant regions. He was one with high ideals and in his work in Africa he strove to raise the standard of its culture. Throughout his years overseas he never forgot the debt he owed to Kew for unfolding to him the wonders of the plant universe. He would long be remembered for his botanical and agricultural investigations, and by the species discovered by him which now bear his name. Mr. Hubbard said he well remembered the remarkably fine collection of Uganda grasses Mr. Maitland brought back to Kew in 1927, and the pleasure he had gained from their collaboration in producing the first account of the grasses of the Protectorate. Only a few weeks ago our President had presented his fine Herbarium of thousands of African plants, and his unique collection of African fungi, to Kew.

In response to the toast the President referred, sometimes quite poetically, to the hard work and happiness which he experienced during his training as a student at Kew, and which continued side by side throughout the whole of his working life in the tropics. He referred briefly to his experiences with the African peoples and to the success attained in the gradual development of Cotton and other crops which had resulted in the great improvement in the life and conditions of the inhabitants of Uganda. Kewites had previously begun to assist in this work and over the years had played a glorious part in the development of the colonies. His final words were to reiterate for the benefit of our young people, the great pride which he felt we all could take in having been associated with the Royal Botanic Gardens, Kew, and the Guild which united together those who had served and still served this wonderful establishment so well known throughout the world.

After the toast of the Kew Guild had been drunk, Mr. A. J. Brooks proposed the toast of our guests and referred first to the fame and activities of Colonel F. Stern whose work on Iris, Lilies and Paeonies was so well-known to horticulturists throughout the world. In addition to his work on the Council and Committees of the Royal Horticultural Society he also served on the committee responsible for the management of the John Innes Horticultural Institute. Mr. Brooks then paid tribute to Dr. K. H. Dodd who

had taken over the important post as Director of the John Innes Horticultural Institute, an establishment with which Kew had had close contact since its inception in 1910, and he had no doubt that under his leadership those happy relations would continue. He finally spoke of the work of Prof. R. E. Holttum, and instanced the valuable contribution made by him to scientific work in the tropics, and of the assistance which he had rendered at all times to Kew. In response Prof. Holttum, on behalf of himself and the other guests, expressed the very great pleasure it had given him to be present that evening. He welcomed this opportunity of thanking the staff at Kew publicly for the wonderful help they had given him at all times.

The President then presented the prizes to the successful students of the year:—

Matilda Smith Memorial Prize—Mr. P. J. Jew.

The Hooker Prize—Mr. P. J. Jew.

C. P. Raffill Prize—Mr. D. D. Riach.

Mutual Improvement Society's Prize—Mr. D. V. Clark.

The Dümmer Memorial Prize—Mr. P. J. Jew.

The Proudlock Jubilee Prize—Mr. A. I. Wilkinson.

“Kew Notes” Award—Mr. J. B. Comber.

The Proudlock Tennis Cup was presented to the winners, Mrs. O. Milne-Redhead (ladies) and Mr. D. J. Pringle (men).

In conclusion Mr. Campbell called for a special welcome to those Kewites who were visitors from overseas and also for other distinguished horticulturists who attended that evening as friends of the members. A warm welcome was accorded to them all. The function ended at 10.0 p.m. after which many stayed on to renew and re-live friendships of the past.

KEW GUILD GENERAL ACCOUNT, 1955.

RECEIPTS	£ s. d.	EXPENDITURE	£ s. d.
Balance from 1954 a/c....	78 4 3	Printing the 1954 Journal, 900 copies including two blocks ...	201 19 0
Annual Subscriptions and Arrears	122 16 0	Printing 200 copies "Chronicle of an Old Kewite" ...	8 3 6
77 Life Members donated	222 17 7	Hon. Editor's and Hon. Treasurer's Postages including overseas Journals ...	5 2 3
Advertisements in 1954 Journal	93 4 0	Refund, £50 to Jubilee Security Fund ...	50 0 0
Dividends on £300 3% New South Wales Stock £9 Os. 0d. less Income Tax @ 9s. and 8s. 6d.	5 1 3	Barclays Bank, Ltd. ...	7 3 7
Dividends on £26 6s. 3d. 3½% War Stock ...	0 18 4	Post Office Savings Bank	285 2 2
Dividends on £500 3% War Savings — Sir A. W. Hill's bequest	15 0 0		
Dividends on £295 3% Savings Bonds ...	8 17 0		
Dividends on £220 3½% Defence Bonds ...	2 6 1		
Dividends on £220 2½% Savings Bank—W. H. Judd's bequest ...	5 10 0		
Interest on Post Office Savings Bank ...	2 16 0		
	£557 10 6		£557 10 6

KEW GUILD CAPITAL ACCOUNT.

LIABILITIES	£ s. d.	ASSETS	£ s. d.
160 Life Subscribers @ £1 @ ½ rate... ..	80 0 0	£300 3% New South Wales Stock... ..	300 0 0
226 Life Subscribers @ £2 @ ½ rate	226 0 0	£26 6s. 3d. 3½% War Stock	26 6 3
113 Life Subscribers @ £3 3s. 0d.	355 19 0	£500 3% War Savings— Sir A. W. Hill's bequest	500 0 0
7 Life Subscribers @ £5 5s. 0d.	36 15 0	£220 2½% Savings Bank— W. H. Judd's bequest	220 0 0
Loan from Jubilee Per- manent Security Fund	168 16 3	Valuation of Journals in stock	134 15 0
Assets exceed Liabilities	605 16 9	Barclays Bank Ltd. ...	7 3 7
		Post Office Savings Bank	285 2 2
	£1,473 7 0		£1,473 7 0

KEW GUILD JUBILEE PERMANENT SECURITY FUND.

RECEIPTS			EXPENDITURE		
	£	s. d.		£	s. d.
Balance from 1954 a/c...	635	1 0	3% Savings Bonds ...	295	0 0
Donations from 85 members received and gratefully acknowledged ...	55	12 6	3½% Defence Bonds ...	220	0 0
Balance from Dinners and Teas, 1954-55...	4	14 6	Deficit in General Fund	168	16 3
		3 15 6	Barclays Bank ...	15	0 0
			Cash in Hand ...	0	7 3
	<u>£699</u>	<u>3 6</u>		<u>£699</u>	<u>3 6</u>

MATILDA SMITH MEMORIAL PRIZE FUND.

RECEIPTS			EXPENDITURE		
	£	s. d.		£	s. d.
Balance from 1954 a/c ...	32	12 5	Prize awarded to P. J. Jew ...	2	2 0
Dividends on £50 3% Savings Bonds ...	1	10 0	Balance in Post Office Savings Bank ...	32	16 8
Interest on Post Office Savings Bank ...	0	16 3			
	<u>£34</u>	<u>18 8</u>		<u>£34</u>	<u>18 8</u>
(Assets £50 3% Savings Bonds and balance in Post Office Savings Bank, £32 16s. 8d.)					

DÜMMER MEMORIAL PRIZE FUND.

RECEIPTS			EXPENDITURE		
	£	s. d.		£	s. d.
Balance from 1954 a/c	49	4 9	Prize awarded to P. J. Jew ...	2	2 0
Dividends on £70 4% Funding Loan ...	2	16 0	Balance in Post Office Savings Bank ...	51	3 2
Interest on Post Office Savings Bank ...	1	4 5			
	<u>£53</u>	<u>5 2</u>		<u>£53</u>	<u>5 2</u>
(Assets £70 4% Funding Loan and balance in Post Office Savings Bank, £51 3s. 2d.)					

THE PROUDLOCK PRIZE FUND.

RECEIPTS			EXPENDITURE		
	£	s. d.		£	s. d.
Balance from 1954 a/c	9	11 3	Prize awarded to I. A. Wilkinson ...	1	1 0
Dividends on £25 4% Funding Loan ...	1	0 0	Insurance Premium on Tennis Cups ...	0	7 6
Interest on Post Office Savings Bank ...	0	5 4	Engraving 2 Silver Tennis Cups ...	0	19 0
			Balance in Post Office Savings Bank ...	8	9 1
				<u>£10 16 7</u>	
				<u>£10 16 7</u>	

(Assets £25 4% Funding Loan and balance in Post Office Savings Bank, £8 9s. 1d.)

WATSON MEMORIAL EDUCATIONAL FUND.

RECEIPTS			EXPENDITURE		
	£	s. d.		£	s. d.
Balance from 1954 a/c ...	152	18 3	Refund of N.D.H. Examinations fees to P. J. Jew ...	5	5 0
Receipts ...			Refund of N.D.H. Examinations fees to J. Chapman ...	5	5 0
Dividends on £100 3½% War Stock ...	3	10 0	Balance in Post Office Savings Bank ...	149	12 8
Interest on Post Office Savings Bank ...	3	14 5			
				<u>£160 2 8</u>	
				<u>£160 2 8</u>	

(Assets £100 3½% War Stock and balance in Post Office Savings Bank, £149 12s. 8d.)

THE BENEVOLENT FUND.

RECEIPTS			EXPENDITURE		
	£	s. d.		£	s. d.
Balance from 1954 a/c ...	139	18 5	Donation of £5 0s. 0d. to Mr. R. Mason ...	5	0 0
Subscriptions ...			Donation of £2 2s. 0d. to the Royal Gardeners' Orphan Fund ...	2	2 0
Interest on Post Office Savings Bank ...	3	7 7	Balance in Post Office Savings Bank ...	136	4 0
				<u>£143 6 0</u>	
				<u>£143 6 0</u>	

KEW GUILD WAR MEMORIAL FUND.

RECEIPTS			EXPENDITURE				
	£	s.	d.		£	s.	d.
Balance from 1954 a/c	23	16	0	Photograph of War Memorial for 1955 Journal	2	2	0
Interest on Post Office Savings Bank ...	0	8	7	Balance in Post Office Savings Bank ...	22	2	7
	<hr/>				<hr/>		
	£24	4	7		£24	4	7
	<hr/>				<hr/>		

KEW GUILD DINNER, MAY, 1955,
 Held at the "Windsor Castle," Victoria.

RECEIPTS			EXPENDITURE				
	£	s.	d.		£	s.	d.
Sale of tickets:—				To The Castle Catering Company, Ltd.—173 Dinners @ 13s. 6d. each ...	116	15	6
133 @ 16s. 6d. each ...	109	14	6	Refreshments for Commissionaire ...	0	6	8
35 @ 14s. 6d. (Students)	25	7	6	Wine for the Guests ...	1	9	10
5 Guests ...	—	—	—	Hire of Microphone ...	1	1	0
				10% Service Charge ...	11	14	0
				Menu Cards ...	1	4	0
				Gratuity to Commissionaire ...	1	2	6
				Balance ...	1	8	6
	<hr/>				<hr/>		
	£135	2	0		£135	2	0
	<hr/>				<hr/>		

KEW GUILD TEA, AUGUST, 1955.
 Held at Kew.

RECEIPTS			EXPENDITURE				
	£	s.	d.		£	s.	d.
Sale of tickets: 75 @ 3s. each ...	11	5	0	To Messrs. John Gardner, Ltd., 76 teas @ 2s. 6d. each ...	9	10	0
1 Guest ...	—	—	—	Balance ...	2	7	0
Donations ...	0	12	0				
	<hr/>				<hr/>		
	£11	17	0		£11	17	0
	<hr/>				<hr/>		

Audited and found correct.

E. G. DUNK, }
 F. S. SILLITOE, } *Hon. Auditors*

15th March, 1956

MUTUAL IMPROVEMENT SOCIETY, 1954-55

The Annual General Meeting was held in the Iron Room on September 27th, 1954, with Mr. J. Souster in the Chair and 28 members present. A revision of the Rules resulted in the introduction of an annual subscription, and student lecturers preparing a written summary of their papers to be filed for reference in the Students' Library. The following officers were elected: Chairman, Mr. W. M. Campbell; Vice-Chairman, Mr. J. Souster; Hon. Secretary, Mr. P. J. Jew; Hon. Assistant Secretary, Mr. D. V. Clark; Hon. Treasurer, Mr. B. W. Till; Committee members, Miss A. D. S. Hopkins and Mr. I. A. Butcher.

The Society has held twenty-six meetings during the Season and a glance at the Syllabus will show the wide range of subjects discussed. Seventeen students presented papers and a further six gave short lectures, now termed lecturettes, on two evenings.

We were hosts to the Lindley Society for the Annual Debate with Wisley and, after Messrs. Clark and Collins had won the evening for Kew, all partook of a sumptuous supper. This spread, most capably arranged by our lady student, Miss Hopkins, was on a scale never seen before at Kew. A joint debate was held again with Cambridge, and our hosts, the Walkerian Society, made it a most enjoyable occasion.

The average attendance of 29 at each meeting was slightly below that of recent years, but interest is still strong in this integral part of student activities.

The prizes were awarded as follows:—

The Hooker Prize—Mr. Philip Jew.

The C. P. Raffill Prize—Mr. Desmond Riach.

The Society's Prize—Mr. Dudley Clark.

The summer outings were well supported this season and visits were made to the Gardens of Sir Edmund de Rothschild at Exbury, Messrs. Secretts, Ltd., at Milford and Messrs. Jackman of Woking.

The success of this season has been due in no small part to the help and interest of the Chairman, Mr. W. M. Campbell, and the Vice-Chairman, Mr. J. Souster. These gentlemen in their quiet and unobtrusive way, have done much for the Society and for this we are very grateful.

PHILIP JEW, *Hon. Secretary.*

SYLLABUS.

1954

Oct.	4.	*Bedding Schemes	Mr. S. W. Rawlings
„	11.	Commercial Citrus Culture	Mr. P. J. Jew
„	18.	Ecology of a Chalk Down	Mr. G. E. Collins
„	25.	Lecturettes—Messrs. F. Vickers, C. L. Baylis, A. E. R. Goodale	

Nov.	1.	Public Speaking	Mr. W. M. Campbell
"	8.	Soilless Culture	Mr. J. P. Tregear
"	15.	Kew—Wisley Debate: That this House believes that Horticulture is as important to the Social and Cultural Life of the Nation as any other of the arts and Crafts. Motion defeated: 42—37	
"	22.	The Advantage of Dutch Lights over Cloches	Mr. G. L. Manger
"	29.	Mushroom Culture... ..	Mr. S. D. Hitt
Dec.	6.	Pot Plant Production: Commercial and Municipal Methods Compared	Mr. D. V. Clark
"	13.	Commercial Production of Perpetual Flowering Carnations	Mr. A. S. Jones
"	20.	Cultivation and Manufacture of Tea	Mr. U. M. P. Dahampath

1955

Jan.	3.	*Leaves	The Director
"	10.	Bulb Forcing	Mr. A. I. Wilkinson
"	17.	Some Beneficial Virus Diseases	Mr. D. D. Riach
"	31.	Artificial Illumination of Plants	Mr. N. Hamblett
Feb.	7.	Debate: That Horticulture offers better opportunities Abroad than in this Country. For the Motion: Messrs. B. W. Till & J. B. Comber. Against the Motion: Messrs. P. J. Jew & I. A. Butcher. Motion defeated: 15—8	
"	14.	"The Wilds," Johannesburg	Mr. B. W. Till
"	21.	Brains Trust—Messrs. C. W. Rudd, S. A. Pearce, E. W. Milne-Redhead and J. R. Sealy	
"	28.	Environmental Factors in Relation to Apple Fruit Storage	Mr. J. Chapman
Mar.	4.	Kew—Cambridge Debate: That the Present Trend towards Specialisation in Horticulture is to be Welcomed. Speakers for Kew: Mr. J. B. Boulton (second speaker for the Motion) and Mr. P. J. Jew (first speaker against Motion). Motion defeated: 27—25	
"	7.	Bees, Flowers and Honey Production ...	Mr. J. B. Boulton
"	11.	*Gardening in Singapore	Professor Holttum
"	14.	*Plant Associations in New Zealand ...	Mr. W. M. Rogers
"	21.	Lecturettes—Miss A. D. S. Hopkins, Mr. T. Seager, Mr. T. O. Harvey	
"	28.	*Malaya	Mr. J. B. Comber
Apr.	4.	Gladioli Culture	Mr. D. J. Moore

* Lantern Lectures.

BRITISH BOTANY CLUB, 1955.

The Annual General Meeting of the Club was held on March 10th, 1955, when 25 members were present, including the President, Mr. Ballard, and Dr. Bor. The President explained that he was retiring this year, and that the Director had appointed Mr. F. N. Hepper as his successor, another member of the Herbarium staff. Office bearers were elected as follows:— Secretary, Mr. P. Jew; Assistant Secretaries, Messrs. Wilkinson and Vickers; Committee Members: Messrs. Baylis, Boulton and Harvey. The new President then proposed a vote of thanks to Mr. Ballard, who had held the position since 1936, and this was carried with acclamation.

In April we had a demonstration evening given by Mr. Hepper who, in his opening address to the meeting of 27 members, explained the objects of making a collection. The final results could be both scientific and artistic, as was illustrated by some sheets shown by Mr. A. G. Cook.

Our first trip was to Box Hill under the leadership of Mr. G. Collins, but inclement weather more or less spoilt the trip although members did collect a few specimens. Of the many other trips during the fine and dry summer, the most exciting was, I think, our Annual Outing on July 20th to Wicken Fen, which was led by Mr. F. Perring, of Cambridge. A most beautiful sight seen by members was *Utricularia vulgaris* and *Nuphar lutea* against a background of reeds—photographers were soon busy. On the way, we visited Cambridge Botanic Garden, where we were shown around by Mr. Younger. A new venture this year was a series of trips to Syon House by kind permission of the Duke of Northumberland, where the Club has taken over responsibility for recording in connection with the B.S.B.I. Mapping Scheme.

Lectures during the Winter Session:—

Dr. W. B. Turrill: "Variation and the British Flora."

Mr. J. P. M. Brenan: "Foreign and Alien Plants of the British Flora."

Mr. J. F. M. Cannon: "Unusual Habitat: Tree Top Botany."

Mr. C. E. Hubbard: "British Grasses."

Four members submitted collections and the judges made the following awards:—The Dümmer Memorial Prize to Mr. A. V. Rippon (S.A.); The Proudlock Jubilee Prize to Mr. G. Messenger. Mr. W. Rogers (N.Z.) was commended and Mr. T. Elton submitted a good collection. Many others joined in the activities of the Club but did not submit collections.

Thanks are due to all those who gave such fine support during the season.

F. VICKERS.

SPORTS AND SOCIAL CLUB.

The Club is responsible for the Sporting and Social activities at Kew. At an Annual General Meeting held in October a Chairman, Treasurer and General Secretary are elected as well as Secretaries of the various Sections of the Club.

The last A.G.M. saw the introduction of a new set of rules which should prove of much value in the running of the Club. Thanks are due here for the help given by the retiring Chairman, Mr. A. A. Bullock, this being only one of the many ways he helped the Club during the year. Mr. C. L. Baylis, the retiring General Secretary likewise deserves thanks for his enthusiasm and very good work. The meeting unanimously elected the following officers:—Chairman, Mr. S. W. Rawlings; Treasurer, Mr. S. A. Pearce (the Club has been fortunate in having his kind help for many years now); General Secretary, Mr. D. J. Moore.

SOCIAL ACTIVITIES, 1955.

The Annual Dance held in January was the success usually associated with this popular event and we were pleased to have Mr. J. Wright as M.C. In April, there was another successful dance with Mr. Wright as M.C. The last dance of the year was held in November, with Mr. Stan Hitt as M.C., and he added his own personality to the entertainment.

An invitation was extended to the Club by the Officers' Club of the Feltham Borstal Institution to attend their Annual Dance on December 30th and ten members had a very enjoyable evening. Members are used to close collaboration with nearby *Horticultural* Institutions but this is something new!

Whist Drives have continued throughout the year; they are held on the first Friday of each month. Although not well attended by members, outside support has been reasonably good and Mr. E. G. Dunk is to be thanked for his help in running them.

This year the Christmas Party was held at the "Boathouse" for the first time. A three-piece band was in attendance. Fancy dress was optional and the number who entered for the competition was rather small; however, the standard of dress was high and the judges were faced with a difficult task in selecting the winners.

In a short sketch the Herbaceous Department gave their impression of what takes place in the Curator's Office when the subject of the six-monthly moves for the Students is discussed. Immediately the sketch had ended shots were heard, which proved to be the Curator taking a very firm hand with the renegade cast! The Tropical Pits staff, besides putting on a very humorous sketch, formed a brass band calling itself "Lew Stenno's Nitwits." Those present were hoodwinked in welcoming a distinguished guest in

the person of the "Lord Bishop of Kew"—was it coincidental that Mr. E. W. Macdonald was found to be missing?

Mr. Brian Andrews was a very capable M.C. Catering was excellently carried out by Miss A. Hopkins, Miss A. Dunk, Mrs. S. Taylor and Miss M. Sillitoe. I should like to thank Mr. P. Godley and all Committee members for their help in running the Party, which had proved a great success.

This year two evenings were spent in Carol Singing in aid of the "Star and Garter" Home for Disabled Ex-Servicemen. The sum collected totalled £14 17s. 0d. The singers were made welcome on the Tuesday night by the Director at his home. On Thursday, Dr. and Mrs. Metcalfe once again very kindly invited the carollers to refreshments.

D. J. MOORE.

CRICKET SECTION.

The most outstanding feature of the past season was undoubtedly our weather which, for once, provided a real cricketer's summer. The team's performances were, however, not so consistent as the weather, and out of a fixture of 17 matches, 11 were played of which 4 were won, 1 drawn and 6 lost. Unfortunately, both matches against Wisley had to be cancelled.

The season opened disastrously—against Ilford Parks on Kew Green, we were routed for 24 runs and our visitors won comfortably by nine wickets, G. Nicholson taking 5 for 38. However, in our return match against Ilford, Kew won handsomely by 71 runs, due almost entirely to a magnificent century by Pringle, who hit 20 4's and a 6 in his 104.

Our game at Rothamsted was played in bitterly cold weather and resulted in a draw, rain stopping play when we had victory within our grasp. Of our total of 100, D. Pringle played a real captain's rôle with 76.

We recorded a well merited win by four wickets over a strong Wood Green XI, who were shot out for 49 runs. Pringle's hostile bowling brought him 8 wickets for 26 runs.

John Innes beat us on both occasions—by 12 runs on Kew Green and, more convincingly away, by 8 wickets.

Kew sent a weakened team to Cambridge and lost by 39 runs. Less than a week later, however, we had our revenge on Kew Green and after dismissing Cambridge for 43 runs, Pringle and Messenger put us well on the way to a 7 wickets win, with an opening stand of 36.

A much depleted side lost heavily to Bayer Products. Kew, batting first, could only total 23 runs, 5 players sharing the doubtful honour of being top scorer with three runs each. Our opponents scored 108, G. Nicholson bowling very economically, taking 7 for 26 in 22 overs.

The match against the Old Kewites resulted in a resounding victory for the Students by 61 runs—helped no doubt by their opponents lack of practice. Pringle and Nicholson put on 71 runs for the first wicket, Nicholson startling the spectators by scoring faster than his partner and finishing top scorer with 35. We were able to declare at 145 for 4 and then bowl our opponents out for 84—Pringle taking 5 for 31.

We were again below strength against Avodene, who scored 127 for 7 declared. In reply G. Messenger and I. Beyer scored 26 for the first wicket; but then came a complete collapse, the next six batsmen failing to score and the innings closing for 39 runs.

In conclusion, a word of thanks to last season's Secretary, to Messrs. Campbell, Stenning and Pearce, to Miss D. M. Newton (scorer) and finally to D. Pringle, the captain, whose achievements have inspired his team so often—he will be sorely missed next season.

G. MESSENGER, *Section Secretary*.

RUNNING SECTION.

KEW TO WISLEY RELAY RACE.

This race was held on Saturday, March 26th, a fine and sunny day, but with a strong head wind. Four teams took part—Kew, Wisley, Cambridge and, for the first time, East Malling. The race was started by Dr. Bor at Gloucester Court, Kew. At the end of the first stage Kew were lying second, 13 seconds behind Wisley, but T. Müller rapidly made this up and sprinted away to give a lead of 63 seconds. The third runner for Kew, R. Millard, very sportingly made up the team at the last minute, without previous training or experience—one of the selected team having to drop out through illness. He put up a grand performance in staying the $3\frac{1}{2}$ miles, although the lead was once more lost to Wisley, who went on to romp home as comfortable winners by 4 minutes, so gaining the Pring Challenge Cup for the first time. Kew, coming in second, won the Maori Batons whilst Cambridge were third and East Malling fourth. The Kew team in running order were :—R. Hoyte, T. Müller, R. Millard, C. Baylis, H. Hind, P. Tucker.

THE INTER-DEPARTMENTAL CLOG AND APRON RACE.

The race was run down the Broad Walk on the evening of June 16th. Fourteen runners took part; the race being won by C. L. Baylis in 53 seconds. Baylis took the lead in the first 12 yards from Pringle and Messenger, and this was the position throughout the race. The race was started by Mr. Rawlings and judged by Mr. Campbell with Mr. Stenning as time-keeper.

THE ROUND THE GARDENS RACE.

This event took place at 5 p.m. on Wednesday, October 26th. With 15 runners taking part, T. Müller was the winner, his time being 15 minutes dead. The race was run at a very brisk pace, the lead changing hands several times between the Rhododendron Dell and Lion Gate. From this stage the race rested between four runners—Müller, Hind, Ast and Dumont. On the run in Müller beat Hind by 2 seconds, being followed by Ast and Dumont. Owing to a misunderstanding, half of the runners unfortunately ran down the Broad Walk instead of through the Herbaceous Ground. The Trophy was won by the combined team of Müller (No. 4), and Martin (T. Range). Teams finishing positions :—

T. Müller (No. 4)	...	...	15.00 minutes.
H. Hind (Flower Garden)	...	...	15.02 ..
R. Ast (Ferneries)	...	...	15.06 ..
R. Dumont (Rock Garden)	...	...	15.18 ..

H. HIND, *Section Secretary.*

MIXED HOCKEY SECTION, 1954—1955.

The Hockey Club in the past season has gone from strength to strength and is fast becoming "known" in the West London area. With a total of 21 fixtures at the commencement of the season a promising start was made. Unfortunately after Christmas the bad weather seriously curtailed our fixture list and a final summary is as follows:—Played—12; won—5; lost—7. Goals: For—23; Against—34. Goal scorers: C. Stone 10; D. Pringle 4; J. Thirkettle 3; Miss Y. Rogers 3; I. Butcher 2; Miss A. Wilson 1.

With the standard of play being raised considerably we were able to hold our own against teams such as Hoover's, Guinness's Club, Old Fraysians and London Transport. The Club was seriously handicapped by the withdrawal of the refreshment facilities at Gunnersbury Park this season. This prevented us from

returning the hospitality shown by other clubs after matches—of which the Guinness match was notable!

Our thanks are especially due to Mr. F. Blyth for turning out regularly to referee for us.

The keenness and enthusiasm of all players has made the Club a very happy one, and the games have been enjoyed by all. Unfortunately, however, the future of the Club is in the balance due to a lack of new members to fill the places of those leaving.

C. SHEPHERD, *Section Secretary.*

LAWN TENNIS CLUB.

Reading again reports written by former secretaries of the Royal Botanic Gardens, Kew, Lawn Tennis Club, one realizes how much the fortunes of clubs like ours are affected by weather conditions. Had an account of the Club's activities appeared in the last edition of the *Journal* it would have been a dismal story indeed; on so many club days in 1954 play was impossible and so many matches were cancelled as the rain poured down from leaden skies. During the past hot, dry summer, however, the Club has had a most successful season. Forty members joined the Club this year and the average attendance for a Sunday afternoon was between 15 and 20.

A number of matches were played against other clubs. Our opponents included G.P.O., Richmond; Park Administration (Reading); Plant Protection Ltd., and the British Museum. Of the six matches played Kew won 2 and lost 4. In addition to these matches the match between the staff and the students was played as in previous years; the result was a win for the staff by 5 matches to 4. This year, for the first time, the ladies dared to challenge the gentlemen to a doubles tournament. However, they were defeated by 7 matches to 1.

Sixteen gentlemen and 9 ladies entered for the two Proudlock Cup competitions. In the final of the gentlemen's competition L. Boot beat D. Pringle, last year's holder, 6—1, 2—6, 6—1; whilst the ladies' cup was again won by Mrs. Milne-Redhead, who beat Miss Bewley 6—3, 6—2. Let us remind Old Kewites that these competitions are open to them as well as to members of the Tennis Club.

Before next season begins several members of the Club will have left us, but let us hope that new students and new members of the staff will take their places and that the club will have another successful year in 1956.

D. M. CATLING.

PHOTOGRAPHIC SECTION

In the Autumn this new Section of the Club was formed, following the increasing interest shown at Kew in colour photography. Its main object is to help to improve the composition and general colour rendering of transparencies taken by members.

At its first meeting on 15th November, Mr. Rawlings gave some very sound advice on the mounting and binding of slides, and passed on some useful hints gained after many years of experience of colour work. Members had been invited to bring along slides for comment, and when these were projected a general discussion took place upon them and many helpful criticisms as well as compliments were expressed.

A. CLEET, *Section Secretary.*

HERBARIUM LECTURES.

These informal talks, given by visiting botanists and members of the staff, continued successfully during 1955 and attracted audiences from all sections of the Gardens, including families and friends. Following the usual method of presentation, these talks are designed upon the basis of a slide show and this important feature has, undoubtedly, added much to their popularity.

Dr. A. E. Porsild, Government Botanist, Ottawa, entitled his talk "Canadian Alpines" and spoke of his experience in collecting these plants in the Rockies of British Columbia.

Mr. F. Ballard, Kew, gave a most informative talk on "Colour Photography," with particular reference to its use in botanical field work, illustrated with many of his Ceylon Kodachromes. He was followed by **Dr. R. Melville** and **Mr. J. Kennedy-O'Byrne** with a selection of their own slides to illustrate various conditions and effects in colour work.

Mr. A. H. G. Alston, British Museum, gave an account of his plant collecting trip to Indonesia during which he visited Java, Sumatra, Borneo and Celebes.

Dr. S. M. Walters, Botany School, Cambridge, lectured on the new "Plant Distribution Mapping Scheme for the British Isles" and explained the method of work in compiling plant records to be based on the 10 kilometer grid reference maps.

Mr. P. Bally, Coryndon Museum, Nairobi, gave a most interesting talk on "Soil Erosion in East Africa" based upon his own personal observations and experience of these conditions during the eighteen years he has lived in Kenya.

Before European colonisation, the balance of nature maintained an equilibrium between the size of the native populations and the available food supply. Then came revolutionary changes; tribal wars were stopped, medical and veterinary services introduced, hygiene greatly improved and the supply of food increased

with enough for all. This naturally brought about a marked increase in the native population and a greater need for more from the land, which is instead being continually wasted by bad agricultural practices. The protective cover of vegetation is removed exposing the underlying soil which, being very friable, is swept away by wind action, laying waste vast areas during the eight consecutive dry months of the year. Fifty years ago in British Somaliland, between Hargeisa and Berbera, elephants could be seen wandering down to the sea, in forest or under shade through big tree vegetation. Twenty years ago the rhino died out, then the hartebeest and, last year, the last elephant died and the whole area is now almost treeless. It is likely that, in fifty years time, the Somalis in British Somaliland will have to go either into Italian Somaliland or Kenya for grazing land unless bad agricultural methods are stopped.

Recent schemes undertaken by the Europeans have not been altogether to the good. Tsetse control has been carried out on "short-term" methods by clearing half mile strips of land which, although effective in killing the tsetse fly, gave way to subsequent erosion where regeneration of the vegetation is impossible. Wiser and more careful use of the land is urgently needed in order to conserve and maintain its vegetation upon which animal and human life are so largely dependent.

Mr. Bally gave a second and more general talk on the "Plants and Animals of East Africa" and held the keen attention of his audience with his stories and his excellent series of Kodachromes.

Mrs. F. Kingdon-Ward, wife of the well-known plant explorer, gave a commentary on the colour film "Operation Triangle" taken on their 1954 expedition to the mountainous region of Northern Burma, in the area of the Triangle, between the two main branches of the Irrawaddy. They were based at Hkinlum at an altitude of 5,000 feet and spent a whole year collecting in the surrounding districts finding several plants new to science, including a new species of Lily, and a large collection of Rhododendrons which were seen so wonderfully in colour in the film.

J. KENNEDY-O'BYRNE.

XIV INTERNATIONAL HORTICULTURAL CONGRESS.

The Congress held at Scheveningen from 29th August to 6th September was the big event of the year for International Horticulture. Holland is an ideal setting for such a congress; having Horticulture as its major industry it was to be expected that a congress held there would be a great success.

Kew participants at the Congress were:—Messrs: J. Souster, T. A. Russell, J. B. Comber, A. G. Alphonso (Malaya), V. R. James (Jamaica) and J. H. Jones (Bermuda).

The Congress was inaugurated by the Dutch Minister of Agriculture and this was followed by the Presidential Address by Prof. Dr. S. J. Wellensiek, who spoke on the past, present and future of Horticultural Congresses.

Sectional meetings were held during the Congress on "Vegetable and Seed Growing," "Fruit Growing," "Floriculture and Bulb Growing," "Arboriculture" and "Tropical and Sub-tropical Cultures." The excursions provided much of great value and interest; they included visits to such places as the Agricultural University at Wageningen, the woody plant nurseries at Boskoop, a vegetable and flower seed farm at Enkhuizen and the Laboratory for Flower Bulb Research at Lisse. Sightseeing trips were also available to the Aalmeer Flower Parade and to North Holland, through reclaimed areas of the Zuiderzee.

PITCHER PLANT DIGEST!

The *Nepenthes* housed in the Tropical Pits have yielded some interesting results from tests carried out on the pitcher secretion. The process of digestion in these insectivorous plants is being investigated, and is revealing a close parallelism with that of the mammalian stomach.

The young, unopened pitchers secrete a juice which digests protein. Special glands, located at the base of the pitcher, secrete the juice, and it is kept sterile by means of an effective system of closely interwoven hairs at the lid. This fibrous mat-like barrier prevents the entry of bacteria and the protease activity is therefore not due to bacterial enzymes.

The mean activity figure for unopened pitchers is 2.4 Anson Units per ml. and the secretion is weakly acidic (pH 5.7). When the pitcher is opened, however, a marked increase in the acidity is noted (pH 3.7) and the proteolytic activity of the secretion increases fivefold (14 Anson Units per ml.).

Voeckler (1849) analysed the fluid for sulphuric acid and for organic acids. In the course of his observations he found that potassium chloride was abundant, but he did not suggest that the acidity of the secretion might be due to hydrochloric acid. It has generally been supposed that the activity is due to non-volatile organic acids.

The modern technique of paper chromatography has so far failed to detect a known organic acid but does show the chloride. This latter is confirmed by the standard silver nitrate test. The acid would then appear to be hydrochloric acid.

The problem of gastric acid secretion is of concern to physiologists and a recent demonstration, at a Biochemical Society meeting, of the close analogy to be found in *Nepenthes* has stimulated interest.

Thanks are due to the Director in allowing this investigation to be carried out.

SHELAGH MORRISSEY.

KEW METEOROLOGICAL NOTES, 1955.

Apart from an exceedingly wet May and a very dull June, the weather of 1955 in south-east England may be described briefly as dry and sunny.

The first three months were all very cold, particularly February and March, the former being the coldest *month* since February, 1947. January 16th was notable for its early afternoon "black-out," when a great accumulation of smoke caused a short spell of complete darkness in parts of the London area. Snow was frequent during the three months but there was little fog.

April lived up to its reputation as one of our driest months, with plenty of sunshine and above-average warmth. As mentioned above, May was very rainy. It was also cold and on the 17th London had its latest spring snowfall for more than a hundred years.

June, as already noted, was unusually dull, the third June in succession to be deficient in sunshine. Like May it also had its cold spells. The air temperature at Kew on the morning of the 10th was the lowest June reading for many years.

What a change then took place! July and August were lovely holiday months—dry and warm and sunny. In parts of London there was only one wet day in July and only two in August. The warmest days in July were the 14th and 17th when 90° F. was reached at Camden Square, where the maximum during August was 89° F. For a distinctly warmer July-August one has to go back to 1911. The poor showing of June prevented a possible "record" full summer.

At this point I take leave to digress for a moment to mention an outstanding event during July at a place outside our area. A new British rainfall record was set up near Dorchester, Dorset, where on the 18th/19th, 11.0 inches of rain fell in 24 hours. Hitherto the greatest daily falls have been about 9 inches on three occasions and all in Somerset. Contrast these figures with Margate's 9½ inches during the whole of 1921!

Getting back to Kew, the weather during September continued to be dry, sunny and rather warm, but this was probably not fully appreciated by late holiday-makers because of the much higher standard set in July and August. October was rather cold, the day temperatures being slightly, but the night ones considerably, below the average.

Dryness and mildness were the chief characteristics of November and December. There was no striking weather feature in either month except that on November 30th London, for the second time in the year, experienced darkness in the afternoon, but this was less pronounced than in January.

E. NELMES.

1955	Rainfall in		Temperature	
	Inches	Maximum	Minimum	
January	2.38	53°	21°	
February	1.54	54°	16°	
March	1.09	64°	22°	
April	0.37	68°	29°	
May	4.22	68°	34°	
June	1.95	78°	40°	
July	0.26	89°	48°	
August	0.67	89°	42°	
September	1.72	79°	41°	
October	2.57	69°	28°	
November	0.95	62°	29°	
December	2.02	59°	24°	
	19.74			

KEWITES AS AUTHORS

The following books by Kewites were published during 1954:—

“All about Gardening,” by J. Couatts, edited and revised by G. H. Preston (Ward Lock), London, 1955. 15s.

“Shrubs for Amateurs,” by W. J. Bean. Revised by S. A. Pearce (“Country Life”), London, 1955. 8s. 6d.

“Drawings of British Plants,” by Stella Ross-Craig. Part 8, Rosaceae (1). (Bell) London, 1955. 8s. 6d.

“A Revision of the Genus *Sphaeranthus*,” by Stella Ross-Craig (Hook. Ic. Pl. VI (1)). (Blackwell), Oxford, 1955. 20s.

“The Practical Home Gardener,” by T. R. N. Lothian (Lothian Publishing Co., Pty., Ltd.), Adelaide, 1955. £A4 15s.

“Gardening Handbook,” by T. H. Everett. (Arco Publishing Co.), N.Y., 1955. \$2 (Rev. ed.).

“A Treasury of American Gardening,” edited by John R. Whiting. (Doubleday), Garden City, N.Y., 1955. \$7.50. Among the contributors to this work are T. H. Everett and Montagu Free.

H. S. M.

POSITIONS TAKEN BY STUDENTS ON LEAVING KEW DURING 1955.

Billett, M. H. T.....	Messrs. Sanders, Royal Orchid Growers, St. Albans.
Butcher, I. A.....	Avebury Manor Gardens, Nr. Marlborough.
Chapman, J.....	Asst. Agricultural Officer, Dept. of Agriculture, Nairobi, Kenya.
Clark, D. V.....	Nursery Manager, Cyprus Nurseries, Edmor- ton, N.9.
Collins, G. E.....	Derby Parks Dept.
Comber, J. B.....	Anglo-Indonesian Plantations, Java.
Crowder, G.....	Hammersmith Parks Dept.
Hamblett, N.....	Manchester Parks Dept.
Hitt, S. D.....	Foreman, Uxbridge Parks Dept.
Jew, P. J.....	Student, Institute of Park Administration School of Training, The Grotto.
Jones, A. S.....	Worcester Teachers' Training College.
Lucas, J. A.....	Efford Experimental Station, Lymington.
Manger, G. L.....	Missionary Candidate with C.M.S.
Riach, D. D.....	Christchurch Parks Dept., New Zealand.
Seager, T.....	Foreman, Coventry Parks Dept.
Shepherd, C. E. T.....	Johannesburg Parks Dept., South Africa.
Till, B.....	Battersea Park.
Tregear, J. P.....	St. Pancras Parks Dept.
Wilkinson, A. I.....	Asst. Estate Manager in North Malaya.

WEDDING BELLS

Mr. R. A. Bee to Miss Eileen Harriman at St. Peter's, Braunstone, Leicester, on 30th October, 1954.

Mr. R. B. Drummond to Miss J. Morris, at Cromford, Matlock, Derbyshire, on 12th February, 1955.

Mr. James Heyworth to Miss Molly Harris, at All Saints' Church, Putney, on 19th February, 1955.

Mr. C. E. T. Shepherd to Miss Norma Williams, at East Grinstead Registry Office, on 26th March, 1955.

Mr. M. S. F. Roberts to Miss Eunice Sandy, at Ham Church, on 2nd April, 1955.

Mr. A. S. Jones to Miss Rita E. Collins, at St. Peter's Church, Ightham, Kent, on 9th April, 1955.

Mr. D. Hubbard to Miss Isabel Boyes at Kirkpatrick-Durham Church, Kirkcudbrightshire, on 11th April, 1955.

Mr. Dudley V. Clark to Miss Margaret Wake, at The Bourne Methodist Church, Southgate, on 3rd September, 1955.

Mr. P. G. Taylor to Miss S. M. Patten at Norbiton Registry Office on 17th September, 1955.

Miss P. L. Burridge to Mr. R. A. Irving, at St. John's Presbyterian Church, Kensington, on 24th September, 1955.

Mr. G. E. Collins to Miss Margaret H. Smith, at Christ Church, Teddington, on 24th September, 1955.

Miss Betty Cooper to Mr. C. F. Jackson, on 15th October, 1955.

NOTES AND GLEANINGS

EXAMINATION SUCCESSES.

N.D.H.—J. Chapman, P. J. Jew, K. Evans.

D.Inst.P.A.—W. N. Gilmour, P. A. C. Tebby.

D.Inst.P.A. (Inter.)—I. M. Heughes, C. A. Joy, J. B. Rigby,
B. R. Savage, T. J. Seager, F. Tweedale.

I.L.A. (Inter.)—W. N. Gilmour.

B.Sc. (Special) Botany 1st Class—Miss S. Morrissey.

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Members will all be very pleased to learn of the award to Mr. Lewis Stenning of an Associateship of Honour by the Royal Horticultural Society.

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We are also pleased to record the award of the A.H.R.H.S. made to Mr. Arthur Blackburn, in 1954. Mr. Blackburn, who was our President for 1945-46, was in charge of the Blackpool Parks Department for many years.

* * *

Congratulations to Mr. R. O. Williams (left Kew 1916) who was awarded the C.B.E. in the New Year's Honours List for services to the Clove Growers' Association in Zanzibar.

*

Congratulations are also due to Dr. W. B. Turrill and Mr. W. J. C. Lawrence on being awarded the O.B.E. in the Birthday Honours List.

* * *

Major H. B. Sharpe, President of the Kenya Horticultural Society, was presented with the silver medal of the Society for outstanding service to Horticulture in the Colony, at the Annual General Meeting in March. Major Sharpe left Kew in 1913.

* * *

Congratulations to Mr. C. E. Hubbard, of the Herbarium, on his promotion to the rank of Senior Principal Scientific Officer.

* * *

Mr. E. W. Studley has been President of the Institute of Park Administration for the year 1954-55. He became a Student Gardener at Kew in 1926 and later became a deputy foreman; he left in April, 1930, to become a nursery foreman with Ilford Parks Department. In 1934 Mr. Studley was appointed the first Parks Superintendent of Merton and Morden. He was appointed to his present position of Parks Superintendent to the City of Portsmouth in 1945, and it was here that the Institute held its 29th Annual Conference in September.

The sister body of the Institute of Park Administration in Southern Africa also had an Old Kewite as its President for the year 1954-55. Mr. R. E. Hardman was born in Southern Rhodesia and became the first apprentice at the Bulawayo Municipal Parks. Appointed Assistant Parks Curator in 1931, he became a volunteer student at Kew in 1934. He was appointed Parks Curator in 1936. Visiting Bulawayo for the Annual Conference in September, were a number of Kewites from South Africa and we are pleased to include a photograph taken of them with Mr. Hardman. Our thanks are due to Mr. F. R. Long for kindly sending us the printer's block of the picture.



F. J. COOK, R. E. HARDMAN, Mr. and Mrs. W. G. SHEAT,
F. W. THORNS, F. R. LONG, L. N. PROSSER.

* * *

We have heard from Mr. Colin Shepherd, who left Kew during the year, that he and his wife, Norma, are settling down well in Johannesburg. They found the journey out very interesting, especially their short visit to Las Palmas. Mr. Shepherd writes of the large number of parks and open spaces in this rapidly developing city. Including the Director, Mr. Sheat, there are nine Old Kewites on the Department.

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It is always pleasing to meet Old Kewites returning on leave after their first tour of duty overseas. Mr. I. C. Hamblin has been at Moer Plantation, Ibadan, Nigeria, for the last three years. Although engaged as a Temporary Cocoa Officer he was in charge of the Citrus nurseries. He has been concerned particularly with the development of clonal stocks of the Nigerian Green Orange as well as with demonstrating the budding of Citrus to other workers and co-operative farmers. He has also helped in the development of pineapple plantations. The work of developing these secondary crops alongside the cocoa industry is becoming of increasing importance and a canning factory has been opened to deal with the produce. Mr. Hamblin will be returning to Nigeria to take up another post in the Northern Region.

Mr. E. V. H. Rolls left Brighton Parks Department at the end of August to take up an appointment with the Nairobi City Council. Mr. Rolls, at Kew in 1948, goes to Kenya with our good wishes.

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Mr. M. J. Barnett, M.B.E., has retired from the post of Director of Botanic Gardens, Parks and Reserves, Christchurch, New Zealand. Mr. Barnett, who left Kew in 1914, has been with the Christchurch City Council for the last 26 years. During the time he has been Director, Christchurch has grown enormously and the development of the parks and open spaces has earned widespread admiration. A civic farewell supper party was given by the City Council in his honour on 15th October. Mr. Barnett visited Kew a few years ago, and he was elected a member of the Committee of the Guild of the last A.G.M. His many friends will wish him a very happy retirement.

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It is always interesting to hear from Old Kewites of their varied local conditions. In a letter to our Treasurer, in October, Mr. Lothian, Director of the Adelaide Botanic Garden, Australia, writes as follows:—

“We have had an astonishing season. Already we have received our annual rainfall of 21 inches and, in consequence, growth has been very prolific and lush. We have been fortunate enough to have made several trips into the field as far away as Lake Eyre, some 500 miles to the North. Under normal conditions this area receives about 4 to 5 inches a year, and this year has received over 10 inches so far. Therefore we have been able to make first class collections of native plants. A member of my staff has just left to revisit the area and we are hoping this time to make valuable seed collections, which, because of the growth present last time, was not possible.

“While we have had such a wonderful season for growth, conditions have been ideal for pests, and at the moment we are waiting the outcome of concerted attacks against plague grasshoppers. These, in our pastoral and upper North agricultural areas some 200 to 300 miles North of Adelaide, have developed into plague proportions this year.”

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THE BOTANIC GARDEN, DOMINICA

Many readers of Mr. Squibbs's article in our last issue will be interested and concerned to read the following extract from the Roseau Correspondent of the *New Commonwealth*, 16th May, 1955:—

“An appeal for a Garden Preservation Fighting Fund is being circulated to assist the public opposition to the granting by the Administration of a portion of the Botanical Gardens to the Convent High School at the rental of a shilling a year for 99 years. This allocation of public property for a play-ground, which if persisted in, must spoil these exceptionally beautiful gardens, was made without consulting the Legislative Council, although the original donors of the land made its consent essential to any such alienation.”

In commemoration of the visit of Her Majesty the Queen in November, 1953, Hope Gardens, Jamaica, have been renamed "The Royal Botanic Gardens, Hope." The Gardens were established eighty years ago and in his despatch making the recommendation, the Governor stated that:—

"They have been most carefully cared for and greatly improved under the direction of Mr. E. J. Downes, M.B.E., A.H.R.H.S., who has been Director of the Gardens for the last 10 years and who worked in the Gardens for 23 years before that, following his first appointment from the Royal Botanic Gardens, Kew, in 1920."

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Mr. G. H. Pring, who was President of the Guild in 1950-51, has completed 50 years on the staff of the Missouri Botanic Gardens, where he is Superintendent. He is expected to retire next year. Mr. Pring is well-known for his breeding work on Orchids, Waterlilies and Nepenthes. Kew owes much to George Pring—who started his career as a boy at Kew—if only for the introduction of the *Nymphaeae* varieties raised by him at St. Louis and which give such a magnificent display every year in the Waterlily House, No. 15. He has been at Missouri since he left Kew in 1906 and we offer him our congratulations for this long and distinguished service.

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We were sorry to learn in a letter from Mr. O. J. Ward, of New Orleans, that he had been badly burnt in a petrol explosion in 1954. He was in hospital for some months undergoing some skin grafting, but, happily, is now fit again. He was well looked after by the family for whom he is working. Their place is rather like an old English estate and he is fortunate in having a generous budget for its maintenance.

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In September, 1954, Mr. W. E. Bassett, M.B.E., retired from the post of Agricultural Superintendent of Montserrat, British West Indies, where he has been since 1938. Mr. Bassett left Kew in 1927 upon his appointment as Assistant Superintendent, Victoria Botanic Gardens, The Cameroons. In 1932 he was appointed Assistant Agricultural Officer, Dominica, British West Indies, where he remained until his appointment as head of the Agricultural Department in Montserrat. We wish Mr. Bassett much happiness in his retirement.

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On his 80th birthday on 17th March, 1955, Mr. W. G. Warry, now resident in Guernsey, completed a round of golf on the local course. Mr. Warry has recently been elected a life member of the Royal Horticultural Society, an honour which is undoubtedly well deserved owing to the excellent work he has carried out in Guernsey

for many, many years. In his letter to the Secretary, Mr. Warry talks about the excellent climate of the island and mentions that during the past winter (1954-55) Pineapples and Stapelias have survived out-of-doors without any damage. Mr. Warry left Kew in March, 1897.

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H. N. RIDLEY

Mr. Ridley celebrated his hundredth birthday at Kew on 10th December. Most widely known as the pioneer of the rubber industry of Malaya and for the famous "herring bone" cut used for collecting rubber, he has lived at Kew since his retirement as Director of the Singapore Botanic Gardens. Although never a member of the Kew staff, his work on his "Flora of the Malay Peninsula" brought him into close touch with Kew, and in particular with the Herbarium. He published a long series of papers in the Kew Bulletin. His collection of Malayan plants much enriched the Herbarium. For many years he was a constant visitor and—as mentioned in our article on "The Wild Birds of Kew Gardens"—he began the first systematic watch on birds at Kew, as Observer for the Committee on Bird Sanctuaries in the Royal Parks. It is interesting to note that his two successors at Singapore, Dr. Burkill and Professor Holttum have also both been closely associated with Kew since their retirement. On the occasion of his birthday the Herbarium presented Mr. Ridley with a congratulatory address and the Gardens with a bouquet of Malayan plants, including rubber leaves. The permanent gardening staff received two barrels of beer from him with which they drank his health.

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Congratulations to Mr. and Mrs. Arthur Osborn who celebrated the 50th anniversary of their wedding on 16th March, 1955. Mr. Osborn retired from his position as Deputy Curator of the Arboretum in 1945. He returned to live at Kew in December and so we expect that he will now be paying more frequent visits to the Gardens.

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Members of the Gardens Staff are aware of the many activities carried out by Mr. Souster, Assistant Curator, though not all may know of his nautical adventures. Mr. Souster, having recently constructed a canoe, has now taken to carrying out expeditions by water, and the following signal was received from him:—

From: *MV Mallard
To: Curator RBG Kew
Time: 1800 GMT

SIGNAL.

Date: 12 June

REACHED BOULTERS LOCK 1646 GMT TODAY STOP PROGRESS
SLOW OWING TO STRONG CURRENT STOP MAY FAIL TO
REACH OBJECTIVE OXFORD

SOUSTER
MASTER

*Muscle Vessel

Provision has been made for an additional Assistant Curator at Kew, and Mr. G. E. Brown has been appointed to take up this position on 2nd January, 1956. He will be taking over a large part of Mr. Pearce's work in the Arboretum and this will enable Mr. Pearce to devote more of his time to assisting and deputising for the Curator in the office. We are glad to welcome Mr. Brown's return to Kew after eight years as a lecturer at the Kent Horticultural Institute, Swanley.

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Following the above appointment, Mr. Pemberton of the University Horticultural Station, Reading, is taking over much of Mr. Brown's duties at Swanley, where he was appointed Lecturer and Assistant Warden in October. Mr. Pemberton left Kew in 1954, and we wish him every success in his new post.

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Another Old Kewite to leave in 1954, Mr. M. S. F. Roberts has been appointed Nursery Supervisor at the Central Nursery of Swansea Parks Department. He takes up his duties on 2nd January, 1956. On leaving Kew Mr. Roberts became propagator at the Central Mortlake Nursery of the Hammersmith Parks Department, where in January, 1955, he was promoted Foreman Propagator.

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Also taking up a new post in the New Year is Mr. K. Evans, who becomes Deputy Superintendent at Keighley, Yorkshire. Mr. Evans joined the Keighley Parks Department as an area head gardener in 1954, he had been at Southend Parks Department since leaving Kew in April, 1952.

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Mr. F. G. Dayson has been appointed Landscape Clerk of Works to the New Town Development Corporation of Stevenage. His previous position was Assistant Landscape Supervisor at Harlow New Town. Mr. Dayson left Kew in 1948 to join the Parks Department of Stoke-on-Trent.

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Mr. I. M. Hughes has been promoted to the position of District Superintendent in Salford Parks Department. Mr. Hughes, who left Kew in 1951, has recently attended the course in Park Administration at "The Grotto."

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We have a letter from Mr. G. Corbett, now retired at Bovingdon, Hertfordshire, in which he refers to his Colonial Service in Mauritius and Cyprus in connection with tobacco research. Copies of a published report of his were forwarded to Kew. Incidentally, we notice that an error occurred in the last Journal, stating that he became an assistant estate manager in Uganda, on leaving Kew, whereas this should have read Manager of the Bukona Estates, Ltd.

Last autumn the "Western Mail" published a "Jubilee Supplement: Cardiff 50 years a City" and among its contents is a history of the Cardiff parks by the present Director, Mr. W. Nelmes. In 1905, when Cardiff became a city, the parks comprised 240 acres: to-day they are 2,170 acres. The most substantial single acquisition was the gift, by the Marquis of Bute, in 1948, of the Cardiff Castle Lands, or Bute Park, over 350 acres in extent, "an area of sylvan parkland unequalled in Great Britain." There have been only three men in charge of Cardiff's parks, and it is of particular interest to us that they have all been Kewites: W. W. Pettigrew, 1891—1916; A. A. Pettigrew, 1916—1936; and W. Nelmes, 1936 to the present date.

* * *

Probably the largest exhibit of succulent plants ever staged at the R.H.S. Hall was that erected by the Royal Botanic Gardens for the I.O.S. Congress in September. The Congress, which was the third of its kind, was organized by the British Section of the International Organization for Succulent Plant Study. The exhibit, in the form of a rockery, occupied an area of 450 sq. ft. About 400 succulents of various sizes were employed, some of the larger specimens weighing from 2 to 4 cwt. each. In addition to the show, lectures were given by Messrs. P. R. O. Bally, A. A. Bullock and E. Milne-Redhead.

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A special exhibition in the Herbarium was arranged on 10th—11th June under the general title of "Art in the Service of Botany." Included in the many exhibits were the original artistic work of Kew Botanists such as Sir William and Sir Joseph Hooker and original paintings by Botanical Magazine artists. Of great interest was a selection from the extensive Kew collection illustrating the general history of botanical art, the variety of styles and treatment, and the range of subject matter. Apart from the paintings, art form was illustrated in the dried specimens and photographic studies of individual plants and of vegetation.

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Mr. E. Milne-Redhead, head of the Tropical African Section of the Herbarium, accompanied by Mr. P. Taylor, left in the Autumn on a collecting expedition to the Southern part of Tanganyika. The area is botanically rich and imperfectly known and the results of the expedition should be of immense value for the "Flora of Tropical East Africa."

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KEW CHRISTIAN UNION.

Meetings have been held fortnightly throughout the year and there have been many visiting speakers. A series of studies on the Epistle to the Ephesians proved very profitable. The meetings take place on alternative Wednesdays and are open to all who are interested.

Professor L. K. Mann of the Department of Vegetable Crops in the University of California has been awarded a Guggenheim Fellowship and will be at Kew for one year. He is making a study of the Alliiums of the world and will visit Italy, Greece and Palestine in search of specimens for study at the Jodrell Laboratory.

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VISITORS TO THE GARDENS.

The total number of visitors during 1955 was 1,180,324, an increase of 70,019 on last year's figure. The greatest number of visitors in one day was on Easter Monday when there were 48,905; in contrast to this there were only 20 on the 4th January.

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On Monday, 4th July, a Russian Delegation, lead by Mr. Benedictov, Minister of State Farms of the U.S.S.R., visited Kew. The delegation consisted of 17 representatives of Soviet Agriculture, together with two interpreters, and was sponsored by the *News Chronicle*. The visit lasted two hours, during which time the visitors were shown the main features of the Gardens. Great interest was displayed, particularly in the various mowing machines which were available for their examination. The close cutting and texture of the lawns caused a great deal of comment amongst them.

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Requests for seeds from Botanic Gardens and other places continue to increase and well over 12,000 packets of seed were despatched during the year.

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Losses among the older trees continue and during the year 14 large trees were removed. As in previous years a number of large limbs were shed from some of the older trees without warning, and one visitor and his children narrowly escaped injury when a very large limb fell from one of the old sweet chestnuts along the Boathouse walk.

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A realignment of the path near that well-known landmark, the Stone Pine, was necessary, in order to safeguard the large limb overhanging the path from damage by passing coke lorries.

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A number of Eucalyptus species have been planted out amongst the holly and other trees near to the Australian House. In this way it is hoped to provide an interesting adjunct to the Australian House.

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The hot dry summer made almost continuous watering necessary in many parts of the grounds, many extra hours of overtime were worked, and it was even found necessary to bring in two men on night shift to deal with this work.

For the first time all the Pelargoniums were bedded out on the Palm House front. The plants benefited from the dry, sunny conditions and gave a very colourful display throughout the season.

* * *

It is hoped to develop at Kew one of the most modern collections of Iris varieties in the country and a number of members of the British Iris Society have generously given a large number of new varieties, many of American origin. A large rectangular bed at the side of the Iris Garden was planted in the Spring with at least 70 Iris species, the names of which had been verified at the Herbarium. This probably forms the most comprehensive collection of correctly named Iris in the country.

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At the north end of the Rock Garden another section is being cleared and reconstructed with Sussex sandstone to conform with the general layout. This has provided an opportunity to try to eradicate the *Equisetum* which was established in this part. The plant is very deep rooting and entails considerable labour to remove all parts of the rootstock. During the summer an experiment was carried out with a selective weedkiller to try to check the spread of this very troublesome weed, first observations suggest that this has not penetrated more than 16 inches, but it is too early to estimate the final result.

* * *

The rabbit population has been greatly reduced during the year. 210 have been shot but the decline of this pest at Kew has chiefly been brought about by myxomatosis. This disease made its appearance during June and in the following six months 257 rabbits were found suffering from it and killed. Whilst the appearance of the disease may be regretted from a humanitarian point of view, it relieves us of one of our worst pests. Every year many young trees and shrubs had been damaged or killed by rabbits and severe losses in the Arboretum Nursery had made it necessary to fence it in with wire netting. Rats, grey squirrels, and wood pigeons continue to be a source of trouble, the latter having appeared again during the autumn in very large numbers. The numbers shot were as follows: Rats 28, Squirrels 104, Wood Pigeons 294.

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Owing to a shortage of stokers the night stoking of the boilers has had to be discontinued since the late autumn, and the fires banked for the night. Although there have been some difficulties this practice is so far proving fairly satisfactory.

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Two industrial vacuum cleaners are now in use in the stoke-holds; these are proving most useful in keeping the boilers clean.

THE PALM HOUSE.

An outstanding feature of the past year at Kew has been the commencement of the work of renovating the Palm House. Experiments have shown that it will be possible to repair the Palm House instead of replacing it. Although this means that the Coronation Arches will not now be used, as was proposed when a new structure was contemplated, the association of the Gardens with this historic occasion will be achieved as the "Queen's Beasts" in stone are to adorn the foot of the Palm House Terrace. The renovation began in the spring and the northern wing was completed in early November. The iron structure was cleaned and repaired, thoroughly painted and then reglazed with larger panes of specially curved glass, thus cutting down the number of overlaps and so providing more light as well as reducing draught. By the end of the year the plants had been cleared from the south end and moved into the completed wing. The task of moving the very large specimen plants has been a big operation, skilfully carried out by Mr. G. H. Anderson. Many plants have had to be retubbed and others that were planted out in the beds have also had to be "tubbed-up." Notable among those placed into tubs from the beds were the large plants of *Brownea x crawfordii*, *Saraca indica* and *Arenga saccharifera*. The largest tub was over six feet square and was used for the *Brownea x crawfordii* which had been donated to Kew in 1888 on the death of the raiser, W. H. Crawford.

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Further news of the *Brownea crawfordii* is the rooting of two pieces by air layering. The largest piece took two years to root freely and was taken from the parent plant just before this was moved. Although this plant has been rooted from cuttings in the past they have never been sufficiently established to pass through our winter.

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The Tropical Fern House, No. 2, was rebuilt in Burma Teak on the original foundations, during the summer months. Following the pattern of the new houses built in the T-Range during the previous year, the glazing bars have been fitted further apart and the old-fashioned roof lantern has been done away with.

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Although the Succulent House, No. 5, was cleared ready for demolition work to begin on the 1st November, no start was made until May and by the end of the year only the low walls and the rain water tank had been completed and the main girders erected. This long delay has been causing considerable inconvenience as the large collection is scattered in various other houses, including the Temperate House and the Palm House, and maintenance is becoming more difficult as time proceeds; many of the plants need overhauling and more room to develop, but this cannot be done under present circumstances.

In the Melon Yard a new banana house has been built in teak on the site of the old house, but enlarged and redesigned to include a corridor linking the three growing-on compartments. A section of the corridor is partitioned off, with a hot bed for propagation built over the heating pipes. The remaining portion of the corridor is fitted with a potting bench, so that all work with the bananas can be carried out under one roof.

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Cuttings of the Sultanina Vine were received from Cyprus in January and produced over fifty plants which were grown outside the Quarantine House during the summer. Towards the end of the year, when the plants were dormant, a consignment was sent for trial to Saint Helena.

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AWARDS OF MERIT.

A First Class Certificate was awarded by the R.H.S. to a plant of *Cytisus x beanii* exhibited by Kew—Mr. Dallimore tells us something of the early history of this plant in "The Chronicle of an Old Kewite" in this edition. Six plants exhibited by the Gardens at the R.H.S. Fortnightly Shows gained Awards of Merit: *Bergenia* "Ballawley," *Crocus ancyrensis*, *Solanum crispum* Glasnevin form, *Thermopsis montana*, *Begonia x coraliecta* and *Pleiocarpa mutica*. Cultural commendations were received for specimens of *Maxillaria picta*, *Maxillaria luteo-alba*, *Musschia wollastonii*, *Pimelea spectabilis*, and *Cyclamen coum* var. *album*.

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The plants provided for figuring in the Botanical Magazine were *Rhododendron siderophyllum*, *Cytisus stenopetalus*, *Hibiscus huegelii*, *Wahlenbergia bicolor*, *Ceratopetalum gummiferum*, *Callistemon brachyandrus*, *Cassia stipulacea*, *Narcissus hedareanthis*, *Allium bulgaricum* and *Campanula portenschlagiana*.

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Now that the whole of Descanso House has become available for the Curator's offices improved arrangements have been carried out, including redecoration. The Library is now set aside for its proper purpose, and a small visitors' waiting room has been provided at the front of the House, adjoining a new typists' room and adjacent to Mr. Campbell's office.

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During the latter part of the year the herbarium of hardy trees and shrubs, which has been housed at Cambridge Cottage for at least half a century, was moved to the Curator's new offices at Descanso House. This collection contains a large number of species of economic interest including all those Conifers that may be grown in the British Isles. The herbarium was started by George Nicholson, a former Curator, and built up to its present proportions mainly by Messrs. W. J. Bean, W. Dallimore and R. Melville.

THE WILD BIRDS OF KEW GARDENS

I. HISTORICAL

In his book, "Nature near London," Richard Jefferies admitted that all his preconceived ideas about bird life in London were overthrown when he came to live here. Considering the extent to which London has spread since his time, and the more complete knowledge of London birds which systematic observation has provided, the present position would be even more surprising to a new arrival from the country, if his idea of London were so many square miles of built-up area. Fortunately for the birds as well as the human inhabitants, London has its parks and open spaces, the value of which is well brought out by R.S.R. Fitter in his "London's Natural History." Besides providing permanent homes for many species and breeding territory for others, these areas are green oases where migrant birds may alight in their flight across the desert of bricks, and it is the visits of such migrants that provide some of the most interesting bird records of London.

Apart from passing references, such as that of Oliver Goldsmith to the Temple rookery, little was written about London birds before the middle of the last century. A more general interest in natural history awakened throughout the country during the next 50 years, to judge from the number of local natural history societies then founded and the works then published. Neither was deficient in the London area, and the birds of London began to receive serious attention. With interest came a more humane attitude towards birds and a desire to conserve them in their natural surroundings; as evidence of which change we may note the Wild Bird Protection Act in 1880 and the founding of the Royal Society for the Protection of Birds in 1889. It is easy for us to underestimate what was done during that period, but it was then that public opinion began to turn and birds were decreasingly thought of as a source of revenue for trappers and as potential trophies for collectors and fanciers. The present more enlightened attitude towards them is in large measure the result of the efforts of that time.

Movements of this sort do not start or finish on definite dates, but, in tracing their progress, dates serve as useful milestones. The year 1898 is one such date, for that year saw the publication of W. H. Hudson's "Birds in London." Though Hudson was descended from a Devonshire family, he was born in Argentina. As a boy he led a free, energetic, out-door existence and became a close and sympathetic observer of wild life, but serious illness obliged him to give up all strenuous pursuits. He came to London in 1869, being then 28 years of age, and settled here where he seems to have led a rather depressing life in drab surroundings, "with continual worry over the needs of existence." He wrote a number of books on birds, both of Britain and Argentina, as well as other works, but recognition came slowly. "Birds in London" was a

book with a purpose. It provided an account of London birds at that time, stressing the value of parks and open spaces, and the pleasure which wild birds gave at a fraction of the trouble and expense then lavished on collections of exotic wild-fowl in some parks. It attacked the lack of enforcement of the laws protecting birds and referred to veiled bird catching and the taking of nests, which was permitted to continue, as well as to the discouragement given to birds by ill-considered tree lopping and pruning and the clearing of undergrowth. In his survey of London parks, he devoted about three pages to Kew but did not here give a complete list of the recorded species though mentioning those which bred in the Gardens. These included the Redstart and Nightingale, now unfortunately no longer with us. The Queen's Cottage Grounds which were then apparently very overgrown provided the best cover for birds, and Hudson had some astringent remarks to make about the attitude of the "authorities" at that time. It will be remembered that this area was opened to the public in 1898, and a good deal of tidying up, opening of vistas and removal of lower branches seems to have done in that year.

Hudson's account by itself fails to give a fair picture of the situation. A pessimistic mood pervades his book, he shows a general impatience of authority, and is not likely to have erred on the side of understatement. It is possible, indeed probable, that there was a regulation protecting birds from the time the Gardens first opened to the public in 1841, for in the last century the freedom of visitors was much more circumscribed than now. Such a regulation has certainly been in force for over eighty years, for Paragraph 9 of the Rules for Kew Gardens and Pleasure Grounds, dated 1st October, 1872, and made under the Parks Regulation Act of that year, says quite simply, "Birds nesting, and taking, destroying or injuring Birds are forbidden." The present Rules made in 1927 protect any "animal, bird or fish," in five times as many words. As for the Cottage Grounds, it appears from the Kew records that about a third of the original area was added to the Arboretum, the remainder being left more-or-less as it was, apart from fencing to confine the public to a single path through it. A letter dated 18th May, 1898, in which the First Commissioner's approval is given for leaving this land as a piece of wild garden for flowers and birds, credits the Director (Sir William Thiselton-Dyer) with this idea. Such a plan did not suit everybody, and a request was made for freer public access. This was successfully resisted, strong representations to that effect having been made by the President of the Linnean Society on behalf of ornithologists. It will be clear then, that in balancing the conflicting claims of the Gardens as a botanical institution, the public as the ultimate land owners, and the birds as long established tenants, the interests of the birds were not disregarded.

Perhaps Hudson came to regret his earlier outburst. Certainly he could be helpful as well as critical, and when in 1906 the project

was launched for publishing a list of all the wild species of animals and plants of Kew Gardens, he contributed the section on the birds. The list includes 84 species seen over a period of thirty years, the majority recent personal records by Hudson, but he included a few reported by other observers. He was sure this list could have been extended if a sufficiently close watch could have been kept for a few years, and this supposition has proved correct. His general remarks on bird life at Kew were much more favourable at this date. He speaks particularly of the number of song birds and the volume of song, and remarks that even in a perfectly rural district it would not have been easy to find such variety of birds in the same area. Since 1906, there have been great changes in the bird population at Kew, with gains and losses both in the numbers of individuals of some species, and in the species themselves. Hudson's list, now just 50 years old, is of the greatest value to those interested in such changes.

The conditions in the Royal Parks near the centre of London were less favourable than at Kew, and doubtless caused Hudson more concern. It is known that he approached the Office of Works with proposals for making the parks safer and more attractive for birds, but his efforts produced no results. Possibly a less forthright man might have achieved more. Then the First World War came, and wars are always a good excuse for deferring action. So nearly a quarter of a century rolled away from the publication of "Birds in London," and Hudson was an old man, still without the satisfaction of seeing his ideas officially approved and acted upon. But his leaven was working on the public mind, and when the late Mr. Harold Russell, a barrister and amateur naturalist wrote in 1921 to suggest that something should be done about protecting and encouraging wild birds in Hyde Park and Kensington Gardens, a committee was set up to consider the establishment of bird sanctuaries in all the Royal Parks, with Sir Lionel Earle as Chairman and Mr. Russell as one of the members. So in the end Hudson had satisfaction, but it came only just in time, for he died in 1922 at the age of 81. A memorial incorporating a pool and Epstein's controversial sculpture "Rima" was erected to him in Hyde Park and will be found in the shrubbery on the south side of the nursery.

The first report of the Committee was published in 1922, and reports appeared annually for the years 1928-38. These were small, official booklets entitled "Reports by the Committee on Bird Sanctuaries in the Royal Parks (England and Wales)." Publication was interrupted by the Second World War, and when it was resumed with a report covering the years 1939-47, the general title "Birds in London," and a more attractive style of presentation were adopted. As the committee's activities extended beyond London, a new title, "Bird Life in the Royal Parks," was introduced with the 1950 report. Since then the reports have each covered two years and two have appeared. Like its reports,

the Committee itself has undergone changes. The present Committee was appointed in 1947 with the following terms of reference: "To advise the Minister of Works on Bird Sanctuaries in the Royal Parks and in other open spaces under his control in England and Wales." The Minister of Works at this time sought the advice of the London Natural History Society, three of whose members were appointed to the Committee. Official recognition was thus given to the great part played by amateur naturalists in the study and conservation of bird life, as in other branches of natural history, and in this appeal to the knowledge and enthusiasm of the amateur we have the best evidence that this reorganisation was no mere formality. The present Chairman is Lord Hurcomb, and the Secretary Mr. W. G. Teagle, whose friendly assistance has proved most valuable in the preparation of this account.

However distinguished a committee might be, no naturalist would expect it to accomplish much if its activities were confined to the committee room. Field work is essential, and early in its career the Committee set up an intelligence service by appointing one or more Official Observers for each park. These Observers, some of whom have also served on the Committee, have in the main been highly qualified amateur naturalists who have been willing to devote the necessary time to these duties. Since the birds do not seem to distinguish between parks administered by the Ministry of Works and those under other control, to obtain adequate information about the bird population of London, it was necessary for Observers to be equally free from prejudice. Reports are therefore received from several parks not under the control of the Ministry of Works; Kew, of course, being one such area. Although the Committee is mainly concerned with London where its work began and the problems are greatest, its activities have lately extended to Osborne House, in the Isle of Wight.

A systematic watch on the birds of Kew has been kept since 1936, when Mr. H. N. Ridley undertook the duties of Observer, and his first report was included in the Committee's Report for that year and published in 1937. Dr. J. W. Landells, M.B., M.R.C.P., F.Z.S., was appointed in 1947 and has continued the observations up to the present date, with the help of Mr. J. H. Hemsley since 1951. Mr. Hemsley will be contributing an account of the present wild bird population of Kew in the next edition of the *Journal*, but it seems appropriate to conclude this historical outline with a brief glance at some of the changes which have occurred since the records began. Hudson's list takes us back to 1876, when, in spite of the regulations, a great Northern Diver was shot on the Lake. As Dr. Landells has remarked, this was a unique occurrence, "not so much because the Diver is unlikely to reappear as because, if it does, it will not be shot." Species which have ceased to breed here include the Dartford Warbler, Nightingale, Redstart, Nightjar, Turtle-Dove and Wryneck, but the great Spotted Woodpecker has appeared since Hudson's time and

is now a regular breeder here, and the Coot, then only a visitor, is now resident. One of the most pleasing gains is the Tufted Duck which does not figure in Hudson's list even as a rare visitor, but which is now frequent in winter and has bred here in recent years. The nesting of the Crossbill in 1936 was a notable event, not since repeated, and other unusual and unexpected records include a Puffin, Osprey, Golden Oriole, Waxwings and a Bittern. Dr. Landells has called attention to a change in status of the Magpie and the Jay. The former, once common, is now rarely seen, while the Jay has increased and can hardly be missed in any walk through the Arboretum. In all, 118 species of wild bird have been recorded to date in or over the Gardens or on the adjacent reach of the river.

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SOME GREENHOUSE PESTS.

This article was originally published in the Students' weekly sheet, "Kew Notes," and it is reprinted here, in slightly expanded form, as it may prove of interest to many others—particularly those responsible for the care of plants in municipal and other public gardens.

Any attempt to identify these pests in entomological textbooks is doomed to failure, since all the specimens described are included in that ubiquitous group *Homo sapiens* var. *pseudosapiens* Macd. nom. nud.

Many of them exhibit an apparent blindness, since they often fail to perceive the various notices exhibited. Judging by their progress through the houses, they also appear to lack the ability to distinguish between right and left antennae. I have classified them into three main sections.

Section I. HOMOINIDAE.

A. *Homo inquisitorius*.

This species is constantly asking questions, yet probably forgets the answers within five minutes of receiving the information. The female is the deadlier, wagging her mandibles with a loud clacking while she discourses on the demise of her favourite cactus or aspidistra. She rarely listens for the reply, but repeats herself *ad nauseam*. The younger females usually ask where the orchids are, but whether they are genuinely interested in them or even know what they look like is very doubtful, since they have made the request very often whilst actually in the orchid houses. There is no remedy for *Homo inquisitorius*—just grin and bear it!

B. *Homo pseudo-artisticus*.

As the specific name implies, members of this species are not true artists, inasmuch as they do not create; however, they are mostly quite skilled at copying plant form. There does not appear to be much sexual differentiation but those approximating to the female can usually be identified by the long hairs on the back of the head in the manner of a horse's tail. The males and hermaphrodites can be noted by their solemn "Existentialist" expressions. (See my pamphlet "Jumbled Genes and Chronic Chromosomes.")

Although the species is not inimical to plant life it does occasionally impede progress, hence their activities are confined to Friday afternoons.

C. *Homo tactophilus*.

This species is responsible for a considerable amount of damage, since it finds an irresistible urge to squeeze and squash, pinch and pull at the plants. The female—again the deadlier—when remonstrated with, usually replies, "I'm only just feeling

it." She usually possesses a rather broad body, with no distinct division between thorax and abdomen, but a horizontal ridge across the lower back indicates the presence of a *corseta rigida*. Ambles freely from port to starboard. Remedy: Interspace liberally with Laportias.

D. *Homo scroungens* (syn. *H. horridus*).

The worst and most dangerous pest, usually attacking on dull, wet afternoons, when few people are about, but constant vigilance at all times is necessary. The following are the usual methods of attack :—

a. Working in pairs. One engages the attention of the man in charge whilst the other helps himself to the "loot." If this method is suspected the best way to circumvent the plan is to answer the first and watch the second.

b. The "Bonhomie" Method. Usually tried by the big, bluff, hale and hearty type. "Now, old boy, you can spare me one of those little jokers, I know."

c. Confidential Whisper Method. "'Ere, I know wot I was gonna ast you, 'ow about a bit o' that?"

d. The Indirect Method or Subtle Approach. Usually employed by the female. "What do you do with all the little ones you don't want?" "I suppose you don't *sell* any of the little ones?" Or further, "Surely you can spare me just a teeny-weeny little bit of that pretty creeping thing." This latter is sometimes accompanied by tertiary sexual tactics such as ogling of the eyes, etc.

The female can often be diagnosed by her habit of rubbing together the thumb and forefinger, known in multiple stores as "January Sales Itch." Advanced cases exhibit the additional symptom of a chewing movement of the pursed lips, known as "Bargain Hunter's Jitters." (See my "Twenty Years in Darkest Oxford Street," Lyre & Blottisbook, 19s. 11 $\frac{3}{4}$ d.)

The only remedy against these marauders is to have all plants behind wire grilles, preferably electrified.

Section II. MATERMILITANTIDAE.

A. *Mater cum-perambulatoribus*.

Apparently of marsupial origin, as it possesses a mobile pouch, which is detachable, and can be left in the porch, or pushed through the houses like an armoured tank. Remedy: Turnstile approaches to all houses.

B. *Mater cum-infanto-precioso*.

The larvae of this species delight in disturbing the gravel, throwing it into the tanks and filling up pots and the rosettes of bromeliads. The mature female cannot be persuaded that her

precious larvae are doing wrong, her usual retort being : " 'E aint doin' no 'arm."

Section III. SCHOLASTIDAE.

A. *Scholasticus crocodiloides*.

Heralds its approach by a loud crescendo of confused chattering. Possesses numerous antennae which wave, poke and point in every direction, touching everything they can. Even more destructive without its "head."

B. *Juvenilis horridus*.

Closely related to the above and just as deadly, they engage in sporadic attacks. Remedy : Instant ejection when plants are attacked.

In conclusion, it must be mentioned that most of the above pests carry their food supplies in large sacs or containers. The leaves of many plants are damaged by the swinging motion of these sacs. The debris from these sacs is scattered everywhere by hand-like organs called litteropositors.

The above pests will, it is feared, be with us for many years yet, until some more selective breeding for quality rather than quantity is achieved; consequently we must ever be on our guard to protect the botanical treasures entrusted to our care.

E. W. MACDONALD.

THE NATIONAL DIANTHUS SPECIES COLLECTION.

Visitors to the Herbarium in the summer months are often attracted by the fragrance and profuse blossoming of many of the pinks making up the Dianthus species collection situated in the Experimental Ground behind the Herbarium. This collection was initiated by the Ministry of Agriculture seven years ago and now occupies about a quarter of an acre under the care of Mr. W. A. Mullins, gardener in the Experimental Ground. Its use is primarily to make available to the grower and plant breeder authentically named material of as many Dianthus species as can be obtained and grown. In addition it can provide much useful information for the taxonomist which is not available from dried specimens.

There seems to be a growing interest amongst gardeners in the species pinks, judging by the space devoted to them in recent books on the carnation, but a great deal of confusion exists in their naming. Hundreds of packets of seed from botanic gardens in all parts of Europe have been grown in the search for new species for the collection, but in six or seven cases out of ten the plants coming up bear little relationship to the name rather optimistically put on the packet. A major cause of this confusion is the freedom with which Dianthus species grown together will hybridise, as well as the difficulty of checking the identity of

plants in cultivation. The hybrid offspring of *D. plumarius*—a species which crosses freely with many others—are very widely distributed in botanic gardens under a great variety of specific names to which they have no claim. The existence of a reference collection of authentic material and the distribution of seed which has been obtained from self-pollinated flowers, should help to clear up this confusion.

About 70 species are now present in the collection. They include the half dozen or so well-known ones which, in the past centuries of cultivation, have provided the parents for the array of hybrids amongst the Sweet Williams, pinks and carnations grown to-day. Interesting evidence on the origins of some of these garden Dianthus may be obtained from crosses of known parentage amongst species such as *D. caryophyllus*, *D. gratianopolitanus* (Cheddar Pink), *D. barbatus*, *D. superbus*, *D. sinensis*, *D. alpinus* and *D. plumarius*. Some other plants in the collection are already well-known to gardeners more-or-less in their wild form. These include *D. arboreus*, *D. callizonus* and *D. neglectus*. The majority of the species, however, are not well-known outside botanic gardens, and some new introductions are included. Such is *D. brachyanthus* var. *alpinus*, brought by Davis and Heywood from the Sierra Nevada, a hardy, persistent and attractive plant forming low, grey-green mats of short compact shoots and bearing a profusion of small, pink flowers in May. Another attractive plant from Spain, worthy of the plant breeder's interest, is *D. broteri*, with large laciniate petals bearing red purple markings against a paler background.

Starting from a small collection of Balkan plants contributed by Major H. S. Knowles, and some plants already in the Experimental Ground, the collection has been built up largely from the seed brought back by botanical collectors.

The genus, of about 400 species, is chiefly one of north temperate regions, from England eastwards to Japan, with concentrations of species in the Balkans. South of the Equator it is confined to Africa, where there are a few tropical species and an interesting group in South Africa. Two species from South Africa which form attractive plants in their native haunts have been received as seed and their progress in this dull climate is being eagerly watched.

Of the many species still to be added to the collection most are to be found in the Balkans, South-East Europe and the mountains of Spain. We should be grateful if anyone encountering any Dianthus in the wild would send us either seed or cuttings with a note of the locality from which they came. Information on what to look for in any particular area will gladly be sent to anyone willing to collect Dianthus for us.

S. HOOPER.

CHRONICLE OF AN OLD KEWITE

Being Extracts from the Memoirs of William Dallimore.

Part II.

When I began work at Kew I was told that the Director was very insistent that the tone of plant life about the place should be the best that could be achieved. Former Directors had been content to collect large numbers of plants and indite volumes descriptive of the flora of various parts of the world, but the gardens were dull and many of the plants poorly grown. As long as a species was represented all well and good, there was no attempt to cultivate it well and exhibit it to advantage, there was even a tendency to declaim against those plants of decided decorative merit in favour of others that had little beyond botanical interest to recommend them. Moreover, the plant houses were hopelessly out of date and overcrowded. But Thiselton-Dyer looked at plant life from another angle. He considered that a plant, whether of botanical or garden interest, should be grown as well as possible under existing circumstances, and that those plants that were specially adapted for garden decoration should be grown and arranged in such a way that visitors could see them to advantage.

The indoor collections were the first to receive his attention and much had been done when I entered the gardens. Plants were reasonably well grown and the reconstruction of the plant houses was in progress. The woodwork of some of the older houses was very heavy and the panes of glass small. Some of the houses were too lofty for their purpose, particularly those devoted to orchids. A theory had been advanced to the effect that plants would thrive better in the subdued light admitted through green glass than they would under clear glass, and that shading from bright sun would then be unnecessary. A number of the houses had therefore been glazed with green glass and it was not changed until they were rebuilt, although the fact had been amply demonstrated that the clearer the glass the better the plants succeeded. The motley appearance of some of the roofs was brought about by replacing broken glass by clear. In some houses there was a lot of clear glass amongst the green; that was not due to casual breakages but to the effect of a violent hail storm that occurred in August, 1879, when an enormous amount of glass was broken.

Overcrowding in the Palm House was being relieved in 1891 by the transference of a number of large palms to the Temperate House, but by then the Director appeared to be concentrating his energies chiefly to the improvement of the Herbaceous Ground and Rock Garden, and to the establishment of a wide herbaceous border on the west side of the T Range. During this work one of the first trees of the Chile Pine (*Araucaria araucana*) introduced

to Britain was cut down. It had become an unsightly wreck. There were records at Kew that, for many years after its introduction, it was covered during winter by a tent-like building as it was thought to be tender.

During 1891 the Director consulted the late Professor Sargent, of the Arnold Arboretum, as to necessary work in the Kew Arboretum, and his first act was to form a garden of Hardy Bamboos. This was done during the winter of 1891-92, and although Mr. W. J. Bean was at the time foreman of the Temperate House, he was given charge of the work.

It may seem strange that the first act of reorganization should be the formation of a bamboo garden, but at that time the use of hardy bamboos as a special feature of gardens was in its infancy, and a number of species were being introduced from Japan. Several kinds were grown out of doors at Kew but they were mixed with other plants and the Director recognized that if bamboos were to be really effective they must be grouped with suitable associates away from other shrubs.

On April 30th, 1892, William Truelove, who had been foreman of the Arboretum for 26 years, reached the age limit and retired. He was succeeded by W. J. Bean, whose place in the Temperate House was filled by the promotion of Tom Jones from the sub-foremanship of the Palm House. At that time the Arboretum contained some 3,000 species and botanical varieties of trees and shrubs, and William Truelove had done good pioneer work, but he had been handicapped through the lack of necessary labour and funds in the proper upkeep of the collection, and by the late Director showing little sympathy for the more decorative kinds of hardy woody plants. Mr. Thiselton-Dyer, on the other hand, recognized that there was much to be done and reserved the general reorganization until he could appoint a young foreman, and in William Jackson Bean he found an excellent man for the purpose.

Early in June of the same year I followed Bean to the Arboretum. It appeared that Professor Sargent and the Director had agreed that one of the first items of work that required attention in the Arboretum was the pruning of neglected trees. Bean told me that the Director wanted me to take the work in hand, and he thought it would be to my advantage to do so. I was always willing to try something new but on asking for details of procedure I found that no one had a very clear idea as to how the work was to be carried out. I was told that deformed trees were to be made straight, leading shoots cleared of rivals, and new leaders encouraged where none existed. I was advised to go to the gardeners' library that evening and read Alphonse des Carr's book on "Pruning," from which I could get an idea of the rudiments of the work. It was from reading this book that I gained the necessary knowledge to enable me to begin a kind of work quite new to me, that was destined to have a very con-

siderable bearing upon my future career, as it was from this beginning that I decided to specialise on hardy trees and shrubs.

For the next six months I did nothing else, during fine weather, than prune trees. Three other men were employed at the work, a ganger and two labourers. We worked in pairs, the ganger had one labourer and I had the other. The Director often visited us twice a day and sometimes stayed with us for an hour or two. There were also frequent visits from the Curator and Assistant Curator. All were learning, and it was rather remarkable that during the early weeks of the work there was no criticism, but as it developed one or another began telling us what to do, the instructions following the lines of the book. Gradually a system of pruning was worked out that continues to the present day. The Director appeared to regard the four pruners as his special charge and he treated me as the leader of the work. If anything went wrong with either my work or that of the ganger, he took me to task about it, but, on the other hand, I got the credit when all went well. It was perhaps a bit hard on the ganger but as he was paid four shillings a week more than I, it evened things out. We were not very well off for tools and the saws we had to use were not very suitable for the work, moreover, there was great difficulty in getting them sharpened. The storekeeper who followed Mr. Granger would not get us the kind of saw we found most convenient; we had one of the type amongst the four, other saws were most inconvenient, and the queer thing was that although so many officials appeared to be interested in the work, not one of them took our part against the storekeeper. I often thought that it would have been an advantage had they had to use the tools for a few days. Saw sharpening was done by men controlled by the Clerk of Works and those sent to be sharpened were often away for two or three weeks. The reason may have been that the Clerk of Works was not under the control of the Director. It was tiring work standing in a tree sawing off branches with a dull saw that was not, even when in good condition, very suitable for the work.

We had two particularly awkward jobs. On each side of the Syon Vista there is a line of evergreen oaks that are now small but shapely trees. They have always grown slowly owing to being planted in very poor, sandy soil, but they would have been larger had they not been clipped into pyramidal shape in their youth. In 1892 the Director decided that the clipping must be stopped and an effort made to get them back into their natural habit. That meant a rigorous thinning out of branches and the removal of all branches near the ground. The top had to be thinned and a shoot isolated to form a leader. Many very large branches had to be removed and the scars left by those wounds, though healed many years ago, may still be traced. The Director was very pleased when he saw one or more sizeable branches lying at the foot of a tree, but when he passed a tree on which we were at

work and saw nothing but small branches lying about, he insisted that we should go over the tree again to find a large branch that could be removed. My man got tired of that so when we came to a tree out of which we could not very well cut a big branch, he carried one up from another tree and let it lie in a conspicuous place; curiously, we got away with the deception.

The other awkward task was clearing conifers of dead wood. Neither soil nor atmospheric conditions at Kew were suitable for the majority of the *Coniferae* and particularly such genera as *Abies*, *Picea* and *Pseudotsuga*. There were many trees between 12 and 30 feet high and all were full of dead branchlets. All the dead matter had to be cut out, and as they had withstood 25 to 50 years of London fog and other atmospheric impurities, their filthy condition may be imagined. From Monday morning until Saturday evening we were like sweeps and our clothes became as dirty as the trees. Under such conditions my eighteen shillings a week did not go very far for food and lodgings, renewal of clothes and heavy laundry bills; therefore, after exhausting what little reserve of money I had, and dirtying and tearing a good cloth suit, I invested in a cheap pair of corduroy trousers and a blue linen jacket, thereby becoming an outcast amongst my fellow student gardeners. However, I was greatly surprised when I was called on one side by the Director on the first occasion he saw me wearing my new garb, and asked where I had bought my trousers and how much I had paid for them—I think the price was 8s. 6d. I gave him the information and he informed me that he would get a pair of corduroy trousers himself. Sure enough, within a few days he turned out wearing corduroy trousers, though not quite such a cheap line as mine, and before long he had prevailed upon Nicholson, Watson and Bean to wear corduroy trousers as well. They swaggered about in whitish corduroys, the Director's and mine were brown. That is the only time that I have impersonated Beau Brummel, by becoming a leader of fashion.

I had sometimes to demonstrate pruning to friends of the Director. On one occasion he sent for me hurriedly to demonstrate before Mr. Freeman-Mitford (later Lord Redesdale), and the late Mr. Chambers. My labourer was not at work that day, so I had to sling my various appliances, saw, chopper, standard pruners, short pruners, wire, pliers, tarpot and tar brush, ladder, etc., about me as best I could. My appearance pleased the Director so much that on the following day he sent for a photographer and had me photographed as I appeared with my kit. For some time that photograph occupied the place of honour in his office, but I was eventually supplanted by two women gardeners.

One afternoon he elected to do some pruning himself on one of the islands in the lake, and for years afterwards he was pleased to be reminded of his afternoon's work. I do not think anyone had the courage to tell him that I was sent over to the island the

following morning to cut off the snags of branches he had left. He sometimes visited us about 2.30 in the afternoon and stayed until 4 or 4.30. During that time he made us cut off lower branches of trees at top speed, but we must not finish off the cuts, just cut them off a few inches from the trunk and finish the work after he had gone. It was strenuous work while it lasted and my labourer's usual remark was, "He had more than bread and cheese for his lunch and must have had one or two stronger than water to drink."

The Director's habit of staying out in the grounds until 4.30 or 5 o'clock was not appreciated by his clerk, as he was left in the office all afternoon, sometimes with little to do, then had to stay late in the evening to write letters that might have been dictated earlier in the day. At that time typewriters had not been introduced to Kew and all letters had to be written by hand.

In addition to pruning, a good deal of repair work was carried out on old trees; clearing cavities of dead wood, treatment with a fungicide, and filling with concrete or cement. As far as I know no systematic pruning of young trees and proper repair work on old trees had been carried out in the country prior to that date. In some nurseries pruning had been done to young trees mostly with a view to keeping clear leading shoots but very little attention was paid to trees in permanent places. An idea prevailed amongst forestry people that any branches removed from well developed trees should be cut off at a point 12 to 18 inches from the trunk, and that the stumps should be allowed to die and fall naturally. Foresters were averse to pruning woodland trees, although by the early removal of branches from the lower half of very young tree trunks it would have been possible to produce cleaner and more valuable timber than when the lower branches were left to appear as knots in sawn timber.

The Kew system of pruning was quite different from that practised by most foresters, for by removing the branches close to the trunk and protecting the wounds with tar or some other antiseptic substance, it was possible to get even large wounds to heal and become covered with new wood in a reasonable time. Many years later I described the Kew System of Pruning in *The Pruning of Trees and Shrubs*, Dulau & Co. (1926). It has gone through several editions, the later ones published by Basil Blackwell & Mott, Oxford. It is curious to find that a system of pruning that people engaged in commercial forestry in this country would not accept 50 or 60 years ago is now being put into practice, and time is being spent in research that would have been unnecessary had an older generation of foresters been less conservative in outlook. I argued the question with foresters in days gone by, but they were almost unanimous in asserting that such a system applied to forest grown trees was impracticable and would cost more than it was worth.

As the young decorative trees at Kew had been badly neglected over many years, very drastic pruning was necessary and we came in for criticism. A particularly scathing note appeared in *The Garden* for September 10th, 1892, page 232. In that note I was described as "the man with the instruments of torture." When it was pointed out to the Director, his comment was, "It is no use taking notice of a couple of old butter merchants."

I was hard hit over that pruning and I often complained to Mr. Bean about the difficulty I had in paying my way on eighteen shillings a week while engaged upon such rough work. He pressed the matter with the Director, who was apologetic and gave me half a sovereign out of his own pocket as a little help, but no official allowance was given for tree pruning at that time. For three weeks I was given two shillings a week extra for the work, but when the powers that be at headquarters heard about it, orders were received that the allowance must be discontinued as no official sanction for such a payment had been made. However, I think that my representations may have done some good as a year or two later official permission was given for the payment of two shillings a week extra to men engaged upon very rough or dirty work. Those of us who had tackled the roughest of the work came off worst, which is ever the way.

The labourers were worse off than I was, they were married men and received only eighteen shillings a week; the ganger was paid four shillings more, little enough even in that day for the nature of the work. My labourer was always on the look out for a little extra, and when he saw my corduroy trousers he asked me what I had done with the old ones. On replying that I had given them away, he remarked, "Well, remember that I am first for those when you have done with them." On my remarking that he was both taller and stouter than I was and my clothes would not fit him, he replied, "Anything will fit a naked man." Poor fellows, the Kew labourers of that day were badly paid and most of them were excellent and conscientious workmen. The student gardeners could not understand me carrying out this pruning with the labourers, but as a matter of fact I liked the work and was gaining wonderful experience, moreover I found many of the labourers to be very likeable men. The only drawback was shortage of money.

In December, 1892, I succeeded to the post of propagator and sub-foreman of the Arboretum. My predecessor, Tom Humphreys, was an ex-apprentice from Dicksons, who left to take up the Kew post while I was at Chester. On my appointment I was treated in what I then thought and still think, a very mean and shabby way. The weekly wage attached to the post was twenty-five shillings, but I was told that as the financial year was well advanced, money was becoming short, therefore I could

only be paid twenty-two shillings a week until the first of April, and that after six months of particularly hard and important work at eighteen shillings a week, which had not covered my expenses. One or two other sub-foremen were similarly treated when they were appointed during the later months of the financial year. I found out afterwards that when a little money could be saved by such means an extra labourer was employed for a few weeks. It was no use protesting, the sufferers had to make the best they could of the position.

I spent nearly four years as Arboretum propagator and sub-foreman, and during that time I often wished I had the men with me who had informed me, before I entered Kew, that the gardeners there led an idle life and never did any real work. For my part I was never called upon to work harder in a commercial establishment than I was in the Arboretum at Kew. The two nurseries occupied over two acres of ground with the necessary propagating house and frames. I had one student gardener to help me. We did all the propagating, most of the nursery planting and most of the hoeing, the hedges being cut by labourers. But that did not end our work. For six months of the year I was put in charge of several men, including my student gardener, and helped in the reconditioning of the tree and shrub collections, and with landscape work. About the end of September all possible upkeep work was stopped and ground work was begun, and continued during open weather until the end of March. During that time the Director could not bear to see men weeding beds or cleaning paths, but he expected everything to be spick and span for Easter, and from that time onwards until winter work began again.

In the nurseries necessary work connected with propagating house and frames was given by one or other of us in the early mornings and at the end of the afternoon. Seed sowing and other work indoors was reserved for inclement weather, otherwise the only time spent in the nurseries between late September and early March was when we were lifting plants, packing plants to send away, or bridging a gap of a few days between the completion of one job and the start of another, we then carried out necessary replanting and the preparation of ground for planting in March. My student gardener and I returned to the nurseries early in March to go on with propagation and nursery planting. Throughout the summer we worked the nurseries practically alone, the only times we were given assistance being when the foreman wanted us to go into the grounds for some special work, when we were given labour to compensate.

If I was not taught a great deal by the officials at Kew I learned a good deal from the labourers. Some of them had been on the place many years and were excellent at ground work, tree felling, transplanting large trees and shrubs, and moving heavy

objects. At first they looked askance at me and my student gardener, but once they found that we were willing to take the rough with the smooth in all we did, and work as hard as they did, they put us up to all kinds of wrinkles. The first student gardener I had was William Meldrum, a big hefty Scot who had served his apprenticeship in the garden of the Earl of Aberdeen, a place noted throughout Scotland for the well trained young men the head gardener turned out. Meldrum was a glutton for work, and was particularly capable with a spade; I had hard work to keep up with him.

Mr. Bean was very glad to get us out for winter work. His time was very fully occupied looking after the numerous alterations that were in progress and he found that he could delegate certain jobs to us that could not be trusted to gangers, particularly when plant names were concerned. Bean was an excellent man for renovation work; he was thorough, always on the job, and did not spare himself.

The Arboretum covered a smaller area than it does now. The boundary on the north and east from the rest of the place was a wire fence running from a line about midway between the Victoria and Unicorn Gates, westward to a point within a short distance of the north end of the Holly Walk, thence northwards until it ended at the Duke of Cambridge's laundry, which stood near the Upper Nursery, to the west of Kew Palace. The nursery was an isolated area, amongst land not definitely included in the gardens. A sunken fence ran from a point a little south of the Broad Walk, some fifty yards west of the big Turkey Oak, across the present Palace Lawn, through the birch collection, to end near Brentford Gate. Except for the Nursery near the Palace, and the Service Yard known as the *Depôt*, none of the land within the sunken fence was included in the gardens or was open to the public. I give this information in preparation for what came later. The Queen's Cottage Grounds were larger than they are now, for the outer fence on both the north and east was moved inwards during my time to add several acres to the Arboretum.

The ground north and east of the fence previously mentioned was included in the Decorative Department and was known as the Botanic Garden, the land to the south and west of the fence was the Arboretum or Pleasure Grounds. Some years prior to my entrance to the gardens, visitors were not allowed to smoke on the Botanic Garden side of the fence, and until the fence was removed in 1895, the several gates in it were locked every evening after visitors had gone and were kept locked until early the following morning, although it was very awkward for workmen in the middle of the winter who did not leave work until half an hour after the gates were locked and who were forced to make a long detour.

The two nurseries—with the exception of one border—were given up to the cultivation of trees and shrubs. The one near the

Palace had been a kitchen garden, and at some time it must have been allowed to become very weedy, for the ground appeared to be very full of weed seeds and it was most difficult to keep clean. Two weeds were very prominent, the annual nettle (*Urtica urens*), and the American weed *Galinsoga parviflora*; both perfect pests if allowed to seed. Market gardeners in the neighbourhood of Kew called the latter "Kew Weed" and accused the gardens authorities for its introduction; if the accusation was justified it was only retributive justice that it should become so troublesome in the gardens. The other nursery, situated near the Richmond end of the grounds near the stables, was designed for the purpose. It included a propagating house and frames, also the feeding houses and frames for the Temperate House several hundred yards away.

When I first knew the nurseries they were filled with the commoner kind of broad-leaved trees, conifers and a limited selection of shrubs, and regular transplanting had been neglected over a number of years. Every border in one nursery was surrounded by wire netting as a protection against rabbits. Work during the winter 1892-93 was very largely connected with clearing out overgrown stock. Necessary trees were added to the collections and many duplicates were sent to public institutions.

I, unconsciously, committed a breach of etiquette at that time. After lifting the first consignment of trees and shrubs to be sent away I, with the help of my young gardener, packed them. A little later the Curator passed through the nursery and gave orders that as soon as the trees were lifted they were to be sent to the packing shed to be packed by the gardens' packer. On being informed that they were already packed he was very concerned, thinking, apparently, that young gardeners knew nothing about that kind of work. However, after inspecting the bundles he decided to allow them to go as packed, and hoped for the best. Upon the receipt of a letter from the consignee congratulating him on the quality of the packing, all later packing of trees and shrubs was left to me as a matter of course.

Work in the tree and shrub collections, in the opening of avenues and vistas, alterations to paths and other objectives, necessitated the felling of many large trees, and for such a contingency no better man could have been found than the Director. He was not concerned with the thoughts of outside people. He had the future of the gardens to consider and must look ahead. He knew that young trees would not flourish beneath the shade and amongst the roots of old trees; he had to make room and did not allow outside opinion to interfere with his views; there had been too much of that in the past. If anyone protested against tree felling he forthwith marked a few more to be cut down. On one occasion an article on Kew appeared in a magazine, in which the author indulged in a sarcastic passage

which ran somewhat as follows, "I do not know such another place as Kew Gardens. I go there one Sunday and enjoy the shade of a beautiful grove of trees; I go again the following Sunday and where the trees stood I find a level lawn." The Director's only comment was, "that speaks volumes for the efficiency of my staff." The present Woodland Walk was for a time called the Electric Avenue by the labourers. They vowed that they had transformed it from ordinary woodland into a wide, more or less level, ride before breakfast one morning. That was an exaggeration as I happen to know that it was not completed before eleven o'clock that morning. It was really very good work as several trees had to be felled and cleared away, branches removed from others, and the ground roughly levelled. I do not remember why the job had to be rushed.

The Director dearly loved to see a job put through quickly and he became very irritable when he thought that a landscape operation was lasting too long. Unfortunately he could not understand that the quantity of litter was not always a guide to the amount of work done or yet to be done, and if a job that was nearing completion was cleared up a few days after he had grumbled, he fancied that his remarks had hastened its end.

He was quite right in his landscape ideas. He maintained that in a garden to which many people have access, they should be taken from point to point by the shortest route, and to effect that paths and avenues should, whenever possible, be straight; curves should not be made for the sake of making them. When a curve is necessary there should be a well defined reason for it and it should be a bold one; when there was a series of small curves visitors were liable to wear small tracks across the grass.

One winter some extra money was allowed for cleaning out the mud from the four-acre lake in the Arboretum, and an extra gang of men was engaged to help with the work. It had not been cleaned out for many years and the mud was several feet deep. It took about three months to accomplish and there was mud everywhere. A good deal was used for top dressing grass and trees, and a large quantity was stacked for digging into the ground after draining and aeration. We found that it could be used with advantage for vigorous rooting trees and shrubs, but it was fatal to all *Ericaceae*, and for years afterwards rhododendrons could not be grown in nursery borders into which lake mud had been dug. We thought at the time that it was solely due to the presence of lime in the mud, but later knowledge suggested that there may have been salty deposits as well. The lake is kept filled with water from the Thames at high tide, and for many years most of the water used for watering in the gardens was pumped from the lake. At various times difficulties arose over the cultivation of certain plants, including filmy ferns and rhododendrons, which appeared to be periodic, but no solution could

be found until it occurred to C. P. Raffill, Assistant Curator of the Temperate House, that during a spell of dry weather when there was a diminished flow of land water, unadulterated or only slightly adulterated tidal water was being admitted to the lake, and the water supplied for watering purposes was salty. Tests were made that substantiated his suspicions and it was arranged to obtain the water supply from above Richmond Weir. There was an incident connected with the cleaning of the lake that got us into trouble with the Thames Conservancy. It occurred to someone that a lot of mud could be cleared away by filling the main channel with mud, then allowing the tide to run in and out and as the water ran away setting a number of men in the channel to keep the mud moving. It answered very well for a few days, but the black stream was carried down to London, traced back to Kew, and we were warned to stop our game or various penalties would be imposed. We found the aerated mud to be excellent top-dressing material for surface rooting trees, particularly beech and horse chestnut.

After many trials with different soil mixtures it was found that the best results with *Ericaceae* were obtained by using the top spit of the natural sandy soil of the gardens, with four to six inches of broken peat forked through it. Many years before my time certain beds had been excavated to a depth of eighteen inches and filled with peat for rhododendrons, but the peat became sour and quite unfit for plant life before it could be filled by roots. For a long while those beds were a source of trouble and in the end all the old peat was taken out and replaced with Kew top spit soil into which a small proportion of peat was mixed. Then, new plants grew well.

The natural soil of the gardens is very poor and sandy, and during those early years of renovation we used 1,000 loads (cubic yards) of good, imported top spit loam each year for planting purposes, in addition to a large amount of clay brought from Richmond Hill. We also used huge quantities of horse and cow manure, with peat moss litter from omnibus stables. The last named was not dug into the ground but used extensively for top-dressing lawns and shrubs. A lot of mown grass was carted away by cow-keepers in the neighbourhood, who had steadings for a few cows behind their houses but little or no grazing. Some of them loaded in with manure and took grass away. Much mown grass was carted into a service yard and rotted down with peat manure. In winter it was carted out and used as top-dressing for beech and other trees.

Reference to manure reminds me that the price charged to Kew at that time may be of interest. The litter received from the omnibus stables was carted in by the company at one shilling a load and, as they used a very large cart, about one and a half cubic yards went to the load. A man and a horse and cart did

little else than cart manure into the gardens. People who took grass away for their cows or a horse or two, charged very little for the manure; they were glad to get it out of the way. There were two firms of dairymen who kept a larger stock of cattle and they had an arrangement with us whereby we agreed to keep their yards clear of manure. The yards were supposed to be cleared once a week and we could take as large a cart load of manure as we liked at half a crown a load.

The Director was anxious to wean people from the old form of shrubbery wherein box, aucuba, holly, laurustinus, laurel and yew were used almost to the exclusion of anything else. He had free-flowering, attractive shrubs planted in masses, and in shrubberies, groups of deciduous and evergreen flowering shrubs were intermixed, the object being to avoid the repetition of single plants, as in the past, by making a bold group of a species and then passing to something quite different. In order to interest garden lovers in the more attractive kinds of flowering trees and shrubs he sent collections of cut branches to the spring fortnightly meetings of the Royal Horticultural Society. The meetings were then held in the Drill Hall of the London Scottish Volunteers, near St. James's Park Station, a gloomy building of limited area. It is strange to think in these days, when flowering trees and shrubs are so prominent in horticultural exhibitions, that in 1893 a group of cut branches of such subjects were looked upon as a novelty.

On one occasion Mr. (later Sir Harry) Veitch unwittingly did me a good turn with the Director. They had been round the gardens together and after passing through one of the nurseries stopped near the entrance, close to where I was working, and Mr. Veitch said, "Dyer, I congratulate you on the condition of your nursery. There was a time, not many years ago, when the cultivation of plants at Kew was derided by outside people, but that is not so now, gardeners now visit Kew to see how plants should be grown, and your nursery is a credit to you." The Director deserved the compliment for he certainly did a lot to improve the cultivation of plants, not so much by cultural knowledge as by the enthusiasm he infused into his staff. Coming from one of the greatest nurserymen in the country the reference to the nursery gave me great pleasure although I was not supposed to hear the remarks.

The Director was active in another direction. He could not bear untidiness and he made frequent visits to tool sheds, potting sheds, stokeholes, messrooms, stables, cart sheds, looked under greenhouse stages, and poked into holes and corners in the herbarium, museums and offices. Everything that was wanted must have a proper place and be kept clean, anything that became redundant must be disposed of or returned to store. It was an excellent trait although we sometimes thought that he

went a little too far. His frequent visits of inspection certainly kept everyone on the alert and the whole place tidy.

There was an annual audit of tools by a clerk from the Board (now Ministry) of Agriculture. This was timed for August Bank Holiday. They took the official lists and went round the place noting deficiencies. Losses were indicated to the foreman concerned who had then to try and find out what had become of the missing articles. After an exhaustive hunt lost tools were renewed, but not very readily. I have known a lost handfork to cause no end of trouble. There was a greater waste of energy than of money in the renewal of lost tools.

The Director often took his friends round the tool sheds on Sunday, and there was trouble on Monday morning should anything be found dirty or in the wrong place. He made a special point of showing off the tools used in the nursery. They were hung in the potting shed, and there were two spades, two forks and two hoes that, through constant use in sandy soil, were wholly bright. After learning that these tools were used to demonstrate how well tools were cared for at Kew, we begged some cotton waste from the engine-driver and gave them an extra rub on Saturday evening.

Mention of the engine-driver, Abel Watford, who had care of the pumping machinery at Kew, reminds me that he was an excellent cricketer, and regarded as the best wicket-keeper for miles around. He knew his value as a cricketer and for the two annual matches between the gardens and Kew village both tried to get him. The Kew team had plenty of players but the members knew that if they claimed him first the gardens' eleven was weakened. The village usually won, but the gardens occasionally brought off a match, and one year won both, which pleased us and depressed the village. We were only allowed time to play those two afternoon matches; other matches had to be played in the evening.

When the gardens were removed from private to parliamentary control the Royal House retained certain privileges, one of them being that Royal personages might ride about the place on horseback or in a carriage. In the Autumn of 1892 a little breeze occurred through the exercise of this prerogative. The Vicar of Kew was a chaplain to Queen Victoria and he had been granted permission to hold a three days' bazaar in the Queen's Cottage in aid of a fund for the provision of a new vicarage. The bazaar was to be opened by a Royal personage and the Vicar, without consulting the Director, arranged that the carriage conveying the august person, should enter the gardens by the Tea Pavilion Service Gate and approach the Queen's Cottage by the gravel paths. The Director, smarting under the indignity, I presume, ordained that the carriage must enter by the Queen's Gate and proceed by a rough service road to its destination. On the event-

ful day the Director and Curator stood by the Pavilion Gate to prevent entrance and direct the coachman to the Queen's Gate, but the Vicar had been one too many for the Director. On learning that there was likely to be trouble he had appealed to Queen Victoria and she, on her part, had made arrangements for officials to be sent from London to make sure that the carriage was allowed to pass. I was pruning trees in the vicinity of the gate at the time and saw all that happened. I have never been able to understand how it was that such an astute person as the Director sometimes made very injudicious decisions. Knowing of the privileges retained by Royalty he should have known that he was in the wrong. However, in common courtesy, the Vicar should have consulted him. There is another rule still in existence that has to do with the passing of the gardens to parliamentary control, that is that the place must be closed to the public on one day in the year. The day chosen as likely to cause least inconvenience is Christmas Day.

In the early summer of 1893 a political garden party was held one Saturday afternoon on the lawn in front of Kew Palace. At that time the lawn was not included in the gardens and it had to be mown and prepared at short notice. A large marquee was erected and a brilliant assembly of politicians, diplomats, and others were entertained. The following account of the event is taken from the *Journal of the Kew Guild* for 1894, page 10.

"Garden Party at Kew Palace. In June last year the then First Commissioner, Office of Works, Mr. Shaw Lefevre, and his wife Lady Constance, set the Thames on fire with specially chartered steamer-loads of Princes, English and Foreign, Ambassadors, Lords, Members of Parliament, and shining lights of the scientific and literary worlds, who brought their wives to sip tea and eat strawberries and cream under the shade of the grand beech and chestnut trees which surround the Palace lawn, to the music of a band and to the delight of the small-folk of Kew and Richmond. The Old Palace was got into trim, the rats and spiders ordered off, and the interior decorated with palms, ferns and flowers. The many-windowed Palace must have rubbed its eyes and doubted its ears, and wondered if Royalty had really found its way back to its old home at Kew after all. Probably nothing like this brilliant assemblage had been seen in the Old Palace grounds at Kew since the first Duke of Kent was married in the drawing-room there three-quarters of a century ago."

In 1893 there were more buildings near the Palace than there are now. Prominent was a large stableyard with stabling, coach-houses, harness rooms, etc., with living rooms above. The stables were not used but some of Queen Victoria's pensioned servants were quartered in the living rooms. The house in front of the Palace was occupied by a Miss Hodson, who looked after the Palace and the Queen's Cottage, airing them and keeping them

reasonably free from dust. The latter building contained a collection of Hogarth's pictures, but they were removed during my early years at Kew. Eventually the Office of Works took over the care of the Palace and the Arboretum foreman was made responsible for airing the Queen's Cottage.

Early in April each year Bean went through the Kew *Tree and Shrub List* with me and we marked those kinds that were to be increased, with the approximate number of plants required. It was then my duty to raise the necessary stock. In addition to those needed for planting about the grounds there must be a surplus for exchange, and a large number of a few free-flowering kinds had to be raised for forcing for greenhouse decoration during winter and spring. It was astonishing how few decorative shrubs were represented by more than a few examples when Bean took over the Arboretum. There were only three bushes of *Berberis stenophylla* on the place, only a few *Forsythias*, not a single plant of the smaller *Leguminosae* that was worth keeping when the collection was overhauled, there was one bush of *Magnolia stellata*, *Ericaceae*, other than *Rhododendron*, were poorly represented, and so on.

The only hardy rambling roses grown at Kew in 1892 were "Dundee Rambler," *Rosa bourboniana*, one poor plant of *R. moschata*, a few bushes of single and double-flowered forms of *R. multiflora*, with two or three pillar kinds. Here and there on walls were plants of "William Alan Richardson," "Gloire de Dijon," and *Rosa Banksiana*. In 1893 one plant of a new rose, "Crimson Rambler," was received, and I remember the Curator commending it to me for special care and rapid propagation. His remark about the brilliant colour of the flowers was, "When in flower it can be seen from here to Charing Cross." After a year or two devoted to raising stock plants I raised a large number of plants by summer propagation. The Curator wanted plants on their own roots, therefore I made up a hot bed, covered it with sandy soil, and dibbled in cuttings cut to two buds, one for roots the other for growth. This is a quick means of propagation but great care is needed in watering, shading, and ventilation on hot, sunny days. *Rosa Wichuraiana* was sent to Kew from the Arnold Arboretum about this time, and within a few years many new hybrids between that species and *R. multiflora* were raised which, with the aid of certain garden varieties, laid the foundation for the present race of rambling roses. By the winter of 1895-96 there were enough of these kinds of roses to warrant the formation of the Rose Garden near the Pagoda. The site was a cutting from which gravel had been taken for garden paths. It had been very untidy and used partly as a burning place for rubbish and partly as a refuse dump for the tea pavilion. To make it suitable for roses some terracing was done by the aid of large tree butts, then beds were excavated and filled with a mixture of heavy loam, clay and manure. Free flowering kinds were planted in large groups.

That was my last winter's work as a sub-foreman. The rose garden became very popular and as more varieties were raised the garden was extended. Two other types of garden roses appeared about this time, the "Penzance Briars," very attractive single- or semi-double-flowered kinds raised by Lord Penzance by crossing the Sweet Briar with garden roses, and the Rugosa Hybrids, a useful group raised by crossing *Rosa rugosa* with garden varieties. There were very few Hybrid Tea varieties in 1892, the only ones I remember being "Grace Darling" and "La France." Hybrid Perpetuals were the commonest kinds, but there were numerous varieties of the Scotch Rose (*R. spinosissima*), that were very attractive. There was still a number of varieties of the old Damask and Provence roses that were popular by reason of their fragrance, but their day had gone. One would like to see them back again in gardens.

Species of *Rhododendron* introduced about the early nineties of last century were *R. racemosum*, *R. yunnanense*, and *R. rubiginosum*. A queer coincidence connected with rhododendrons occurred about 1893. In the Rhododendron Dell at Kew were several large bushes of hybrid rhododendrons that had been raised by crossing *R. Fortunei* with various garden hybrids. They had been there for many years without attracting attention, and no one knew who had raised them. Then one day the Director and Curator were attracted by the fragrance of their pinkish flowers and three of the best were named respectively, "Mrs. Thiselton-Dyer," "Frances Thiselton-Dyer" and "George Thiselton-Dyer." Flowers of each variety were sent to one of the fortnightly meetings of the Royal Horticultural Society to find that one of the Pauls, the nurserymen—I think it was William Paul—had sent hybrids of similar parentage that had been growing in his nursery for many years and had been given scant attention, and what was more remarkable still, one of his varieties was identical with the one sent from Kew under the name of "Mrs. Thiselton-Dyer." Mr. Paul withdrew his name so that "Mrs. Thiselton-Dyer" might stand.

During my time in the nurseries I became interested in hybridization and left behind me a number of hybrid rhododendrons. The first time that *R. Smirnowii* flowered I crossed it with a garden variety, but after waiting several years for seedlings to flower, neither one was as good as either parent, so I burnt the lot. However, from crossing *R. Fortunei* with the garden variety "Cynthia," I raised a number of seedlings of a good shade of pink. They varied in the size and shape of the truss and a little in the throat markings, also some were without stamens and in others the stamens were rudimentary, but they were near enough alike to be grown together and they made an attractive group. Ten years later, as we were constantly being asked the name of the variety, Bean suggested that I should name it, so I gave it the maiden name of my wife, "Edith A. Boulton."

In 1893 seeds of a pine tree were received from Dr. A. Henry from China as *Pinus sp.* It turned out to be *Pinus Armandi* and proved to be the original introduction of that species to Britain. *Cytisus scoparius* var. *andreanus* was a new shrub in 1891 or 1892 and it caused a good deal of excitement by reason of its brownish-crimson wing petals. I believe it was originally found as a wilding on a common in France. Another striking shrub introduced in 1893 was *Spiraea japonica* var. "Anthony Waterer." The first I knew about it was being given a few plants on Good Friday morning to carry to the nursery. The variety was new to me, and as there were young shoots an inch long on the plants I used some of them for cuttings that day. As soon as Easter had passed, the Curator called at the nursery to tell me about the *Spiraea*. Mr. Waterer had given him a few plants of the variety to grow at Kew before it was placed on the market, on the understanding that it should not be propagated until it was on sale. I told him what I had done and he thought that I had better destroy the cuttings, but my nursery training overbore other considerations—a nurseryman is ever careful of new plants—so I kept them, grew them under another name and restored the correct one when the proper time came. Mr. Nicholson knew nothing about that.

I was responsible for another bit of deception while I had charge of the nurseries. Three brooms that had occurred as natural hybrids had been selected from amongst other seedlings of *Cytisus Ardoinii* and *C. biflorus*. The two *C. Ardoinii* hybrids looked like making good garden plants suitable for the rock garden. They were of compact habit, dwarf and free-flowering, one bearing cream-coloured flowers the other golden ones. The *C. biflorus* hybrid was of prostrate, straggling habit, with sparingly-produced yellow flowers, interesting from a botanical point of view but giving no promise of becoming a good garden plant. The Curator named the one with cream-coloured flowers *Cytisus kewensis*, the *C. biflorus* hybrid he named *C. Beanii*, the other one remaining unnamed. A year later when looking round the nurseries Bean remarked, "I don't know why Nicholson couldn't have named that golden-flowered broom after me instead of that rubbishy one." I answered, "That can easily be altered, burn the poor one and put the label to the other." He did not give permission for the alteration but I made it all the same, and that is the reason why the parentage of *Cytisus Beanii* is given in the earliest edition of the *Handlist of Trees and Shrubs* as *C. Ardoinii* x *C. biflorus*, and in later editions as *C. Ardoinii* x *C. purgans*. Fortunately no description of the original *C. Beanii* had been published. From a scientific point of view I suppose I was wrong in acting as I did but I did horticulture a good turn by preventing the distribution of a worthless plant under a good name. If Mr. Nicholson ever knew about the change he did not mention the matter to me, and I kept the secret until a Tree and Shrub Conference was held by the Royal Horticultural Society

in April, 1938. I then let it out when some question of plant naming arose.

When I first entered Kew there were no authentic lists of the plants under cultivation, all that were available being rather badly kept manuscript lists compiled by the foremen for their own guidance, but soon after my entrance, the Curator began the preparation of proper lists of the plants grown in the various departments. In these lists botanical names with their principal synonyms were given, their common names when possible, and their country of origin. He took the responsibility for the lists of trees and shrubs and herbaceous plants, and in course of time the Assistant Curator prepared similar lists of tender ferns, orchids, and stove and greenhouse plants. They were printed by H.M. Stationery Office and sold to visitors. Their greatest value, however, was to people employed on the place, and once they came into use we wondered how we had got on without them. Each man who was in charge of a department was made responsible for keeping his list up to date.

Some of the student gardeners were much given to dancing during my earlier years and they went to Isleworth for their pleasure. They were plucky. They left work at 6 o'clock, then had to have their tea, dress, walk two or three miles to meet their lady friends, get to the dance hall between eight and nine o'clock, keep up their dancing until midnight or later, take the girls home and be ready for work at six o'clock the following morning. I have known some men get to their lodgings just in time to change their clothes and get to work. Some of the men induced me to join a dancing class. I attended two lessons and the teacher bullied me so much that I didn't go again. I somehow could not put my feet where he wanted them to be. Later I sometimes wished that I had persevered and learnt to dance. As I grew older I had no opportunity to try again, I seemed to get so many irons in the fire that I could not spare the time.

Sidney Skan was one of the hardest working student gardeners I knew. He entered Kew from the Birmingham Botanic Garden, whence several well trained gardeners of studious nature followed him. Sidney worked in the propagating houses attached to the Temperate House, and as they were situated in one of the nurseries I saw a good deal of him. The Director gave him the opportunity of sitting for an open examination for a position of Assistant in the Herbarium, and for several weeks before the examination he worked night and day, during the night at his books, in the daytime at gardening. Even while we were at breakfast in the potting shed he had a book open before him. Some of us were afraid he would not stay the course, and we made things as light as we could for him by relieving him of some of his duties, but he did and came out top of the six candidates, some of whom were University-trained men. He turned out to be a first-rate botanist

and did more to strengthen the prestige of the student gardeners than some who were of a less retiring nature.

Three of us had our breakfast together in the potting shed and we thoroughly enjoyed those breakfasts. We were close to the men's messroom where we got hot water for our milkless tea and had our bacon cooked. Bacon was cheap in those days and we usually had two good fat slices cooked on a plate before the fire. Our bread was cut nearly an inch thick but when it was soaked in hot bacon fat we found it very good after two hours' work. Had we gone to our lodgings for breakfast we should have had a mile to walk each way and breakfast would not have been such an enjoyable meal. We discussed many things during those breakfast periods and I think we laid the foundation for one or two alterations that were to help future student gardeners. But some of our activities were in frivolous vein.

There always have been and possibly always will be men whose aim in life is to raise the tone of the student gardeners at Kew. Two such men sought to do it by demonstrating to others the way in which they should be clothed when off duty. To effect that they paraded the gardens one Sunday afternoon wearing frock coats, nicely creased striped trousers, light coloured spats, very smart, natty boots, and top hats, they also wore very stiff stand-up collars and fashionable ties. Both men were of Scottish descent and a few days later a drawing appeared in the notice box depicting two raw young Scots wearing Glengarry caps and Kew clogs, with an arrow pointing to another drawing of the same young men as they appeared on the previous Sunday, with the word "evolution" in block capitals beneath. I think that everyone but the right group of gardeners was accused of the deed. It originated in the nursery potting shed one morning at breakfast time, and the only men who knew anything about it were Skan, a man named Young who worked with me in the nursery, and myself. Young was the artist, and to get the drawing posted I had to take a man who lodged with me, Fred Tribble, into my confidence. He worked near the notice box and was able to post it when the coast was clear. He was also able to watch for results, and the victims were silly enough to tear it down before a crowd of men. The secret about the drawing was kept for thirty years, and in the end I told the sufferers, both of whom were in very good situations, where it had originated and how it had been posted.

During my time as propagator the Curator expected me to go round the gardens every Saturday afternoon and make a list of all the trees and shrubs in flower, sending a copy to his office the following Monday morning. I found it to be an excellent means of becoming acquainted with the collections, and after a time conceived the idea of making a second copy and posting it in the notice box for the use of other gardeners. Some were

very pleased with the idea, and a few ardent souls, headed by William Hales—who later became Curator of the Physic Garden, Chelsea—asked me to go round with them one evening a week and show them where the various subjects were to be found.

The winter of 1894-95 was one of the most severe I remember and it was not until the winter of 1946-47 that it was equalled by length and severity. There had been frosty weather with snow in December, 1894, and in early January, 1895, but by the middle of January the frost had gone and there were some mild days. At that time we protected certain semi-tender plants during frosty weather and on the disappearance of frost Mr. Bean sent me to uncover them, saying it was unlikely that we should have much more frosty weather to hurt. But on January 24th the weather changed and frost set in again to continue throughout February. During one week in February from 28 to 32 degrees of frost, Fahr., were registered each night. A heavy fall of snow occurred early in the period, but throughout the greater part of the cold time there were bright, sunny days with a dry atmosphere, followed by severe frost at night. By the break up of the frost most of the snow had disappeared by evaporation and there was a very clean thaw. Water mains were frozen in many places and household water could only be obtained at prescribed hours from standpipes erected in the streets. Water was so short that most of the gardeners washed themselves in the plant houses. The Kew staff enjoyed several weeks of skating on the pond near the Palm House, and on several occasions a large fire, in a brazier placed on the ice, cheered the skaters at night. Most of the gardeners went straight to skating from lectures, then had to go to their lodgings and write out their lecture notes in a bedroom below freezing point. Fortunately I was not attending garden lectures at the time. On the 6th of March, 1895, I wheeled a barrow over the ice to the islands in the big lake to bring back prunings. We lost numerous trees and shrubs. Mediterranean heaths and cistuses suffered very badly.

By the spring of 1896 I had become very unsettled and dissatisfied. In those days any posts that were sent to the gardens to be filled were offered to men privately, not posted for applicants as was done later, and I was consistently overlooked. When I complained, all the comfort I got was, "We do not want you to leave Kew, you are young and are not taking any harm." But I was only receiving twenty-five shillings a week with nothing extra in any way. I was not allowed to take Sunday duty because my weekly wage was one shilling higher than that of other sub-foremen. I felt that I was earning more than I was getting and that I was being exploited, as my duties became more onerous year by year. I could not very well apply for any post I saw advertised as the Curator would not give me a reference without the Director's approval. On one occasion, when I insisted upon the matter being taken to the Director, he refused to allow me to

apply because he thought that the job was not good enough for me. But immediately afterwards I was asked to combine the propagator's work with that of label writer and seed collector for the Arboretum. I was to be allowed a second student gardener to assist me with the work and I was to be paid thirty shillings a week but must promise to stay in the position for at least five years. I refused, giving as my reason that the position was not sufficiently attractive. No further attempt was made to combine the two posts. During the summer of 1896 Sir William insisted that I should apply for the post of Horticultural Instructor under the Yorkshire County Council. I did and was selected for the short list. I was turned down through lack of experience in kitchen garden work. I was not sorry for I did not think that I was suitable for the post, my experience having led me in other directions. Any one of the other five candidates selected for the short list could well have been my father or in some instances, grandfather; I felt very young amongst them.

In the end I began seriously to consider my old idea of starting a small nursery business and through an uncle got into touch with a man in Cheshire who had four acres of land and a cottage to let. There was some difficulty over a lease and during negotiations the foremanship of the Temperate House at Kew became vacant. I was asked to give up my nursery ideas and take the position. As I should have had to borrow money from my father, and he had just had a bad time owing to my mother having had a long and serious illness, and my younger brothers and sisters wanting to undertake work that rendered necessary long periods of training, I thought it better to be on the safe side and stay at Kew, although I had no illusions about the difficulties of the task that lay ahead. Thus I entered upon my third distinct period of service at Kew.

It may seem strange that my father, who had never been paid high wages and had brought up a large family, should be able to help his children with their training fees, but he was always a careful man and my mother was a good housekeeper. When he was about thirty-five years of age an employer died and left him a legacy that brought in about £30 a year. He did not spend the money but lent it to different children in turn who faithfully paid it back as soon as they began to earn. I do not think that my eldest brother had any assistance from home. As far as I was concerned the only help I had, from the time I first went into lodgings at the age of fourteen, was seven shillings and sixpence. One autumn I was hard up and my mother gave me five shillings to pay my fees at a class I wanted to attend; the other half-crown my father gave me to buy a budding knife. We were all brought up to be thrifty and we got to know the value of money at an early age.

Before passing on to my new work I should like to record two or three events that happened during my years as propagator.

One was the innovation of adding two women gardeners to the staff. I think that some pressure had been brought to bear on the Director. But before they were engaged he insisted that they should wear brown knickerbocker suits, such as were worn by boys, thick woollen stockings and ordinary brown cloth, peaked caps. When walking to and from work they wore long mackintoshes. There was nothing unseemly in the attire but it created a sensation in the old-fashioned village of Kew. The Director's reason for the special clothing was to make the girls as unattractive as possible to the young male gardeners, and it was understood he had said that he was not going to encourage any "sweet-hearting." The most awkward item of dress for the girls appeared to be the cap. They wore their hair long and seemed to find it difficult to arrange so that they could wear the cap becomingly.

A startling event occurred one morning—I think it was in 1895. I was walking along Kew Road to work a little before six o'clock, when the first motor car I had seen passed me heading for Richmond, with a man walking in front carrying a red flag. At that time every steam propelled machine or vehicle had to be preceded on public roads by a man carrying a red flag, and there was a speed limit for such dangerous contraptions as steam rollers and traction engines of eight miles an hour. Soon after the appearance of motor cars the law was repealed to meet the new conditions.

The following record will give an idea of the petty meannesses authorities were wont to practice in their dealings with workmen. An increasing number of men in various walks of life were being allowed to cease work at midday on Saturday and the practice had been adopted in several important gardens, a skeleton staff being retained for necessary work. Student gardeners at Kew had very little free time, and the subject of Saturday afternoon leave had been a constant subject of discussion during breakfast in the nursery potting shed. Eventually we brought the matter up at a general meeting of gardeners and it was decided to petition H.M. Office of Works—it was not until April, 1903, that the Royal Botanic Gardens were transferred to H.M. Board of Agriculture and Fisheries—for Saturday afternoon off in alternate weeks. As I had been a prime mover of the idea I was appointed with two others, John Mahon and John Newsham, to draft a petition and we drew up a fairly strong case, backed by letters from head gardeners saying that they had encountered no difficulties through their men being allowed to have Saturday afternoon free. Eventually we were allowed to have one afternoon in four, but we were informed that if those men who worked out of doors wished to avail themselves of the concession, they must cease to leave work at five o'clock on Saturdays when the labourers left work, and remain on the three Saturdays when they had to work until six o'clock. Only three men were affected, and it would have done no harm to anyone to have allowed them to continue to leave at five as in the past. I suppose that in my case it was retributive

justice as I had been the principal actor in propounding a scheme that would allow men to have some free time on an occasional Saturday. I have never been able to make up my mind whether I gained or lost over the question. The Director was very astute in many ways but he could not seem to understand how such petty occurrences bred discontent.

* * *

Reprints are being made of each part of Mr. Dallimore's reminiscences as these are serialized. It is felt that some members may wish to obtain these so that when complete they may be bound together. Reprints of Parts I and II are now available at 1s. 6d. each [Ed.].

In Memoriam

Members will be sorry to learn of the deaths of the following: Mr. F. C. Mack, who left Kew in 1904 and lived in Norwich; Mr. J. W. Miles, who left in 1896 and lived in Sussex; Mr. D. G. McIver, who left in 1905, and lived at Morecambe; and Mr. T. Oliver, who left in 1908 and lived in Dumfriesshire. Unfortunately we have no more than the sad news of the death of these Old Kewites, and are therefore unable to give suitable obituaries.

* * *

DAVID LADIPO COLE

We record with regret the death of David Cole in November, 1955, after a comparatively short illness. Mr. Cole, a Nigerian, was a volunteer student at Kew in 1951. He will, perhaps, be remembered most for his prowess in tennis—he won the Proudlock Tennis Cup. He was attached to the West African Institute for Oil Palm Research near Benin City, Nigeria, and was responsible for the upkeep of the Oil Palm Trial Grounds and for the distribution of seed. We tender our sympathy to his wife.

* * *

Miss E. A. BRUCE

It is with very great regret that we record the death of Eileen A. Bruce on 13th October, 1955. She was educated at the Francis Holland School, passing from there to University College London.

She came to the Kew Herbarium in 1931 and soon became well-known for her wide interests and abounding energy. At the outset of World War II she at first did first-aid work; feeling strongly, however, that she ought to take her part in more direct active service, in 1941 she joined the A.T.S. It was not long before she had gained a commission, and from then until the end of the war she served with a mixed A/A Battery.

After demobilisation she returned to the Herbarium, but in 1949 she accepted a post in the Department of Agriculture, Pretoria. While there she paid particular attention to the genus *Kniphofia*, and undertook several long expeditions in search of species. 1952 found her back again at Kew, this time assisting in the production of the "Flora of East Tropical Africa." By the end of 1954, however, the symptoms of disease became manifest, and an operation failed to arrest it. She struggled on with her work and, for recreation, she turned her attention more to outdoor sketching. She was an amateur artist of considerable ability and had some of her paintings accepted for the annual exhibition of the Richmond Art Group.

One of Miss Bruce's outstanding characteristics was her ability to keep up with a very wide circle of friends. Her untimely death leaves them with a very real sense of loss.

E. M. W.

T. G. BULLOCK

The death occurred at Leicester, on 19th October, 1955, of Mr. T. G. Bullock who left Kew in May, 1913. For several years he was engaged at the East Anglian Horticultural Institute at Chelmsford, and his interest in horticultural education was such that he eventually became horticultural instructor to the Leicestershire County Council, a position which he retained from 1920 onwards until he retired in 1951.

He was very popular in all circles, being in great demand as a judge at flower shows and also as a lecturer to local horticultural societies. His passing will be a great loss to gardeners locally and throughout the county, and the sympathy of the Guild and its members is extended to his widow and only son.

* * *

E. V. WILLOUGHBY.

The death occurred tragically of Mr. E. V. Willoughby on the 21st March, 1955. He had suffered severe injuries from a road accident on the 19th March and died in hospital without regaining consciousness.

He left Kew in January, 1928, and after several years spent at Budd's Farm, Wittersham, Kent, took up a position at the Metropolitan Police College, Hendon, which he retained until his death.

Mr. Willoughby retained a very keen interest in Kew throughout his all too short life, and those acquainted with him will be very sorry to learn of his passing. He leaves a wife and two daughters to whom we tender our deepest sympathy.

* * *

HENRY WILLISON

It is with regret that we record the death of Mr. Willison who passed away in May, 1955, after a very painful illness. His death took place in the hospital at Darlington.

Upon leaving Kew Mr. Willison spent several years in private service, working in establishments such as Warren Hill Gardens, Loughton, Essex, and Langley Court Gardens, Beckenham, Kent, and later he was to devote much time to landscape construction in which he was particularly interested. On various occasions, having carried out the constructional work, he continued afterwards as Head Gardener, until his flair for the making of new gardens would lead him back to this work.

A quiet and unassuming person, rather reticent about his own affairs, Mr. Willison, a bachelor, was very highly esteemed by those who knew him. He leaves a cousin, niece and nephew to whom we tender our deepest sympathy.

Entered
Kew

Assistant Scientific	Miss I. Blewett.....	1941
" "	Miss I. Bewley.....	1949
" "	Miss L. Fletcher	1952
" "	Miss P. Halliday.....	1947
" "	Miss J. E. Hawkins (Index Kewensis)	
" "	Miss D. M. Newton.....	1948
" "	A. L. G. Sapper	1948
" "	Mrs. O. Tait	1950
" "	Mrs. S. M. Taylor.....	1953
" "	Miss A. C. Uchlein	1955
" "	G. D. Udale	1953
Visiting Botanist	D. J. B. Killick, M.Sc. (S. Africa)...	1954
Librarian	H. S. Marshall, F.L.S.....	1932
Assistant Librarian	Miss B. A. Borrás, A.L.A.....	1952
" "	K. J. Churches, A.L.A.	1954
Clerical Officer (Library).....	Mrs. P. L. Irving.....	1954
" " " "	Miss M. Kierans.....	1934
Librarian Assistant	Miss M. C. Davy (Bentham-Moxon)	1937
Hon. Associate (Transplant and Breeding Experiments)	E. M. Marsden-Jones, F.L.S., F.R.E.S.	1922
Artist	G. Atkinson.....	1922
"	*Miss Stella Ross-Craig, F.L.S. (Bentham-Moxon)	1929
Preparer (Supervisor)	Mrs. H. Wootton.....	1949
Technical Assistant	Miss A. Dunk (Bentham-Moxon)...	1953
Clerical Officer.....	E. E. Cope.....	1953
" "	Miss G. Pring.....	1954
" "	W. D. H. Prior.....	1955
Clerical Assistant.....	Miss F. V. Surplice.....	1954
Shorthand Typist.....	Mrs. E. Jones	1953
Typist	Mrs. H. M. Skews (Colonial Office)	1953
" "	Mrs. M. Brind.....	1955
"	Mrs. B. F. Saunders.....	1952
"	Miss I. L. Taylor (Colonial Office)	1951

JODRELL LABORATORY

Keeper (P.S.O.)	C. R. Metcalfe, M.A., Ph.D., F.L.S.	1930
Scientific Officer	Miss M. Y. Stant, B.Sc., Ph.D.....	1950
Senior Assistant (Scientific).....	F. Richardson	1934
Assistant (Scientific)	Miss D. M. Catling.....	1950

MUSEUMS

Keeper (P.S.O.)	F. N. Howes, D.Sc.....	1925
Senior Scientific Officer.....	S. G. Harrison, B.Sc.....	1949
" " " "	T. A. Russell, B.Sc., A.R.C.S., A.I.C.T.A.	1954
Scientific Officer	Miss B. J. Youngman, B.Sc.....	1950
Assistant (Scientific)	Miss J. K. Bowden.....	1949
Preparer	L. J. Harding	1913
Typist	Miss V. Horwill	1951

GARDENS

Curator	†W. M. Campbell, N.D.H., F.Inst.P.A.	1922
Deputy Curator (Tropical).....	*†L. Stenning, A.H.R.H.S.....	1925
" " (Arboretum)	†S. A. Pearce, F.Inst.P.A.....	1928
Assistant Curator (Temperate).....	†J. E. S. Souster, N.D.H., F.L.S.....	1943
" " (Herbaceous).....	†G. H. Preston, F.L.S.....	1934
" " (Decorative).....	*†S. W. Rawlins.....	1936

	<i>Entered Kew</i>
Foreman (Arboretum)	P. G. Shutler..... 1946
" (Arboretum, Propagator)	R. J. Chuter..... 1953
" (Botanics)	G. C. W. Gardner..... 1926
" (Decorative)	†F. A. Larkbey..... 1947
" (Ferneries)	H. J. Bruty..... 1946
" (Orchids)	†G. Nicholson..... 1947
" (Palm House)	G. H. Anderson..... 1940
" (Rock Garden)	†A. G. Cook..... 1948
" (Temperate House).....	M. A. Wells..... 1946
" (Temperate House Pits).....	W. H. Bridle..... 1946
" (Tropical Propagating Pits).....	*†E. W. Curtis..... 1950
" (Quarantine House, Colonial Office)	†H. Colin..... 1940
Executive Officer	†E. G. Dunk..... 1914
Clerical Officer.....	R. J. Claiden..... 1948
"	Miss E. Mates..... 1948
"	G. Lamb..... 1951
Shorthand Typist.....	Miss A. G. Barton..... 1953
Typist	Miss M. Sillitoe..... 1947
Sergeant-Constable	G. E. Williams..... 1906
Packer and Storekeeper.....	†H. W. Ruck..... 1907
Game Keeper	J. H. Claiden..... 1919
Seed Collector	J. Paske..... 1929
"	S. Sheffield..... 1947
"	G. W. Bull..... 1936
"	F. L. Burnell..... 1946
"	J. Gibson..... 1947
"	H. Hockley..... 1942
"	A. Hughes..... 1920
"	F. H. Jackman..... 1940
"	H. J. Jackman..... 1949
"	E. W. Macdonald..... 1950
"	J. Mateer..... 1952
"	W. Mort..... 1929
"	C. W. Preston..... 1922
"	E. Skyrme..... 1947
"	J. Slater..... 1945
"	F. W. Standen..... 1940
"	R. J. Sadler..... 1951
"	E. J. White..... 1940

STUDENT GARDENERS.

<i>Name</i>	<i>Entered Kew</i>	<i>Previous Situation.</i>
Addison, P.	Oct., 1955	Liverpool Parks Dept.
Ast, R.	Mar., 1955	L. R. Russell, Ltd.
Baylis, C. L.	Mar., 1954	Southend Parks Dept.
Beyer, R. I.	Mar., 1955	Bexley Parks Dept.
Boot, W. A.	Oct., 1954	Botanic Gardens, Baarn, Holland.
Boulton, J. B.	April, 1954	Charles Madsen, Ltd., Cheshunt, Herts.
Cleet, A. T.	Mar., 1955	John Innes Horticultural Inst.
Dunn, P. G.	Oct., 1955	Birmingham Parks Dept.
Dumont, T. W. J.	Oct., 1955	Wm. Wood & Son, Ltd.
Elton, T.	Oct., 1954	Cheltenham Parks Dept.
Fleming, J. G.	Mar., 1955	Derby Parks Dept.
Forster, R. R.	Mar., 1955	John Innes Horticultural Inst.
Fugard, R. L.	Oct., 1954	L.C.C. Parks Dept.
Godley, P. G.	April, 1954	Windsor Royal Gardens.

<i>Name</i>	<i>Entered Kew</i>	<i>Previous Situation.</i>
Goodale, A. E. R.....	April, 1954	G. Thompson & Sons, Ltd., Park Hill Nurseries, Ewell, Surrey.
Hale, J. A.....	Mar., 1955	Bexley Parks Dept.
Harvey, T. O.....	Oct., 1954	Cambridge Botanic Garden.
Hickman, N. C.....	Mar., 1955	R.H.S. Gardens, Wisley.
Hind, H.....	Oct., 1954	Leeds Parks Dept.
Hopkins, Miss A. D. S.....	April, 1954	Miss Gray, Bay Tree Hotel, Burford, Oxon.
Jakobsen, P. R.....	Oct., 1955	W. Fromow & Sons, Windlesham, Surrey.
Jordan, J.....	April, 1954	M.O.W., Hyde Park.
Kemish, G. T.....	April, 1954	Enfield Parks Dept.
McCracken, J. S.....	Mar., 1955	Glasgow Parks Dept.
Messenger, G. W.....	Mar., 1955	Ipswich Parks Dept.
Millard, R.....	Oct., 1954	Portsmouth Parks Dept.
Moore, D. J.....	Oct., 1954	Southgate Parks Dept.
Müller, T.....	Oct., 1954	A. Vogt, Gartenbau, Erlenbach/ZH, Switzerland.
Neighbour, E. C.....	Oct., 1955	Fulham Parks Dept.
Powell, Miss M. C.....	Oct., 1955	L.C.C. Parks Dept.
Pringle, D. J.....	April, 1954	Salford Parks Dept.
Prive, A. E.....	Oct., 1955	National Fruit Trials, Wisley.
Rippon, A. V.....	Oct., 1954	M.O.W., Hampton Court.
Rogers, W. M.....	Oct., 1954	Messrs. Slocock, Woking, Surrey.
Ryder, F. P.....	Oct., 1955	Manchester University Experimental Grounds.
Scott, A. H.....	Oct., 1954	Brighton Parks Dept.
Sumner, R. J.....	Oct., 1955	Beckenham Parks Dept.
Tyte, J. S.....	April, 1954	Badminton School, Bristol.
Vickers, F.....	April, 1954	Swansea Parks Dept.
Wyatt, R. C.....	Mar., 1955	W. J. Unwin, Ltd.

IMPROVERS.

W. Marshall, A. Paterson, D. J. Sales, V. H. Saville.

BOYS.

B. Elliot, A. F. Goodwin, M. Griffin, W. J. Holloway, I. S. Hodson, D. B. Martin, P. J. Saul, D. Togni, A. G. Vivien.

AMENDMENTS TO ADDRESS LIST OF 1952-53 JOURNAL.

(The names of Life Members are preceded by an asterisk)

ABBREVIATIONS: B.G., Botanic Gardens; C., Curator; D., Director; F., Foreman; H.G., Head Gardener; M., Manager; N., Nurseryman; S., Superintendent.

<i>Name</i>	<i>Left Kew</i>	<i>Present Position and Address</i>
Andersen, A. W.....	Dec., 1906 ...	8, Wiltshire Road, LONDON, S.W.9.
Appleby, J.....	April, 1954 ...	c/o 53, Rathbone Road, Wavertrøe, LIVERPOOL, 15.
*Ashby, Mrs. D. G., N.D.H. (F. A. Sharps)	June, 1944 ...	Little Croft, Harston, CAMBS.
Ashley, R. F.....	Mar., 1954 ...	c/o R.H.S. Gardens, Wisley, Ripley, SURREY.
Attenburrow, D. C.....	Oct., 1954 ...	c/o D. of Agriculture, P.O. Box 338, Nairobi, KENYA.
Bachelor, Philip L.....	Mar., 1935 ...	Glenchairn, Dover Ridge Avenue, Carlton, NOTTINGHAM.
*Bailey, A. G., M.A.....	Oct., 1914 ...	Address Unknown.
*Baker, A. F.....	April, 1920 ...	P.O. Box 23, Nigel, Transvaal, SOUTH AFRICA.
*Banfield, F. S., F.L.S.....	May, 1927 ...	28, Cudmore Avenue, Toorak Gardens, SOUTH AUSTRALIA.
*Bassett, W. E., M.B.E.....	June, 1927 ...	6, Ravenswood Road, Croydon, SURREY.
Baverstock, E.....	April, 1954 ...	44, Woodwald Road, Dagenham, ESSEX.
Bee, R. A.....	Dec., 1953 ...	c/o Bedford College, Regents Park, LONDON, N.W.1.
Bentham, H.....	June, 1952 ...	Arle House, Arle Village Road, Cheltenham, GLOS.
Bettesworth, A. W.....	June, 1949 ...	Address Unknown.
Billett, M.....	Mar., 1955 ...	176, Down Hall Road, Rayleigh, ESSEX.
*Blackman, J. A. E., N.D.H.	Jan., 1934 ...	Plumpton Nurseries, Ltd., SUSSEX
Blowfield, A. H.....	April, 1946 ...	Asst.S., Grove Cottage, The Grove, Carshalton, SURREY.
Boddington, H. P.....	Feb., 1951 ...	5, Dagger Lane, WEST BROMWICH.
Bowles, H. A.....	Oct., 1949 ...	77, Queenway, Newton Abbot, DEVON.
*Boyd, T. D.....	Aug., 1928 ...	Mansion House, Oak Hill Park, Accrington, LANCS.
Bromley, W. H.....	Sept., 1927 ...	Coedmor Cottage, Saundersfoot, PEMB.S.
*Brown, A. E.....	Sept., 1905 ...	76, The Kingsway, Toronto 18, Ontario, CANADA.
Brown, D. A.....	Sept., 1950 ...	c/o Parks Dept., Beckenham, KENT.
Brown, R. M. Stuart.....	July, 1946 ...	The Lodge, Marie Louise Gardens, West Didsbury, MANCHESTER, 20.
*Bullock, T. G.....	May, 1913 ...	Deceased.
*Bundy, E. F.....	May, 1945 ...	62, Combemartin Road, Southfields, LONDON, S.W.18.
Bundy, Mrs. (Scott).....	May, 1945 ...	62, Combemartin Road, Southfields, LONDON, S.W.18.
Burras, J. K.....	April, 1954 ...	F., Oxford Botanic Garden, OXFORD.
Bury, W.....	Mar., 1949 ...	47, Fell Close, Grange-over-Sands, LANCS.
Butcher, I. A.....	Aug., 1955 ...	Avebury Manor Gardens, Avebury. Nr. Marlborough, WILTS.
Carr, O.	Oct., 1947 ...	The Cottage, Deighton Grove, Crockey Hill, YORK.
Carson, S. A.....	Mar., 1953 ...	Foreman's Cottage, High Park, Toronto, CANADA.

<i>Name</i>	<i>Left Kew</i>	<i>Present Position and Address</i>
Chambers, Mrs. K. (K. Watson)	Mar. 1922 ...	Bines Common, Partridge Green, Horsham, SUSSEX.
Chapman, J.	Sept., 1955 ...	c/o Dept. of Agriculture, Nairobi, KENYA.
Child, R. E.	Oct., 1949 ...	c/o Parks Dept., Ilford, ESSEX.
Clark, D. V.	Aug., 1955 ...	Nursery M., Cyprus Nurseries, Cyprus Road, Edmonton, LONDON, N.9.
*Clarke, T. R.	April, 1936 ...	Plumpton Nurseries, Ltd., SUSSEX.
Collins, G. E.	Sept., 1955 ...	The Dower House, Marheaton Park, DERBY.
*Cook, G. G. (Major)	Dec., 1945 ...	War Graves Commission, 19, Rue Jean Guyon, Albert, Somme, FRANCE.
*Cook, L.	May, 1929 ...	Hort. S., Belle Vue Zoological Gardens, Manchester 12, and 173, Reddish Road, South Reddish, Stockport, [CHESHIRE.
Cooper, Miss B. (See Mrs. C. F. Jackson)	Aug., 1944	
*Corbett, G.	May, 1920 ...	Riseley, Bushfield Road, Bovingdon, HERTS.
*Cotton, A. D., O.B.E., F.L.S.	Jan., 1946 ...	Honey Cottage, Green Lane, Farnham Common, BUCKS.
Cotton, Mrs. A. D.	Aug., 1915 ...	Honey Cottage, Green Lane, Farnham Common, BUCKS.
Cramer, Mrs. (B. N. Shepherd)	Aug., 1940 ...	395, Zephyr, Lakewood 15, Colorado, U.S.A.
Crowder, G.	Mar., 1955 ...	16, Haverfield Gardens, Kew, SURREY.
*Cutting, S. G.	July, 1938 ...	H.G., "Fieldwood Farm," Briarcliff Manor, N.Y., and 50, Upper Croton Avenue, Ossining, N.Y., U.S.A.
Dahampath, U. M. P.	Mar., 1955 ...	C., University Park, Peradeniya, CEYLON.
Dalgleish, J.	Oct., 1954 ...	The Flat, Sudley, Mossley Hill Road, LIVERPOOL, 18.
Davenport, W.	Aug., 1947 ...	Address Unknown.
*Davidson, Miss H. W.	May, 1919 ...	Address Unknown.
Dayson, F. G.	Oct., 1948 ...	34, Forest Row, Roebuck, Stevenage, HERTS.
Dean, Geo.	Oct., 1937 ...	Asst. D., Parks and Reserves, Auckland, NEW ZEALAND.
Donaldson, C.	April, 1954 ...	1, Northfield Cottages, University Field Station, Wytham, Nr. OXFORD.
Drewitt, C. E.	Oct., 1945 ...	Address Unknown.
*Dumke, G. P. W.	June, 1935 ...	Berlin Botanical Garden, Berlin- Dahlem, GERMANY.
Duncan, C. A. A.	Mar., 1954 ...	89, Nottingham Street, Karori, Welling- ton, W.3, NEW ZEALAND.
*Eady, Miss M. C.	April, 1945 ...	22A, St. John's Avenue, Putney, LONDON, S.W.15.
*Edwards, J. H.	Oct., 1947 ...	190, Seaview Road, New Plymouth, NEW ZEALAND.
Ekanayaka, D. T., B.Sc.(Hons.)	May, 1955 ...	Botanic Gardens, Peradeniya, CEYLON.
Elphick, G. G.	Dec., 1934 ...	30, St. James's Road, East Grinstead, SUSSEX.
*Elson, A. S.	Feb., 1936 ...	Address Unknown.
Evans, Sir Geoffrey, C.I.E., M.A.	Dec., 1953 ...	"Quarriers," Mayfield Lane, Wadhurst, SUSSEX.
Evans, Mrs. I.	May, 1947 ...	Pitt Farm, Harbertonford, Nr. Totnes, S. DEVON.

<i>Name</i>	<i>Left Kew</i>	<i>Present Position and Address</i>
Evans, K., N.D.H.....	April, 1952 ...	Deputy S., c/o Parks Office, Utley, Keighley, YORKS.
Fisher, F. W.....	Dec., 1939 ...	73, Station Road, Hampton, MIDDX.
*Flippance, F.....	July, 1915 ...	Lavender Cottage, 17, Paddocks Road, Burpham, Guildford, SURREY.
Fraenkel, Miss E. R.....	April, 1946 ...	16, Museum Road, OXFORD.
*Free, M.	Mar., 1912 ...	River Road, Hyde Park, New York, U.S.A.
Garnett, J. B.....	Mar., 1953 ...	38, Princess Street, Woodlands, Den- caster, YORKS.
Gates, F.....	April, 1949 ...	Address Unknown.
Gibbons, J. E.....	Oct., 1953 ...	178, Easton Road, Roley, Nr. LIVERPOOL.
Gossweiler	Sept., 1898 ...	Deceased.
Hack, H. R. B.....	Jan., 1946 ...	123, Worthing Road, Ruslington, SUSSEX.
Halhead, J.....	Oct., 1954 ...	21, Roman Road, Colchester, ESSEX.
Hamblett, N.....	Sept., 1955 ...	18, Wastdale Road, Baguley, Wythen- shawe, MANCHESTER.
Hamblin, I. C.....	June, 1952 ...	Nigerian College of Arts, Science and Technology, Zaria, NORTHERN NIGERIA.
Hardie, R. M.....	April, 1954 ...	12, Glyndebourne Avenue, Toorak, S.E.2, Melbourne, AUSTRALIA.
Harper, A. E.....	Oct., 1933 ...	S. Parks Dept., Warrington, and 7, Brook Avenue, Stockton Heath, Warrington, LANCs.
*Harrow, R. L., V.M.H.....	Jan., 1893 ...	Deceased.
Hart, Mrs. V..... (Miss V. Hudson)	Aug., 1951 ...	c/o Min. of Works, British Embassy, Cairo, EGYPT.
Hayward, P. A.....	Sept., 1950 ...	262, Kew Road, Kew, Richmond, SURREY.
*Hazel, C.....	Nov., 1919 ...	"La Roche," Mount Rossignol, St. Ouen, JERSEY, C.I.
*Hebden, F. J., N.D.H.....	April, 1947 ...	District Horticultural Officer, I.W.G.C., 1, Miconos Street, Nicosia, CYPRUS.
Heyworth, J.....	Oct., 1954 ...	18, Market Place, Ramsbottom, LANCS.
Hingston, J. A., N.D.H.....	July, 1948 ...	S., Municipal Offices, Bebington, Cheshire, and 2, Plane Tree Road, Bebington, CHESHIRE.
Hingston, Mrs. (Miss J. Sharps)	Jan., 1949 ...	2, Plane Tree Road, Bebington, CHESHIRE.
Hitt, S. D.....	Sept., 1955 ...	91, Lewis Trust Flats, West Kensington, LONDON, W.14.
*Holloway, H. M.....	July, 1930 ...	P.O. Box 1454, Snr. Dist. S. of Parks, City Council, Pretoria, SOUTH AFRICA.
*Hopkins, A. J.....	Nov., 1926 ...	S. of Gardens, University College, LEICESTER.
Horton, D. E.....	Sept., 1928 ...	N.A.A.S., Rosewarne Experimental Station, Camborne, CORNWALL.
Hubbard, D.....	April, 1953 ...	16, Broughton Drive, Cressington, LIVERPOOL, 19.
Hudson, Miss V..... (See Mrs. V. Hart)	Aug., 1951	
Huggett, P.....	Sept., 1952 ...	24, Greatfields Road, Barking, ESSEX.
Ibbotson, D.....	April, 1952 ...	Address Unknown.

<i>Name</i>	<i>Left Kew</i>	<i>Present Position and Address</i>
*Ing, W. J.....	July, 1905 ...	Arcata Place, Skyline Lakes, R.F.D., Wanaque, New Jersey, U.S.A.
Jackson, Mrs. C. F..... (B. Cooper)	Aug., 1944 ...	2, Essex Court, Temple, LONDON, E.C.4.
Jackson, F. A.....	Oct., 1948 ...	c/o Parks Dept., Southport, LANCS.
Jackson, R. M.....	Oct., 1948 ...	13, Longcliff Road, Coalville, LEICS.
Jackson, Thos.....	Dec., 1947 ...	Address Unknown.
James, E. B.....	Mar., 1936 ...	c/o Plant Protection, Ltd., Yalding, Kent, and 31, Broadwater Street, West Worthing, SUSSEX.
*Jarrett, J. C., N.D.H.....	April, 1913 ...	71, Ashcombe Road, Weston-super- Mare, SOMERSET.
Jew, P. J.....	Aug., 1955 ...	644, Mount Albert Road, Epsom, Auckland, NEW ZEALAND.
Johnson, G.....	June, 1949 ...	Saighton Grange, Saughton, Nr. Chester, CHESHIRE.
*Johnson, G. C.....	Oct., 1914 ...	20, Gundreda Road, Lewes, SUSSEX.
*Johnson, J. T.....	Oct., 1904 ...	"Kinfare," Fernhill Heath, WORCESTER.
Jollie, F. J. E.....	April, 1937 ...	21, Rocklands Avenue, Mt. Eden, Auckland, NEW ZEALAND.
Jones, A. S.....	Mar., 1955 ...	"Rita," Sevenoaks Road, Ightham, KENT.
Jones, D. A. G.....	June, 1951 ...	Fairfield Experimental Horticultural Station, Esprich, Kirkham, LANCS.
Joy, G. S.....	May, 1946 ...	Emmetts Lodge, Ide Hill, Sevenoaks, KENT.
Kemp, H. W.....	April, 1926 ...	c/o Messrs. Sutton & Sons, and 421, London Road, Reading, BERKS.
*Knight, F. P.....	July, 1929 ...	D., R.H.S. Gardens, Wisley, Ripley, SURREY.
*Kruger, H. J.....	April, 1946 ...	18, Parkfield Drive, Wallasey, CHESHIRE.
*Lambert, J.....	June, 1907 ...	P.O. Box 5515, Daytona Beach, Florida, U.S.A.
Lavender, F. R.....	Sept., 1949 ...	70, High Street, Gorleston-on-Sea, NORFOLK.
*Leith, G. J.....	Mar., 1937 ...	Flat 1, The Library, Rose Hill, Hampton, MIDDX.
*Leslie, J. E.....	Feb., 1902 ...	44, Parkgate Road, Chester, CHESHIRE.
*Letch, Mrs. A. J..... (M. J. B. Evans)	Sept., 1945 ...	The Old School, Bradwell, Nr. Brain- tree, ESSEX.
Lingard, H. M.....	Mar., 1948 ...	"Dobinetts," Dobinetts Lane, Hale, CHESHIRE.
Littlewood, G.....	Sept., 1952 ...	4, Wensley View, LEEDS 7.
Lockley, R. E.....	April, 1948 ...	Ivy Farm Cottage, Ivy Farm Lane, Canley, Coventry, WARWICKS.
*Long, F. R., A.H.R.H.S.....	April, 1908 ...	47, Eastbourne Road, Port Elizabeth, SOUTH AFRICA.
Lovatt, D. W.....	April, 1948 ...	The Lodge, Stuart Road, Wealdstone, MIDDX.
Lucas, J. A.....	Mar., 1955 ...	Efford Experimental Station, Lymington, HANTS.
*Luja, E.....	July, 1898 ...	Deceased.
*Mack, F. C.....	Feb., 1904 ...	Deceased.
Manger, G. L.....	Sept., 1955 ...	96, Woodlands Way, West Wickham, KENT.
*Marriott, W. E.....	July, 1904 ...	3, Altair Avenue, off Taunton Road, Pietermaritzburg, Natal, SOUTH AFRICA.

<i>Name</i>	<i>Left Kew</i>	<i>Present Position and Address</i>
Massey, A.....	Oct., 1954 ...	8, Glastonbury Avenue, Marton, Blackpool, LANCS.
Maunder, P.....	April, 1954 ...	18, Shelly Grove, West Hartlepool, Co. DURHAM.
*Maw, H.....	Feb., 1924 ...	Address Unknown.
Medcalf, J. G.....	April, 1948 ...	1, Summerfield Road, Dudley, WORCS.
Meherne, C. D.....	Mar., 1947 ...	110, Scarborough Road, Sumner, Christchurch, NEW ZEALAND.
Melles, A. M.....	Oct., 1950 ...	Address Unknown.
*Melles, Major A. B., M.B.E., N.D.H.....	Nov., 1915 ...	Inspector, I.W.G.C., S.W. District, St. Marks House, St. Marks Avenue, Salisbury, WILTS.
Mellors, G.....	Sept., 1952 ...	Asst. S., Parks Dept., Town Hall, Uxbridge, and 15, Meadow-view, Uxbridge, MIDDX.
Miles, J. W.....	June, 1896 ...	Deceased.
Milton, G.....	June, 1950 ...	Address Unknown.
Murden, R.....	Jan., 1954 ...	Parks Dept., KIDDERMINSTER.
*McCulloch, Mrs. E..... (E. K. G. Thompson)	Aug., 1944 ...	9, Third Avenue, Kenilworth, Kimberley, Cape Province, SOUTH AFRICA.
*McIver, D. G., N.D.H.....	Dec., 1905 ...	Deceased.
MacKenzie, W. W.....	Jan., 1935 ...	2, Market Lane, Kilmarnock, AYRSHIRE.
McLachlan, D. D.....	Mar., 1952 ...	5, Deeside Crescent, Bee's Nursery, Ltd., CHESTER.
McLachlan, P. A.....	Mar., 1952 ...	87, Crescent Road, Toronto, Ontario, CANADA.
McNab, J.....	Sept., 1911 ...	Address Unknown.
Naylor, G. T.....	Sept., 1951 ...	"Movley," New Road, Twyford, Nr. Reading, BERKS.
Nelson, J.....	Aug., 1945 ...	S., The Lodge, Acton Park, The Vale, Acton, MIDDX.
*Newberry, W. J.....	Mar., 1903 ...	Deceased.
Newhams, D.....	May, 1950 ...	c/o Parks Dept., Neath, GLAM.
*Norris, J. L.	May, 1946 ...	90, Rue de Cassel, Estaires, Nord, FRANCE.
Offord, K. A.....	April, 1952 ...	140, Colchester Road, Ipswich, SUFFOLK.
*Oldham, C. H.....	May, 1910 ...	Deceased.
Oliver, T.....	Oct., 1908 ...	Deceased.
*Osborn, A., M.B.E., A.H.R.H.S.	Mar., 1945 ...	4, Nylands Avenue, Kew Gardens, Richmond, SURREY.
Parker, F.....	Nov., 1952 ...	Address Unknown.
*Paton, R. A.....	July, 1925 ...	Deceased.
Pemberton, L., N.D.H.....	April, 1954 ...	13, Pope Road, Bromley, KENT.
Ramsbottom, Miss M.....		34, Ennerdale Road, Kew, Richmond, SURREY.
Rattenbury, H. C. P.....	Oct., 1951 ...	L.C.C., Avery Hill Halls, Avery Hill Road, Eltham, LONDON, S.E.9.
Ravenscroft, A.....	Jan., 1951 ...	Asst. S., Parks Dept., Municipal Offices, Harrogate, YORKS.
Riach, D. D.....	Mar., 1955 ...	94, Tomes, Papanui, Christchurch N.W.2, NEW ZEALAND.
*Ritchings, H.....	April, 1927 ...	Waterfall Gardens, Penang, MALAYA.
Roberts, M. S. F.....	Oct., 1954 ...	Swiss Cottage, Singleton Park, Swansea, GLAMORGAN.
Robertshaw, P.....	Aug., 1922 ...	80, Chelsea Drive, Durban North, Natal, SOUTH AFRICA.

<i>Name</i>	<i>Left Kew</i>	<i>Present Position and Address</i>
Robinson, C.....	Dec., 1931 ...	M., Leicester Parks Dept., Nurseries, Rotherby, Nr. Melton Mowbray, LEICS.
*Robson, C. H. A.....	May, 1934 ...	Byeways, Patching Hall Lane, Chelmsford, ESSEX.
Rodick, P. W.....	Dec., 1948 ...	Old Vicarage, Holbrook, DERBY-SHIRE.
Rodick, R. S.....	June, 1948 ...	179, Knox Road, Wellingborough, NORTHANTS.
Rolls, E. V. S.....	July, 1948 ...	City Park, P.O. Box 651, Nairobi, KENYA.
Rymer, Miss N. B.....	Sept., 1946 ...	11, Isabelle Street, Brampton, Ontario, CANADA.
Ryneveld, C. C. van.....	July, 1938 ...	Deputy D., Parks, Recreation and Beaches Dept., Durban, Natal, SOUTH AFRICA.
Sampson, Miss J.....	May, 1946 ...	Address Unknown.
Saville, D.....	Sept., 1923 ...	6, Ennerdale Road, Kew Gardens, Richmond, SURREY.
*Sayer, H. W.....	June, 1924 ...	Flat 3, 70, Cornwall Road, Harrogate, YORKS.
Sayers, D. W.....	June, 1940 ...	The Flat, Beckworth, Lindfield, SUSSEX.
Seager, T. J.....	Mar., 1955 ...	190, Abbey Road, Whitley, Coventry, WARWICKS.
*Senogles, F.....	Dec., 1949 ...	4, Astor Avenue, Ludgershall, Nr. Andover, HANTS.
Shepherd, C.....	Mar., 1955 ...	c/o Parks Dept., Johannesburg, SOUTH AFRICA.
Shepherd, M. W.....	Sept., 1953 ...	23, Denmark Road, Exeter, DEVON.
*Short, J. G.....	April, 1940 ...	16, Percy Street, Whangare, NEW ZEALAND.
Simmonds, F. L.....	Dec., 1937 ...	10, The Chase, Holland-on-Sea, ESSEX.
*Simond, R.....	Sept., 1919 ...	Address Unknown.
Simpson, A. J.....	May, 1937 ...	Address Unknown.
Smalley, E.....	Oct., 1954 ...	c/o 28, Thornton Road, Childwall, LIVERPOOL, 16.
Smith, I. L.....	Sept., 1953 ...	87, Crescent Road, Toronto, Ontario, CANADA.
*Smith, Rev. W. C.....	June, 1902 ...	St. Barnabas School, Ravenshoe, N. Queensland, AUSTRALIA.
Snow, C., N.D.H. (N.Z.).....	Dec., 1903 ...	70, Franklin Road, Ponsonby, Auckland, NEW ZEALAND.
*Spooner, H.....	July, 1901 ...	5, Jacklyn Close, off Clive Avenue, Prestatyn, FLINTSHIRE.
Squire, Mrs. M. W. (Tanner)	Mar., 1942 ...	28, Colston Road, East Sheen, S.W.14.
Stanion, R. O.....	July, 1939 ...	9, First Avenue, Colwick, NOTTINGHAM.
*Stayner, Major F. J., V.D....	Aug., 1903 ...	Temeraire, Mashaba, SOUTHERN RHODESIA.
Stayner, F. J.....	May, 1934 ...	Scotswood, Greenbushes, via Port Elizabeth, SOUTH AFRICA.
*Stewart, W. E., N.D.H.....	Aug., 1928 ...	Address Unknown.
Stone, C.....	Dec., 1953 ...	87, Crescent Road, Toronto, Ontario, CANADA.
Swatton, A.....	Mar., 1903 ...	Address Unknown.
Tanner, M. W. (See Mrs. Squire)		
Tapson, O. V.....	April, 1954 ...	Address Unknown.
Taylor, Henry.....	Mar., 1953 ...	Address Unknown.
*Taylor, Hubert, N.D.H.....	Sept., 1933 ...	Parks Dept., L.C.C., Old County Hall, Spring Gardens, LONDON, S.W.1.

<i>Name</i>	<i>Left Kew</i>	<i>Present Position and Address</i>
Taylor, J. O.....	Oct., 1947 ...	N., 74, Hean Hay Road, Halswell, Christchurch, NEW ZEALAND.
Tebby, P. A. C.....	Mar., 1953 ...	Oddicombe, New Road, Broxbourne, HERTS.
*Thomas, H. H., V.M.H.....	Feb., 1899 ...	Deceased.
*Thorns, F. W.....	Aug., 1928 ...	D. Parks, Recreation and Beaches Dept., Durban, Natal, SOUTH AFRICA.
Till, B. W.....	Mar., 1955 ...	20, Bushwood Road, Kew, Richmond, SURREY.
Timmers, A.....	May, 1915 ...	Address Unknown.
Tindall, H. B., B.Sc.(Hort.) N.D.H.	Aug., 1946 ...	Horticulturist, Dept. of Agriculture, New England, Freetown, SIERRA LEONE.
Towle, P.....	April, 1954 ...	c/o Parks Dept., NOTTINGHAM.
Tregear, J. P.....	Mar., 1955 ...	10, Penryn Street, LONDON, N.W.1.
Tweedale, F.....	Nov., 1948 ...	Southerton House, Southerton Road, Kirkcaldy, FIFE.
*Wallace, J. C., M.C.....	April, 1912 ...	Address Unknown.
*Walsh, C. S.....	Oct., 1914 ...	Address Unknown.
Wassell, Geo.....	Mar., 1935 ...	11, Hillfield Gardens, Muswell Hill, LONDON, N.10.
Watson, G.....	Oct., 1954 ...	c/o Parks Dept., Johannesburg, Transvaal, SOUTH AFRICA.
*Watson, Miss W. Cradock...	Mar., 1919 ...	Church Cottage, Westmeston, Hassoeks, SUSSEX.
Watts, Miss B. C.....	Mar., 1944 ...	St. Hild's College, DURHAM.
Weighill, G. C.....	April, 1953 ...	c/o Park Superintendent's Office, 3, North Parade Buildings, Bath, SOMERSET.
*Welsh, H.....	May, 1923 ...	69, Fortune Green Road, Hampstead, LONDON, N.W.6.
Werder, H. A.....	Mar., 1938 ...	31, Cue Racine, Montrouge (Siene), FRANCE.
*Western, Miss P.....	Oct., 1948 ...	Hale, Fordingbridge, HAMPSHIRE.
Wheatcroft, P.....	Oct., 1954 ...	Red House, London Road, Ware, HERTS.
Wheeler, G. F., N.D.H.....	Feb., 1935 ...	Hort. Station, Burlingham, NORFOLK.
White, Miss J. M.....	Aug., 1946 ...	Address Unknown.
Wilding, J. E.....	Jan., 1932 ...	The Cemetery Office, Farnwrth, LANCS.
*Williams, R. O., O.B.E., A.H.R.H.S.	Jan., 1916 ...	D. of Agriculture, and Clove Growers' Assn., P.O. Box 26, ZANZIBAR.
Willison, Henry.....	Mar., 1902 ...	Deceased.
Willoughby, E. V.....	Jan., 1928 ...	Deceased.
Wincott, Mrs. M..... (M. H. Lancaster)	Sept., 1942 ...	Address Unknown.
*Wood, P. L. D.....	Dec., 1950 ...	c/o Box 189, Salisbury, SOUTHERN RHODESIA.
Worraker, E. N.....	Oct., 1954 ...	c/o East Malling Research Station, East Malling, Maidstone, KENT
Wray, E. V.....	Nov., 1948 ...	South Holderness County Secondary School, Preston, Nr. Hull, YORKS.
Yarde, Miss E.....	...	18, St. Margarets Road, Stanstead Abbots, Nr. Ware, HERTS.
Zammitt, S. J.....	Dec., 1932 ...	S., Govt. Farms and Agricultural Organizer, Dept. of Agriculture, Govt. Farm, Ghammieri, MALTA.

R U L E S

1. The name of the Society shall be "The Kew Guild."
2. Membership of the Guild shall be open to all who are or have at any time been employed as Student Gardeners or who occupy or have occupied a position of responsibility in the Royal Botanic Gardens, Kew, on payment of the annual subscription.
3. The object of the Guild shall be to promote mutual and friendly intercourse between past and present Kewites, and to further their interests.
4. Members of the Guild shall have the right to vote at meetings and to compete in competitions, and shall be eligible for election as officers of the Guild or to serve on the Committee.
- 5a. The business of the Guild shall be conducted by a Committee composed of the officers and ordinary committee members. The officers shall consist of the President, Hon. Secretary, Hon. Treasurer and Hon. Editor. The ordinary Committee members shall consist of four present Kewites, twelve old Kewites, and two Student Gardeners.
- b. The officers shall be elected annually at the Annual General Meeting. Any vacancy among the officers shall be filled as soon as possible by co-option by the Committee.
- c. Four ordinary Committee members (including three Old Kewites) shall retire annually in rotation and shall not be eligible for re-election for at least twelve months. Any casual vacancy on the Committee shall be filled at the next Annual General Meeting, the member elected completing the term of office of the member whom he has replaced. The Student Gardener representatives shall be elected annually by the Student Gardeners.
- d. A Chairman of Committee shall be elected by the Committee to take the Chair when the President is absent.
- e. Candidates for election as officers or ordinary Committee members may be proposed by any member of the Guild, provided that the names of candidates be sent in writing to

the Secretary at least 21 clear days before the Annual General Meeting.

6. The Annual Subscription, which shall be payable on January 1st of each year, shall be such sum as the Annual General Meeting shall from time to time determine and shall entitle members to all publications of the Guild. A member whose subscription is one year in arrears shall not receive further publications until his arrears be fully paid. [The annual subscription is at present 7s. 6d.]
7. Any member whose subscriptions are fully paid, may, on the payment of a lump sum predetermined by the Annual General Meeting, become a Life Member, and be entitled to all the privileges of the Guild without further payment. A sum representing not less than one-half of each life subscription shall be invested in the name of the Trustees and the liabilities to Life Subscribers shall be clearly shown in the annual Statement of Accounts. [This rule is abrogated at present by decision of the Annual General Meeting.]
8. The Guild shall publish annually a Journal containing a list of the Kew Staff, from the Director to the Student Gardeners, and such other information as shall appear desirable.
9. The Annual General Meeting shall be held at Kew on the last Saturday in August. At the Annual General Meeting the Report of the Committee and annual Statement of the Accounts shall be submitted, and elections of officers and Committee members shall take place. Fourteen clear days before the Annual General Meeting the Hon. Secretary shall circulate to all members resident in the United Kingdom a financial statement together with the agenda of the meeting, which shall include a list of candidates for election as officers or ordinary Committee members together with their proposers.
10. There shall be a Benevolent Fund for the purpose of helping Kewites who may be in urgent need of assistance.
11. The Rules shall not be altered except by a two-thirds majority of those present and voting at the Annual General Meeting. Any proposals for the alteration of Rules shall be sent to the Secretary in writing at least twenty-one clear days before the date of the Annual General Meeting, and shall be sent by him to members resident in the United Kingdom at least seven clear days before the date of the Annual General Meeting.

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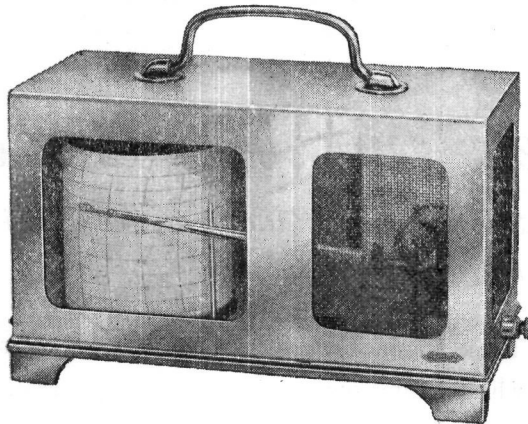
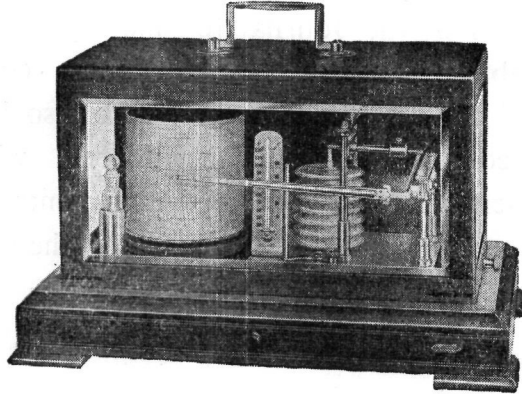
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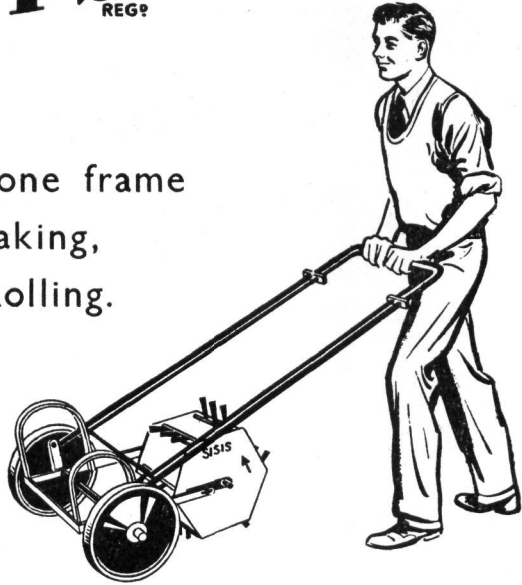
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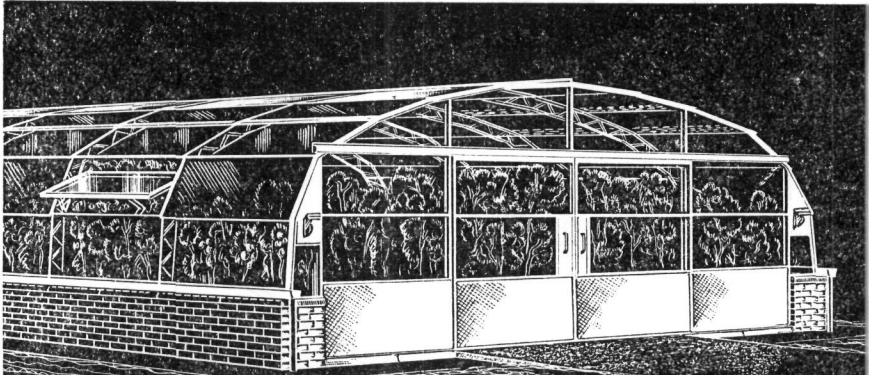


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GLASSHOUSE

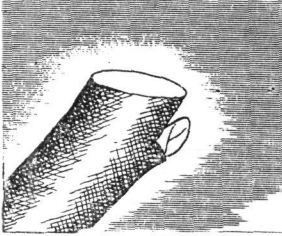
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Arbrex has been specially prepared to protect the exposed living cells of a tree by covering the wound with an adhesive skin giving the same protective value as natural cork callus. The skin is water-proof, non-flowing at high temperatures, and sufficiently elastic to accommodate movement and stress caused by the growth of the tree or by the effect of the wind; in other words Arbrex will *heal, seal and protect* almost immediately on application. Trees pruned or damaged in winter stand less chance of becoming naturally cured because the cambium layer is less active.

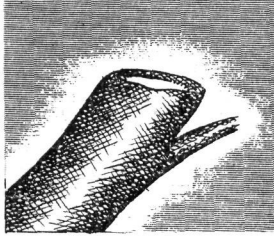
Thus wounds, unable to form their own protective layers, are exposed to frost and water which soon rot the woody interior of the tree or branch.

GRAFTING. Arbrex has the advantage that it can be brushed over the finished graft to give a perfect seal preventing "drying out." It replaces grafting wax with the advantage that it needs no preparation or heating before use. After securing the graft with adhesive tape or raffia, a second coat can be given after the first one has dried out. When the ties are slit in June or July, most of the skin of the dry Arbrex will be removed with the binding material.



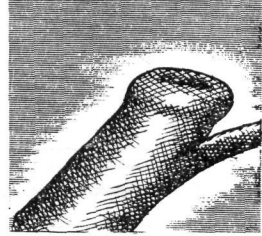
Exposed Wound

1. The illustration shows the exposed wound after pruning.



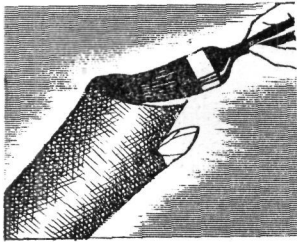
Nature Begins

2. In a short time the natural callus begins to grow.



Years Later

3. Years later the full protective callus has grown.



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4. This picture shows the application of Arbrex immediately after pruning.



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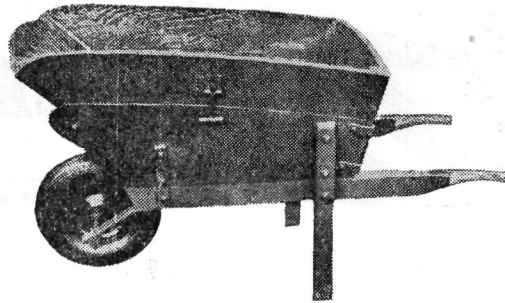
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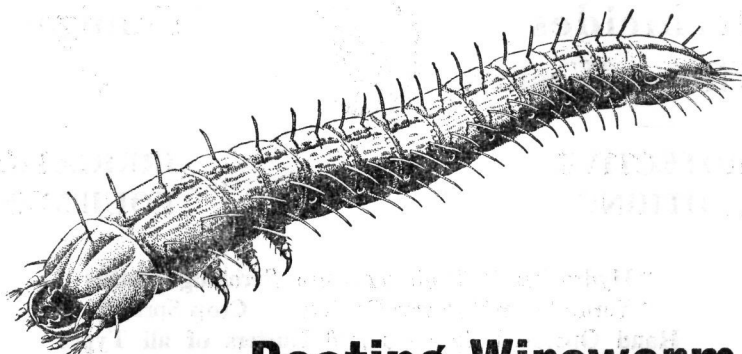
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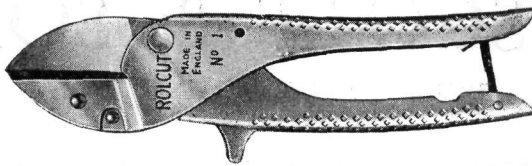
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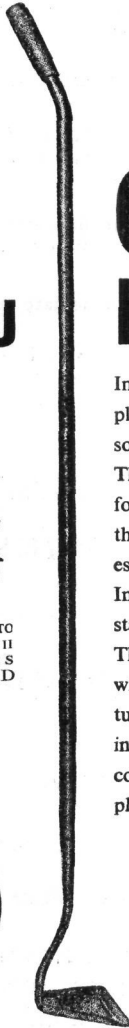
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