

"FLOREAT KEW"

THE
JOURNAL
OF THE
KEW GUILD,
AN ASSOCIATION OF
KEW GARDENERS Etc.

PAST AND PRESENT.

July, 1932.

LIST OF OFFICERS.

President: 1931-32 :—**Daniel Bliss, A.H.R.H.S.**

„ 1932-33 :—**George T. Lane, A.H.R.H.S.**

Trustees: **Sir Arthur W. Hill, K.C.M.G., M.A., Sc.D.,
F.R.S., F.L.S., F.N.Z. Inst., and J. Coutts, Esq., A.H.R.H.S.**

Hon. Treasurer: **L. Stenning, Royal Botanic Gardens,
197, Kew Road, Kew, Surrey.**

(To whom all remittances should be addressed).

Secretary and Editor of Journal: **E. G. Dunk,
197, Kew Road, Kew, Surrey.**

Members of Committee:

Chairman of Committee: **A. D. Cotton, F.L.S.**

Retire 1933.

**E. Nelmes, Kew.
S. W. Braggins, Italy.
F. G. Preston, Cambridge.
M. Free, U.S. America.**

Retire 1934.

**L. Stenning, Kew.
W. C. Ibbett, Winchester
J. Richardson, Salford.
A. F. Baker, South Africa.**

Retire 1935.

**W. Sharp, Durham.
J. Coutts, Kew.
C. H. Curtis, London.
F. S. Banfield, Federated Malay
States.
W. Gullick, Salisbury.**

Retire 1936.

**J. S. L. Gilmour, Kew.
W. Lamberton, Merton.
J. McPherson, New Zealand.
W. L. Lavender, Raynes Park.**

Sub-Jforeman: **R. YOUNGER.**

Student-Gardener: **S. Edmondson.**

CONTENTS.

PORTRAIT OF DANIEL BLISS	- - - - -	Frontispiece
MEMOIR OF DANIEL BLISS	- - - - -	111
ANNUAL GENERAL MEETING, 1931	- - - - -	113
ANNUAL REPORT AND BALANCE SHEETS, 1930-31	- -	114
ANNUAL DINNER, 1931	- - - - -	119
ANNUAL REPORT AND BALANCE SHEETS, 1931-32	- -	125
THE MUTUAL IMPROVEMENT SOCIETY, 1930-31	- - -	130
THE CRICKET CLUB, 1931	- - - - -	132
THE SWIMMING CLUB, 1931	- - - - -	135
TENNIS	- - - - -	136
THE FOOTBALL CLUB, 1930-31	- - - - -	137
THE BRITISH BOTANY CLUB, 1931	- - - - -	139
KEW NOTES AND GLEANINGS	- - - - -	140
PUBLICATIONS	- - - - -	147
WEDDING BELLS	- - - - -	147
THE SUDANESE GARDENER, HIS CHARACTERISTICS, CUSTOMS AND TOOLS	- - - - -	148
LA MORTOLA, ITALY	- - - - -	152
COUNTY HORTICULTURAL EDUCATION	- - - - -	155
KEWITES AND EARTHQUAKES IN THE ANTIPODES	- - -	158
THE CHARM OF THE MOUNTAINS	- - - - -	165
DEVELOPMENT OF SWANSEA'S OPEN SPACES	- - - - -	166
COMMERCIAL CITRUS GROWING IN SOUTHERN RHODESIA	-	169
BOTANICAL EXCURSIONS: ANCIENT AND MODERN	- - -	172
TWENTY YEARS ON THE WEST COAST OF AFRICA	- -	180
THE ASSOCIATION OF KEW GARDENERS IN AMERICA	- -	185
THE ASSOCIATION OF NEW ZEALAND KEWITES	- - -	189
IN MEMORIAM	- - - - -	191
KEW STAFF LIST	- - - - -	199
DIRECTORY OF OLD KEWITES	- - - - -	201

of the old specimens still survive and a large collection of young plants has recently been planted. The sterling worth of Mr. Bliss was soon recognised by the Swansea Corporation and one item after another was added to his Department. In addition to his duties connected with parks, he is Superintendent and Registrar of the Public Cemeteries and Manager of Swansea's extensive Foreshore which comprises some 2,000 acres. The child of his mature years is the Educational Garden situated in Singleton Park. In this garden Mr. Bliss has got together a very comprehensive collection of British plants and a very fine collection of hardy and tender plants of economic value. There are also plant houses devoted to Ferns, Stove Plants, and other subjects of special interest. In every undertaking Mr. Bliss has the interests of his employers at heart and his keenness is as great now as when he was a youngster at Kew.

On the completion of 25 years' service the Corporation presented Mr. Bliss with an address in vellum to mark their appreciation of his services. The Royal Horticultural Society conferred the Associateship of Honour on him as recently as February, 1931.

Mr. Bliss is an enthusiastic Free Mason, and a member of the Council of the Royal Institution of South Wales. He is also on the Council of the Swansea and South Wales Caledonian Society, and is a prominent member of St. Andrew's Presbyterian Church of England.

W.D.



THE ANNUAL GENERAL MEETING, 1931.

THE Annual General Meeting of the Kew Guild was held at the Clarendon Restaurant, Hammersmith, London, W.6., on Thursday, May 21st, 1931, at 6-30 p.m. The Chair was occupied by Mr. A. D. Cotton, F.L.S., in the absence of Mr. F. S. Sillitoe, M.B.E., the retiring President, and upwards of sixty members were present.

The Minutes of the Annual General Meeting of 1930 were read and on the motion of the Chairman it was unanimously resolved that they be passed as a correct record of the proceedings.

The Chairman then called on the Secretary to submit the Annual Report for the year 1930-1931, while Mr. C. P. Raffill, the Hon. Treasurer, read the statements of the various Guild Accounts. On the proposition of Mr. W. Hales, A.L.S., seconded by Mr. A. Hosking, it was unanimously resolved that these having received the approval of the Committee and the Hon. Auditors be passed.

Considerable discussion took place with reference to the proposal of Mr. W. C. Ibbett, who was supported by Mr. W. G. Fry, with regard to the existing practise of admission of new students to the Royal Botanic Gardens, Kew. Both these members stressed the point that they considered that it was desirable in view of the increasing number of applicants that entrance should be by merit on the result of examinations. Mr. C. P. Raffill pointed out the objections to such a procedure and emphasised the fact that many experienced men who without doubt were practical men had been through Kew and had made good in the world, whereas an entrance examination would probably have debarred them from admission. He stated that from the point of view of his own, and other officials' experience at Kew, it was a recognised fact that the percentage of failures that had been trained during their period at Kew was practically negligible. He further considered that those on the spot at Kew, were best able to judge the appropriate method of admission, as from the references submitted it was rarely that a mistake was made in the selection of applicants. The Chairman in summing up considered that the question would be better left to the discretion of the powers that be at Kew as it was quite obvious, that, with the increased facilities offered for self-education and other methods of tuition on specialised subjects, it was reasonable to assume that generally speaking the standard of education of the student who was desirous of entering Kew was a high one, and that this fact was borne out in actual fact by the students themselves in their Kew Lectures, etc.

The Chairman referred to the proposal of the Committee to nominate Mr. Daniel Bliss, Superintendent of Parks, Swansea, as President for the ensuing year (1931-1932) and this proposal was unanimously supported. Mr. Bliss expressed his appreciation of the honour thus extended to him in a few, but well chosen remarks.

A vote of thanks to the Chairman concluded the Meeting at 7-15 p.m.

THE KEW GUILD ANNUAL REPORT, 1930-1931

THE Committee of the Kew Guild have pleasure in presenting the Annual Report for the year 1930-31. It will be noted hereafter, that all accounts have been made up to and including May 16th, 1931. The Hon. Auditors scrutinised the accounts, etc., and certified them as correct on May 18th last.

The Annual General Meeting of the Guild was held at the Clarendon Restaurant, Hammersmith, W., on Thursday, May 22nd, 1930, at 6-30 p.m. The retiring President, Mr. John Coutts, occupied the Chair and was supported by nearly 50 members. The Business was purely formal in character, except for some discussion which took place with reference to the present-day courses of Lectures and the general curriculum of the Kew Student-Gardener. As a result of this discussion a resolution was adopted supporting the application of representatives of the Students for a revision of lectures, etc., at Kew.

The Committee beg to ask forbearance of Members with reference to the late publication of the 1931 issue of the Journal. The delay is owing to the illness of the Secretary-Editor, and the ever increasing difficulty of obtaining suitable "copy" for publication. Members will note that a request with reference to this matter will be included in the 1931 issue (which by the way will be in the printer's hands within a day or so now), as a result of which it is hoped that Members will be induced to contribute more freely to the Journal and thus make the Editor's task less arduous.

The Members of the Committee who retire are :—Messrs. R. L. Harrow, W. L. Lavender, C. P. Raffill, T. Hunter, and Miss E. M. Gunnell. The following have been nominated to fill the vacancies :—Messrs. W. Sharp, T. W. Taylor, C. H. Curtis, F. S. Banfield and W. Gullick. Messrs. R. Younger and E. Gale have been elected to represent the Sub-foremen and Student-Gardeners. Mr. C. P. Raffill has consented to be nominated as Hon. Treasurer, while intimating that he hopes a successor to the office may be found within the coming year. Messrs. G. W. Robinson and W. M. Campbell are recommended as Hon. Auditors for the ensuing year.

Mr. E. G. Dunk has agreed to fill the offices of Secretary and Editor of the Journal for yet another year. It may be of interest to record that he was originally nominated for the position in May, 1923, in succession to Mr. A. C. Bartlett.

The 1931 issue of the Journal is the first number of the 5th Volume, and the 38th annual issue.

It is pleasing to record an increase in subscriptions from Life Members, and in the receipts from Annual Subscribers, which represent healthy progress.

The revenue from advertisements which are secured by the Secretary-Editor only at considerable personal effort are our chief source of income and it should be noted that a sum from this source in the neighbourhood of £50 should be available when the 1931 issue is published. Without this very welcome assistance, we should only be able to publish a Journal of a very "lean" nature.

The net receipts for the year ending May 16th, 1931, amount to £108/14/9, reference to the Balance Sheet will show that the printing expenses in connection with the 1930 Journal were £88/4/9 while the total expenditure to date is £125/19/1. There is, however, a balance in hand of £93/10/8.

As an economy the Committee unanimously decided not to have the report and balance sheets printed, thereby effecting a saving of several pounds.

No advances have been made to members from the Kew Guild Educational Fund since the presentation of the last report. The balance standing to the credit of this Fund is now £32/7/1 while in addition we have a stock holding of £100 in 5% War Loan.

The Benevolent Fund has £75/3/6 to its credit, and no grants have been made during the past year.

The Matilda Smith Memorial Prize is to be awarded to Mr. J. Goldsmid and the Dümmer Memorial Prize to Mr. J. H. Saint, for Lectures and British Botany respectively.

Since the Annual General Meeting of 1930, the Committee deeply regret to record the deaths of the following:—Messrs. W. Auton, J. W. Campbell; J. M. Hillier (President 1922); L. P. Lee; J. Ridley; W. S. Tannock (Son of David Tannock of Dunedin, N.Z.) and Dr. E. H. Wilson, V.M.H. (President 1923). News has also reached us of the passing of Messrs. J. H. Bale, Michael Barker, and Miss M. E. Goad, though the actual dates of their deaths are uncertain, and details somewhat scanty. The loss of these Members is to be greatly deplored.

The 1931 issue will contain Dr. E. H. Wilson's Life Story in detail, and is reproduced by kind permission of the author, Mr. Alfred Rehder, from the Journal of the Arnold Arboretum.

A. D. COTTON,

Chairman of Committee.

19th May, 1931.

BALANCE SHEET, GENERAL ACCOUNT—as on May 16th, 1931.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance from 1929-30 A/c.	110	15 0	Postages, (Journal and Secretary's miscellaneous)	9	7 6
Life Subscriptions ...	26	3 6	Hon. Treasurer's Postages, etc ...	0	8 8
Annual Subscriptions (including arrears, etc.) ...	17	6 0	Printing expenses (including 1930 Journal £88/4/9)...	99	0 11
Advertisements 1930 ...	48	15 3	Secretary-Editor's Honorarium ...	15	0 0
Advertisements 1931 ...	4	17 6	Subscriptions, Royal Gardeners' Benevolent Fund	2	2 0
Dividend on £300 5% New South Wales Stock—less tax ...	11	12 6	Balance at Bank ...	93	10 8
	<u>£219</u>	<u>9 9</u>		<u>£219</u>	<u>9 9</u>

CAPITAL ACCOUNT,

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Thomson Bequest ...	92	8 6	£300 New South Wales Stock (1935-1955) at par...	300	0 0
230 Life Subscribers of £1 at two-thirds rate ...	153	6 8	£26 6s. 3d. 5% War Stock (1929-1947) at par ...	26	6 3
221 Life Subscribers of £2 at two-thirds rate ...	294	13 4	Journals in Stock (valuation)	15	0 0
	<u>£540</u>	<u>8 6</u>	Typewriter (valuation) ...	7	0 0
			Cash Balance in Bank ...	93	10 8
			Liabilities exceed Assets ...	98	11 7
				<u>£540</u>	<u>8 6</u>

EDUCATIONAL FUND BALANCE SHEET,
as on May 16th, 1931.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance ...	30	17 1	Nil		
Donation : Mr. F. G. Walsingham...	1	0 0	Balance at Bank ...	32	7 1
Mrs. R. M. Morgan ...	0	10 0			
	<u>£32</u>	<u>7 1</u>		<u>£32</u>	<u>7 1</u>

CAPITAL ACCOUNT.

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Balance of Assets ...	132	7 1	£100 5% War Stock value at par ...	100	0 0
	<u>£132</u>	<u>7 1</u>	Balance at Bank ...	32	7 1
				<u>£132</u>	<u>7 1</u>

BENEVOLENT FUND BALANCE SHEET as on May 16th, 1931

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance from 1929-30 A/c.	73	8 6	Nil		
Donations:					
Mrs. R. Morgan	£0	10 0			
Mr. C. E. C. Fisher	1	0 0			
Mr. H. P. Morgan	0	5 0			
		1 15 0	Balance	...	75 3 6
	£75	3 6		£75	3 6

MATILDA SMITH MEMORIAL PRIZE FUND.

as on May 16th, 1931.

BALANCE SHEET.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance 1929-30	...	2 16 9	Presentation volumes to J. E. Goldsmid 1930-31 award	2	3 3
Dividend on £50 L.C.C. 5%	...	2 10 0	Printing Book Plate	...	1 10 3
Stock	...		Balance in hand	...	1 13 3
	£5	6 9		£5	6 9

CAPITAL ACCOUNT.

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Balance of Assets	...	51 13 3	£50 L.C.C. 5% Stock value	...	...
			at par	...	50 0 0
			Cash Balance	...	1 13 3
	£51	13 3		£51	13 3

DÜMMER MEMORIAL FUND as on May 16th, 1931.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance from 1929-30 A/c.	1	13 3	Presentation volumes to J. H. Saint, (British Botany 1930	...	2 3 3
Dividends on 4% Funding Loan	...	2 16 0	Balance at Bank	...	2 6 0
	£4	9 3		£4	9 3

CAPITAL ACCOUNT,

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Balance of Assets	...	63 4 0	£70 4% Funding Loan at Purchase Price	...	60 18 0
			Balance at Bank	...	2 6 0
	£63	4 0		£63	4 0

ANNUAL DINNER ACCOUNT, 1930.

RECEIPTS.				EXPENDITURE.			
	£	s.	d.		£	s.	d.
Balance from 1929 a/c ...	0	3	0	124 Dinners at 6/6 each ...	40	6	0
Sale of Tickets ...	43	8	0	Carriage on Hampers, grat- uities, and Artists' inciden- tals... ..	0	10	0
				Postage and miscellaneous expenses	0	12	6
				Balance with Secretary ...	2	2	6
	<u>£43</u>	<u>11</u>	<u>0</u>		<u>£43</u>	<u>11</u>	<u>0</u>

Compared with Vouchers, Bank books,
Stock Receipts, etc., and found correct.

C. P. RAFFILL Hon. Treasurer.
E. G. DUNK, Secretary.

G. W. ROBINSON
W. M. CAMPBELL } Hon. Auditors.

18th May, 1931.



THE KEW GUILD DINNER, 1931.

THE Annual Dinner was held (as in former years) at the Clarendon Restaurant, Hammersmith, London, W., on Thursday, May 21st, 1931, and Mr. Daniel Bliss presided over an attendance of 124 members and friends. An excellent repast was served and following the dinner, the speeches, as has been the custom of recent years, were commendably few. An entertaining programme had been arranged by the Secretary and the artists who had been specially engaged were:—Miss Hermione Mordaunt, Messrs. Cuthbert Dunton and Gilbert Bushell. The musical programme was of a very varied nature and some community singing was introduced with great success, and gave much enjoyment to all.

The Loyal Toast having been duly honoured, the President then proposed the Toast of "The Kew Guild" with the following appropriate remarks:—

"Before presenting the Toast of the Kew Guild, and asking you to drink to the Guild's future success and prosperity, I should like to take this opportunity of thanking you for the auspicious honour you have bestowed upon me in electing me as your President for the year. It is an honour which I deeply appreciate, but I am fully conscious of my inability to do full justice to the position in which I find myself.

Although I come from the land of music and oratory, I am "No orator as Brutus is," or shall I say as Lloyd George is, but a plain blunt Scotsman, accustomed to call a spade a spade. But as it is customary for the President to make a few remarks, I must bow to the inevitable, and as you are prepared to be willing victims, I will promise to be as merciful as a Scot can be. As for myself I ask you to remember the injunction which appeared over the piano in an American Saloon, "Don't shoot the pianist, he is doing his best."

It is very gratifying to me to see such a large and representative gathering here to-night of the Guild, and especially do I want to extend a warm welcome to those present who have gone out to the far-flung frontiers of the Empire to carry on the great work of Horticulture for which Kew men are so eminently fitted.

It affords me great pleasure to meet around this festive board my old friend Mr. T. Hay, the world-wide known Superintendent of Hyde Park. Mr. Hay does not happen to be a member of the Kew Guild; but nevertheless he is a member of the Edinburgh Botanic Guild, which is a very fine sister organisation. Mr. Hay's achievements in the domain of British Horticulture are well known to all plant lovers, for scarcely a month passes without some new plant being exhibited by him at the Shows of the Royal Horticultural Society.

I have always taken the deepest and closest interest in the work of the Guild, because I have always held that man, being a gregarious animal, derives substantial benefit from all forms of social organisation which aim at developing self-interest, raising the standard of personal conduct, improving the morale and tone, and safeguarding the physical and ethical wellbeing of their members. I should like to make a few references in passing to the inauguration of the Kew Guild in 1893, it being the healthy offspring of the Kew Mutual Improvement Society, a Society which has, I believe, been in existence for about 60 years.

What a magnificent send-off was given to the Guild in those far off days by the then Director, Sir W. T. Thiselton-Dyer. How pleased I am that his letter, conferring his personal blessing upon the Guild has been preserved, because of its sound sense, its appealing sentiment, its lofty tone and its elevating philosophy, Kew was to him, as indeed it ought to be to all members of the Guild, the University of Horticulture, and we, who have come under its beneficent sway, should regard it with the same measure of respect and love that Oxford and Cambridge men show for their Alma Mater.

The management of the Guild has always been fixed upon a democratic basis, and it was one of the proud events in my life when the Student Gardeners elected me on the Management Committee as their first representative in 1894, but I never once flirted with the idea that 38 years afterwards I should be elected its twenty-third President.

A great event in the early history of the Guild was the holding of the first dinner at the Holborn Restaurant, and presided over by the Director, Sir William T. Thiselton-Dyer, a precedent which I am happy to say is still being honoured, and I trust may long continue.

I am happy to say that many of the young men who were my Kew colleagues have remained for nearly 40 years my warmest and my best friends, and I am glad to see several of them here to-night. Association with Kew makes such an indelible impression upon one's mind that relations with it can never be forgotten.

Some of the happiest days of my life were spent at Kew, even if the work was hard, the hours long, the wages small, and the lodgings in "Tea-Pot Row" not quite up to the standard of modern amenities.

My friends, post-war Britain is confronted with problems of almost heart-breaking intensity and baffling complexity and they will only be solved by co-operative effort on the part of groups of men, welded together by good will, and spurred to action by grim determination and fearless courage. The Kew Guild has probably never held its dinner under more depressing industrial conditions.

than prevail at the moment, and our members will, I am sure, derive much encouragement and inspiration from the sentiment expressed in the recent speech delivered by that "Ambassador of Empire," the Prince of Wales.

Tremendous changes have taken place in Britain since the birth of the Guild, and one can only speculate as to what further changes the future has in store for the next generation. Democracy at that time was only beginning to feel its feet. Now it is in full stride. Then there was a limited franchise, now men and women enjoy full political rights without reference to creed, colour, caste or class. Then Britain was acknowledged an easy first among the manufacturing countries of the world, now her commercial, financial and industrial position is being assailed and challenged.

Difficult as life was for us, the youth of 1893, it is, I fear, going to be more difficult for the youth of 1933.

One of the characteristic changes in the new order of things is the great advance in the public taste in the domain of the garden and the park. This is a very pleasing feature to the men and women of our occupation and profession. It is to be deplored that acute industrial depression accompanied by a crushing burden of rates and taxes, have played havoc with private establishments, but on the other hand, the last 30 years have seen an enormous extension of public gardens, parks and open spaces generally, so that what is being lost on the swings is being made up on the roundabouts.

Modern conditions are vastly superior in many ways to those which prevailed when I was at Kew, better housing, higher wages, shorter hours, greater educational advantages, particularly in the scientific and technical sides, quicker and cheaper transport and an extension of the opportunities and facilities for leisure and pleasure. But the new order of things has been accompanied with some disquieting features, one of which is the unhealthy and feverish pursuit of enjoyment which threatens to sap our national stamina. I am no kill-joy, for I believe in warming both my hands before the fire of life, but this age is given too much to chasing Will o' the Wisps, and to give too lukewarm attention to personal initiative and endeavour, and to the spirit of work. There is no royal road to success in the winning of the prizes of life. They can only be obtained through hard work and intelligent direction. I would appeal to the young men to maintain the Guild in the highest condition of efficiency by intelligent interest and youthful enthusiasm. You have an opportunity while at Kew of developing those manly qualities of self-respect, independence and industry which will enable you, in the battle of life, to stand success with becoming modesty, and to face failure without despair. It is because I know the value of the training at Kew, and how much I owe to the system of training that I want you young men to take

the fullest advantage of the opportunities which Kew and the Kew Guild afford. The difficulties of the times should act as a spur to greater effort and more sustained concentration, remembering that there is always room at the top. I have every confidence that when the time comes for us older men "to shuffle off this mortal coil" new links will be forged to maintain the chain of tradition and prestige which have contributed to making Kew the finest institution of its kind in the world."

The interval which followed the usual presentation of the Guild and Mutual Improvement Society awards, was of sufficient duration to enable members to "get together" and renew old friendships. Following the interval Mr. W. Dallimore proposed the Toast of "Our President" with the following introductory remarks, which brought considerable applause in that they were considerably enhanced by many witticisms:—

"Men who succeed in working their way into good positions in the horticultural world are usually credited by their less successful brothers with having obtained their positions through influence, but I can assure you, from what I know of our new President, that any success that has come his way has not been due to influence but to taking advantage of opportunities afforded him during his period of service at Kew, supplemented by sustained hard work and paying strict attention to the interests of his employers. True, Mr. Bliss did in his early days possess a very considerable advantage over most of us other Kewites, for I understand he was an extraordinarily pretty baby. He was conspicuous amongst other little Blisses who were famous for their personal beauty. His mother thought "surely a child like this has been born to fulfil some great purpose and I will help him all I can." With that she began thinking about a name for him. Names such as William, George and Henry were all right for ordinary babies but *he* must have a name that had been held by a man of historical importance, a strong-minded, Godfearing man, and she decided upon Daniel. As soon as this little fellow could begin to understand she told him the story of Daniel of old, and urged him to model his life on the biblical Daniel. Young Daniel was an apt scholar and eagerly learnt all that he could about his illustrious predecessor, and it is understood that soon after he was breeched, he was in the habit of making the Darnaway Woods melodious with his rendering of Moody and Sankey's famous hymn "Dare to be a Daniel."

Mr. Bliss was fortunate in his young days by working at Dalkeith under that famous Scottish gardener Malcolm Dunn, and when he came to Kew he entered as a good cultivator of plants. Men who could cultivate plants well soon caught the eye of the late Mr. W. Watson, and Bliss was soon singled out for promotion, in fact he was appointed Sub-foreman of the Orchid Houses, which at that time was considered to be a premier appointment amongst sub-foremanships. Whilst at Kew he made a special study of

British Botany and succeeded in winning a prize in that connection. As with many past and present Kew men Bliss was sometimes affected by growing-pains.

Complaints arising out of growing-pains in those days, however, received very curt treatment; nowadays they have the mature consideration of full Whitley Councils.

Eventually Bliss left Kew but it was not to take up a first-class post. He went to a private garden in Cornwall. He did not care for the place and soon returned to London to take up an ordinary workman's post in one of the London County Council Parks. He was soon earmarked for promotion and occupied the position of foreman for a year or two. He then obtained the appointment of Superintendent of Roundhay Park, Leeds. After a short time the general superintendentships of parks at Birmingham and Swansea became vacant. Bliss applied for both and was selected for interview in both cases. He was appointed to Swansea in 1903. When he took over his duties the parks extended to 99 acres and they were in a deplorable condition. He immediately began improvements but he had to go carefully—he had first to prove himself. His first two successes were the establishment of a bowling green and the installation of a floral clock from the centre of which a dejected looking cuckoo appeared at regular intervals and proclaimed the time. The bowling green was a great success and brought in a profit the first season. Up to that time Swansea had been unfortunate in her Municipal undertakings and the papers came out with leaded headlines "At last Swansea has a Municipal undertaking that pays." The clock was equally popular but in another way, excursions were run from outlying places to see the new-fangled clock. These two undertakings gave Bliss a start and he gradually introduced one special item after another into the parks, a rose garden here, masses of attractive herbaceous plants there, a rock garden in another park, many bowling greens, grass and hard tennis courts, football and cricket grounds, putting greens and various other attractions. His great gardening chance came when the Town Authorities took over Singleton Abbey and grounds. Here Bliss started with the remains of a famous garden. This he has reconditioned, and in addition he started what at the time was unique in parks, a very full collection of British Plants, together with a collection of tropical and temperate plants of economic value. All are arranged in a very popular garden known as "The Educational Garden."

Before Bliss had been at Swansea very long the Town Council found that they had got a first-class man and they began to give him a wider sphere. First the cemeteries were added to his charge; then he was given the foreshore to develop, and if any of you want to try your luck with ice-cream stands, a circus, a fat woman or a wild-man-from-Borneo-booth, hot drinks, or donkey rides, you need only apply to Bliss. The town was in need of advertisement and Bliss was asked to undertake the work. Had I been asked to

undertake such a thing I should probably have begun to think of tinsplate or coal. Did Bliss? Not at all. He thought of Swansea as a holiday resort and many puffs emanated from his fertile brain. You have doubtless seen something like the following :-

“Spend your holidays at the Mumbles
’Tis a pleasant place to be,
Bliss reigns supreme at Mumbles
Swansea’s suburb by the sea.”

The Parks Department at Swansea has increased in size from 99 acres in 1903 to about 5,000 acres at the present time, including parks, gardens, playing fields, commons, foreshore, cemeteries, etc., and the annual budget for expenses is £50,000, some £18,000 being returned from various chargeable sources. It must not be thought that all this has been done by Mr. Bliss without work or worry, it has not, but in all instances he has met his difficulties manfully and surmounted them. In February, the Royal Horticultural Society recognised the work of Mr. Bliss by making him an Associate of Honour of the Society, and present Kewites would be wise to work diligently as he has done with a view to filling as honourable a place in the community at some future time in their career. I ask you all to drink the health of Mr. Bliss and to wish him and Mrs. Bliss long life and much happiness.

Something in the nature of a “surprise item” followed the rendering of this Toast which was accorded musical honours.

Mr. T. W. Taylor, intimated in a few, but well chosen remarks, that he had been requested to make a presentation to Mr. J. Coutts, on behalf of the members of the Kew Mutual Improvement Society, as a mark of their esteem and good wishes, upon his relinquishing the post of Chairman of the Society, a position he had held faithfully and with utter impartiality for nineteen years. The presentation took the form of a handsome mahogany striking clock, suitably inscribed, and, in acknowledging the gift, Mr. Coutts spoke of the interest that the Kew Mutual had always occasioned in Kewites of succeeding generations and of the very great pleasure he had derived from being able to watch over the deliberations of the meetings during his Kew career. He assured them that it was due to no lack of enthusiasm for the welfare of the Society that had occasioned his relinquishing the position of Chairman and that he would still be ready to give his advice at all times.

The President expressed his appreciation of the able manner in which Mr. E. G. Dunk had carried through the arrangements and a vote of thanks to the artistes brought to an end yet another very enjoyable Kew Guild Dinner.

THE KEW GUILD.

ANNUAL REPORT, 1931-32.

THE Committee have pleasure in submitting for the consideration of the members of the Kew Guild, the Annual Report for the year 1931-32. The Annual General Meeting was held at the Clarendon Restaurant, Hammersmith, W.6., on May 21st, 1931, at 6-30 p.m.

The Chairman of the Meeting (in the absence of Mr. F. Sillitoe, M.B.E.), was Mr. A. D. Cotton, and he was supported by upwards of sixty members. The Meeting was followed at 7-30 by the Annual Dinner, when Mr. Daniel Bliss, of Swansea, presided over an attendance of 128 members.

The Members of the Committee who are due for retirement are :—Messrs. A. D. Cotton, H. Spooner, A. Hosking, and B. P. Mansfield, while a further vacancy has been created owing to the untimely death of Mr. T. W. Taylor.

The following have been nominated to fill the vacancies thus created :—Messrs. J. S. L. Gilmour, W. Lamberton, J. McPherson, W. L. Lavender, and J. Coutts. Messrs. R. W. Younger and S. Edmondson will represent the Sub-foremen and Student-Gardeners respectively. Mr. C. P. Raffill has expressed his desire to be relieved of his duties as Hon. Treasurer, and Mr. L. Stenning has consented to be nominated in his stead for the ensuing year. The Committee desire to take this opportunity of placing on record their sincere appreciation of the able manner in which Mr. Raffill has discharged the duties of his office since May, 1929, when he succeeded Mr. R. F. Williams.

Mr. E. G. Dunk has agreed to fill the office of Secretary-Editor, and he wishes to express his thanks for the ready help that has been extended to him during the past year by those Members who have sent in contributions for the Guild Journal. Messrs. G. W. Robinson and E. F. Coward are recommended as Hon. Auditors for the year.

The Committee wish to call attention to the falling off in the sums received as annual subscriptions which have amounted to £15/11/0, while the sums received from life subscribers amount to £16/12/0. As the cost of producing the Journal is in the region of £80 it will be realised that it entails considerable effort on the part of the Secretary to secure sufficient advertisements to enable the Journal to be published in its present form.

The Committee are anxious that the Journal shall maintain its present high standard, but unless members forward their subscriptions or donations regularly, together with any arrears, it is to be regretted that it may be found necessary to reduce subsequent numbers very considerably in size. The publication of the 1932 Journal has been delayed at the Committee's request, owing to depleted funds. As a result of the recent financial crisis and the present trade depression it

was a matter of difficulty in many instances to obtain payments for the 1931 advertisements in the Journal, and also to secure sufficient advertisement copy for the 1932 number. It is pleasing, however, to note that our patrons have responded loyally and that no moneys are now outstanding; in two instances, indeed, the advertising matter for the 1932 issue has been prepaid.

Since the publication of the 1930-31 Report, death has taken from our midst several distinguished Kewites, and we regret to record the passing of Major T. F. Chipp, M.C., D.Sc., Ph.D., F.L.S., F.R.G.S. (the Assistant Director); Mr. T. W. Taylor, A.H., R.H.S., the popular Curator of the Royal Botanic Gardens, Kew; Messrs. T. Fraser, G. F. Tinley, T. J. Dinn, T. Turton, W. G. Hoad, J. W. G. Parnell, W. H. Stone, K. Haga, and G. M. Ryan.

No advances have been made to Members from the Kew Guild Educational Fund since the presentation of the 1930-31 Report. The balance standing to the credit of this Fund is now £46/14/3. and in addition there is a stock holding of £100 in 5% War Loan.

The Benevolent Fund has a balance in hand of £77/8/8 and a donation of £2/2/0 was made to the fund promoted by the Horticultural Club (Secretary, Mr. J. R. Pulham) for the widow of the late Mr. G. F. Tinley. No other grants have been made during the period under review.

The Matilda Smith Memorial Prize award has been delayed this year owing to the re-organisation of the Kew lecture courses which will not be completed until later in the season, the award at the moment being dependent on the results of an unfinished course.

The Dümmer Memorial Prize for British Botany has been secured by Mr. Dennis Leigh.

The receipts for the year amount to £97/1/4 and the expenditure to £112/5/6 and there is at present a balance in hand of £78/7/6.

Finally, it has been brought to the notice of the Committee that there is a general feeling amongst the members of the Guild to honour the memory of the late Curator, Mr. T. W. Taylor, whose long and devoted service on behalf of Kew and interest in the welfare of the Kew Guild was apparent to all who were privileged to know him. After having had the matter under careful consideration the Committee are unanimously agreed to invite subscriptions from members of the Guild (i.e. Kewites past and present) with a view to erecting a memorial in Richmond Cemetery. Contributions for this purpose will be thankfully received by the Secretary. Should any surplus funds result from the subscriptions it is suggested that these should be disposed of at the discretion of the Committee.

(Signed) A. D. COTTON,

Chairman of Committee.

23rd May, 1932.

BALANCE SHEET as on May 23rd, 1932.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance from 1930-31 A/c. ...	93	10 8	Secretary's Postages and postages on 1931 Journal	10	5 0
Life Subscriptions ...	16	12 0	Hon. Treasurer's Postages and Incidentals ...	12	2
Annual Subscriptions (including arrears) ...	15	11 0	Secretary-Editor's Honorarium ...	15	0 0
Advertisements 1931 <i>Journal</i> ...	43	4 3	Purchase of Wreaths (for late Major T. F. Chipp and T. W. Taylor) ...	2	7 6
Advertisements 1932 <i>Journal</i> ...	3	5 0	Repairs to Typewriter ...	4	18 6
Dividend on £300 5% New South Wales Stock (less Income Tax deducted at source) ...	11	5 0	Reproducing portrait for Journal ...	4	0
Dividends on £26 6s. 3d. 5% War Stock ... 1930/31	1	6 2	Printing 1931 Journal ...	78	18 4
Do. ... 1931/32	1	6 2	Balance in hand at Bank ...	78	7 6
Post Office Savings Bank Interest 1930 and 1931 ...	2	5 9			
Special Sales of Journal ...		5 0			
A Donation from "Three Kewites" ...	2	2 0			
	<u>£190</u>	<u>13 0</u>		<u>£190</u>	<u>13 0</u>

CAPITAL ACCOUNT as on May 23rd, 1932.

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Thomson Bequest ...	92	8 6	£300 New South Wales Stock (1935-55) at par ...	300	0 0
227 Life Subscribers of £1 at two-thirds rate ...	151	6 8	£26 6s. 3d. 5% War Stock (1929-47) at par ...	26	6 3
226 Life Subscribers of £2 at two-thirds rate ...	301	6 8	Valuation of Journals in Stock ...	15	0 0
	<u>£545</u>	<u>1 10</u>	Valuation of Typewriter ...	10	0 0
			Balance at Bank ...	78	7 6
			Liabilities exceed Assets ...	115	8 1
				<u>£545</u>	<u>1 10</u>

BENEVOLENT FUND.
BALANCE SHEET.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance from 1930-31 A/c. ...	75	3 6	Donation to the G. F. Tinley Fund of the Horticultural Club ...	2	2 0
Donation :—Mrs. R. M. Morgan ...	10	0	Balance in hand ...	77	8 8
Bank Interest 1930 and 1931	3	17 2			
	<u>£79</u>	<u>10 8</u>		<u>£79</u>	<u>10 8</u>

MATILDA SMITH MEMORIAL PRIZE FUND.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance of 1930-31 Account	1	13 3	Nil		
Dividend on £50 5% L.C.C. Stock	2	10 0	(N.B.—The 1931-2 prize cannot be awarded until the completion of the lectures now in progress at Kew, as the issue rests upon a single incomplete course. Intimation of this has been given to the Kew Students)		
			Balance in hand	4	3 3
	<u>£4</u>	<u>3 3</u>		<u>£4</u>	<u>3 3</u>

CAPITAL ACCOUNT

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Balance of Assets	54	3 3	£50 L.C.C. 5% Stock value at par	50	0 0
			Balance in hand	4	3 3
	<u>£54</u>	<u>3 3</u>		<u>£54</u>	<u>3 3</u>

DÜMMER MEMORIAL PRIZE FUND.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance from 1930-31 A/c.	2	6 0	Presentation volumes to D. H. Leigh for British Botany, 1931	2	2 0
Dividends on £70 4% Funding Loan	2	16 0	Balance at Bank	3	0 0
	<u>£5</u>	<u>2 0</u>		<u>£5</u>	<u>2 0</u>

CAPITAL ACCOUNT

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Balance of Assets	73	0 0	£70 4% Funding Loan at par	70	0 0
			Balance at Bank	3	0 0
	<u>£73</u>	<u>0 0</u>		<u>£73</u>	<u>0 0</u>

WATSON MEMORIAL EDUCATIONAL FUND.

RECEIPTS.				EXPENDITURE.			
	£	s.	d.		£	s.	d.
Balance from 1930-31 A/c.	32	7	1	Nil			
Donations :—				Balance at Bank ...	46	14	3
Mr. F.G. Walsingham	£1	0	0				
Mrs. R. Morgan ...		10	0				
Mr. E. Hopper ...	£1	1	0				
		2	11	0			
Dividend on £100 5% War							
Stock 1930 ...		5	0	0			
Do. 1931 ...		5	0	0			
Bank Interest 1930 and 1931		1	16	2			
	£46	14	3		£46	14	3

CAPITAL ACCOUNT

LIABILITIES.				ASSETS.			
	£	s.	d.		£	s.	d.
Balance of Assets ...	146	14	3	£100 5% War Stock value at			
				par ...	100	0	0
				Balance at Bank ...	46	14	3
	£146	14	3		£146	14	3

KEW GUILD ANNUAL DINNER, May, 1931.

RECEIPTS.				EXPENDITURE.			
	£	s.	d.		£	s.	d.
Balance 1930 Account ...	2	2	6	128 Dinners (Clarendon			
128 Tickets at 7/- each ...	44	16	0	Restaurant at 6/6 per			
Donations from certain mem-				head ...	41	12	0
bers of the Kew Staff				Secretary's Postages ...		16	6
towards entertainment ex-				Artistes' fees ...	3	3	0
penses ...	2	18	0	Printing Menu Cards ...	2	2	0
				Printing notices and en-			
				velopes ...	17	6	
				Gratuities and incidentals ...	5	0	
				Carriage on returned hampers	1	6	
				Artistes' refreshments and			
				incidentals ...	7	6	
				Balance to 1932 A/c. (with			
				Secretary) ...	11	6	
	£49	16	6		£49	16	6

Compared with Vouchers, Bank Books,

Stock Receipts, etc., and found correct.

Signed

E. F. COWARD	} Hon. Auditors.
G. W. ROBINSON	

23/5/1932.

THE MUTUAL IMPROVEMENT SOCIETY.
SESSION 1930-31.

THE Annual General Meeting was held in the Garden Library, on September 15th, 1930, when Mr. A. Edwards occupied the Chair, and there were twenty-five members present.

Mr. J. Coutts, who had been Chairman of the Society for the past 19 years, intimated that he desired to be relieved of his duties in order to make way for the younger generation, and Mr. A. Edwards was elected in his stead. Mr. Coutts, however, consented, much to the satisfaction of all members, to be nominated as Vice-Chairman. Mr. E. Hewitson was elected Hon. Secretary with Mr. R. H. Mason as Assistant Hon. Secretary, and Messrs. A. Findley Gunn, R. H. English and T. Lomas as members of the Committee.

Mr. Coutts, in a brief outline of the work of the Society, emphasised the many advantages to be derived from entering freely into discussions and expressed the hope that, given the usual high standard of papers, members would avail themselves freely of the unique opportunity offered on meeting nights.

On Mr. A. Edwards's appointment to Fleetwood, Lancs., it became necessary to elect a new Chairman, and in consequence a special General Meeting was called on October 30th, 1930, when Mr. T. W. Taylor presided, and Mr. C. P. Raffill was unanimously elected as Chairman for the session. Before leaving Kew, Mr. Edwards was presented with a suitably inscribed clock as a memento of his association with the Mutual and the Sports Club. A further resignation later in the season made yet another business meeting necessary, when on Mr. Hewitson's resignation, Mr. Mason was elected Hon. Secretary and Mr. L. G. Atkins Assistant Hon. Secretary.

During the session twenty-three meetings were held. Mr. Coutts gave an excellent opening lecture on "Consider the Lilies," while later Mr. Osborn gave us his impressions of "Gardening in New England." The Director, Sir A. W. Hill, K.C.M.G., contributed an interesting and instructive talk on "A Botanical Tour in South and East Africa."

All the papers read before the Society showed that the contributors had a thorough practical knowledge of their respective subjects and a glance at the Syllabus will be sufficient to prove the variety of subjects treated.

The average attendance of 33 was very creditable compared with 27.5 for the previous session. The highest attendance was 54 and the lowest 26, while the average number of members participating in discussions was 10.

The Hooker Prize presented at the 1931 Kew Guild Dinner was awarded to Mr. R. H. Mason, while the Society's prize was presented to Mr. R. J. English.

E. W. GALE,
Hon. Secretary.

SYLLABUS.

1930.						
Oct.	6	*Consider the Lilies ...	...	...	...	MR. COUTTS
„	13	Fruit Growing in Switzerland	...	...	...	K. ZWICKY
„	20	Indoor Fuchsias ...	...	...	...	G. WOLSTENHOLME
„	27	The Culture of the Narcissus	...	...	...	R. ENGLISH
Nov.	3	Tomatoes ...	...	...	...	A. WALBY
„	10	*Glasnevin Botanic Gardens	...	...	...	E. DONELLY
„	17	Commercial Gardening in the District ...	...	Evesham ...	...	W. ROSE
„	24	Bowling Greens and Lawns	...	...	...	J. WILDING
Dec.	1	Orchids ...	...	...	...	C. B. GIBBINS
„	8	Hardy Primulas ...	...	...	...	G. R. WILLIAMS
„	15	*Glasgow Parks ...	...	...	...	W. W. MCKENZIE
1931.						
Jan.	5	*Peeps in the Unseen ...	...	...	...	DR. RODMAN
„	12	*Flowering Trees and Shrubs	...	...	...	MR. RAFFILL
„	19	Perpetual Flowering Carnations	...	...	...	J. SAINT
„	28	Outdoor Rhododendrons ...	...	...	...	C. VANSON
Feb.	2	*Flora of Australia ...	...	...	...	R. RUMSEY
„	9	Plant Foods and Stimulants	...	...	...	A. E. WISEMAN
„	16	Vineries ...	...	...	...	F. FOLK
„	23	*Gardening in New England	...	...	...	MR. A. OSBORN
Mar.	2	*Tresco, Scilly ...	...	...	...	A. MULLINS
„	9	Chrysanthemums ...	...	...	...	G. STONEBRIDGE
„	16	Grass seeds and their uses	...	...	...	J. GORDON
„	23	Botanical Tour in South and East Africa...	...	...	...	SIR A. W. HILL
„	30	Annual Report ...	...	...	...

* Lantern Lecture.

CRICKET CLUB REPORT, 1931.

THE Annual General Meeting was held in the Garden Library, on the 13th April, 1931, when the following members were elected to hold office for the season :—L. Stenning, Captain ; C. Coates, Vice-Captain ; L.B.J. Miller, Hon. Secretary ; Messrs. W. Bates and W. McKenzie, members of the Committee.

A list of 25 matches was arranged, two of these being Sunday fixtures. Of the 25 matches arranged 16 were played and of these 6 were won and 10 lost. Although not quite such a successful season as 1930, we had some very good games and the team played well together.

The annual match Staff v. Students was played on Kew Green on June 3rd, the weather being perfect, and a good wicket gave every promise of a keen game. The Staff were Captained by Mr. Hutchinson and the Students by L. Miller. The Students batted first and made a disastrous start, having the first wicket down for no runs. The innings closed with a total of 99, the chief scorers being L. Miller 19, J. Wilding 18, A. Wiseman 17, and R. Younger 16. Bowling for the Staff :—J. Taylor 5 for 14, Dyer 2 for 10, Flack 2 for 20.

The Staff commenced in exactly the same manner as the Students, the first wicket was down for no runs, but things altered when Flack started hitting out and he made the fine score of 40. Their innings closed for the score of 113. It was a great game and both teams had to fight hard. Bowling for the Students :—G. Stonebridge 4 for 27, D. Leigh 4 for 51.

As in previous years, the teams were entertained to tea by the Director on the Lawn Tennis Courts enclosure, where Miss Hill was our genial hostess.

One of the most enjoyable trips of the season was to Cliveden. The weather was perfect and it was one of the few occasions when we had a really bright sunny day suitable for cricket. This match is looked upon every year as one of our hardest games, and more especially so as Kew had not won a match at Cliveden for a number of years. This year, however, matters were different. Kew, who batted first, ran up the useful score of 143. J. Taylor, W. Taylor and R. Thompson were our chief scorers with 29, 28, 23 respectively. After the fall of our last wicket tea was decided upon and, as in previous years, we found ourselves well looked after in every way.

After tea Cliveden set about our bowling in a determined manner. This, however, did not last long, thanks to Messrs. W. Taylor and J. Smith who bowled unchanged throughout the innings, which closed for 91 runs. This was quite a low score for Cliveden, especially as it was a batsman's wicket. Naturally we were all in high spirits at having beaten Cliveden on their own ground.

After the match we were shown round the gardens and grounds. Later we spent an hour or so in the Club rooms, indulging in various games and amusements, before leaving for Kew at 10 o'clock, when everybody agreed that the trip had been a very enjoyable one.

Another match worth a description was played at Reading, on June 13th, when we visited Sutton's 2nd XI. We arrived there about 12 o'clock and we were met by Mr. A. Sutton, who kindly conducted us round their extensive Trial Grounds. Afterwards we proceeded to their Sports Ground where we were entertained to a most excellent lunch. The match started at 3 o'clock and Kew batted first, making a total of 76. Suttons then followed and made the fine score of 126 for 4 which closed the innings. Our chief scorer was G. W. Stonebridge who batted well for 28 runs.

After the match we were entertained by Mr. L. Sutton at his house, where an excellent repast awaited us and was thoroughly enjoyed by all.

The match with John Innes XI. at Merton resulted in a win for us. Scores, Kew 104, John Innes, 38.

The match with Wisley was played on Kew Green, on May 30th, and resulted in a home success. Scores, Kew 125, Wisley 76.

Although the weather was not very kind to us, the matches that were played were enjoyed by everyone and played in the best team spirit.

ROYAL GARDENS CRICKET CLUB, KEW.

BATTING AVERAGES, SEASON 1931.

Played 5 Innings and over.

Name.	Innings.	Times not out	Most in an Innings.	Total Runs	Average
PEARCE, S. A.....	10	—	44	140	14.00
THOMPSON, R.....	9	—	36	93	10.33
WILDING, J.....	6	—	22	51	8.50
TAYLOR, J.....	15	—	29	127	8.46
LOMAS, T.....	5	—	16	38	7.60
TAYLOR, W.....	8	—	28	53	6.62
COATES, C.....	11	—	17	69	6.27
STONEBRIDGE, G. W.....	9	—	28	52	5.77
FOLK, F.....	8	—	20	45	5.62
MILLER, L. B. J.....	8	—	19	43	5.60
WISEMAN, A.....	11	—	17	55	5.00
STENNING, L.....	11	2	11	43	4.77
SMITH, J.....	8	1	15	29	4.14
MCKENZIE, W.....	8	2	11	24	4.00
LEIGH, D.....	8	—	13	19	2.37
HALL, H.....	5	—	5	8	1.60

Played less than 5 Innings.

Name.	Innings.	Times not out.	Most in an Innings.	Total Runs.	Average.
YOUNGER, R.....	2	1	16	16	16.00
MOULD, A.....	2	—	18	19	9.50
BOYCE, P.....	1	—	5	5	5.00
SAINT, J.....	1	—	4	4	4.00
BATES, W.....	4	—	6	11	2.75
WALBY, A.....	3	—	5	7	2.33
ENGLISH, R.....	4	—	7	8	2.00
GALE, E. W.....	3	—	6	6	2.00
HARPER, E.....	3	—	3	3	1.00
PEARCE, W.....	4	—	1	2	0.50
TAYLOR, G.....	2	—	1	1	0.50
RUMSEY, R. H.....	2	—	—	—	—
DOUGLAS, J.....	1	—	—	—	—

ROYAL GARDENS CRICKET CLUB, KEW.

BOWLING AVERAGES, SEASON 1931.

Name.	Overs.	Maidens.	Runs.	Wickets	Average.
TAYLOR, W.....	109.5	19	196	36	5.44
WISEMAN, A.....	69.1	5	163	24	6.75
TAYLOR, J.....	71.5	7	136	17	8.00
STONEBRIDGE, G. W.....	42.2	3	174	20	8.70
THOMPSON, R.....	36.3	4	112	8	9.5
SMITH, J.....	70.4	14	204	20	10.20
LEIGH, D.....	38	1	114	8	18.25

Catches.	Total.	Catches.	Total.
MILLER, L. B. J.	6	WILDING, J... ..	1
PEARCE, S. A.....	5	WILKINS, L.....	1
TAYLOR, J.....	4	MCKENZIE, W.....	1
FOLK, F.....	4	HALL, H.....	1
SMITH, J.....	3	THOMPSON, R.....	1
LOMAS, T.....	3	WISEMAN, A.....	1
STENNING, L.....	3	STONEBRIDGE, G. W.....	1
TAYLOR, W.....	2		

Total Runs For ... 1161
Total Runs Against ... 1279

Matches Played ... 16
„ Won ... 6
„ Lost ... 10

L. B. J. MILLER,
Hon. Secretary.

THE SWIMMING CLUB, 1931.

At the Annual General Meeting, held in the Library on April 13th, 1931, the following members were elected to hold office for the season : Messrs. R. J. English (Hon. Secretary) ; B. C. Gibbins (Captain) ; A. Findlay Gunn (Vice-Captain) ; W. Pearce and W. Schuphan (Committee).

Despite the fact that the season opened with cold weather, considerable keenness was displayed by members who attended the Richmond Public Baths on club nights. The Captain and Committee decided to accept the services of a German champion as coach and his help was greatly appreciated, many members improving very considerably under his able tuition.

At a later club meeting it was decided to race over the old " championship " course from Isleworth Ferry Gate to Kew Bridge in preference to that from Richmond Lock to Isleworth Gate. The Annual Mile Championship Race was fixed for Friday evening, July 3rd, but the untimely death of Major T. F. Chipp caused a postponement until July 31st. Evening practice started in the Thames early in the season in spite of the inclement weather and continued for nine weeks. Each evening Mr. Hammarberg was in attendance with a boat as a measure of safety, and members are very grateful indeed for his forethought.

The Annual Mile Championship Race was decided on Friday, July 31st, Messrs. L. Stenning and C. P. Raffill acting as Judges and Mr. J. A. Mingay as Starter and Timekeeper. Unfortunately only five entrants participated in the event. A good start was made, every man getting well away from the starting boat. Schuphan, Gibbins and Gunn were soon ahead. Wilkins was troubled with cramp and had to retire from the race shortly after the start. Passing the half-way mark, Schuphan was well ahead and kept a good lead to the finish. Some of the boatmen guided their men into dead water and this, combined with a cross wind, tended to slacken their pace, and in consequence the finishing times are rather slower than is usual. The times and placings were as follows :—

1.	W. Schuphan	...	...	19 mins. 38 secs.
2.	B. C. Gibbins	...	...	19 " 54 "
3.	A. Findlay Gunn	...	...	20 " 53 "
4.	F. Folk	...	...	23 " 30 "
	W. Wilkins	...	...	retired.

The Annual Swimming Dance was held in the Kew Pavilion after the Race, when Miss Hill kindly presented the prizes and the Silver Challenge Cup to the winner. (N.B.—It is believed that this is the first occasion when the Cup has left this Country.

An interesting and noteworthy fact is that the Club has broken the conventional ties and entered into open competition with other Clubs. In this regard our activities were somewhat restricted on account of not being affiliated to the London Swimming Clubs' Association.

On August 22nd a Gala was held at Sunbury-on-Thames and the following team represented Kew :—Messrs. Gibbins, Schuphan, Robson and Findlay Gunn. Of the four open events that the Club contested, two first and one second prize was secured. The glorious "failure" of the afternoon was the relay race, when the Kew team secured the 5th place, only 8 seconds behind the winners' time!

This Gala rings down the curtain on our Swimming activities for the 1931 season.

R. J. ENGLISH,
Hon. Secretary.

TENNIS—1931.

IN 1931, for the first time on record, a tennis team was formed, and fixtures were arranged in the same manner as other branches of sport at Kew. As this represented a modest start, only two matches were arranged and our rivals were the Students of the Royal Horticultural Society's Gardens, at Wisley, with whom we were able to enjoy a home and away fixture.

It was not until half-way through the season, which at its best had been a very inclement one, that it was decided to form a team, although matches had been arranged in the past by the official Gardens' Club teams and other clubs.

The first match was played at Wisley on Saturday, July 11th, and resulted in a win for Kew by five events to four, or by 12 sets to 9.

The return match was played on our own courts on the evening of August 12th. The evening was hot and sultry, and while the last two events were being played, a storm broke over the ground and torrential rain made further play impossible. On this account it was mutually decided to regard the fixture as finished, and resulted in a win for Kew by four events to three, or 10 sets to 8.

The Kew Students' team on both occasions was as follows :—A. E. Wolstenholme (Captain), A. Findlay-Gunn, A. S. Wilson (Vice-Captain), C. B. Gibbins, S. Zammit and G. D. Cousin.

The team's most sincere thanks are due to all who made the home match such a success and in particular to Mr. W. N. Winn, the popular Secretary of the Gardens' Club, who did so much throughout the season to coach and encourage us, and to Mrs. Dallimore and her two daughters who so kindly provided the refreshments for our visitors, ourselves and the spectators.

C. B. GIBBINS.

THE FOOTBALL CLUB, 1930-31.

At a general meeting of the Club, Mr. R. Moore was elected Hon. Secretary and Messrs. E. Hewitson, S. Pearce, R. Younger and E. Donnelly as members of the Club Committee. Later, however, Mr. T. Lomas was elected Hon. Secretary and Mr. A. Wiseman a member of the Committee, in succession to Messrs. Moore and Hewitson who left Kew to take up appointments elsewhere. Mr. Lomas was eventually appointed General Secretary of the Sports Club, and Mr. F. Folk became Hon. Secretary of the Football section.

During this season matches were played under very favourable weather conditions and no fixture had to be cancelled. Seventeen matches were played, eight being won, six lost and three drawn, while the goal total was 40 against 45. An 8-0 defeat at the hands of Richmond St. Mary's was responsible for the adverse balance of goals, but, in fairness to our playing members, it should be recorded that throughout this match the Gardens' team was a player short.

Our goal scorers included Folk, 6, Lee, 5, Zammit, 5, Wilkins, 5, and Gordon, 4.

The fortunes of the Club were adversely affected by the injury to L. A. Lee in the course of the match with St. Luke's F.C., which prevented him taking part in further fixtures that season. Up to the time of his accident, he had figured with marked success as centre-forward, and was not only a constructive player but also a marksman. Later "Bob" Younger, who had ably captained the team during several matches, was prevented from participating in fixtures owing to an injury to his ankle. It is pleasing to note that this popular member of the team recovered in time to play in some outstanding fixtures in the latter half of the season. Despite these set-backs, the keenness of the players was very marked.

Four matches were played against Richmond Hill Old Boys, the Gardens' team winning 3 and drawing 1.

One of the most enjoyable games was against Richmond St. Mary's, when after a dour struggle a draw (2—2) was the result. The second meeting with this Club produced the heaviest defeat of the season when we were beaten (but not disgraced) 8 goals to nil. The two fixtures with Oak Vale Athletic F.C. produced a couple of hard games, but we were the victors on each occasion, by 2 goals to one, and in the return fixture, three goals to one.

An enjoyable trip was made by char-a-banc to Wisley R.H.S. Gardens. We were well supported by the spectators, and despite the fact that the Kew Annual Dance had taken place the evening before, the team succeeded in forcing a draw (2—2), after being 2 goals down at half time. The second half effort was undoubtedly due to the enthusiastic support accorded the team by the Kew Students who had made the trip. These stalwarts had made it a gala day at the expense of the "night before" in that they were decked in paper hats and armed with musical instruments to augment their own vocal efforts.

The trip that was voted the most enjoyable of the whole season was that to Cliveden, the scene of many a Kew defeat on the sports field! Although we were beaten by 5 goals to 2, the excellent manner in which we were entertained at the "Cliveden Club" after the match compensated for our defeat. After partaking of an excellent meal, the team took part in a series of impromptu tournaments, including Billiards, Table Tennis, Darts, Skittles, Whist and other games. It is of interest to note that the Kew Students were able to hold their own, Messrs. Wilding and Stonebridge excelling at billiards and Mr. Birch at skittles. The success of these outings was due in no small measure to the enthusiasm of those non-playing Students who accompanied the team. Many of our players have turned out, often at great personal inconvenience, and it is such sporting action which has enabled our fixtures to be contested in the true team spirit throughout the entire season. May future seasons be equally successful!

F. FOLK,
Hon. Secretary.



BRITISH BOTANY CLUB, 1931.

THE Annual General Meeting of the Club took place in the Garden Library, on April 2nd, 1931, when Mr. E. W. Gale was elected Hon. Secretary and Messrs. Donnelly, Douglas and Hall to the Committee.

Evening rambles took place as in former years, along the Thames Bank, Brent Canal, Sheen Common, and the Queen's Cottage grounds. For the latter ramble we had the able assistance of Mr. C. E. Hubbard who had just returned from a visit to Australia, and he enabled us to find a great many grasses which otherwise would have been unnoticed. After the ramble a visit was made to the top of the Pagoda by special permission.

Although there were very few collectors, the evening rambles were well supported by non-collectors.

Owing to the small number collecting it was decided to arrange only one half-day trip, instead of two as in former years, and the usual full day trip, members being allowed the privilege of attending each.

The half-day excursion was held on July 1st, nine members, including Mr. C. E. Hubbard as conductor, leaving The Avenue, Kew Gardens, at 1 p.m. by motor coach for the White Downs.

The Downs were approached from Betchworth village, this way providing a much better hunting ground than the Horsley side of the Downs. Many interesting plants were found, including *Orobanche minor*, *Linum catharticum*, *Gymnadenia conopsea*, *Orchis fuchsii*, *Ophrys apifera* and *Cnicus acaulis*. After an exceedingly fine day we rejoined the coach at Betchworth and arrived home about 9-30 p.m.

The whole-day outing to Milford-on-Sea was again under the able guidance of Dr. W. B. Turrill. A party of 28 left Kew by motor coach at 6-30 a.m., and Milford was reached about 10-30 a.m.

We started collecting along the salt marshes as in previous years, and continued past Hurst Castle, where lunch was partaken and the usual "dip" was thoroughly enjoyed.

The return journey was made along the shingle beach, many members collecting the various seaweeds which were named by Miss Dickinson. Leaving the shingle we visited the fresh water ponds, later returning to the refreshment pavilion for a well earned rest. Some of the members again had a "dip," and the rest had a walk through the common, all eventually sitting down to an excellent tea.

The usual maritime plants were collected, including *Salsola Kali*, *Salicornia stricta*, *Genista tinctoria*, *Triglochin maritimum*, and *Spartina Townsendii*.

The journey home was made via Southampton water and we were able to see the colonisation of the salt marshes by *Spartina*. A halt was made at Winchester, where we were able to have a good look round the famous old Cathedral. Another halt was made at Hartley Wintney, some of the members collecting on the local common.

After an excellent excursion on one of the few fine days of 1931 we eventually arrived home at 10 p.m.

The small number of collectors for 1931 was rather discouraging, but the collections submitted showed keen and careful attention, this being, no doubt, partly due to the fact that the maximum number of specimens to be submitted had been decreased from 200 to 150. Collections were sent in for examination by Messrs. Fisher, Douglas, Pearce, Simmonds, Cousins, Leigh and Zammit. All satisfied the examiner, Mr. D. Leigh winning the Dümmer Memorial Prize awarded by the Kew Guild for the best collection submitted during the year.

The thanks of the Club are due to all those who have given so much of their time and assistance, and especially to Mr. E. Nemes who acts as a "Father" to the Club.

E. W. GALE,
Hon. Secretary.

KEW NOTES AND GLEANINGS.

VISITORS TO THE GARDENS DURING 1931.

DURING 1931, 1,389,184 visitors were admitted to the Gardens. This number represents a falling-off of 155,028 persons, as compared with 1930. The total Sunday attendance was 579,216 and the number on weekdays, 809,969. The month of May with 345,525 shewed the greatest monthly attendance, while December had the lowest attendance with 10,449 persons. May 25th was the greatest single weekday record with 96,859 visitors, and Sunday, May 31st, was the highest Sunday record with 43,308 visitors. January 23rd with but 7 visitors was the lowest weekday attendance, while November 29th, with 279 visitors, was the lowest Sunday record.

8,783 perambulators were admitted in addition to many admitted as season ticket holders. 15,782 cameras were admitted on payment and 37,275 visitors paid for admission on Students' days. 1,264 bath chairs were admitted on various days throughout the year.

The admission fee of 1d. per visitor was re-imposed in the interests of National Economy on October 5th, 1931. Admission fees are not in force on Bank Holidays throughout the year and school parties accompanied by teachers are admitted free by vouchers obtained on prior application to the Director, on all days other than Students' days.

DURING THE YEAR ENDING DECEMBER 31st, 1931, 986 consignments of living plants, seeds, etc., were received at the Gardens. This number is the highest ever recorded and represents an increase of 36 on the previous year.

MR. JOHN S. L. GILMOUR, B.A., is the Assistant Director in succession to the late Major T. F. Chipp. Mr. Gilmour was formerly Curator of the Cambridge University Herbarium and Museum, and was educated at Uppingham School and Clare College, Cambridge.

MUCH satisfaction was occasioned by the appointment of Mr. John Coutts, A.H.R.H.S., to be Curator of the Gardens, in succession to the late Mr. T. W. Taylor. Mr. Coutts was President of the Guild 1929-1930, and his keen interest in the welfare of Kew and Kewites is too well known to be commented on in these notes. May we be permitted to extend to him, as to other recently appointed officers of the Kew Staff, our sincere wishes for their future activities.

MR. A. S. WILSON, has recently been appointed Assistant Curator of the Decorative Department on Mr. Coutts' promotion to Curator, while Mr. A. Osborn is now Deputy Curator.

THE UNIVERSITY OF WITWATERSRAND, Johannesburg, in the Union of South Africa, has conferred the Honorary Degree of Doctor of Science on Mr. N. E. Brown, A.L.S., in recognition of his work on the flora of South Africa. Dr. Brown is still very active and is an almost daily visitor to the Herbarium, while his presentations of Sphaeroid Mesembryanthemums, in particular, for the living collections, are still very numerous. May we offer to Dr. Brown our congratulations and good wishes?

THE water supply for the Gardens, which for so many years has been drawn from the Thames, filtered and stored by the Gardens' own pumping plant, is now provided by arrangement with the Richmond Corporation who have connected up with the existing mains.

A NEW WING has been built at the west end of the Herbarium to accommodate the increasing collections of specimens and the augmented staff. At the present time cabinets of metal construction are being fitted instead of the wooden ones with which the main building is already adequately supplied. It is anticipated that the new extension will be available for use early in the coming Autumn.

THE REFRESHMENT PAVILION situated near the Pagoda has been considerably enlarged and, in common with other Royal Parks, the "Cafeteria System" is now in vogue, which, together with the increased space available under cover, should prove a boon to the many thousands who daily visit the gardens.

THE DIRECTOR'S OFFICE has been enlarged and extended and provision has been made for a central registry. Great pains were taken during the alterations to preserve the fine old *Wistaria* which fronts the building. This was successfully accomplished and during the early summer again presented a fine show of blossom.

INCREASED CLOAKROOM accommodation has been provided near the Main entrance where the Ladies' Cloakroom has been doubled in size. Exit doors have also been fitted to all the existing cloakrooms and these have proved a great convenience on such days as Sundays and Bank Holidays when visitors are numbered in tens of thousands. The lavatory accommodation for Gentlemen, at the back of Museum III. has also been modernised.

THE SHERMAN HOYT CACTUS HOUSE.—It will be remembered that the outstanding feature of the Royal Horticultural Society's Show at Chelsea, in May, 1929, was the exhibit of Cacti and other Succulent Plants shown by Mrs. A. Sherman Hoyt, of Pasadena, California. The collection of living plants was arranged against a painted scene of the Mohave Desert, the whole exhibit being a representation of the Desert Flora of Southern California.

At the close of the Show, Mrs. Sherman Hoyt very generously presented the collection of living plants to Kew, together with the painted desert scene. Since it was impossible to make an adequate display of her exhibit, or to make use of the very beautiful painting in any of the houses at Kew, Mrs. Sherman Hoyt most generously offered to build a special house for the display of her plants with the painted background.

Mr. J. H. Markham, F.R.I.B.A., of His Majesty's Office of Works, in consultation with the Director, has designed the house, which faces due south, with a semi-circular apse on the northern side. In the house, now completed and planted, the desert scene occupies the semi-circular wall of the apse and in the foreground is a representation

of the Desert in conformity with the painted background. The stone used for building up the foreground is old red sandstone from Dunster, Somerset, and matches remarkably closely both in colour and structure the Californian rocks shown in the picture.

Cacti and other Succulent plants have been placed among the rocks in positions similar to those in which they are found in their native home, and the whole effect makes a remarkably striking picture. The rocky foreground blends so naturally with the painted desert scene behind that it is by no means easy to detect any break between the actual living plants and those shown in the background.

Among the living specimens are two large plants of *Cereus giganteus*, several examples of *Ferocactus Lecontei*, *Echinocactus polycephalus*, *E. Engelmannii*, Opuntias and other Cacti. Another striking plant, of which living examples are growing in the house and specimens are also depicted in the background, is the Candlewood, *Fouquieria splendens*. This shrub, with its long, slender, prickly branches some 6 ft. high, bears bright-red flowers at the tips of the branches and is one of the more remarkable plants of the California Desert. Among other plants planted in groups in the foreground are various species of *Cereus*, *Mammillaria*, *Phyllocactus*, and many species of *Agave*.

The desert character of the scene has been further enhanced by covering the ground with red and yellow sand similar to that which occurs naturally in the Mohave Desert; some of the sand has been obtained specially for the purpose from Devonshire.

The desert picture was painted by Mr. Perry McNeely, and in order to render it perfectly harmonious in its present setting, some slight changes in the colouring have been admirably carried out by artists on the staff of His Majesty's Office of Works. Among the plants depicted in the background there are large clumps among the rocks of the Cluster Cactus, tall specimens of the Joshua Tree (*Yucca arborescens*), several shrubby specimens of the Smoke Tree (*Dalea spinosa*) and of the Creosote Bush (*Larrea glutinosa*), and bushes of *Juniperus occidentalis*.

On the outside of the north face of the apse the following inscription, in gilded letters, has been placed on a cast-lead plaque:—"This House, together with the Scenic Background and many of the plants was presented to the Royal Botanic Gardens, Kew, by Mrs. Sherman Hoyt, of Pasadena, California. House erected 1931."

The house was formally opened by Sir John Gilmour, Bart., M.P., Minister of Agriculture and Fisheries, in the presence of Sir Lionel Earle, K.C.B., Secretary of His Majesty's Office of Works; the Hon. H. D. McLaren, C.B.E., President of the Royal Horticultural Society; Mr. G. W. E. Loder, Past President of the Royal Horticultural Society; Sir William Lawrence, Bart., President of the Cactus and Succulent Society of Great Britain; and Lt.-Colonel F. R. Durham, Secretary of the Royal Horticultural Society. The House was opened to the inspection of the public on Thursday, March 24th.

KEWITES AND THE VICTORIA MEDAL OF HONOUR IN HORTICULTURE.

When the Council of the Royal Horticultural Society instituted the Victoria Medal of Honour in Horticulture, in 1887, to celebrate the Jubilee of Queen Victoria, it founded an Order of Merit that caught the imagination of British horticulturists. The interest thus created has never faltered and now the "V.M.H." is one of the most coveted distinctions in the world of horticulture and botany.

There were only fifty members of the Order when it was instituted, but ten years later, by permission of Queen Victoria, the number was increased to sixty, in celebration of her Diamond Jubilee, and now there are never more than sixty living Victoria Medallists.

Kewites occupy a very honourable position among the holders of the prized distinction. Those who received the honour when the Medal was instituted were Sir Joseph Hooker, a former Director of the Gardens; Sir Daniel Morris, an Assistant Director; Mr. John Gilbert Baker, Keeper of the Herbarium and Mr. George Nicholson, a former Curator. Later yet another Director, Sir David Prain, was honoured and in due course two other Curators, Mr. William Watson and Mr. W. J. Bean, gained the award, while successive Keepers of the Herbarium in Dr. W. B. Hemsley and Dr. Otto Stapf were similarly honoured. Mr. George Massee, the mycologist, joined the select circle in 1902, and Mr. R. A. Rolfe in 1921, while another Kew official quite recently honoured is Mr. William Dallimore.

Old Kewites who have also received the "V.M.H." are Mr. W. W. Pettigrew, Mr. John Fraser, Mr. R. L. Harrow, Dr. E. H. Wilson and Mr. Charles H. Curtis.

Father time takes his toll as the years pass by, but at the present moment the Kew tradition is worthily upheld by nine living Kewites who hold the honoured distinction.

In 1930, the Royal Horticultural Society instituted the Associateship of Honour and it is of interest to record that the following Kewites, past and present, have been awarded this distinction:— Among the first thirty Associates in 1930 were Messrs. G. H. Banks, E. W. Cooper, J. Coutts, J. J. Gutteridge, W. Irving, W. Page; in 1931 Messrs. D. Bliss, T. W. Brown and C. Wakely, and in the 1932 awards Messrs. J. W. Besant, A. Hosking, J. Jones, O.B.E., G. T. Lane, E. P. Long, T. D. Maitland, M.B.E., J. W. Matthews, the late T. W. Taylor and R. O. Williams.

A DONATION OF TWO GUINEAS was forwarded on behalf of the Guild from the Benevolent Fund, to the Hon. Secretary of the Horticultural Club (Mr. J. R. Pulham) towards the Fund on behalf of the widow of the late Mr. G. F. Tinley, a notice of whose death appears in our present issue. We are informed that at the date of closing a sum of £120 had been subscribed.

THE FOLLOWING LETTER was recently received from Mr. A. Weber, who left Kew in September, 1908, and now resides at Weimar, Germany :—

“ It is with great pleasure that I recall the golden days of my youth and if the general situation of international affairs had not undergone such a radical change, I should e'er now have paid a visit to beloved Kew.

The receipt of the Journal of the Kew Guild always gives me much pleasure and joy, in fact, I have always received it regularly excepting during the period of the Great War and it is with much interest that I read the articles and notes contained therein.

Since the cessation of hostilities I have been living at Weimar, the city of our great national poets Goethe and Schiller. I recollect with pride that these two masters of German thought are represented on the Albert Memorial in London. Weimar is visited year by year by large numbers of British admirers, for in the wonderful park here, created by Goethe, there is a memorial erected in honour of the world's greatest dramatist, William Shakespeare.

A Shakespeare Society and a Byron Society have been formed in the city and its members are continually increasing in numbers. At the moment preparations are being made for the centenary of Goethe's death. Goethe and Schiller are both interred in the city cemetery.

I am quite confident that the Royal Botanic Gardens, Kew, will have maintained its high standard of efficiency and its world-wide reputation and the attractiveness of former days.”

KEW METEOROLOGICAL NOTES, 1931.

	Rainfall in Inches.	Temperature (Fahr.)	
		Maximum.	Minimum (on grass).
January	0.95	53°	19°
February	1.66	55°	18°
March	0.21	69°	10°
April	3.22	68°	25°
May	2.38	76°	29°
June	1.45	78°	35°
July	2.89	79°	38°
August	5.33	79°	31°
September	2.27	71°	27°
October	0.64	66°	14°
November	2.03	62°	21°
December	0.58	59°	14°
Total Rainfall	23.61	—	—

1931 will be remembered in particular on account of its dull, almost sunless summer. The Rainfall generally was adequate throughout the spring and summer months, and August in particular had unusually heavy storms, with torrential rains. The total rainfall was less than in 1930, when 24.99 inches were recorded. Unusually mild weather prevailed during November and December, but frost was recorded on occasions in each month with the exception of June and July. At no period throughout the whole year did the screen temperatures exceed 79°. With an adequate rainfall, the lawns at Kew were in good condition throughout the year. There were extremely few fine week-ends with settled weather and this was reflected in the falling-off in visitors mentioned elsewhere.



PUBLICATIONS.

WE have received a copy of a Pamphlet published by the Horticultural Education Association entitled "Reports on Some Aspects of Horticultural Education."

The Pamphlet is divided into two portions, Part 1 dealing with the report of a Sub-Committee set up to consider "The Development of More Effective Liaison between Research, Education, and Advisory Work and the Putting into Practice of The Results of Research." We notice in passing that an old Kewite, Mr. A. D. Turner, N.D.H., served on the responsible Committee.

The Report surveys the field of Research, Education and Advisory Work in Great Britain and goes on to consider methods of developing more effective liaison between the three branches of the work. Possible methods of translating the Results of Horticultural Research into the Practice of Horticulture are considered and finally recommendations are made.

The second portion of the pamphlet deals with the findings of another Sub-Committee appointed to consider "The Status, General Relationship and Training of County Horticultural Officers."

A SECOND edition of the Handbook of Coniferae by W. Dallimore and A. B. Jackson, published by Edwin Arnold & Co., London, 1931, price £2/2/0, is now available. The principal features of the edition are the alphabetical arrangement of the genera and the appendix which provides a descriptive list of species, varieties and hybrids published since the appearance of the first edition.

WEDDING BELLS.

Mr. Charles R. Stock to Miss Lilian Harris, at All Saints' Church, Woodford, Salisbury, Wiltshire, on May 7th, 1931.

Mr. F. N. Howes to Miss Marjorie Hepher, at St. Matthias' Church, Richmond, Surrey, on June 20th, 1931.

Mr. Stanley F. Ovenden to Miss Ethel M. Willicombe, at St. Martin's Church, Canterbury, Kent, on August 29th, 1931.

Mr. Leslie A. Lee to Miss Pat Ramsay, of Gunnersbury, London, W.4., at Salisbury, Southern Rhodesia, on October 9th, 1931.

Mr. Sydney A. Pearce to Miss Nellie Byron, at St. Mary's Church, Glynn Taff, Treforest, Pontypridd, South Wales, on February 6th, 1932.

THE SUDANESE GARDENER, HIS CHARACTERISTICS, CUSTOMS AND TOOLS.

FOR some years now it has been my intention to write a few notes for the Journal, but although the spirit has been willing the flesh has been weak. This is a country for doing things "Bookra," which means to-morrow, and the native is not always the only one affected by the creed.

Now that I have made a start, I think it may be of some interest to Kewites if I write a few notes on the Sudanese Gardener, his characteristics, customs, and tools. I choose this subject since much has appeared in the Guild during the past few years describing the wonderful work achieved by Mr. F. S. Sillitoe, M.B.E., A.H.R.H.S., during his 27 years in the Sudan as Superintendent of Government Gardens, and I consider an appreciation of the men and the lowly tools by whose agency his work was carried out, would not be amiss.

The average Sudanese has not an inherent love of a garden, except as a means to produce food and shade. The best gardener is to be found North of Khartoum in Dongola Province, where more fruit is grown than in Khartoum itself. The principal crops grown by the natives are Cotton, Dura (*Sorghum sp.*), Lubbia (*Phaseolus sp.*), and Dukhn (*Pennisetum sp.*) and there are a number of methods adopted for cultivating these crops.

A rain crop is often obtained by selecting a fertile spot, and sowing seeds just before the annual rains in July. This method does not always yield a crop up to the expectations of the cultivator, owing to the vagaries of the rainy season, and very often to the ravages of locusts.

The riverain method is more general. The Nile commences to fall in October, and the fine alluvial silt which is left in ledges is sown with the required crops. A rotation of crops is obtained by this means and as soon as a drop occurs in the Nile, the cultivator extends his cultivated area. The seepage from the Nile is sufficient to bring these crops to fructification.

The method in which these crops are sown is interesting. A large dibber, very similar to an old fashioned potato dibber, is used to make holes in the wet soil, and seeds of the crop to be grown are dropped in the holes and covered in with slightly moist soil. It is when the Sudanese adopts those principles with garden annuals, that his ability as a gardener is called to question.

Islands and sandbanks which appear with the fall of the Nile are cultivated in the same manner.

The most general way of cultivating native crops is by irrigation, and the two native contrivances for irrigation, which have been in use for hundreds of years, are worthy of note.

The "Sagia" which is built on a ledge with a sheer drop to the river, consists of a horizontal wooden wheel which is drawn by bullocks. This wheel connects with a smaller vertical wooden pinnion wheel and a vertical revolving water wheel, to which is tied earthenware pots, petrol tins or other containers. Much water is lost in most "Sagias" by faulty construction of the "Sagia," or by leaking receptacles in the revolving water wheel, but this does not worry the cultivator as a rule. The "Sagia" makes a peculiar creaking noise when at work, and it is said that this is required by the farmer, so that he can detect at once when his labourer gets tired of driving the bullocks round. It is rather like the old story of the boy gardener having to whistle all the time he is picking fruit.

The creak of the "Sagia" wheel is a very pleasant sound, and possibly one that we soon shall no longer know, with the increase in oil driven pump engines amongst native farmers.

The "Shadoof" is another method adopted for irrigating. This consists of a see-saw arrangement erected on the edge of the bank of the river. A container is fixed to the end of the see-saw pointing towards the river, and the other end is weighted. A platform is erected for the labourer who does the work, half-way between the waters edge and the top of the bank. From there he fills the water container, and lifting it up with the aid of the weight on the other end, he tips the water into a channel prepared at the required level. Sometimes two or three relays of "Shadoof" are required to raise the water to the level of the ground to be irrigated.

From the men who work in such circumstances we obtain gardeners in Khartoum, so some idea of the difficulties in getting results may be realised.

Now to deal with the tools he uses. The Sudanese gardener is not a man who requires many tools in a garden. He can do all the work he considers necessary with the "Toria" (Adze) for digging, the "Wasook" for levelling soil, the "Shorooof" for cutting grass and hoeing, and the "Guffa" (native basket) for collecting garden refuse.

The "Toria" or adze should be well known in the British Isles, since a similar tool was carried by every soldier during the Great War. A gang of 20 natives digging a plot of ground, and keeping time with their "Torias" as they chant one of their many songs, is a fine sight. Their dexterity with this implement in the making of "gadwells" or irrigation channels cannot be equalled by British workmen.

The "Wasook" has been unkindly described as a tool which enables three men to do the work of one. It consists of a board 9

inches broad, by 3 feet long, to which is attached a wooden pole in an upright position. A rope is tied to each end of the board, and the free ends of the ropes are held by the labourers who pull in response to the man holding the wooden pole. By this means earth is shovelled up, and transferred from one spot to another, until a uniform level is obtained. As the native gardener obtains a much better level on a plot by these means than he does by other methods, it is better to let him carry on in the way he knows best.

The "Shorooft" is usually made of hoop iron with the edges turned in at one end to form a handle, the cutting edge being serrated by means of a three-cornered file. I have at times prohibited the use of this tool in the gardens, as lawns have been purposely left unmown for weeks for the express purpose of supplying long grass which had to be cut by a "Shorooft" as the lawn mower could not take it.

Long grass of this type obtains a good sale in the "Suk" (native market) or it may be useful as fodder for the gardener's own donkey, and it is certain to be in better condition when cut by "Shorooft" than when it is cut by a lawn mower.

I have always had to rescind the order on account of the legitimate uses of this tool. Forking out weeds on paths and beds, the cutting of grassy banks, hoeing of beds, and cleaning out of "gadwells" are a few of the uses to which it is put.

The "Guffa" does most of the work which an English gardener carries out with a wheel barrow. It is manufactured by the natives with products of the country, namely the dried leaves of the Dom Nut Palm (*Hyphaene Thebaica*). The cost of each "Guffa" is approximately 8 millimes, which is equal to two-pence.

Another tool which is used occasionally on lawns is one known as the "Milod." For the purpose of cleaning a lawn which has become full of plants other than the proper lawn grass, *Cynodon Dactylon*, it is necessary to scrape the whole surface off to a depth of $\frac{1}{2}$ an inch or more all over. The "Milod" is used for this purpose, and the process is known as "hishing." The cutting face of this tool is like that of a miniature edging iron, to which is attached a short bent handle. This latter is necessary to allow freedom to the hands when working, as the tool is used in a horizontal manner, and not vertically, as is the case with an edging iron.

I trust that the sketches of these tools which have been drawn for me by Mr. A. M. Petrie, Assistant Master of Works, Khartoum Municipality, will be suitable for reproduction, as they will explain the tools better than I can describe them.

Hoeing is a job which is not fully understood by the Sudanese gardener, and it is very seldom carried out in a proper manner or at the right time. To hoe and irrigate immediately is the order of things with a Sudanese, and consequently most garden crops are over-watered.

The life of a British gardener is a hard one amongst such people and in such a climate as that of the Sudan, but there are compensations, as in all spheres of life, and that which strikes one most is the profound belief most Sudanese have in British justice. It is important that this belief be justified, but it is not an easy matter to deal sanely and calmly with situations which arise in the course of a day's work, in a country where one's nerves are often in rags as a result of excessive heat.

This is a point which should be noted by all young Kewites who are considering the advantages of going abroad, as it is a proved fact that the possession of certain types of temperament does not conduce to a happy life in the Tropics.

The dealing with petitions for increases of pay and other matters is part of the life here, which has its amusing side. Many men twice my age address me as their father, and invoke the blessings of Allah to give me a son, which is quite the usual custom.

One very amusing petition for an increase of pay for one named Mohd. Ibrahim, who was employed on the water carts which are used for watering street trees, was signed "Mohamed Ibrahim, on the water wagon." It was not the Prohibitionist tendencies of this man which gained for him his increase.

I would like to take this opportunity of conveying my best wishes through the medium of the Guild, to all my old Kewite friends, many of whom I hope to meet at the Annual Dinner in May, when I expect to be on leave.

J. ROBBIE.



LA MORTOLA, ITALY.

A FEW notes on the famous La Mortola gardens, the property of Cecil Hanbury, Esq., M.P., F.L.S., may be of interest to the many Kewites who are acquainted with them by name only. The gardens are undoubtedly the most famous of all the beautiful Riviera gardens, and, in the estimation of botanists and gardeners, come first on account of the unique collection of sub-tropical plants they contain.

I had the pleasure of staying at La Mortola from April, 1930, to July, 1931. This privilege was due to the generosity and interest of Mr. Hanbury, who annually offers the authorities at Kew the opportunity of sending two student gardeners to his famous garden. The experience was one I shall never forget, and the first impression gained after a tour of the garden in April beggars description. Our hackneyed adjectives, glorious, wonderful and beautiful, seem hopelessly inadequate to describe its glories; the Italians provide the most suitable word when they call it a garden "poetico."

Much of the beauty of La Mortola is undoubtedly due to the fact that the gardens are supervised by an old Kewite—Mr. McLeod Braggins, under whose able guidance they become increasingly beautiful year by year.

La Mortola overlooks the Mediterranean between Mentone and Ventimiglia, about three miles from the French-Italian frontier. the gardens are ten miles from Monte Carlo, and, on the Italian side, about twelve miles from San Remo. They cover an area of about one hundred acres and the main entrance is on the coastal road three hundred feet above the sea. The upper part of the garden is composed of a number of steep slopes and terraces which gradually run into a gentle slope continuing down to the sea shore. The position of the entire garden is so sheltered that on January 1st there were no less than 250 varieties of plants in flower.

The name La Mortola signifies "The Myrtle," a plant which abounds in the indigenous flora. The garden was begun in 1867 by the late Sir Thomas Hanbury, K.C.V.O., F.L.S., who then acquired an old Italian manor farm, a half ruined "palazzo," and terraces, where lemons, olives and vines had been cultivated. Originally begun as a garden for the collection of plants of the Mediterranean region, it has gradually become known all over the world for its varied collection of sub-tropical plants.

The "palazzo" (Fig. 1) is supposed to be from four to five hundred years old and contains many valuable works of art. A marble tablet let into a wall records the fact that Queen Victoria sketched the view from a window in 1882.

Many Roman remains and tombs have been discovered in the vicinity, and "Via Aurelia," the ancient Roman road from Italy to Gaul, passes through the present day gardens. Pope Innocent IV. passed along this way in 1251, and Napoleon in 1796.

The ambition of the owner and superintendent of La Mortola is to forward the interests of gardening, and no pains have been spared to accomplish this. Every year about twelve thousand packets of seeds are distributed gratis to botanical and private gardens throughout the world. Every assistance is given to students in search of knowledge and to the visitors who go there in crowds. Seed lists are printed annually and distributed to those desirous of making exchanges. An excellent library, herbarium and museum are also provided for; an interest in local horticultural matters is fully maintained by exhibiting at shows in the vicinity, helping nearby nurserymen and gardeners, and by identifying specimens.

The climate at La Mortola is typical of the Mediterranean region. The summers are dry and rain falls chiefly from Autumn to Spring, but, generally speaking, the rainfall is irregular and during the Summer, three months, or longer, may pass without rain. The drought is often such that even large fleshy *Opuntias* become shrivelled and withered. On the other hand, when rain does fall it does so with tropical intensity; two inches have been recorded in three hours, and twenty-seven inches in thirty-seven days. The beneficial effect of the rainfall is greatly reduced by the steep incline of the land.

The temperature is not extremely high, rarely exceeding 95° Fah. in the shade. Nevertheless the summers are very trying owing to the moist atmosphere, continuous bright, hot weather and warm nights. Midnight is often little cooler than mid-day. In winter the temperature rarely falls below 45° Fah., although I have seen slight frosts there, and on more than one occasion the gardens have been covered with two inches of snow. Terrific winds from the sea are occasionally the cause of very great damage.

Although the Riviera climate deserves its wonderful reputation, I am afraid it is not quite the gardener's paradise many people imagine it to be. As I have already mentioned, the temperature is liable to range from freezing point to nearly 100° Fah. in the shade; terrible winds are to be expected at almost any time; three to four months' drought is a regular feature every summer, and once it starts raining there is no knowing how much of the garden may be washed away. The soil is of the poorest, very limey and often less than one foot deep. In spite of these variable conditions, gardeners on the Riviera are expected to maintain their gardens in a perpetual state of sub-tropical beauty, and, with careful irrigation, manure, good drainage and an unlimited supply of patience and enthusiasm much is brought about.

The end of April or beginning of May is undoubtedly the time to visit La Mortola to see its floral display at its best. On one side the main drive is banked with masses of *Richardia africana*, which grow to an enormous height, planted beneath some fine species of *Phoenix*. The other side is made beautiful with *Reinwardtia tetragyna* and *R. trigyna*, masses of *Gazania*, *Narcissus*, *Iris* and the wild *Gladiolus segetum*. On a terrace, which runs almost half the width of the entire garden, there is a magnificent pergola furnished with *Clematis Armandi*, many varieties of *Bignonia*, *Plumbago capensis* and *Hardenbergia Comptoniana*. In the shade of this pergola there are blue Cinerarias, crimson Nemesises, and pink, red and white *Primula stellata* and *P. sinensis*.

At right angles to this pergola there is a stone stairway, the sides of which are a mass of *Rosa laevigata*, whilst overhead there is a riot of *Wistaria*. Descending this stairway one approaches a beautiful white marble fountain planted with Arum Lilies. Nearby is the main succulent garden where Aloes thrust up their scarlet flower spikes against the vivid blue sky. Agaves, *Echinocactus*, *Cereus*, Opuntias and Euphorbias abound in the greatest profusion and among them are some magnificent specimens.

Nearer the villa there is a succession of terraces ; one devoted to scented plants such as Salvias, *Aloysia citriodora*, Lavender, Pelargoniums and Rosemary, while others are planted with Paeonies, Magnolias and young Orange trees.

The " New Vista " (Fig. 2) is, perhaps, the most impressive sight in the garden. Both sides are planted with *Echium fastuosum*, the blue spikes of which make a never-to-be-forgotten picture. Among the Echiums are Acacias, Peach trees and Lavender, all of which, blended together and with the blue sea as a back-ground, make a delightful sight.

Acacias, Eucalyptus, Daturas, Pittosporums, Oleanders, Hakeas, Ipomoeas and Erythrinias abound, whilst the yellow and white forms of *Rosa Banksiae*, blue *Jacaranda ovalifolia* and golden *Grevillea robusta* all contribute to this kaleidoscope of colour.

The lower part of the garden is almost entirely devoted to vines, which yield luscious grapes in June for wine making, and lemons, grape fruits, limes, and other citruses of every hue from pale yellow to the darkest orange and from the size of a marble to that of a football, make a wonderful display.

Planted throughout the gardens are some very fine palms (Fig. 3), such as *Washingtonia filifera* and *W. gracilis*, *Phoenix canariensis* and *P. dactylifera*. Bananas help to give the garden a tropical appearance, while old friends such as Zinnias, Mignonette and Stocks remind one of home.

HENRY R. COCKER, 1932.

COUNTY HORTICULTURAL EDUCATION.

WITHIN recent years several articles have appeared in the *Kew Journal* reviewing the work of old Kewites who labour within the British Isles. The articles in question have been in direct contrast to the work of Kewites who spend their lives in other countries, but have served to show that there are many outlets for the skilled horticulturist. Ever since the writer became familiar with the *Kew Journal* he has been reading of famous Kewites who have done or are doing much to build our Empire upon sound lines in the Colonies. It has been pointed out of late years that, owing to changed conditions, more and more Kew men are having to find posts within the British Isles. The work of Parks and Cemeteries Officers have formed the subject of notes to these pages, but there are other branches of British Horticulture about which nothing has been said.

Perhaps the most important activity of Kewites in Countries other than Britain has been their work in training the natives of their adopted Countries to be better Horticulturists. There is a small band of Old Kewites who have and are endeavouring to do the same thing for the "natives" of the British Isles. The Kewites we have in mind are those employed by County and other Authorities in connection with Horticultural Education. This field of work offers to any man wide opportunities. The work is skilled, often highly technical, and, above all, the workers feel that they are doing something towards bettering the lot of their own countrymen. The slogan of the moment is to "Buy British," the job of the County Horticulturist is to teach the Market Growers of Britain how to "Produce British." This aim is of fundamental importance if "Buy British" is to mean anything at all. The officers concerned work under many titles—Agricultural Organisers, Horticultural Organisers, Superintendents, Instructors, and Inspectors. What of their job?

ADVISORY WORK:—The most important work of the County men is undoubtedly giving advice on horticulture to all and sundry people who require it. Such work requires a wide knowledge and the officer must be prepared to advise on manures, insect pests, fungus diseases and a host of other subjects. His job in this respect is to save his rate and tax payers' money and to help them to produce better crops. Advisory work may take an officer to a man who is growing, say, 20 acres of fruit and by carefully going into the case it may be possible to cut the manure bill by £50; this money remains in the pocket of the grower and enables the latter to cut his production costs. Another day he may be advising a large grower as to the best means of avoiding damage to apple fruits at harvest-time. Careless picking and the resulting bruises may cause enormous losses to commercial people when their product reaches the open market. On other occasions the work is not so spectacular and may result only in the saving of shillings to the individual concerned.

LECTURE WORK :—During the winter months lectures are given to Growers' Associations, Horticultural Societies or Allotment Associations. The object of the lecture work is to convey to those interested the established practice in well managed gardens and also the latest research work in connection with horticulture. Since the close of the war Research Stations have been established in various parts of the Country and, as a result, many new facts have been established. It is the job of the County Horticulturists to carry this information from the Research Stations to the practical man. Summer lectures and demonstrations are given out of doors to many Associations and serve to bring the County man into direct touch with local problems and conditions. In the hands of the right man these out of doors engagements do much to break down the idea that the so-called Expert is only a book man and knows little or nothing about the practical aspect of the work. It is not easy to demonstrate in a lecture room how to spray a tree correctly, but it is a simple matter to demonstrate when one has an actual tree, spray fluid, and spraying outfit.

FARM INSTITUTES :—A number of Counties are now running Farm Institutes which serve to teach young people the principles and practice of Horticulture and Agriculture. The findings of the Research Stations are tried out under local conditions and the Institutes act as a centre which commercial horticulturists can visit and see for themselves whether the research findings are applicable to their own conditions. As a rule the Farm Institute pays especial attention to local crops and practice, and endeavours to turn out young people who are valuable workers to their subsequent employers. To teach Horticulture to young people is not easy, and if any reader of this note fancies himself as a lecturer or teacher, I would advise him to take a class for an hour, asking the students to take rough notes and afterwards to write up the lecture and send him in the notes to correct. As the person concerned is correcting the notes he begins to realise that he has not been so successful, and by the time all the notes are completed his opinion of himself as a teacher is down to zero.

Enough has been written to serve to indicate the lines upon which County Horticultural Education is founded. Young Kew men might do worse than endeavour to fit themselves for this class of work, and in this connection I would like to quote the words used by an *Old Kewite when delivering his Presidential Address to the Horticultural Education Association in September, 1930 :—

“ At our last meeting one of our respected members expressed the opinion that Horticulture was at a low ebb and the outlook for the future very dark. I am far from agreeing with this view, and I think the future is promising. One of the healthiest signs of the times is the increasing demand from our County Education Authorities for Instructors in Horticulture. The first thing, therefore, I desire

to bring forward is some consideration of the qualifications necessary for men desiring to occupy these posts. I should place first in every case character and personality, character, including, of course, the primary qualities of honesty, truthfulness, and sobriety. A very brilliant and highly-qualified agriculturist, when discussing this matter with me, remarked, academic distinctions count very little by themselves in your job and mine, it is the character and personality of the individual which counts every time. Secondly, a thorough groundwork of practical experience is a most essential qualification in Horticultural Education.

I have no wish whatsoever to disparage the possession of a University education, but I may say unhesitatingly that any man of ordinary intelligence, given the opportunity, can acquire a pass degree, yet we frequently find the possession of such a qualification being placed before the knowledge born of practical experience. I once heard the question put in connection with a man's qualification for a certain post—"Is he educated?" The reply was:—"Yes, he knows his job." To know one's job, to learn one's job by doing it, to acquire knowledge general as well as specific, should be the aim of those aspiring to such work. The man who aspires to teach practical work without having acquired that knowledge himself by practical experience is soon exposed for the sham he really is and his sphere of usefulness is greatly curtailed.

Enthusiasm, Determination, Tact.—Enthusiasm is a precious virtue, without it very little achievement is possible, with it every little job, no matter how humble, becomes a source of pleasure. Determination is indispensable to success, it is the driving force which helps us to achieve the seemingly impossible, to conquer the disappointments and to continue the strife for our ideals. Tact and courtesy are qualities we cannot neglect, no matter how clever our work is, it is almost useless unless it is accompanied by good temper. Common-sense, which is by no means common, and initiative, which I have seen aptly described as "the knack of doing things at the right time without waiting for orders," are crowning qualifications; these with an unselfish desire to serve are ideals for those aspiring to positions in Horticultural Education to strive for, because they are qualities never found resting on a rotten foundation."

The above three paragraphs indicate the type of man that is likely to succeed as a County Horticulturist. No others need apply.

G. C. JOHNSON.

* Mr. W. S. Sharp, Horticultural Instructor, Durham County Council.

KEWITES AND EARTHQUAKES IN THE ANTIPODES.

ON looking through the *Journal* of the Kew Guild, one finds that men who have passed through the Royal Gardens are stationed in practically every part of the globe, so it is not strange to hear of one who went through the thrills, adventures and trials of the great Hawke's Bay earthquake, on the 3rd February, 1931 ; nor is it remarkable that another Kewite should be near enough to the scene of the disaster to come through and render assistance ; it is, however, an example of the Kew spirit, which becomes fully manifest on such occasions.

Amongst Kewites, the writer alone experienced the violent upheaval which, within two minutes and twenty-nine seconds, completely wrecked two prosperous towns, Napier and Hastings, and which not only brought ruin and distress to thousands of homes, but cast a shadow of gloom over the whole Empire.

To represent the sensation of ground movement in words and so make these notes reach the imagination of the reader is difficult, for as those who have experienced such shocks know, they differ vastly in effect and movement. To generalise, however, it may be compared to being in a London building under which the tube passes . . . at first there is a distinctly audible rumble and within the space of a few seconds the whole place gently vibrates. Such is a "shake," tremor or minor earthquake ; fortunately violent disturbances are infrequent.

It is a truism that nothing occurs spontaneously ; there is always a gradual working towards a climax, though it often happens that few or none have the power to interpret the warnings aright at the time ; such was the case at Hawke's Bay. Looking back only to Sunday, February 1st, one can trace definite signs which had a direct influence on subsequent events. On that day many hundred residents watched with amazement the turbulent waters of the Pacific as the great ocean breakers rolled in, broke with a thundering noise on the foreshore and dashed up the beach, frequently washing in over the wall of the Marine Parade on to the roadway. Quite apart from the exceptionally rough sea, it was noticed that the water was of a filthy colour which, since there had been no rain for weeks, was not due to any washout from the rivers, and so was attributed to a storm at sea, we have since learnt that it was probably caused by some submarine disturbance as the centre of the earthquake is reported to have been ten miles out to sea. Yet another factor, now clearly understood as being due to the disturbance, was a series of remarkably sudden drops in temperature, though it was Summer ; about that time on several occasions it became bitterly cold and, quite as suddenly, uncomfortably hot again.

When in 1929 the writer took advantage of the offer of a long-looked-for post in the Antipodes, he was at once impressed by the variety and sub-tropical nature of the plants growing in the Napier district, which enjoys more hours of sunshine per annum than any other town in New Zealand and has an average rainfall of 26 inches. The Pacific Ocean sweeps right in to the shore, and the town area is mainly composed of reclaimed swamp. To the south of the town there is a vast expanse of flat country where, in Winter, frosts up to 10° are not uncommon, but snow never falls in Napier itself. To the north and west are extensive ranges of hills which wear a mantle of snow for the greater part of the year, and even the foothills on the northern side are frequently quite white.

To enumerate but a few of the plants commonly found growing here without protection, there are Hibiscus, Bougainvilleas (including that most tender variety "Mrs. Butt"), Doryanthes, Bananas, Citrus fruits, Lasiandras, Poinsettias, *Phoenix canariensis*, Prosthant-eras, and occasionally Kentia Palms. For a distance of some three miles along the Marine Parade there is a fine row of Norfolk Island Pines (*Araucaria excelsa*) many of which exceed thirty feet in height, making a grand fringe for the blue Pacific. It appears that the wood of all plants gets such a ripening in the hot autumn weather that they are able to withstand even the coldest Winters.

The nurseries in which the writer is stationed are about one mile out of the town on the south side and are built on an old swamp and partly over an old river-bed, about 10 feet above sea-level. The grounds contain the largest range of glass in the Dominion and the largest palm-house in the Southern Hemisphere. For compactness, general maintenance, interest and variety it is comparable with anything of its kind in Great Britain; the equipment is very modern and a large wholesale and retail trade is catered for throughout both Islands. The staff numbers about 28, and the plant comprises some 25 glasshouses, plant-shelters, bush houses and frames; the organisation and system are such that every available inch of ground is made to produce the maximum amount of saleable stock.

It was here, on Tuesday, 3rd February, 1931, that the writer experienced his first big earthquake and one which is said to have been the most violent on record. Quite suddenly, without the customary warning rumble, the ground began to sway; the motion gradually but swiftly increased in intensity till the whole place and range of glass rose bodily in a wavy motion fully two feet in the air, rocked and tossed like a cork on the ocean, or performed like a broncho in a Wild West show! . . . till, accompanied by the sound of breaking glass and falling buildings, it gradually settled in the space of about three minutes. All this happened seven months ago, but I can vividly recollect being in a glass house, dashing out instantly on to the walk and being hurled bodily from one side to the other between the rows of glasshouses, in fear of being thrown forcibly through the glass; dropping like a log to the ground and lying there motionless, probably half-dazed, watching the pathway crack and

open up, seeing the houses become all twisted and contorted, and half wondering if the ground was going to open right up and consume us whole ! It was a weird and wild sensation. Fancy being swallowed up and disappearing like a shadow into the bowels of the earth ; it now seems fantastic, but at the time it was very real !

While such occasions seem an age to those who endure them, time passes swiftly, and so actually within a few moments I was again on my feet and endeavouring to control a somewhat peculiar situation. Everyone had a grim realisation of what had occurred, but what was still to come all feared to speculate. All this time the ground was in motion, and did not definitely settle for six hours ; the sky was darkened by the dust from fallen buildings throughout the district ; the air, charged with sulphurous fumes, was almost choking ; where cracks had appeared, silt and water were oozing up like miniature geysers ; people were shrieking, crying out and dashing aimlessly about, and suddenly the flames of the burning town leapt up into the sky, displacing the dust, and a blazing inferno seemed to be rapidly approaching us.

It took but a little quick thinking to decide on a definite plan : clear the place, have the girls escorted home, send the married men to their wives and families, and get everyone out of the region of the glass and tottering houses, with a request to report, if possible, at 1 o'clock. Fortunately no one among our staff was injured, though all were terror-stricken, and at this juncture some maniac rushed along the roadway bawling out " A tidal wave is coming, a tidal wave is coming !" With an alarmed and distracted people the effect was awful ; men, women and children dashed anywhere, anyhow, on to the hills, leaving everything behind. Families were divided ; men hurried from the town only to find their homes deserted and their families gone ; it was many hours before some could be found.

Having resolved to await the " tidal wave," though a passion for cold water is not among my weaknesses, it was possible, when alone, to survey the damage and get a rough idea of the best way to proceed, although a round of the houses was not made without a feeling of alarm and having to force a sense of duty. I found all the doors jammed, pot-plants lying on the stages in every house, while hundreds decorated the floors in company with hanging baskets hurled from the roofs. Chimney pots had crashed into two houses, the concrete walls of the propagating house had caved in and the cases were submerged ; foundations were gone, pipe lines and boiler houses wrecked ; no water, no light, structures everywhere twisted, battered and contorted to all appearance beyond repair, it seemed ghastly, hopeless ; and being alone amidst so much wreckage did not help towards finding a starting point.

Glancing around, one would have thought there had been a bombardment, only it was worse. Private houses lay everywhere in ruins, with furniture, linen, pictures, crockery, kitchen utensils, jam and bricks all mixed up in one glorious mess. How and when

was one to separate the jam from the bricks? A gentle breeze was blowing in from the sea, fanning the flames which leapt from building to building and swept whole streets. Having no water, fire-fighting was impossible, and the fire station itself was on fire.

A glowing tribute must be paid to those, especially the doctors and nurses, who remained undaunted and rescued patients from the hospital which was completely shattered, and students who had been buried alive under the wreckage of the technical college and under other buildings in the town. To the marines who landed immediately from a warship which most fortunately had anchored only that morning in the Bay, the townsfolk owe a debt of everlasting gratitude. They not only plunged into the rescue work and provided food, but by their example, they restored confidence wonderfully and so mastered a very awkward situation.

Not only was the ground in gradual motion all this time, but during the day 151 earthquakes were officially recorded, some quite violent, occurring with alarming rapidity. For the remaining 25 days of the month, 588 earthquakes were recorded, and since then they have occurred at intervals, the grand total to date (22nd September), being well above 2,000. News of the disaster was speedily wirelessly from the man-of-war . . . all other communication was cut off . . . so food and relief parties were immediately organised and were pouring into the town before nightfall.

Having rushed home for a few minutes to collect a few valuables, said good-bye to all other belongings (as I then thought) and snatch a hunk of dry bread and lump of German sausage and gulp down some artesian water, it was possible to commence reconstruction work at the nurseries. Nine men reported for duty; the two motor lorries were out on relief work, so we commenced to set things straight. By nightfall every house had received some attention and plants were left as safe as possible, but, owing to the frequency and rapidity of "shakes" the work was beset with many difficulties; no sooner would a house begin to move like a concertina than all the men would dash for their lives for fear of collapse, yet none actually fell. A remarkable thing was that with such an extensive range of glass, very little, not above 500 panes, was broken. It gave with the motion of the shake, proving most pliable. All the houses were stayed with iron, and this was the cause of their safety. However, all glass was loose, and, though tightening up has been done, the whole range must be re-glazed. Actually no stock whatever suffered at all, but damage to plant, foundations, pipe lines, water mains, boilers, offices, etc., is estimated at about £5,000.

So nightfall came, but few were inclined to sleep.

That night, 3rd February, 1931, will always stand out vividly in my memory with mingled feelings of fear and pride. Within a few hours people settled down to a wonderful degree; in the adjacent Nelson Park some 5,000 refugees spent the night; many others lay on the steps and verandahs of their houses or on lawns and pavements,

but hundreds were "up and at it" all night long. Many pianos and gramophones had been rescued from houses, so that the whole night through a sort of impromptu concert was in progress and the sound of music and singing filled the air, while flames leapt into the sky from the burning town. The retort house of the gas works, a few hundred yards away, was afire and was generally expected to blow up, but it didn't. Eventually dawn came.

The roads were lined with relief and food cars coming in and cars filled with refugees going out; all women and children had to leave, and it was rumoured that the whole town would have to be evacuated in three days. During this period the weather was perfect, sunny and dry with clear blue sky, pleasantly warm by day and at night quite mild with clear sky and perfect brilliancy; in fact many nights were as light as day. This weather lasted for about four months, though there were occasional dull periods and showers, yet no wet period set in.

About 7 o'clock the following morning several of our men came along and we immediately organised a water brigade. Tins, buckets and large cans were assembled, barrels were placed along the main walks, and then all water had to be brought from a distant artesian well to supply our needs. However, day by day this was accomplished, and after two weeks we again had town supply water laid on. Believe me, to carry so much water was no joke. Fancy having to carry all the water from the Thames to water the Temperate House! In palms alone we carry a stock of 20,000 in addition to all other glasshouse lines, so one can imagine that the water problem, particularly in Summer, was no easy one, especially with a greatly depleted staff and other work waiting.

It was considered essential to clear our large palm house (127 ft. x 27 ft.) in which some £4,000 worth of stock was accommodated, as it might collapse at any time, so when once all watering was finished everyone set to work and rescued specimen palms first and pot specimens afterwards, together with the hanging baskets of *Nephrolepis* that adorned the roof. In three days this was finished, all plants being graded and set up in other houses. By the end of that week the whole place had an almost normal appearance and a way was clear for definite constructional work to be undertaken, and orders were already being executed. I may say the whole horticultural trade came to our assistance by purchasing all they could and so relieving our overtaxed space.

On Saturday morning, four days after the earthquake, A. C. W. Anderson (Jock) arrived from Dunedin; we had not met since I left Kew in January, 1925, so it was quite a reunion! Strangely enough, we had arranged to go for a motor tour of the North Island together and were to have met at Palmerston on the 14th, but my plans were rudely upset. Anyhow, the car was "missing" and did not turn up for about six weeks. It is greatly to his credit that Anderson

speedily realised that an earthquake area is no place for entertainment and I found him, within five minutes of our meeting, armed with a water pot, going for his life and becoming thoroughly conversant with our stock and conditions. That afternoon and the following day we toured the devastated area in one of our trucks, and from his experience of my driving I was given to understand that he did not regret the abandonment of our tour !

Amongst those who performed notable service at the time was Mr. C. W. Corner, the Superintendent of Parks and Reserves for the district. He had to arrange for the accommodation of some 5,000 persons in the Nelson Park, to find suitable sites for the Canteen, officers' and nurses' quarters for the hospital and to arrange for the burial of the dead who, between Napier and Hastings, numbered at least 250.

When Mr. Corner's wife and family left, it was arranged that he and I should share a tent on the lawn of their house and look after each other in case of need. I readily agreed, and it is from this point that the lighter side of my earthquake experience dates. It was possible for us to give the officials and the people generally many attentions which made a good deal of difference to their personal comfort. For instance, Mr. Corner arranged two tents for nurses away from the noise of the park, and we placed plants in tubs around the canteen and each day cut baskets of flowers to decorate the hospital, canteen and nurses' and officers' quarters.

It is not, therefore, surprising that we in our turn enjoyed many privileges. We never had to line up for food outside the general canteen ; from the first we got our supplies direct and prepared our own meals, and interest in our private camp grew so rapidly that we soon entertained quite a number and had a special catering staff. When Anderson arrived he must have received quite a shock at the manner in which we were living, though for six days and nights we did not have our clothes off. During the two nights that he stayed with us sleep was well nigh impossible owing to the frequent occurrence of shakes, but we had plenty to talk about.

The many reports of privation in the district which found their way into the papers were largely unfounded ; the organisation was admirable, there were ample supplies, not only of food, but also of free clothing and of tobacco. At one period there was a superabundance, for during the first week supplies were pouring in while the residents were pouring out to other districts. It may be of interest to give a rough draft of our usual menu, and it is my opinion that if all landladies could do as well, few of us would wish to change our " digs." As it was so soon after Christmas, cigars were plentiful ; liquor was prohibited from entering the area, but I would not be so rash as to say that the prohibition was entirely effective, though the supply was certainly strictly limited.

HAWKE'S BAY EARTHQUAKE ZONE MENU.

5-30 a.m.—Tea and biscuits.

7 a.m.—Breakfast : Biscuits with hot milk or stewed fruit ; bacon and eggs ; fried fish ; chops or sausages ; bread, butter, marmalade, tea.

10-30 a.m.—Tea, biscuits and cake.

12 till 2 o'clock—Lunch : Cold meat ; one vegetable ; potatoes ; salad ; stewed or fresh fruit ; tea or coffee.

3-30 p.m.—Tea ; bread and butter ; cake.

6 p.m.—Dinner: Soup ; hot meat ; chicken or fish (from Lake Taupo) ; vegetables and potatoes ; fruit, jelly and cream, or sweet corn ; biscuits, cheese and coffee.

9 p.m.—Coffee or cocoa made with milk ; biscuits.

It was not unusual for us to have as many as twenty persons at a meal at our camp ; I was first assistant cook !

All this lasted for but six weeks. After that people began to get back to their homes and the parks were evacuated within four months. The Rehabilitation Committee is hard at work and soon the work of permanent reconstruction will be taken in hand and a bigger and better city will arise from the ruins, as was the case with San Francisco and Tokio. Gas, water and power are now available, but the drainage presents peculiar difficulties ; there is not one perfect drain in the whole town.

One of the principal sports grounds was under water, another was in use as a camp for refugees and the race course was utilised as a site for the temporary hospital. Sports were therefore hard to organize, but the Salvation Army got to work and arranged concert parties and in the less flooded area of McLean Park, in front of the grand stand, a talking picture plant was installed. Within a few days there were free entertainments in the open air for all who cared to come. There were also many private parties, birthdays were celebrated, bridge parties arranged. Altogether we did our best to relieve the situation and I think we succeeded.

Whereas the actual earthquake wrecked many buildings, broke bridges and tore holes in the roadway as much as four feet wide by four feet deep, had it not been for the fire that followed, there would not have been half the monetary loss. Stocks and furnishing which might otherwise have been saved were totally ruined, together with all records. It is notable that brick buildings fared worst, whereas ferro-concrete reinforced with steel stood best. Of course, wooden houses are safest of all. Another important point is that the upheaval occurred by day ; had it come in the dead of night, one fears to think what the loss of life might have been, and at night, without lights and with the roadways trenched, rescue work would have been almost impossible.

This report, though by no means complete or elaborate, is intended to show that, bad as the experience was, it might have been much worse.

BRENDAN P. MANSFIELD.

THE CHARM OF THE MOUNTAINS.

There was a time, just 5½ years ago, when the writer spent his summer holidays collecting Alpines in the French Alps. In the unpleasantness of a dull and watery English winter, the mind harks back to one particular day of that memorable vacation, and swift and strong in the heart comes "the call of the hills"—that curious longing which is known to all who have dwelt in the high places, and wandered for a space over the flower-strewn meadows. Thought travels back, and memories rise unbidden. The pen moves, and tries to interpret some of those beautiful recollections.

There was the chill of the dawn, the hasty dressing in the flickering light of a candle, and the cold douche in water that was snow but a short while before. Then, muffled up in an overcoat, one had breakfast on the veranda of the highest residential hotel in the Alps—nearly 7,000 feet above sea-level, where the temperature is almost tropical by day and freezing cold by night. Then followed the securing of sandwiches, bread, cheese and cake, the adjusting of packs, and a final revision of the programme for the day. When all the details had been settled off we went to the tap-tap of our stout sticks and the murmuring of a distant waterfall.

As might be expected at that time of the day, the grass was drenched with dew and the air had that sharp nip which gives the invigorating vitality so characteristic of the mountain-dwellers. The hills are at their best in early morning, before the heat of the day. Everything is refreshed by the coolness of night; the short green grass of the alps is covered with scintillating drops of moisture, as if in compensation for the floral jewels which will sleep until the warming of air and soil, when they will open their eyes in countless thousands and greet the sun-god with upturned faces.

Though bird life is not there to herald the approach of day with its twittering chorus, as at lower altitudes, the soft air seems to quiver with little noises—with rustlings like the awakening of some great city heard afar off. And as I now sit and close my eyes, the better to visualise that lovely morning, the thought arises that the high Alps are like some mighty organ, marvellous in its range of tone, and played by a master musician whose hands are delicate of interpretation and supremely sensitive of touch.

Softly, with little murmurings and frettings, the theme becomes ever more audible. Slowly the whispering and sighing quickens; the tempo changes to allegretto. Then the full allegro takes up the tale, a lively tune pulsating through the air as the grey light of dawn moves over the hills. Now there is a lull, as the moon sinks behind some jagged peak, shrinking away as if afraid of the sun with his fiery shafts. And then, suddenly, with the all-embracing sweep of the Master's hands, there comes the aggitato, as Nature

breaks forth in a paean of colourful display, a passionate song of triumph, echoing, throbbing and reverberating through the gaunt crags and gorges. Gradually the emotion cools and settles down to a grand andante pastorale, this, after many hours, to fade away into the evening air with a saddened, tender little lullaby, until all Nature's children have fallen into an early slumber, with the cool night wind blowing gently over their nodding heads.

Such are the mountains, and so it is that in the midst of an English winter one can look back and feel again that irresistible thrill—the start of a day's hunting, the long tramps over hill and dale, the scaling of rocky heights and scrambling over the stony debris of moraine and shingle-slide. And all this with but one main object in view—to study the flowers of the hills, and to arrive back at the hotel in the cool of the evening, weary and hungry, but feeling that we are the better for having learned still more of the marvels of Nature. This is surely the finest of all holidays—the combination of business with pleasure.

A list of the plants to be found in this Alpine paradise would whet the appetite of any enthusiastic gardener. But that would be telling the *whole* story, and I will only say that if you want to study one of the two richest floras in the Alps go to the Col du Lautaret (Dauphine).

L.B.C., 1932.

DEVELOPMENT OF SWANSEA'S OPEN SPACES.

SIXTY years ago, Swansea, one of the chief centres of metallurgical industry in this country, was practically without public open spaces, and in this respect compared very unfavourably with other similar towns.

Dense fumes from the works smelting iron, copper, zinc, etc., destructive of vegetation and injurious to human life, poisoned the atmosphere surrounding the homes of the workers. It was therefore more than usually desirable that public parks and recreation grounds should be provided out of reach of the works, to which the people might resort for health, pleasure and recreation.

Thanks to the humanitarian outlook and public spirit of the late Mr. Wm. Thomas, of Lan, who devoted himself whole-heartedly to the advocacy of open spaces and parks, public interest was gradually awakened to the realization of the value and desirability of his ideals. During the succeeding thirty years members of the Borough Council became interested in the project and considerable progress was made in the provision of parks and open spaces. But even thirty years ago, the area of open spaces devoted to public use was little more than 100 acres, and progress was exceedingly slow compared with that which has taken place since then.

During the last thirty years, through the long-sighted wisdom of the Swansea Borough Council in the acquisition of land, development has taken place rapidly, and is capable of continued extension under the technical guidance of the Parks Superintendent, Mr. Daniel Bliss, A.H.R.H.S., the fruits of whose thirty years' labours are apparent in the many beautiful parks, flower gardens, and recreation grounds which are suitably distributed throughout Swansea and its various districts. By carrying out small initial improvements, Mr. Bliss has given the public a taste for more extensive amenities, and the schemes and facilities now in the hands of the Corporation are capable of development for many years to come.

Although chiefly an industrial town, Swansea nevertheless possesses almost unrivalled natural advantages from its situation on a hillside overlooking a bay which, it is claimed, equals that of Naples for beauty. This natural situation, while presenting difficulties in the selection of suitable sites for parks and recreation grounds, yet lent great charm to those parks for which sites were found, such as Cwmdonkin and Llewelyn Parks, which command a magnificent view of Swansea Bay and the opposite coast of Somerset and North Devon.

Of the public parks the largest is Singleton, acquired by the Corporation in 1919 and containing Singleton Abbey, which was formerly the home of Lord Swansea and now forms the Swansea College of the University of Wales. The park has an area of 250 acres and consists largely of undulating meadows with magnificent trees and beautiful walks, while facilities for cricket, football and hockey are provided.

It is easy of access from the main Mumbles Road, from the Bryn Road Tramway terminus and from the Sketty tramway route. Here there is a sea view, pure air, quiet and rest—a happy hunting ground for mothers and children as well as for jaded workers and contemplative minds.

The Educational Gardens and Plant Houses, open free of charge to the public, form an interesting and valuable feature. Close by are the Nurseries of the Parks Department, where every year some 250,000 plants are grown for use in the public parks and gardens. Probably the most beautiful feature of Singleton is the wonderful collection of Himalayan Rhododendrons situated in the rear of the College. Some of these specimens are as high as 30 feet and in the early Spring make a rare and glorious picture.

Another beautiful park, of different type, is that of Brynmill, with its lake and surrounding trees. Here in summer months, model yacht sailing and racing is the delight of young and old.

Victoria Park, which adjoins the new Civic Buildings now in course of construction, lies nearest to the town and is close to the sands. With its bowling green and tennis courts, miniature golf, flower beds and shrubs, this will form a very valuable ornamental fringe of the Civic Centre.

But the most finely situated of the parks of Swansea is that of Cwmdonkin, placed high above the Uplands with a comprehensive sea view. It is beautifully laid out with flowers and shrubs and contains a bowling green, tennis courts, rose garden, a fine rockery and miniature falls. The air here is always clear and bracing, and its chief virtues are elegance and seclusion.

The outlying districts of Swansea are well served with parks and open spaces, most of them being provided with bowling greens, tennis courts, childrens' gymnasia and romping grounds, with facilities for organised games such as cricket, football and hockey. The principal of these parks are Llewelyn Park (40 acres), Morriston Park (41 acres) with its open air baths and newly constructed ornamental lake, Ravenhill (22 acres), completed in the summer, 1931, with its wonderful inland view of the Vale of Llangyfelach, Loughor, Llanelly, etc.

There are in addition more than a score of smaller parks and recreation grounds varying in size from 2 to 20 acres.

A number of development schemes are now in hand or projected, one of them being the reclamation of some 36 acres of low lying marsh land near the sea front, and its conversion into playing fields. When this is completed there will be an unbroken line of open spaces from the Civic Centre to Blackpill, a distance of $1\frac{1}{2}$ miles along the sea front.

The Foreshore, which has been acquired by the Corporation and is controlled by the Parks Department, includes Swansea Bay from the West Pier to Mumbles Head, Bracelet, Limeslade, Rotherslade, Langland and Caswell Bays. Clifflands and fine stretches of sand attract thousands of visitors, for whom facilities for bathing, refreshment and amusement are provided.

It may be that as Swansea declines in its importance as a metallurgical centre it will attain to the position which it merits as a seaside resort, having an expanse of beautiful coast line, cliffs and sands, extending from Swansea to the Gower Coast at Rhossili, a distance of more than 20 miles. Comparatively little development has taken place in this direction, but the foresight of the Swansea Borough Council which is evidenced by the rapid development of parks and open spaces will doubtless lead to the growing recognition of the merits and possibilities of Swansea and the Gower Coast as one of the finest of seaside resorts.

At the present time the open spaces of Swansea include parks, recreation grounds, woodlands, commons and foreshore to the extent of 4,000 acres, while under the present town planning schemes this area will be increased to at least 5,500 acres—surely a very valuable asset towards placing Swansea more largely, securely, and lastingly upon the map.

MALCOLM D. GRAHAM.

COMMERCIAL CITRUS GROWING IN THE MAZOE VALLEY, SOUTHERN RHODESIA.

THIS section of the fruit growing industry in Rhodesia is of comparatively recent date and there seems to be every chance of it thriving and becoming an important source of supply of oranges to England during the months of June, July, August, September and October. The following remarks apply more particularly to the British South Africa Company's Mazoe Estate.

NURSERY.

The seed beds are prepared and the seeds are sown during July (i.e. Winter time) in rows, not broadcast, or the roots would get entangled and the lifting would be more difficult. Owing to the absence of rain during this period the beds are watered at least three times per day, grass mats (native made) are placed about three feet above the beds to protect them from the direct rays of the sun. The seeds begin to germinate at any time between 4 and 5 weeks after sowing; then more water must be applied as the amount required by the seedlings is considerable.

Very little labour is necessary to keep the seed beds in order during the early stages, but later, thinning out must, of course, be done to admit the air and help to make the seedlings more sturdy. At least 50% of these seedling stocks are culled (thrown out) when taken up in readiness for planting out into nursery rows, therefore, many more seeds must be sown than stocks required. The best type of the seedling stocks are planted out into nursery rows, 18 inches between plants and 3 feet between rows, during the rainy season, preferably January and February. The stock used very extensively in this country is the Mazoe Rough Lemon which is found growing wild along the banks of the Mazoe River and is said to have been brought here by the Portuguese many years ago.

BUDDING.

This is usually done between January and April, depending upon the weather; the trees are then ready for transplanting to their permanent positions in the grove during the following rainy season. The budded trees are cut back to within 18 inches of the ground and successive growths are also cut back for the purpose of shaping the tree. After these two prunings have been done no more is found necessary, as the trees themselves attain good shape.

PLANTING OUT INTO GROVES.

The trees are planted on the square system with 24 feet bases and 75 trees to the acre—by this system it is found that cultivation is more easily and effectively carried out. When the rains have ceased, irrigation has to be resorted to and the first is applied 6 weeks to 2 months after the last rain. During the dry season

(Winter) the total amount of water applied should be equivalent to the normal rainy season, which is 25 to 30 inches, and applied in three or four irrigations.

BEARING TREES.

Trees should come into bearing any time after the fifth year, and be in full bearing by the eighth year, after planting into groves. On the stem of each tree there are three numbers in white paint, the number of the grove, row, and tree in the row, e.g. 4—2—12. This method of numbering is found beneficial, as each tree can be recorded and if it is unprofitable can easily be identified and discarded. A rough estimate of the crop each tree is carrying is recorded each year. There are, roughly, 52,000 bearing trees on the Estate consisting of seven varieties, viz.:—Washington Navels (early variety—picking starts in April); Jaffa, Joppa, and Mediterranean Sweet (mid-season, picking starts in June); Valencia Late, Du Roi and Paper Rind St. Michael (late crop, picking starts in mid-July). All fruit is off the trees by the end of September.

PICKING.

About 21 days must elapse after irrigation before the fruit can be picked. The fruit is cut from the tree with a pair of clippers, each picker has a glove on his left hand to prevent him from injuring the fruit and a bag hung over his shoulder into which he puts the fruit. When the bag is full he empties the fruit into a lug box. These boxes are taken on to the centre roadway and thence transported to the packing shed, where they are stacked and allowed to wilt for three or four days according to the variety. This wilting period causes loss of moisture from the skin which tends to toughen it up, thus making the fruit less susceptible to injury during transportation.

PACKING.

80 boys are needed to run a packing shed, but only 22 of that number are actually wrapping and packing the fruit; the remainder are making the cases, strapping, nailing, stencilling and carrying the finished cases to the wagon. The 22 boys (natives are referred to as 'boys') pack 1,000 export cases per day and these are transported by wagons each holding 131 cases. Each wagon is pulled to the station by 16 oxen, and the fruit is loaded straight into a railway truck which holds 960 cases. The average number of export cases per tree from the Valencia Late is 3.3.

MANURING.

Kraal manure (Farm Yard) is applied to the trees directly after the picking has finished at the rate of 8 tons per acre every 3 years.

Artificial-complete fertiliser is applied also directly the picking has finished, at the rate of 1 lb. for each year of the tree's age, but the maximum dressing is 10 lbs.

COVER CROPS.

These are sown between the trees in all the groves at the end of December or the beginning of January and ploughed under just as the blossom is showing, which is usually 6 to 8 weeks after sowing. The cover crops used are Sunn, Hemp, Sunflower, Cow peas and Velvet Beans.

PESTS. Mainly (i) Red Scale, (ii) Aphis, (iii) Thrips.

(i) This pest is controlled by fumigation with hydrocyanic acid gas. The tree is tented and the necessary dose of gas is given. The tree is subjected to the fumes for a period of 45 minutes; (ii) is controlled by spraying with Lime Sulphur and Nicotine; and (iii) by spraying with Lime Sulphur.

ETHYLENE TREATMENT.

This is only in the experimental stages here at present. Its chief use is to enhance the colour of the fruit and to ensure a uniform colour throughout. The sugar acid ratio must be 6.5:1 (mature) before the fruit can be treated with the gas. The fruit is put into boxes in a closed chamber and the gas is forced in twice a day—there are electrical fans installed in the chambers to keep up a constant circulation. The chambers must be thoroughly ventilated before each gassing.

THE DAM.

Citrus cultivation in Southern Rhodesia can only be carried out on a commercial scale under irrigation, owing to the long dry spell in the winter, spring and early summer months. To supply the necessary irrigation water at Mazoe a dam was built across the Mazoe River, where all the irrigation water is collected and stored; this occupied nearly two years to build, the catchment area covering 136 square miles. The wall is 100 feet in height with a depth of water to overflow level of 95 feet and has a capacity of 5,000,000,000 gallons. The actual extent of the dam when full is $4\frac{1}{2}$ miles long by $2\frac{1}{2}$ miles wide at the maximum points. The materials used in construction were 25,000 tons of crushed granite, 13,000 tons of sand and 6,000 tons of cement, all of Rhodesian origin.

L. A. LEE.

BOTANICAL EXCURSIONS, ANCIENT AND MODERN.

SOME months ago I was informed that I had been selected by a party of botanists to act as guide, philosopher and friend on a projected plant collecting excursion to Bedgebury, in Kent, on March 31st, 1931. I immediately began to find excuses, urging amongst other things the inappropriateness of the selection, my age, lack of training, the rustiness of my British Botany, that the last excursions of the kind I had attended were in pre-twentieth century, pre-motor car, pre-women's suffrage, pre-aeroplane, pre-electric train and pre-Dora days, when nomenclatural conflict was confined to individuals, ecology as a special study was still in swaddling clothes, and houses of refreshment remained open until eleven p.m. I argued that March was too early in the year for a botanical excursion, and that March 31st was the anniversary of my birthday and therefore I was expected to spend the day in the bosom of my family.

My excuses were summarily dismissed. I discovered that it was only after mature thought that I had been selected for the position. My rusty botany and lack of training were fully admitted, but such accomplishments were not of vital consequence in such a talented company; both botany and organisation were in the hands of experts. What was wanted was a guide who knew the ground, and one with an honest face who could rise to the occasion and pilot the party past the police in case of emergency. Moreover, the party considered that it would be to my advantage to accompany them. There was a decided tendency for men of my age to get into a rut. I would have an opportunity of observing how modern botanical excursions were managed and how the technique of organisation had advanced since the days of my youth. My suggestions as to the earliness of the year were considered to be frivolous—there would be plenty of plants to collect. One concession was made, the prior claims of my family to March 31st were recognised and the date of the excursion was changed to March 25th. As I could not think of any other valid excuse at the moment I accepted the invitation and was then informed that I need not take any further action, all arrangements would be made for me and I would receive full instructions as to what I was to do in due course. Having some experience of Bedgebury I ventured two remarks (1) there were bad roads on the estate (2) hotel accommodation was non-existent.

The excursion is over and I have been asked to express my opinion on the modern versus the ancient method of conducting such undertakings. I do not feel equal to the occasion. The one I saw with the sight of youth, the other with the vision of mature years. All that I can do is to compare the ancient with the modern and leave readers to form their conclusions as to their merits and demerits.

EXCURSIONS OF ANCIENT DAYS.

Looking back 40 years and contrasting my recollections of incidents connected with botanical excursions of those days with recent experiences, I am convinced that in the old days the subject was not approached with the same seriousness the occasion warranted. Too much was tried. The botanisers I had to do with were a happy-go-lucky crowd, and were prone to mix business with pleasure; incidentally they also tried to bring a little colour into the drab lives of residents in the immediate neighbourhood. The prevailing idea was that botanical excursions could be more conveniently and profitably held during summer than in winter or early spring, days were longer and warmer and more plants rewarded the seekers. Perhaps the idea was wrong; I am open to conviction. Casual excursions took place any evening commencing as early as possible after 6 p.m., but one evening a week was set apart for a special excursion, and on two afternoons a year half-day excursions were undertaken. I will first describe the special evening excursion. The party started 30 or 40 strong headed by a conductor of mature years. Ladies were barred. The days were before women had come into their own—I fully admit our mistake. The ground traversed depended very largely upon the activity of the conductor, but, wherever the place, collecting only ceased when it became too dark to distinguish one plant from another. On the turn for home the more seriously minded conductors faded away—one or two stuck it out manfully and only left with the break up of the party. A cornet was produced from one vasculum, a flute from another, and with proper working knowledge almost as much noise could be extracted from the vasculums of the others as from a similar number of kettle-drums and the "music" was even more penetrating. We wore no uniform but most of the party wore Tam-o-Shanter hats—it was a fashion of the day. I had a beautiful brown one crocheted by my landlady's daughter. That we were very popular and that our efforts were highly appreciated was evident from the crowds that appeared in doorways immediately the "band" was heard. Sometimes instrumental music gave place to vocal efforts. I never learned which was most enjoyed, but the party acquired the title of "those mad students." Arriving back vasculums were emptied on bedroom floors, presses placed on beds and some 20 or 30 specimens added to collections.

Afternoon excursions were on a grander scale. The party left about 12 o'clock accompanied by a swagger conductor. On arriving at the base of operations the first business was to locate a likely place for tea and order tea to be ready about four hours later. Work then began and after the years that are gone I look back with very great pleasure and profit on those two delightful afternoons a year spent in the beauty spots of Surrey, Kent or Middlesex; the conductors, C. H. Wright, N. E. Brown, the late R. A. Rolfe and dear old J. G. Baker, in turn, doing all in their power to give us a good and profitable time. Mishaps sometimes occurred. There was one at Chislehurst, in 1892. The usual excitement about tea

was apparent as the party left the station but there was a division of opinion as to whether the best tea for the money could be got at a teashop or at an hotel. Finally the hotel supporters gained the day and two men were deputed to place the order. They selected the biggest hotel they could find and ordered tea which was to cost 1/6 per head, payment in advance. After some four hours' collecting, with dinner left between six and seven hours behind, the party returned to the hotel to find a sort of afternoon tea, thin bread and butter, lettuce and tea. Plates were emptied in the twinkling of an eye and more bread and butter called for; it came and was gone before the waiter could leave the room, and he was given the empty plates and asked for more. He returned with a small quantity, hurriedly retired, and could not be recalled. One man undertook a tour of investigation and lighted upon a maid servant who took pity on him to the extent of a loaf; after that we could get no more, so we retired to a cake shop and bought all the buns.

We had bright experiences each time that N. E. Brown took us to Reigate. He had an old friend there who understood youths and could make them appreciate his worth. He met us at the station, accompanied us whenever he could and invariably gave us a first-rate tea before we undertook the return journey. On such occasions N.E.B. let himself go, telling us tales of his youth; he must have been a sad dog in his young days. I remember one story concerning the local carrier's cart which was one morning found in the village pond. The gate was too narrow to admit the cart or to bring it out, therefore, after studying the situation, the carrier decided to take a holiday. Throughout the day he turned a deaf ear to the advice offered by his many friends, but in the evening when the youth of the village and of Reigate College assembled he freely gave them permission to get the cart out if they could. They immediately removed the wheels, turned the cart on its side, carried it out and replaced the wheels. The only remark passed by the carrier was "I thought that if I waited long enough I should find out who it was put that cart in the pond." We could never get Mr. Brown to admit that he assisted in the escapade but we gained the impression that he liked us to think that he was a ringleader.

So much for botanising excursions of old.

A PRESENT-DAY EXCURSION.

I have already stated that on the excursion I attended I was exempted from all preparatory work. The day before the excursion I found that organisation was complete. I was informed that a car would arrive for me promptly at 8 a.m. and was warned that I must be ready for an immediate start as a few minutes delay would disorganise all arrangements. Starting from the Herbarium at 8 a.m. with three members of the party, a fourth was to be picked up at Worcester Park at 8-15 and Bedgebury would be reached by 9-30. I asked the question "why the hurry?" and volunteered the information that other times when I had gone to Bedgebury by

road I had not reached the place before 11 a.m. I was informed that this was an important visit and as long a day as possible was required for the study of the natural flora and to collect specimens. A great impression was made upon me when I found with what care intricate mathematical calculations had been made, to determine the time a slower car carrying other members of the party must start, in order that the cars might reach Bedgebury simultaneously.

I was ready at 7-55 a.m. and another member of the party arrived at 8. A bitter east wind blew and the sky was overcast. There was time to consider these signs, for the car did not arrive until 8-15. It was an open car loaded with vasculums, a press, drying paper, cameras, a vessel or two containing—or said to contain—oil and petrol, packets of food, and a rope. I was able to give a use to most of the articles but had to ask "why the rope?" The information was forthcoming that a rope was always handy on a botanical excursion and that it might be necessary before we got back to tow the lower powered car with the ladies. I could not exactly divine what was to be done, whether the rope was to be tied round the car and the ladies and the lot hauled back in triumph, or whether it was thought that the car might become too much for the ladies or the ladies too much for the car, but let the matter pass as I thought the time inappropriate for seeking an explanation. I was told that the rope was a very strong one, that it was a mountaineering rope suitable for anything, but that unfortunately the owner had forgotten his iceaxe. Before we could get away the driver found that he had to pack away accessories to make room for passengers. That meant packing and repacking several times which, with the necessary attention required by a refractory tobacco pipe, ran away with 12 minutes. Being exempt from organisation I had time to turn my experience gained through standing half-an-hour in the cold wind to good account, for I crept into the front of the car behind the windscreen on the plea of sitting near the driver in order to point out the road. On drawing attention to the time-table I was informed that the car was an ex-racer and that we should make up for lost time. My foresight in getting behind the wind-screen stood me in good stead when we finally got away about 8-30 and the driver began making up for lost time. He drove like Jehu of old. Some 15 minutes later the fourth member of the party—looking very pinched and cold—was picked up at Worcester Park. He remarked that "it was a cold morning" and the passengers in the back of the car agreed with him. Our driver, however, was optimistic, he was sure that the day would clear and become very warm, that we should not be long in covering the 50 miles or so still to cover and that we should have a very pleasant run. We got on very well for about 300 yards when the car suddenly stopped in the middle of the tram lines opposite the police station from which two policemen were emerging. Perhaps the car may have become familiar with police stations in its racing days, and stopping there was a habit; who knows? Whatever the reason I was thus able early in the day to appreciate the wisdom of the organiser in selecting me to attend the excursion, for immediately the police saw me they

smiled and passed on. Our driver's comment was "petrol gone," then, after a pause, "never mind, I have a gallon tin of petrol on the running board which will be enough to carry us to a filling station." Unfortunately the tin was found to be empty, therefore we all got out and pushed the car to the petrol station. After filling the tank the driver discovered that he had no money, in changing his clothes he had forgotten to change his money; therefore he was short of both iceaxe and money. As there was money amongst the party we got away with the petrol and, after the driver's pipe had received attention, we started on our way and made excellent time, 45 miles an hour through the damp clinging mist on Banstead Down, 50 miles an hour on straight roads, finally reaching Tonbridge about 10-20. There the passengers in the back of the car turned rebellious and would go no further until they had partaken of hot coffee. We had been in a cafe but a few minutes when the ladies arrived with the slower car. They looked very pleased with themselves after a comfortable journey in a closed car fitted with hot water bottles and other comforts. I regret that I cannot give an account of this car. All that I remember is that green was very prominent. After drinking coffee and comparing notes we got away and during the next 15 miles I had time to contrast past and present. In one item the present appeared to be decidedly in advance of the past. I thought "how much pleasanter our homecoming might have been had we encouraged ladies to accompany us on our excursions. What could have been pleasanter than to walk quietly home on a moonlight evening with a pretty companion, discussing the merits of our respective collections and exchanging specimens of *Myosotis*."

The party arrived at Bedgebury about the old time—a little after 11—and after parking the cars botanising began and continued for some time. The bag was *Ranunculus Ficaria*, one; Coltsfoot, one; Mosses, two; Lichen, one; *Hypericum*, one (in seed), special; Fungi, two. The ladies told me that they had really made the journey to see the place, not to botanise. The men seemed to be fairly well satisfied but thought that the original date would have been a better one for the collecting of plants.

The ladies expressed a wish to start the return journey at 3 p.m. They got away at 3-15 and took one of the male passengers with them. They offered to take me also but I excused myself. Even I could not look forward with unalloyed pleasure to nursing two ladies for 62 miles, moreover after I have begun anything I like to see it through, and I felt that I was under an obligation to my own driver. Meanwhile he was lost and was not found before 3-40. He expressed surprise at the disappearance of the ladies and his other passenger but consoled himself with the belief that he would catch them up at Tonbridge where they were to stop for tea. Before beginning the return journey, however, he decided that he would like to take back two young Scots pine trees for his garden. He set about digging them up with a trowel. I have seen many

Scots pines lifted out, never before have I seen a man sit down with an outstretched leg on each side of the plant, delving away with a trowel! In fact I became so interested in the operation that I omitted to indicate a spade standing a few yards away. The work took 20 minutes; then to the car to begin the return journey. There was a good deal of packing and unpacking, and during the wait—with a vivid remembrance of the outward journey—I took the opportunity of adding the whole of a copy of the "Daily Telegraph" to my apparel. At last we were ready but the car was not. The engine had become very cold and would not start by the ordinary means. The driver remembered that it would sometimes start if the car were pushed downhill, therefore our back passenger got out and pushed the car downhill, but to no purpose, the hill was not steep enough. I suggest in passing that another time the car be left by the farm then advantage can be taken of the steeper hill ending at Marshall's Lake. The driver eventually got out, did funny things to the engine, and after winding it up it eventually started. The discovery was then made that the number plate was loose and that had to be secured. We got away at 4-35, which the driver said was a very early hour to start the return journey, but we could stop and botanise on the way. Arriving at Tonbridge we stayed for tea. The ladies had "tea'd" and gone. The driver took the opportunity of running the car to a garage for repairs. Tea over we reclaimed the car and packed ourselves away, when the driver discovered that he wanted oil and that oil he must have. We unpacked, found the attendant, but had to go elsewhere for oil. The driver then gave his pipe attention and we started, the driver informing his passengers that after calling for oil he thought that we might get on as far as Sevenoaks and then botanise. His comrades tried to dissuade him against botanising, saying that it would be doubtful whether there would be any plants to collect. He was, however, optimistic and thought that at least we might explore for water babies. We called for oil, the replenishment took two minutes; attention to the driver's pipe took 20 minutes. He had no pipe cleaner and he had forgotten to bring the next best thing, a pocket knife. He refused the offer of a knife, preferring to stir his tobacco with matches. Many broke under the strain and little good was done. He deplored his lack of foresight in leaving his iceaxe at home for it made a very good substitute for a pipe-cleaner in time of emergency. In the end he accepted a knife. The tobacco that came from that pipe was a revelation. At last the pipe drew well and we made another start at 6-20. At Sevenoaks our driver reluctantly gave way about botanising and continued the journey. Our back passenger was by this time feeling the cold and he passed several quite rude remarks. During the next few miles I meditated upon botanists, pipes and pipe cleaners, and a scheme occurred to me whereby an absent-minded botanist might always have a pipe-cleaner at hand. It must be an adjunct to some article he cannot forget. I thought of his braces but he might change into a belt; his mountaineering rope was thought of but that might be in use for towing purposes; his iceaxe is liable to

be forgotten. At last I decided that a simple adjustment to his vasculum would be most satisfactory. As the cleaner would primarily be a botanist's cleaner it must be appropriately named and be subject to the rules and regulations governing nomenclature. A botanist could not sanction anything else, even though upon occasion, following deep industrial research, it might mean that the name of his favourite pipe-cleaner had suddenly to be changed from the well known and appropriate one of *Pipecleania vulgaris*, given by the elder Smith, to the obscure name of *Vacuumcleania Yourfoulpipeana* given three days earlier by the younger Brown.

It must not be imagined that my train of thought was undisturbed ; it was not. Every few minutes the driver remarked upon the pleasant evening and the balmy atmosphere. The back passenger did not agree and was rude enough to say that it was damn cold. The driver was unruffled, merely asking whether he should stop and let the chilly man run about or sit on the radiator for a while. The remarks of the rear passenger at this juncture led me to the conclusion that although a man's scientific attainments are beyond reproach, he may be lamentably deficient in his perception of the psychological effect of curses. Curses should be used with discretion. At times they are stimulating, at others depressing in the extreme. I am convinced that in a case such as led to this digression, a light and airy ballad—or should the spelling of ballad include the letter r?—trolled in care-free voice, would have been more inspiring than lugubrious epithets.

Without adventure we reached the outskirts of Bromley. Our route should then have been through Bromley, past the Crystal Palace, through Penge, across Clapham Common and home. But the owner of the car knew a better and nearer way. Just a turn to the left round Croydon and there we were, or should have been. A left turn was taken and after taking numerous other turns our driver began to cast anxious glances at the signposts. He then asked a policeman the way to Croydon, the answer was that all we need to do was to go back a few miles on the way we had come and take various turnings. We did all that and eventually found ourselves on Hayes Common. Our driver then thought that he would like to take us to Sanderstead Church ; I think that a rare moss or lichen grew on the steeple, or was it the tower ? In the end we got there and found out the real reason for the rope. Our driver-botanist had designs on that moss or lichen. He was eventually persuaded against an attempt at scaling the church roof, as we had no iceaxe. As we proceeded, so our driver's optimism increased ; his earnest endeavour was to impress upon his passengers the beauty of the night, the balmy atmosphere and the pleasant drive. He even threw off his hat to cool his brow, and I think that I am right in stating that upon one occasion he burst into song. The hill to Banstead Common was taken at 45 to 50 miles an hour and we got on well as far as Cheam, arriving there at 8-5. The driver

then thought that his gears needed attention, but upon examination he found that the back axle was giving trouble. I was informed that it would mean a visit to a garage and as I seemed to want to get home early I had better take a bus to Worcester Park Station, then a train to Kingston, another to Richmond and a bus home. As it happened I saw a bus marked Kingston Garage so I took that, then a bus to Kew and arrived home at 9-10 after a most entertaining, if cold, day. At the time I left Cheam I was not certain whether the breakdown was genuine or just an excuse for botanising. However, there seemed to be nothing about but 'daisies' and in the end I found that my suspicions were unfounded. As I stated, I got home at 9-10, where in Pepys' words, I found a mighty fine supper waiting which I ate, then a hot bath and to bed.

P.S.—I learned that my companions garaged the car, then followed me by bus, arriving home at 10-20.

P.P.S.—The ladies—after an uneventful journey—were back in time for 7-30 dinner.

P.P.P.S.—In the event of any further excursions being arranged, I consider that there should be a definite understanding that the ladies with their car should remain within easy distance of the other car in case they are needed for towing purposes.

W.D.



TWENTY YEARS ON THE WEST COAST OF AFRICA.

MR. T. HUNTER, who left Kew in October, 1911, retired from the Department of Agriculture, Gold Coast Colony, on October 31st, 1931, and the following reminiscences will doubtless be of considerable interest to our readers.

In the year 1911, twenty years' service on the West Coast of Africa was considered rather unique, but conditions have so greatly improved that with reasonable care there is little to be feared by Europeans who reside there for periods of from 12—18 months at a time, with a home leave intervening. The climate is all against longer periods of residence, and the change to temperate zones is absolutely essential, but the unenviable reputation the country gained (and rightly so) has long since been disposed of, as tropical diseases have been better understood and sanitation improved.

The following records of Kew men on the Gold Coast are of particular interest :—

A. E. Evans, retired 1922, after 22 years' service. W. H. Patterson, retired 1929, after 18 years' service, in addition to a previous 10 years in the British West Indies. A. B. Culham, W. C. Fishlock and T. Hunter, in 1931, after 21 years, 12 (and 18 years in the British West Indies), and 20 years' service respectively. Furthermore the true pioneers of the 'nineties must not be forgotten, namely, W. H. Crowther who died at Aburi, in 1895, after only 5 years' service, T. W. Brown and C. H. Humphries who spent a few years out on the "Coast" and were compelled on health grounds to retire, and W. H. Johnson, who afterwards became Director of Agriculture in Nigeria. Kewites who are still carrying on the good work of their predecessors are A. C. Miles, with 22 years' service and G. H. Eady, 19 years; and R. Band who left Kew in 1908 and is now interested in commercial work on the Gold Coast. E. W. Morse died in 1917, at Cape Coast Castle after a period of 5 years' service in the Department of Agriculture. In these notes it must not be overlooked that the late Assistant Director, Dr. T. F. Chipp, also spent a period of 5 years in the Colony, during which time he too did much valuable work. Surely Kew and Kewites have rendered inestimable service to the Gold Coast Colony! Conditions though, have changed very considerably during the last 20 years. Now to continue with the narrative!

"I well remember my first landing at Accra, the capital of the Gold Coast Colony, with instructions to proceed to Aburi, some 26 miles distant, a journey by hammock carriers occupying about 8 hours. In those days there were few roads safe or suitable even for cycling, and motor roads were only just being thought about. If my memory serves me rightly, there were 2 cars and 1 motor lorry in the entire Colony in 1911, yet to-day they are numbered in

thousands. My first journey, to say the least of it, was exciting. After getting acquainted as well as circumstances would permit with the 14 hammock men and carriers that were sent to meet me, I started off. We had only covered a mile or so when the hammock broke down and I had to put back to Accra for the night. There were then no hotels and my carriers could only speak a little pidgin English. At last I got into touch with the Director of Education, who, hearing of my troubles, took me in hand, gave me a comfortable shelter for the night, and started me off on my journey next day.

In those days it was remarkable, but nevertheless true, that rarely did anyone from any department meet a new arrival to the Colony; he was expected to find his own bearings, with the assistance of any native messenger that was available. In spite of this cool reception in a strange land, it was soon evident that hospitality was not lacking and that a European's house was always open to all comers. Such, then, was the experience of a new arrival some twenty years ago, but to-day things have changed with progress. There is little difficulty to-day in finding one's way about, and railways and modern motor cars serve the whole of the Colony.

I arrived at Aburi on a Saturday night just at dusk, and on the following Monday I had to take charge of the Agricultural Station from the officer who was proceeding on leave the following day. When it is considered that little special preparation was received by the Kewite for his future work in the early days, it speaks volumes for the Kew system of training, that so many have held their own as they have done. In most cases there was no one to give them practical advice in their new surroundings and they had to act on their own initiative and work on lines of their own.

To-day the newcomer from an Agricultural College or a University first receives a course of training at the Imperial College of Tropical Agriculture, Trinidad. On arrival in the Colony before taking over an appointment he is always placed with another officer for a considerable time so as to acquaint him with his duties before ultimately being sent out on his own. Even then he is always in close touch with someone who can come to his assistance with help and advice on difficult matters.

During the first ten years of my service practically all travelling had to be done on foot or cycle. To-day there is scarcely a village more than three miles from a good motor road, so that motors are used at all times. Naturally one does not get into such close contact with the people as formerly, and I look back with real pleasure to the early days, when as a pedestrian I was able to be closely associated with the inhabitants. There was a better understanding between the people and ourselves which is not so evident to-day with the advent of modern means of locomotion. The native is always suspicious of modern developments and it takes time to gain his confidence.

I have been in charge of the Agricultural and Forestry Training Centre at Kumasi (Coomassie) since 1922, an account of which appeared in the 1926 *Journal*, and in addition, during the last four years, I have had to supervise the Agricultural sections in Ashanti. I spent 17 years in Ashanti with Kumasi as my headquarters. This town has made marvellous progress, particularly during the past 10 years. Naturally I took special interest in the lay-out of the town, and helped wherever possible with tree planting, etc. The Residency garden was laid out under my direction and has developed into a really fine area which is much appreciated.

During the last 30 years progress in the Colony has been steady and the natives are taking more active interest in Public affairs. Energies formerly dissipated in internecine quarrels and wars are now directed towards the peaceful occupations of farming and trade. The extension and development of railways and roads have had no mean share in bringing about this desirable state of affairs. Progress is most marked by the cultivation of cacao, often called a romance. In 1879 a native of the Gold Coast brought a few seeds from the cacao fields of Fernando Po and planted them near his home. These plants prospered, the Department of Agriculture realised the future before them, and the cultivation spread from village to village throughout the Gold Coast Colony and Ashanti. The exports of cacao in 1900 were about 60 tons, to-day over 200,000 tons! This prosperous industry speaks volumes for the native farmers and furthermore of the useful work of the Department of Agriculture. The Gold Coast can now boast of being the largest cacao producing area in the world and supplies about one-third of the entire world's needs.

This great industry has been built up by the peasant farmers, mostly illiterate; they can therefore be spared any remarks regarding their shortcomings as to the preparation of the product and their crude methods of cultivation. In the past very few native youths have taken up cacao farming as a livelihood on leaving school, but it is to be hoped that with the provision of special courses of instruction and the admirable accommodation now available through the generosity of Messrs. Cadbury Brothers, this state of affairs will be altered, and numbers of young farmers will be trained on progressive business lines in the near future."

The following paragraphs are reproduced from West Africa (June 13th, 1931).

At the end of April, the Hunter Hostels at Kumasi were formally opened, and provided the occasion for a triple tribute unique in character—to Messrs. Cadbury Bros., Ltd., the donors of the hostels; to Mr. T. Hunter, an Agricultural Officer who has always remained constant to the necessity of close contact with the African farmers and who is known for his successful adaption of simple scientific

agriculture to the needs of the people, his excellent understanding of African people and his hospitable and kindly nature, and whose retirement is a loss to European and African friends not easily to be made good ; and last and not least, a tribute to the African people of the Gold Coast for whom the hostels are intended.

About a year ago, Mr. William Cadbury paid his second visit to the Coast accompanied by Mrs. Cadbury and his eldest son Mr. John Cadbury. Mr. William Cadbury visited the training centre and was greatly impressed by the work done by Mr. Hunter and his staff. Whilst he was discussing with Mr. Hunter problems affecting the work of the training centre, the lack of accommodation for farm students was mentioned. On Mr. Cadbury's return to England he put the matter before his fellow-directors, with the result that an immediate offer was made to his Excellency, the Governor, to meet the expense of erecting these buildings. They, moreover, recommended that as a tribute to the devotion which he has paid to his work and students Mr. Hunter's name should be associated with the buildings. A tribute well and worthily earned, and welcomed not only by his colleagues in the Agricultural Department but also by his many friends, as the good work which Mr. Hunter has given to his Department and to the Agricultural Industry is well known to all.

The Chief Commissioner said in his speech :—" This is a unique occasion. We are met here to receive from a great firm a gift for the benefit of the people. It is also unique in that the name of a Government servant is associated with the gift. It is exceedingly appropriate that Mr. Hunter should be honoured at present as he shortly retires to a well-earned rest. Mr. Hunter's name will live amongst the people of Ashanti for his new ideas on the cultivation of crops and their economic development. Messrs. Cadbury are well known for their munificence and those of us behind the scenes know that not only agriculture has benefited through their generosity. On behalf of the Government I accept this gift and ask Mr. Ellis to convey to the firm our thanks and congratulations."

The Deputy Director of Agriculture said :—" I wish to express the regret of the Director of Agriculture for his inability to be present through ill-health. I am grateful for the opportunity which this gift will give my Department of furthering the fine work which has been done at Cadbury Hall. Cadbury Hall has in the past been used mainly as a training centre for the overseers of the Department and it is significant that 62 of the 80 men of our junior staff have been trained by Mr. Hunter. The work of students at the Hunter Hostels will be of a different nature. Here we propose to have practical courses for farmers and intending farmers. The courses have not yet been worked out in detail but the most important will be one for would-be farmers. There are one or two difficulties which have to be faced in this. Such schemes in other countries have not always been successful because the youths have not had the necessary

capital or land to begin farming operations on their own account. We must make sure that students taking the courses have already both of these, or are guaranteed them by friends or relatives.

Another suggested type of training is a short course for actual farmers. Officers in this Department are now getting into close touch with the people; they find in every village good and bad farmers. The good farmers are already an example to their neighbours but it is possible that with a short training they would be of even greater value, as practical demonstrators of the value of improved methods of agriculture.

Mr. Hunter is now in his 20th year at the Gold Coast and has been in charge of the training centre since its inception in 1922 and has watched its growth to its present state of efficiency. He has seen the learners' quarters built, the fine main building Cadbury Hall (the gift of the donors of the present building) and finally the Hunter Hostels. The reason for Mr. Hunter's success has been his extreme keenness and interest in his work, and the fact that he has always tried to instil into his students a love for farming well done.

On behalf of the senior officers of this Department, all of whom have benefited at one time or another by Mr. Hunter's knowledge and ability, and on behalf of the junior officers, most of whom have been trained by him, I congratulate Mr. Hunter and rejoice with him that his name will be perpetuated by these hostels."

Mr. Hunter in his reply said :—" I would like to express sincere thanks to Mr. Ellis as representing his firm for the honour done me in connecting my name with the buildings now being opened. I have completed 19½ years' service in the Department, most of which has been spent in Ashanti. My relations with Europeans and Africans have been very happy, and it is with feelings of regret that I shall be leaving you shortly.

In the use of the present buildings I hope we see the foundation of a scheme which may have far-reaching results so far as agriculture is concerned. If this scheme proceeds satisfactorily we shall set up a new type of farmer, trained on business lines. Such farmers will be able to assess their work at its true value with much better results, and in their work they will set an example for others to follow."

THE ASSOCIATION OF KEW GARDENERS IN AMERICA, 1931.

THE Association of Kew Gardeners in America held its Annual Meeting and Dinner at the Hotel Brunswick, Boston, Massachusetts, on Saturday, March 21st, 1931, this being the last day of the Spring Flower Show of the Massachusetts Horticultural Society.

The Secretary felt somewhat more pleased with the attendance this year which was very encouraging. Those present were J. McGregor, J. Brown, E. J. Mische, W. J. Ing, H. E. Downer, J. H. Watts, E. K. Thomas, T. H. Everett, A. J. Thornton, J. A. Semple, Mr. and Mrs. J. Ellis, Mr. and Mrs. W. H. Judd, with two guests. After supper the spirit of good friendship prevailed, and impromptu discussions took place on various horticultural topics.

Mr. Mische, who has spent some years on the Pacific Coast, reviewed conditions for gardeners in those parts, and emphasised the necessity for the tenderfoot forgetting most of what he already knew on migrating there, at least for a time, and starting all over again by slow adaption to prevailing conditions when his previous foundation will eventually raise his standing as time proceeds. In other words, he will have to prove his worth before advertising his abilities. Mr. Mische recalled how, on leaving school, he planned his future career, and decided to go to the Missouri Botanic Gardens at St. Louis, the Royal Botanic Gardens at Kew, and the Arnold Arboretum, Boston, to get his training. At St. Louis under Dr. Trelease, he met George Nicholson at the St. Louis Exposition, which led to his going to Kew, and from there it was a simple matter in those days to get to the Arnold Arboretum. From this latter place he later joined the landscape firm of Olmsted Bros., of Brookline, Mass.

The feeling prevailed that there was still plenty of opportunity for the professionally trained gardener, and Mr. Everett felt that there was little to fear from the technically trained man who usually found his place in the Institutes for research and such like experimental stations, although it was advisable for the practical man to acquire all the scientific knowledge he could.

On the motion of Mr. Mische, "It was agreed that this meeting puts on record that with the death of Dr. E. H. Wilson, on October 15th, 1930, Kew has lost one of its most noted sons, and Kew men everywhere have lost one of their shining examples of what tact and perseverance will do for those who answer to its call. Dr. Wilson always held for Kew a feeling of filial respect, and was always eager to meet and know Kew men, endeavouring in his travels about the world to get into touch whenever possible with any in easy reach. He was likewise always ready to give good advice to any of us who called on him for it, and we sincerely regret that he should have been called away when in the midst of his usefulness." Mr. Mische recalled his days at Kew, when Will Hales, of Chelsea, E. H. Wilson and himself shared rooms.

Mr. J. Brown moved, and the proposal was seconded by Mr. T. H. Everett, that the Association should hold its next meeting in New York, on Saturday evening, March 19th, 1932, on the occasion of the New York Spring Flower Show, and eventually to alternate with Boston.

It was unanimously agreed that the evening had been a very enjoyable one and a great social success.

There is still a balance in the hands of the Treasurer of 21 dollars, as funds of the Association.

WM. H. JUDD,
Secretary-Treasurer.

THE ASSOCIATION OF KEW GARDENERS IN AMERICA (1932).

The most successful gathering of old Kew men ever held abroad took place in New York City, March 19th, 1932, at the Roosevelt Hotel. It was the last day of the International Flower Show at Grand Central Palace and came as a fitting climax to that affair. Dinner was served at 6-30 p.m. and forty-one sat down including Kewites' wives and a few invited guests.

Mr. M. Free presided and in his welcome to those present thanked all for the co-operation shown on this occasion and stressed the value of men in the States keeping up the traditions of Kew where we are held in high esteem in the Horticultural profession. He referred to many of those there that night as examples. Mr. Free and Mr. Downer landed at New York just twenty years ago on March 20th so he felt at least two were celebrating.

After dinner a distinguished guest was called upon in the person of Mr. T. A. Weston, Assistant Editor of the "Florists Exchange." Mr. Weston expressed his appreciation at being invited to such an interesting meeting, and while not a Kewite, was at least familiar with a large number and eloquently rambled on about old friends of his in England known to many of those present. Years ago as Associate Editor of "The Gardening World" he was well acquainted with Mr. John Fraser. His association with the late John Wright and his two sons, Horace and Walter P., when Associate Editor of "Cassells Popular Gardening," together with his friendship with George F. Tinley and C. H. Curtis of "The Gardeners' Chronicle" proved very edifying to some of us.

Mr. Weston said that gardening should be to all of us as it had been to him, a pleasant way of enjoying life and getting the most out of it. He mentioned the splendid compliment given to Kew and Kew men by the Vice-Consul, Mr. Campbell, at the Judges' Dinner on March 14th. Mr. Weston proved to be a versatile speaker, ending his remarks with a witty poem, "The Gardener's Lament" or such would be a fitting title for it.

Another guest, Mr. J. G. Esson, who at the Show had deservedly been awarded the Gold Shield of the Holland Bulb Exporters Association spoke of his pleasant associations with Kew and Kew men especially our mutual friend Mr. J. Coutts.

After the reading of the Minutes of the previous meeting by Mr. W. H. Judd, which were approved, the meeting fell into a general discussion on various topics which showed no lack of enthusiasm, born in Kewites from their early days in the class room of the Kew Mutual. Mr. Free considered this meeting so successful that it would be fitting, in future, to invite our neighbouring Kewites from the West Indies to join with us. The Secretary would be glad to get some opinions on this proposal from our friends in those parts either direct or through the Kew Guild Journal.

Mr. J. Lambert who first suggested such a reunion in 1909, was impressed that at last results were coming to a head, and emphasized the importance and necessity of earnest endeavour being made that at last started pleasantly the continuance of these Meetings as annual affairs be assured, and the Secretary hopes that those who failed to appear this year will make every effort to be with us next (at least twenty more could have been present).

Mr. E. J. Mische who spoke of the value of Kew influence in the United States and its contribution to culture and fine arts here, spoke as a native born son and suggested the publication of a bulletin that could be circulated among all the Kew men in America to unify us in a closer degree, and this idea Mr. J. Jennings heartily approved. Mr. Judd did not wish to see the Kew Guild Journal suffer through any effort of this kind and emphasized the importance of those not already life members of the Kew Guild promptly becoming affiliated. However, the feeling was that such would not interfere with copy to the Kew Guild Journal. This question will need more discussion at our next meeting.

Mr. Judd felt that the idea of alternating with Boston after the response that night, would be detrimental to the best interests of the Association and on the motion of Mr. Everett, seconded by Mr. Lambert it was agreed to hold the next meeting in New York in 1933 on the Saturday evening of the New York Show.

Some discussions arose relative to expenses incurred by the Secretary in arranging for the meeting in session and which Mr. Judd felt was uncalled for, but he was overruled, Mr. Mische feeling that dues paid would lead to more usefulness among Kewites, whereby prominent outside Horticulturists could be invited to our gatherings, and eventually it ended by a motion of Mr. J. Ellis, supported by Mr. Jennings that each Kewite present pay One Dollar before leaving the table. Mr. Judd felt that this was an assessment tax on those present to the advantage of those absent. However, the sum of Twenty-four Dollars was collected.

As a diversion Messrs. Free and Downer gave the ancient and modern rendering respectively of "The House that Jack Built,"

receiving great applause, after which remarks were called for from the oldest and youngest Kewite present. Mr. Otto Liden said that he waited a year to get into Kew and never regretted the time spent there, for the value of those days meant everything to him in later life, he left Kew in 1886. Mr. N. E. Flitters who left Kew as recent as 1930 spoke of his pleasure at being present and hoped eventually to aspire to the same position in this country some of those already had accomplished.

The tables were decorated with Columbia Roses and Asparagus Fern, generously donated by the seed house of W. E. Marshall & Co., of New York City.

Now, of course, all the readers wonder who were present that were contemporaries of theirs so that pleasure is left to the finish. No list of those present at the Kew Guild Dinner of 1928, 1929 or 1930 were printed in the Kew Guild Journal. We wonder why, and would prefer to see it renewed. However at New York we noticed C. J. Agate, Robert Barton, Mr. and Mrs. J. H. Beale, J. Birkentall, Mr. and Mrs. S. R. Candler, G. Coombes, Mr. and Mrs. E. S. Dodd, H. E. Downer, J. Ellis, Mr. and Mrs. T. H. Everett, Mr. and Mrs. N. E. Flitters, G. W. J. Ford, Mr. and Mrs. M. Free, O. F. A. Higgott, W. J. Ing, Mr. and Mrs. H. H. Jarman, A. J. Jennings, W. H. Judd, J. Lambert, Otto Liden, E. J. Mische, R. L. Roehrs, A. J. Thornton, Mr. and Mrs. J. H. Watts, T. A. Weston (guest), J. G. Esson (guest), with seven other friends.

Condolences on behalf of this Association were conveyed to the widow of our esteemed friend the late Mr. T. W. Taylor, Curator of Kew, who passed away March 4th, 1932.

Our felicitations and good wishes were also conveyed to the recently formed Association of New Zealand Kewites whose first meeting took place at Christchurch, N.Z., on January 27th, 1932.

Kewites in America also sent their congratulations to Mr. J. Coutts on his appointment as Curator of Kew to succeed Mr. T. W. Taylor.

Balance in hands of Treasurer	...	...	...	...	\$21.00
Income at Dinner	...	...	...	...	\$24.00
					<hr/> \$45.00
<i>Less</i>					
Incidental Expenses of Secretary	...	...	...	\$6.25	
Dinner for T. A. Weston	...	...	...	3.75	
				<hr/>	\$10.00
Balance held in trust, First National Bank of Boston	...				<hr/> \$35.00

W. H. JUDD,
Hon. Secretary-Treasurer.

ASSOCIATION OF NEW ZEALAND KEWITES.

FIRST ANNUAL REPORT.

President :

DAVID TANNOCK. A.H., R.H.S., N.D.H. (N.Z.)

Joint Acting Secretaries :

South Island—JAMES A. MCPHERSON, N.D.H. (N.Z.)

North Island—BRENDAN P. MANSFIELD, N.D.H. (N.Z.)

Objects :

To serve as a means of closer contact between Kewites in the Antipodes and the Guild.

To serve as a means of obtaining advice, suggestions, and to hold an annual reunion dinner in connection with the Annual Horticultural Congress.

Remember :

It is your duty to Kew to give this wing of the Guild every support.

The Association was inaugurated at a dinner held in the Hotel Federal, Christchurch, on Wednesday, January 27th, 1932, at 6-30 p.m. D. Tannock (Dunedin) presided over a fairly representative gathering. The arrangements were made somewhat hurriedly when it was discovered so many Kewites were in town, and so it was impossible to advise others at a distance.

Those present included: D. Tannock, M. J. Barnett, J. A. McPherson, C. Little, C. H. Jones and B. P. Mansfield. The President welcomed as guests Messrs. J. G. McKenzie, Director of Parks and Reserves, Wellington, and T. Waugh, Wellington, a pioneer nurseryman.

The toast of "The King" having been honoured, Mr. Tannock proposed the toast to "The Kew Guild," recounted many happy episodes connected with Kew student days, and pointed out that the United Horticultural Congress and National Flower Show, which constituted "Horticultural Week," for which members were assembled, was the New Zealand counterpart of Chelsea Week in London. Mr. Tannock said it was the first occasion that a Kewite reunion had been held in the Antipodes, though Guild members had formed wings in America and the West Indies. It was noted that Maurice Barnett was the first New Zealand-born Kewite.

Mr. Jones being the youngest Kewite, responded. He had returned as recently as 1930, and brought news of many whom members well remembered. He also referred to the good work still being done by Mr. Coutts as chairman of the Mutual Improvement Society, and we feel sure all Kewites will endorse the unanimous expression of appreciation to Mr. Coutts voiced at the meeting.

Mr. J. G. McKenzie thanked the Kewites for the invitation extended to him, and expressed the hope that, as his son—at present at Kew—pursued his studies he would have even greater affinity with Kewites.

Mr. Thomas Waugh, who claims to be the first New Zealand-born gardener to go Home for training, recalled his early days at Dalkeith (Scotland) and later the training under Mr. Barron at the R.H.S. Gardens at Chiswick, where he was foreman for a period of three and a half years before returning to New Zealand. It was interesting to learn that in those days Kewites used to go over to Chiswick and enter into the R.H.S. Debates ; in fact, we were told on some occasions they would arrive in force and take the floor. Good luck to them ! Though it was in 1885 when Mr. Waugh went to England, he can vividly recall details of events which occurred then and the Kew of that period.

The dinner was brought to an early close in order that all members could attend the Banks Lecture in Canterbury College at eight o'clock, but even so short a meeting did a lot of good, brought closer contact between members of different periods who are linked with those at Home and in all parts of the world through the medium of the Guild.

It has been suggested by A. W. C. Anderson that the annual group photograph of students be reproduced year by year in the Journal. This is a very commendable idea which we feel sure would be of interest to all, and trust the Editor sees no objection.

WHO THEY ARE.

- A. W. C. ANDERSON, N.D.H. (N.Z.), 1926, Botanic Gardens, Dunedin.
 M. J. BARNETT, N.D.H. (N.Z.), 1914, Superintendent Reserves Department, City Council, Christchurch.
 W. B. HARDY, 1894, Blackbridge, Lower Hutt, Wellington.
 C. H. JONES, 1930, Kowhai Nurseries, St. Martin's, Christchurch.
 C. LITTLE, Reserves Department, City Council, Christchurch.
 J. A. MCPHERSON, N.D.H. (N.Z.), 1924, Superintendent Reserves Department, City Council, Invercargill.
 B. P. MANSFIELD, N.D.H. (N.Z.), 1925, J. N. Anderson & Son, Ltd., Palm Growers and Nurserymen, Napier.
 R. E. MASON, 1922, 21, Downer Street, Lower Hutt, Wellington.
 G. MILLS, 1900, Superintendent, Bracken Avenue, Takapuna, Auckland.
 C. SNOW, N.D.H. (N.Z.), 1903, Te Kauwhata, Auckland.
 W. SWAN, 1904, Government Experimental Farm, Wairangi, Auckland.
 D. TANNOCK, A.H., R.H.S., N.D.H. (N.Z.), 1898, Superintendent Reserves Department, City Council, Dunedin.
 I. V. THORNICROFT, 1928, Ravensbourne, Dunedin.
 A. G. TILSON, 1889, Montere, Nelson.

Additions and corrections to this list will be appreciated. After each name we give the date of leaving Kew.

February 29th, 1932. BRENDAN P. MANSFIELD,
Acting-Secretary.

In Memoriam.

AN APPRECIATION.

THOMAS FORD CHIPP,

ASSISTANT DIRECTOR OF THE ROYAL BOTANIC GARDENS, KEW.

MAJOR T. F. CHIPP is a name which will never be forgotten by Students of his generation in the Royal Botanic Gardens, Kew. We, who were Students during his time as Assistant Director, will always remember the interest he displayed in our welfare. Every morning, in rain or shine, the Major (as he was known to us all) was to be found taking his before-breakfast stroll around the Establishment. It was then that he would often stop and have a heart-to-heart chat with us, and by his remarks and questioning, it was very evident that he had our welfare among his primary interests. There was little that escaped his eye, and any little thing out of place, a plant incorrectly labelled or "not just so," was soon noticed and the man in charge directly acquainted of the fault.

Our ambitions were always an item of interest to the late Assistant Director, and he knew exactly which man to put forward for any position which came to Kew, whether at home or abroad. There are many Kewites overseas, who, but for the Major, would not have secured such good posts as they now have, and Kewites should be more than thankful that they had such a man to help them on, by his sound advice and encouragement.

In the "passing on" of Major T. F. Chipp, we have indeed lost a very real friend, a man who was indeed a Man.

A STUDENT AT KEW, 1931.

THOMAS WILLIAM TAYLOR.

It is with very sincere regret that we record in this issue the death at the age of 53 years of Mr. T. W. Taylor, the popular Curator of the Royal Botanic Gardens, Kew, on March 4th, 1932, following a very severe operation in Charing Cross Hospital, London.

The passing of Mr. Taylor is a sad loss to the horticultural world and to Kew in particular, and it is to be deplored that after so long a career at Kew he should have been spared for so short a time to occupy the position of Curator. He was comparatively a young man and all looked forward to many pleasant years under his able guidance. It was not to be, however, and we extend as fellow members, and as more intimate friends, our very real sympathy with Mrs. Taylor and her three sons, in the loss of a loving husband and father. The affection and high esteem which all ranks at

Kew and in the horticultural world felt for him was very marked at the impressive funeral service which was held in St. Luke's Church, Kew Gardens, at noon on Wednesday, March 9th. The interment took place in Richmond Cemetery where two notable Kewites, Major T. F. Chipp and Mr. T. W. Taylor, rest near each other.

A Gloucester man by birth, Mr. Taylor commenced his gardening career under his father at the Manor House, Ham, Surrey. At the end of two years he left to go as improver in the gardens at Offchurch, Bury, Leamington, where he gained further experience both under glass and outside. His next move was to Barcote, Faringdon, a place which at that time was renowned for its collection of orchids and stove and greenhouse plants. Leaving Barcote at the end of two years he spent a short period in the Chelsea nursery of Messrs. James Veitch & Sons, and from there he obtained a position as first journeyman at Heythrop Park, Chipping Norton. After serving two years in the plant houses, he was promoted to fruit foreman, a position in which he had entire charge of a large range of fruit houses, as well as the hardy fruits. He remained at Heythrop for four years, when, anxious to gain further experience, he turned his attention to public gardening, and entered the Royal Botanic Gardens, Kew, on May 5th, 1902.

He was promoted to be sub-foreman in the Temperate House propagating department on September 14th, 1903, and was transferred to the Tropical Department, July 18th, 1904. The 28th May, 1906, saw him promoted to the rank of Foreman of the Temperate Department, in which post he remained until the outbreak of the Great War, when he had charge of the Tropical Department, during Mr. Raffill's absence on Active Service. On Mr. Raffill's return, he was transferred to the charge of the Temperate Department, and Mr. Taylor continued in the Tropical Department until May 21st, 1929, when he was promoted Curator on Mr. W. J. Bean's retirement. (From June 19th, 1922 a change in status resulted in his being classed as assistant Curator).

In December, 1928, Mr. Taylor left England on a visit to the Botanic Gardens at Penang, Singapore, Buitenzorg, Peradeniya, Hakgala, etc., and the Public Gardens at Kuala Lumpur and Taiping, and undertook excursions to Fraser's Hill in Malaya and Mt. Gede in Java, for the purpose of studying the mountain floras. Collections of plants, including many rarities, were brought back to Kew on the conclusion of this visit.

He was an active member of the Royal Horticultural Society and was recently made an Associate of Honour. He was an enthusiastic bowls player, and was a member of the Civil Service (Headquarters) Bowling Club.

GEORGE F. TINLEY.

THE passing of George F. Tinley on August 1st, 1931, has removed yet another old Kewite from the ranks of horticultural journalism. A native of Kent, he became interested in our native

flowers quite early in life, and after his school days decided to take up horticultural pursuits. By winning a scholarship that enabled him to take a full course at the Swanley Horticultural College he laid a good foundation of knowledge that was exceedingly helpful when, later, he became a student-gardener at the Royal Horticultural Society's Gardens at Chiswick, while Mr. A. F. Barron was the Superintendent. Subsequently he became a student at the Royal Botanic Gardens, Kew, and afterwards occupied a position under the London County Council, his duty being the provision of botanical materials for schools and classes; these duties took him to many of the London Parks, and he found great delight in them.

In due course Tinley joined the staff of *The Gardeners' Chronicle*, where he remained for a long period, eventually becoming Associate Editor. He left to take up the position of Editor of *The Fruit, Flower and Vegetable Trades' Journal*, a position he filled ably until stricken down by an illness which put such a strain upon his constitution that he did not long survive the serious operation that was found necessary. Tinley served the Royal Horticultural Society for many years as a member of its Fruit and Vegetable Committee. He was also interested in Dahlias and was a member of the Committee of the National Dahlia Society. Blessed with an excellent memory, Tinley was apt at quotation from a wide range of literature and very punctilious in the correctness of such quotations. As a side line he ran a small nursery and florists' business at Southend, in which his wife, son, and daughter were at one time engaged. These all survive a very devoted husband and father.

C.H.C.

THEODORE JOHN DINN.

WE regret to record in these pages the death in his 56th year, of Mr. Theodore John Dinn, which occurred on December 26th, 1931, at Gravenhage, The Hague, Holland.

Mr. Dinn was a well known garden architect and was lately President of the Netherlands Garden-Architects' Union. He received his early horticultural training from 1892—1894 at the Horticultural School, Amsterdam, and was later employed in England, and in the nurseries of Duval et Fils, at Versailles, France. He entered Kew as a Student-gardener on March 26th, 1900, and was employed in the Arboretum and Tropical Departments. He left Kew on September 7th, 1901, and went later to Teneriffe as head gardener at Risco de Oro, Puerto de Orotava. He made a study of the flora of the Canary Islands during his stay at Teneriffe. From 1905 to 1920 he was manager of the Clingendael Nurseries, The Hague, Holland, the property of the Baronesse de Bienen. On relinquishing his position he commenced business on his own

account as a Garden Architect, and it is of interest to note that he had charge of the lay-out and designing of several important continental exhibitions, including Haarlem in 1922, and Noordwijk in 1923. He was the recipient of many awards for his work. Mr. Dinn was a talented linguist and was the author of several books on garden lay-out and design.

THOMAS TURTON.

WE regret to record the passing of Mr. Thomas Turton, one of the oldest members of the Guild, who died on February 16th, 1932, at the age of 80 years.

He commenced his gardening career in his native village of Gateacre, near Liverpool, at the Hall Gardens, whence after 3½ years' experience he went as journeyman to Roby Hall, Liverpool. On November 27th, 1871, he came to Kew and remained here until December 28th, 1872, and was contemporary with William Falconer, G. S. Jenman and others.

On leaving Kew he proceeded to Grimston Park Gardens, Tadcaster, and in 1875 he became foreman at Heckfield Place, near Basingstoke, Hants., at that time one of the most famous private gardens in the country. Later, in 1878 he was appointed to the charge of the gardens at Maiden Erlegh, Reading, where he remained until January, 1899. While at Reading he was Chairman of the Reading Gardeners' Association and a very active member of the Reading and District Horticultural Society. In January, 1899, he took charge of the gardens at Sherborne Castle, Sherborne, Dorset, where he was destined to remain until his retirement nearly a quarter of a century later. He retired from active interest in the gardens in January, 1923, but continued to reside at Sherborne. His reputation as a judge of hardy fruits was well in evidence at the leading shows and he was a fine all-round gardener. He was a great churchman and ever ready to assist young gardeners in their profession. He took a keen interest in the Gardener's Royal Benevolent Institution since its inception. A son and two daughters survive him.

GEORGE MICHAEL RYAN.

WE regret to record the death of Mr. George Michael Ryan, I.F.S. Retd., F.L.S., on January 8th, 1932, in his 73rd year. He joined the Indian Forest Service in 1882 and in 1892 was appointed Deputy Conservator of Forests in the Bombay Presidency. He retired after a period of distinguished service in 1914. For some years he was connected with Kew as a Temporary Technical Assistant in the Herbarium, and was the Official Guide to the Gardens in succession to Mr. S. T. Dunn, in 1919.

He was keenly interested in the little known minor products of forest trees. In 1902 he was elected a Fellow of the Linnean Society. His researches and practical work on the preservation of old trees led to his association with the National Trust and he was instrumental in securing the preservation of several trees of historic interest in various parts of the country. Among the trees on which his advice was sought was the famous old yew standing in Bookham Churchyard and the oak in Holmwood Park, Keston, under which Wilberforce sat with Pitt when he decided to introduce a Bill for the abolition of slavery in the British Colonies. Only last year, Mr. Ryan drew the attention of the Council for the Preservation of Rural England to the neglected condition of the Queen's or Robin Hood's Oak in Sherwood Forest. Mr. Ryan was generous-hearted and of kindly disposition and his death is to be sincerely regretted.

WILLIAM GEORGE HOAD.

WE have learned with regret of the death, following an operation, of Mr. W. G. Hoad, on September 20th, 1931. Mr. Hoad left Kew in October, 1905. Previous to his commencing at Kew in April, 1902, he was employed at Orwell Park, Ipswich. He was sub-foreman of the Decorative Department at Kew and on leaving proceeded to Chateau Vertmont, Reuil, Paris, France, where he was foreman-in-charge. In 1907 he returned to England and was in charge of Vicars Hill Gardens at Lymington, Hants, where he remained until the early days of the Great War. Little is known of his whereabouts but he appears to have resided in the Southampton district for many years, and recently at Shirley, Southampton.

WILLIAM HENRY STONE.

WE have to record with sincere regret yet another of the older generation of Kewites in Mr. William Henry Stone, who died on February 27th, 1932, in his 80th year. Mr. Stone came to Kew on September 12th, 1870, and left in June, 1872. He was a native of Torquay, Devon, and it is not surprising therefore that he chose to spend the evening of his life there.

On leaving Kew, we learn that he became foreman at Wrotham Park, Barnet, and was later in charge of the following well-known establishments before entering on a well-earned retirement towards the end of the war years: Turnworth Gardens, Dorchester; Herriard Park, Basingstoke; Brooklands Gardens, Basingstoke; and at Hyde, Wareham, Dorset.

He was well known during the last five or six years to Mr. F. G. Cousins, Superintendent of the Parks Department at Torquay, to whom we are indebted for the foregoing information, who writes "During the past six years I have frequently seen our late member, who was always of a cheerful disposition and greatly loved and respected by all who were connected with the horticultural profession in the town of Torquay."

A widow and son survive him and we tender to them our heartfelt sympathy in their loss.

THOMAS FRASER.

News reached us in August last of the death of Mr. Thomas Fraser, at Chalfont St. Giles, at the age of 78 years. Mr. Fraser came to Kew on April 14th, 1879, and left on May 29th, 1880. On leaving Kew he was in charge of several private gardens and some 40 years ago opened up a florist's business just outside the Ealing Common railway station. He retired from business about 1920, and lived in retirement at Chalfont St. Giles. A widow, a son, and three daughters survive him. He was an enthusiastic bowls player and was closely associated with the Gerrard's Cross Bowling Club.

JOHN W. G. PARNELL.

News has reached us of the death of Mr. J. W. G. Parnell at his home at Woodside Cottage, Church Hill, London, N.21., on March 4th, 1932.

He left Kew in November, 1887, and we learn that he was subsequently employed at Messrs. Carters, High Holborn; Laing's Nurseries, Forest Hill; Barr & Sons of Surbiton; Stewart's Nurseries at Wimborne; and with Messrs. Dobbie & Co.

He was also at the Government House Gardens, Brisbane, Queensland, and for some 15 years or so, was latterly with Messrs. Carter Page, in their Landscape Department. A correspondent writes of him thus "He was a very skilled man with plans—a real garden architect. He had rather too much knowledge to suit the small minded suburban folk."

KUWAGORO HAGA.

WE have to record with much regret the death of Mr. Kuwagoro Haga, in May, 1931, in his 58th year.

Mr. Haga was born at Shonai in the Yamagata prefecture, Japan, on March 31st, 1873. After graduating at the Sapporo Agricultural College, Hokkaido, in 1903, he entered the Missouri State Botanical Garden at St. Louis, Missouri, U.S.A., on November 22nd, 1903, and remained there until February 28th, 1905. He entered Kew On March 27th, 1905, and left the following year on March 21st.

In November, 1906, he returned to Japan and was appointed a professor at the College of Agriculture, Hyogo prefecture, and resigned this position on August 20th, 1907. In September of the same year he received an appointment under the Government of Formosa, in charge of the Horticultural Experimental Station and remained in this office until November, 1908.

In 1910 he made an extensive tour of the Philippines, Australia, the East Indies, Straits Settlements, Hong Kong, Southern China, and the Malay Peninsula, on behalf of the Formosan Government. In March, 1913, he was appointed as a member of a Committee to investigate economic conditions abroad and in June of the same year he again toured Java, Sumatra, British India, and Ceylon. From October, 1927, to October, 1928, he was lecturer in horticulture in particular reference to the conditions in the Tropics, in the Agricultural College, Tottori prefecture.

He published many works on tropical fruits in Formosa, Lemon culture in Italy, Agricultural Planning, the Coffee industry, etc.

(We are indebted to a compatriot in Mr. Y. Okami of the Imperial Gardens, Shinjuku, Tokyo, for the detailed account of Mr. Haga's life together with the portrait which accompanies these notes. E.G.D.)

CAPTAIN JOHN KIDWELL.

NEWS regarding Capt. John Kidwell has for many years been very vague. The *Journal* has been sent regularly to Honolulu and has been returned to Kew with similar regularity. Knowing full well that he was a very distinguished man in connection with the Pineapple industry in Honolulu, we ventured to enquire of the Pineapples Growers' Association there, and thanks to their good offices and the permission given by the newspaper concerned, we are able to reproduce the following details from the *Honolulu Advertiser*, of July 7th, 1922 :—

“PIONEER IN DEVELOPMENT OF ISLANDS' SECOND INDUSTRY
SUCCEUMBS TO ILLNESS.”

Months of acute illness were ended yesterday afternoon at 1-30 o'clock, at the Queen's Hospital, when death claimed Captain John Kidwell, one of the early believers in Pineapple as a future industry for the Hawaiian Islands.

Stricken some time ago with cancer of the throat and jaw, Capt. Kidwell had sought relief on the mainland but returned here several months ago. He was 73 years old, and a resident of Honolulu since 1882, having come here from San Francisco where for ten years he had conducted a nursery business. He was born in Devonshire, England, and came to the United States in 1872.

He believed in Hawaii as a location that would be favourable to a nursery business and actually established his business here in 1885. He devoted considerable time in experiments with Pineapples, and Manoa Valley was used for these trials. Shoots of Pineapples were procured from Kona, Hawaii. Five acres were first devoted to his new industry and in a year's time the experiment, in his opinion, was successful. He ordered 1,000 plants from Jamaica in 1886 and tried out many other varieties.

Eventually he decided that the Smooth Cayenne was the variety which would be the most successful in the Islands.

Early pictures of the Pineapple plantings on Oahu, show Capt. Kidwell in their midst, as later ones did of C. Camarinos, who also had faith in this fruit, while the third most notable figure in the early Pineapple production was Byron Clark.

Although the Pineapple industry, as an export proposition of any proportions, did not begin here until the early part of this century, Capt. Kidwell developed his Pineapples as rapidly as possible. It is estimated that in 1892 there were 100,000 plants at Apokaa. From this Pineapple plantation was started the Hawaiian Fruit and Packing Co., of which Capt. Kidwell was selected as President and John Emmeluth, Treasurer. During his early service, however, Pineapples were handled as fresh fruit, the canning of pines not having been tried out. Capt. Kidwell retired from the business in 1898."

Capt. Kidwell entered the Royal Botanic Gardens, Kew, on April 18th, 1870, and left on March 18th of the following year.



KEW STAFF (MAY 1st, 1932).

(The Names of Life Members are preceded by an Asterisk).

Entered
Kew.

Director	*Sir Arthur W. Hill, K.C.M.G., M.A., Sc.D., D.Sc. (Adelaide), F.R.S., F.L.S., F.N.Z. Inst.....	1907
Assistant Director.....	J. S. L. Gilmour, B.A., F.L.S.	1931
Economic Botanist.....	H. C. Sampson, C.I.E., B.Sc., F.L.S....	1927
Botanist.....	John Aikman, M.B.E.....	1888†
Clerical Officer.....	S. F. Ormsby.....	1923
" ".....	Arthur Hearn.....	1932
Keeper of Herbarium and Library.....	A. D. Cotton, F.L.S.....	1904
Deputy Keeper of Herbarium.....	Thomas A. Sprague, D.Sc., F.L.S.....	1900
Botanist.....	*Sidney Alfred Skan ...	1892†
" ".....	*Miss Elsie M. Wakefield, M.A., F.L.S.	1910
" ".....	William B. Turrill, D.Sc., F.L.S.....	1909
" ".....	John Hutchinson, F.L.S.....	1904†
" ".....	Cecil V. B. Marquand, M.A., F.L.S....	1923
" ".....	V. S. Summerhayes, B.Sc.....	1924
" ".....	Miss M. L. Green, B.A., F.L.S.....	1912
" ".....	F. Ballard, B.Sc.....	1929
" (Temporary)	N. Y. Sandwith, B.A.....	1924
" ".....	C. E. Hubbard.....	1920†
" ".....	E. W. B. H. Milne-Redhead, B.A....	1929
" " for India.....	C. E. C. Fischer.....	1925
Botanical Artist	Gerald Atkinson.....	1922
Assistant Botanist (Library).....	Ernest Nelmcs.....	1920†
" " (Temporary)	Miss C. I. Dickinson, B.A.....	1929
Assistant (Temporary Technical)	Miss Ada F. Fitch.....	1892
" " " ".....	Miss Mabel I. Skan.....	1919
" " " ".....	Miss S. K. White.....	1929
" " " ".....	Frederick C. Woodgate.....	1922
" " " ".....	James H. Turner.....	1928†
" " " ".....	Miss E. A. Bruce, B.Sc.....	1931
" " " ".....	B. L. Burt.....	1931
" " " ".....	A. K. Jackson.....	1931
Temporary Botanist	A. R. Horwood, F.L.S.....	1924
" " " ".....	A. A. Bullock, B.Sc.....	1929
" " " ".....	H. K. A. Shaw, B.A.....	1925
Assistant Keeper, Jodrell Laboratory.	C. R. Metcalfe, M.A., Ph.D.....	1930
Keeper of Museums.....	*William Dallimore V.M.H.....	1891†
Botanist.....	*John Henry Holland, F.L.S.....	1895†
" ".....	F. N. Howes, M.Sc., F.L.S.....	1926
Preparer.....	Laurence J. Harding.....	1913
Curator of the Gardens.....	*John Coutts, A.H.R.H.S.	1896†
Botanist.....	*William Nicholls Winn.....	1890†
Assistant Curators :—		
Herbaceous Department.....	George William Robinson	1922†
Arboretum.....	*Arthur Osborn.....	1899†
Decorative Department		
Tropical Department.....	Lewis Stenning.....	1925†
Temperate Department.....	*Charles P. Raffill.....	1898†
Clerical Officer.....	Reginald F. Williams.....	1923
" " " ".....	Ernest G. Dunk.....	1914†
" " " ".....	E. F. Burdett.....	1928
" " " ".....	W. Walker.....	1929
" " " ".....	Frank C. Aldridge.....	1931
Shorthand Typist	Miss G. Pond.....	1929
" " " ".....	Miss H. B. Judge.....	1930
" " " ".....	Miss A. E. Barnes.....	1931
" " " ".....	Miss G. Rockell.....	1928
Sergeant-Constable.....	Joseph Sealy.....	1903
Packer and Storekeeper.....	Harry W. Ruck.....	1907†
Superintendent of Works.....	J. E. Holman.....	1912

† Formerly a Student Gardener at Kew.

SUB-FOREMEN AND ARBORETUM PROPAGATOR
(AS ON MAY 1st, 1932).

<i>Department.</i>	<i>Name.</i>	<i>Entered Kew.</i>	<i>Previous Situation.</i>
Arboretum.....	Charles F. Coates.	27 Sept., 1915	_____
Temperate House.	Ernest W. B. Gale.	10 Mar., 1930	The Gardens, Elvetham Hall, Hants.
Temp. House Pits.	Alfred Mould.....	18 May, 1931	Milton Park.
Palm House.....	Robert W. Younger	15 July, 1929	R.H.S. Gardens, Wisley.
T. Range & Orchids	Brian C. Gibbins....	31 Mar., 1930	The Gardens, Mereworth Castle, Kent.
Ferrieres.....	George Farley.....	12 Dec., 1927	Viceregal Gardens, Phoenix Park Dublin.
Rock Garden.....	Dennis H. Leigh....	15 Dec., 1930	Aldenham House Gardens, Elstree.
Herbaceous.....	John H. F. Saint....	27 Jan., 1930	Messrs. Hillier & Sons, Winchester.
Decorative.....	†Allan S. Wilson.....	20 Aug., 1928	Hyde Park, London, W.2.
Flower Garden....	Wilfred S. Pinnion.	3 Dec., 1928	Orwell Park Gardens, Nacton, Ipswich.
Propagating Pits..	Ernest A. Lake.....	8 July, 1929	Orwell Park Gardens, Nacton, Ipswich.

(†Appointed Assistant Curator, Decorative Dept., June 4, 1932.)

STUDENT GARDENERS (As on May 1st, 1932).

<i>Name.</i>	<i>Entered Kew.</i>	<i>Previous Situation.</i>
Wilfred Bates.....	14 Apr., 1930	Dudbrook Gardens, Brentwood.
*Henry R. Cocker.....	3 Dec. 1928	Perry's Hardy Plant Farm, Enfield, and La Mortola, Ventimiglia, Italy (1930-31)
George F. D. Cousin.....	26 Jan., 1931	Dept. of Agriculture, Malta.
Eric J. H. Coward.....	28 Sept., 1931	Parks Dept., Birmingham.
John Douglas.....	10 Feb., 1931	St. Andrew's Drive, Glasgow.
Stanley Edmondson.....	17 Nov. 1930	Hyde Park, London, W.2.
George G. Elphick.....	7 Dec., 1931	Ford Manor Gardens, Lingfield, Surrey.
Robert J. English.....	22 April 1930	John Inne's Hort. Inst., Merton, S.W.19.
Joseph Fisher.....	11 May, 1931	Highdown, Goring-by-Sea.
Frank Folk.....	9 Dec., 1929	The Gardens, Cardiff Castle, Cardiff.
James L. Glasheen.....	5 Oct., 1931	R.H.S. Gardens, Wisley.
John D. Gordon.....	20 Jan., 1930	Clovelly Gardens, Kilmacolm, N.B.
George E. Gough.....	12 Oct., 1931	Buile Hill Park, Salford.
Alistair Findlay Gunn...	2 Oct., 1929	Public Works Dept., Pretoria, S. Africa.
Albert E. Harper.....	1 June, 1931	Cheadle Royal Hospital, Cheshire.
John Richard Hibbert...	30 Nov., 1931	Hyde Park, London, W.2.
John G. C. Mackenzie...	7 Mar., 1932	Parks and Reserves, Wellington, N.Z.
Reginald H. Mason.....	9 Mar., 1928	Chartridge Lodge Gardens, Chesham and La Mortola, Ventimiglia, Italy (1929-30)
William W. McKenzie...	3 Mar., 1930	Botanic Gardens, Glasgow.
Leo. B. J. Miller.....	14 July, 1930	Walhampton Gardens, Lymington.
William Pearce.....	16 Feb., 1931	Messrs. Bakers, Codsall, Wolverhampton.
Charles H. A. Robson...	10 Aug., 1931	Messrs. C. Engelmann Ltd., Saffron Walden.
Walter A. Rose.....	25 Aug., 1930	Avoncroft College, Offenham, Evesham.
Roy H. Rumsey.....	28 July, 1930	Messrs. Hillier & Sons, Winchester.
Frank L. Simmonds.....	3 Nov., 1930	Orwell Park Gardens, Nacton, Ipswich.
James W. Smith.....	8 June, 1931	Royal Gardens, Windsor.
Mark Stanley.....	26 Oct., 1931	Parks Dept., Manchester.
Francis J. Stayner.....	12 Apr., 1932	St. George's Park, Port Elizabeth, S.A.
Gerald W. Stonebridge..	30 June, 1930	Exbury House Gardens, Southampton.
Arthur J. Taylor.....	29 Feb., 1932	Loddon Gardens, Twyford.
Hubert Taylor.....	5 Oct., 1931	John Innes Hort. Inst., Merton, S.W.19.
George H. C. Vanson....	26 May, 1930	Parks Dept., Torquay.
Arthur P. Walby.....	28 Apr., 1930	Balcombe Place Gardens, Balcombe.

<i>Name.</i>	<i>Entered Kew.</i>	<i>Previous Situation.</i>
George Wassell.....	11 Jan., 1932	Parks Dept., Birmingham.
Gerald F. Wheeler.....	25 Jan., 1932	Parks Dept., Beckenham.
George R. Williams.....	10 Mar., 1930	Aldenham House Gardens, Elstree.
George E. Wolstenholme	11 Nov. 1929	Marsden Nurseries, Ashstead, Surrey.
Frederick H. Wright.....	28 Dec., 1931	Botanic Gardens, Cambridge.
Salvino Zammit.....	26 Jan., 1931	Dept. of Agriculture, Malta.

N.B.—The undermentioned have commenced at Kew since the foregoing lists were prepared :—

Philip L. Bachelor.....	9 May, 1932	Lampton Park, Hounslow.
Henry J. Buck.....	8 June, 1932	Greenford Green, Middlesex.
Walter J. Corkhill.....	6 June, 1932	Bees Ltd., Sealand, Chester.
Frank H. Eul.....	23 May 1932	St. Edward's School, Oxford.
Walter C. Ward.....	23 May 1932	Dartington Hall, Totnes.

GARDEN BOYS.

L. A. Wilkins ; L. F. McElroy ; L. R. Brown ; C. Parker ; M. H. Dunk and R. F. Miles.

OLD KEWITES.

(*The Names of Life Members are preceded by an asterisk.*)

<i>Name.</i>	<i>Left Kew.</i>	<i>Present Position and Address †.</i>
*Abbot, James M.....	Sept. 1898 ...	F., Park Farm, Woking Village, Surrey.
Adams, R.....	April 1903 ...	St. Joseph's Hospital, Burlington Lane, Chiswick.
Adamson, John.....	July 1909 ...	N., Moniaive, Dumfriesshire.
Agate, C. J.....	April 1926 ...	33, Hicks Lane, Great Neck, Long Is., N.Y., U.S.A.
*Aikman, Miss M. G.....	Nov. 1924 ...	40 Mortlake Rd., Kew, Surrey.
*Alcock, Mrs. N. L., F.L.S..	Nov. 1918 ...	Dept. of Botany, Royal Botanic Garden, Edinburgh.
Alcock, R. M.....	Mar. 1930 ...	H.G., Hailey, Ipsden, Oxon.
*Allen, C. E. F.....	Feb. 1904 ...	Supt. Agric., Port Darwin, N. Territory, Austr.
Allison, B. W.....	Jan. 1930 ...	Buile Park, Salford, Lancs.
*Allt, W. S.....	Jan. 1911 ...	Cold Spring, New York, U.S.A.
*Anderson, A. W. C., N.D.H. (N.Z.).....	Feb. 1926 ...	Botanic Gardens, Dunedin, N.Z.
*Anderson, J. R.....	Oct. 1905 ...	Supt., John Blodgett Estates, Grand Rapids, Mich., U.S.A.
*Anderson, J. W.....	June 1910 ...	Minneopa, Cynwyd, N. Wales.
Andrews, C.....	Oct. 1922 ...	F., Tresco Abbey, Scilly Islands.
Archer, Sydney.....	Mar. 1895.	
*Arden, Stanley.....	June 1900 ...	c/o National Bank of Australasia, Adelaide, S. Australia.
*Armbrecht, Otto.....	Jan. 1898.	
Armstrong, James.....	Mar. 1893.	
*Armstrong, Robert.....	Oct. 1897.	
*Arnold, George.....	Oct. 1894 ...	Essex.
Arnold, T. A.....	Jan. 1931 ...	c/o Municipality Buildings, Kimberley, South Africa.
*Arthur, Alec.....	April 1899 ...	Jacobs Estate, Coopertown, Bryn Mawr, Penn., U.S.A.

† *Abbreviations* :—H.G., Head Gardener ; F., Foreman ; N., Nurseryman ; M.G. Market Gardener ; C., Curator ; D., Director ; M., Manager ; B.G., Botanic Garden.