

Vol. IV. No. XXXVI.

THE
JOURNAL
OF THE
KEW GUILD.
1929.

THE KEW GUILD

The Annual General Meeting will be held (circumstances permitting) at the Clarendon Restaurant, Hammersmith, London, W., at 6-30 p.m. on Thursday, May 23rd, 1929. The Meeting will be followed by the Annual Dinner at 7-30 p.m. when the President, Mr. John Coutts, will occupy the Chair.

Tickets for the Dinner can be obtained on application to the Secretary at 197 Kew Road, Kew, Surrey, on or before May 16th, 1929, price 7/- (excluding wines).

It is hoped, in view of Mr. Coutts' long association with Kew, that the 1929 gathering will be a record one.

"FLOREAT KEW."

THE
JOURNAL
OF THE
KEW GUILD,

AN ASSOCIATION OF
KEW GARDENERS, Etc.

PAST AND PRESENT.

March, 1929.

LIST OF OFFICERS.

President : **William Norman Sands, F.L.S.**

Trustees : **Arthur W. Hill, C.M.G., M.A., Sc.D., F.R.S., F.L.S., and
W. J. Bean, I.S.O., V.M.H.**

Treasurer : **R. F. Williams, 197, Kew Road, Kew, Surrey.**

Auditors : **A. Osborn and W. H. Young.**

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

Members of Committee :

Chairman of Committee : **William Hales, A.L.S.**

Retire 1929.

**J. H. Holland, F.L.S., Kew.
W. S. Sharp, Durham.
T. Dinn, Holland.
W. H. Judd, U.S.A.**

Retire 1930.

**J. Coutts, Kew.
W. H. Johns, N.D.H., Bermondsey.
W. W. Pettigrew, Manchester.
D. Tannock, Dunedin.**

Retire 1931.

**R. L. Harrow, V.M.H., Edinburgh.
W. L. Lavender, Raynes Park.
C. P. Raffill, Kew.
T. Hunter, Gold Coast.
Miss E. M. Gunnell, Exeter**

Retire 1932.

**A. D. Cotton, F.L.S., Kew.
H. Spooner, London.
A. Hosking, Merton.
B. P. Mansfield, Dublin.**

Sub-Foreman : **E. W. STUDLEY.**

Student-Gardener : **L. B. CREASEY.**

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WILLIAM NORMAN SANDS, F.L.S.

WILLIAM NORMAN SANDS, F.L.S.

MR. W. N. SANDS, the President of the Kew Guild for 1928-29, will probably be little more than a name to the younger generations of Kewites, but to his contemporaries at Kew, the name will recall memories of an athletic young man who excelled at cricket and was more than moderately good at other forms of outdoor pastimes, as well as at all other things he took an interest in, and in particular might be mentioned his own vocation. To others who know of his work and writings during any part of his thirty years' service in Agricultural Departments of British Colonial possessions, the name stands for wide knowledge and reliability regarding matters pertaining to Tropical Agriculture.

Those of us who have been privileged to have been connected with him in his work for any length of time have learned to value Mr. Sands' opinion on matters of Tropical Agriculture more greatly, the longer we have been associated with him. He has sound administrative ability and his practical outlook, born of sound knowledge and wide experience, gives him what at times appears to be an uncanny knack of detecting flaws in, or suggesting valuable alterations or additions to schemes of agricultural work or policy. He has an optimistic temperament which makes him a pleasant colleague, and being possessed of a characteristic and nimble wit he is a congenial companion. He is ever ready to help new-comers in a strange country, as many Kewites and others can testify, and is staunch to old friends who can rely upon help and sound advice from him in difficulties. Finally, at 53 years of age and after 30 years spent in the Tropics, he is still very energetic and fond of recreation, so is ready with equal avidity to make up a tennis four, play a round of golf or a game of billiards, take a long walk with his camera to obtain a good photograph (for photography is an art of which he is no mean exponent) or, as he did recently, join a party to investigate and report upon previously unexplored territory.

Mr. Sands is ambidextrous, being able to write equally well with either hand, and to those who know him best, this fact seems typical of the man; it denotes keen ability, a ready grasp of problems and the quick perception of the best way out of a difficulty, so characteristic of him. During the time Mr. Sands was Superintendent of Agriculture, St. Vincent, it became desirable to destroy the many Silk Cotton Trees growing in the vicinity of the Cotton Plantations, for the trees provided refuge for myriads of "Cotton Stainers," one of the chief pests of Sea Island Cotton, then being developed as an important crop in the Colony. The Negroes looked upon the Silk Cotton Tree as the home of "jumbies" (malignant sprites) so could only be interfered with on pain of future dire calamities. The Negroes, however, knew that "jumbies" have no power to harm a left-handed man—and Mr. Sands knew it, too. Characteristically he at once made use of this knowledge and with an axe in his left hand, amidst a crowd of interested Negro spectators, he felled the first Silk Cotton Tree. He then assured

the Negro cultivators that they could fell the other trees with impunity, provided that at the stroke of the axe they muttered "Not me! Massa Sands." He achieved his object, for soon all the Silk Cotton Trees were cleared from the vicinity of the cultivator's lands. I have recently learned that this incident has become a classic in the West Indies and is recounted to the students at the Imperial College of Tropical Agriculture, Trinidad. It seems a simple story when narrated, but it takes a quick perception such as Mr. Sands possesses to make use of a little knowledge to gain one's end, and those with similar faculties are the men who make their mark in the Colonies, aye, and at Home, too, possibly.

Mr. Sands was born at Littlebourne, near Canterbury, on July 21st, 1875. He received his education at the Simon Langton School, Canterbury, and was a Student at the Horticultural College, Swanley, from 1892-94, where he gained the College Diploma. In 1894 he was awarded a Royal Horticultural Society's Scholarship and became a Student in the R.H.S. Gardens at Chiswick and Wisley (1894-97). He entered Kew on March 1st, 1897, and left in July, 1899. His first appointment on leaving Kew was as Curator of the Botanic and Experimental Stations, Antigua (1899-1904). During this period he was engaged on trials with sugar, cotton and food crops. In March, 1904, he was appointed Superintendent of Agriculture, St. Vincent, where he remained until 1919. Mr. Sands conducted research work with cotton, maize, arrowroot, tapioca and other crops of similar economic importance. A result of his labours is to be found in the strain of cotton produced in St. Vincent, which is claimed to be the finest in the world. For his services to the cotton industry he was specially mentioned in despatches to the Secretary of State for the Colonies.

He was attached to the Royal Society's Second Expedition to the West Indies in 1907, to study the return of the vegetation in the areas devastated by the volcanic eruptions of the Soufrière in 1904-05. For his work on this Expedition he was elected a Fellow of the Linnean Society.

During the years 1914-1918 he was specially employed in St. Vincent in the purchase and grading of fine Sea Island Cotton for the Army and Navy, and was also responsible for the purchase and storage of local food supplies.

Mr. Sands was transferred to the Department of Agriculture, Straits Settlements and Federated Malay States, as Assistant Economic Botanist on January 16th, 1920, in which position he undertook research work connected with rubber, coconuts, cotton, betel-nuts, drug plants, etc. He represented the Straits Settlements and the Federated Malay States at the Imperial Botanical Conference in London, 1924. Articles and reports from his pen have been published from time to time in the records of the Imperial Department of Agriculture, British West Indies and in the Malayan Agricultural Journal.

THE ANNUAL GENERAL MEETING.

THE Annual General Meeting of the Guild was held at the Clarendon Restaurant, Hammersmith, London, W., on Thursday, May 24th, 1928, at 6-30 p.m. The Chair was occupied by the retiring President, MR. WALTER IRVING, and upwards of sixty members were present.

The Minutes of the Annual General Meeting, held on May 26th, 1927, at 6-15 p.m., were read by the Secretary. There being no comments on the Minutes, MR. F. G. PRESTON proposed that they be passed as a correct record of the proceedings, MR. W. HALES seconded the proposition, which on being put to the Meeting was unanimously approved

The Chairman then called on the Secretary to read the Annual Report, 1927-28, and the relative Balance Sheets; on the proposal of MR. G. F. LANE, supported by MR. G. LAMB, it was unanimously agreed that these be passed.

MR. W. HALES then proposed that MR. W. N. SANDS, F.L.S., Assistant Economic Botanist, Agricultural Department, Straits Settlements and Federated Malay States, be adopted as President of the Guild for the year 1928-29 in succession to Mr. W. Irving. MR. F. G. PRESTON seconded this resolution, which was carried with acclamation. MR. SANDS briefly voiced his appreciation of the honour accorded him by his fellow Kewites, and expressed the hope that he would be able to further the interests of the Guild and its Members at every opportunity.

Before the Meeting closed, some discussion was occasioned on the subject of the venue of the Annual Dinner, but it was resolved that the matter be left entirely in the hands of the Committee.

The Meeting closed at 7-15 p.m., a vote of thanks being accorded MR. W. IRVING for his services as Chairman and as retiring President.

THE KEW GUILD DINNER, 1928.

THE Kew Guild Dinner was held at the Clarendon Restaurant, Hammersmith, W., on Thursday, May 24th, 1928, when Mr. W. N. Sands, F.L.S., presided over an attendance of 94 members. An excellent repast was served, and, as in the previous years, the toasts were commendably few.

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

"I have the very pleasant duty of proposing the toast of the Kew Guild, but before asking you to drink to the Guild's prosperity, I wish to say that I am deeply sensible of the honour your Committee has conferred on me in electing me your President for the ensuing year. It is an honour which I feel I hardly deserve seeing so many able and well known members present this evening who have been able to take a far more active part in furthering the interests of the Guild than I have.

"On behalf of the home members I should like to say how very pleased we are to welcome here those overseas Kewites who have made it their business to be present this evening.

"I believe that the President is expected to make a speech on this occasion as one of the penalties for accepting office. I feel a good deal more unnerved than I did in 1924, when at short notice I was asked to follow Mr. Dawe, the President that year who showed me just before dinner an elaborate sheaf of notes he had prepared for his speech and to which I had to reply. Still, if you will bear patiently with me for a short time I will do my best not to bore you.

"At the outset I should like to say how pleased I am to see such a large and representative gathering of members here this evening. It must be a source of great gratification to those who have been responsible for the excellent arrangements they have made for our entertainment.

"It is with deep regret that our able hard working Honorary Secretary, Mr. E. G. Dunk, is not able to be present, and I am sure that I voice the sentiments of all of us when I say how very sorry we are to learn of his sad loss, and on your behalf I would like to express our deep sympathy with him.

"It is twenty-eight years since I left Kew for service abroad, and my duties have taken me to the western and eastern Tropics as well as to other parts of the world where, of course, I have had the privilege of meeting many old Kewites, and it has always been a genuine pleasure to me to see them and talk over the work of Kew

and the doings of the Guild. Needless to say the Kewite abroad, especially in the Tropics, must have a robust constitution. He must also be a very versatile individual and possess plenty of tact if he is to hold his end up.

"In my own case I have had many and varied experiences, for example I have had to control Botanic and Experiment Stations; undertake botanical explorations; do general botanical and also at times entomological work; carry on researches in the breeding of crop plants and give lectures on botanical and agricultural subjects. I have had to organise Agricultural Societies and other meetings of Chambers of Commerce; form Co-operative Credit Societies, purchase gin, grade and ship cotton; kiln dry and store maize and other food crops to conserve food supplies, and so on. But perhaps the hardest problem that I have ever had to tackle was to overcome the superstitions of the negroes in St. Vincent when I worked to turn out of their homes—if I may use the word—certain evil spirits. According to the negroes the natural habitat of these 'imps of darkness' was the silk cotton tree *Eriodendron anfractuosum*, a common tree of huge proportions, which was the host of a serious cotton pest—the cotton stainer. Well, the trees had to be destroyed, but for some time I could not get a nigger to touch one until I ventured to take advantage of his superstitions in another direction. Some of you may have noticed that I have the misfortune to be left-handed. To a negro a left-handed man is considered to be the 'jumbi's bête noir.' I called up a number of strong yet frightened men and told them to get their axes and come along with me to a specially haunted silk cotton tree near by. Then I took an axe and gave the tree a good left-handed blow. I then said you see I am left-handed and if you call my name as you strike the tree nothing can possibly happen to you. At this they summoned up courage and got busy. They passed on the word and soon the whole island—figuratively speaking—was ringing with the shouts of 'Not me! Massa Sands,' as they felled the trees.

"In Malaya we have no less than eleven old Kew men, all of whom are doing good work and reflecting credit on their 'alma mater.'

"During the last few months it has been a great pleasure to me to have had the opportunity of arranging botanical tours in Malaya for two of our well-known home members—namely, Mr. Hales, of Chelsea, and Mr. Taylor, of Kew, and accompanying them on their excursions. Many of you will have read or heard personally from them accounts of their doings, but there are one or two little personal touches which they may not have mentioned.

"Hales was advised by an old friend on one occasion to don a pair of khaki 'shorts' for a rather arduous climb up a mountain near Kuala Lumpur, where the vegetation was particularly interesting. The sun shone fiercely on the way up with the result that Hales'

legs below the line of his 'shorts' were severely burned. As he could not bend his knees in comfort for some days after, I rather fancy he has real grievance against that particular friend.

"Perhaps it was due to his tropical experiences at Kew that enabled Taylor to stand the sun extremely well. But he really did feel upset when the 'sampan' he was travelling in to visit a mangrove swamp was wrecked and he had to wade ashore almost up to his neck in the muddy water. Again I do not think that he liked the atmosphere of the dark virgin jungle we took him into, for he made rather tender enquiries concerning the feeding habits of the local tiger, and seemed quite relieved when we reached open country again. However, I trust that both have forgiven any remissness on our part during their peregrinations.

"Unfortunately I had to leave Malaya just before Dr. Hill was due to arrive on his way home from Australia. I should very much have liked to have met him in Kuala Lumpur and discussed with him on the spot matters of interest as well as our problems and difficulties. Mr. F. N. Howes, of the Museums, also visited us recently in connection with banana investigation. Altogether we have felt much honoured with these visits of distinguished Kewites which cannot fail to do much good in many directions.

"It is very gratifying to learn that the Guild and its Journal continue to prosper and fulfil the useful objects for which they were founded.

"I would like especially to support the Committee's valuable suggestion that old Kewites holding responsible positions at home, and I would add abroad, should do all they can to help Student-gardeners to obtain appointments for which they may be suitable."

Following the interval, which was of longer duration than in former years, Dr. A. W. Hill in the course of an interesting talk mentioned his recent trip to the Antipodes, Java, Ceylon, etc., and gave many details as to the work Kewites are doing throughout these extensive areas, at the same time referring to the great scope that Australia, in particular, offers to the enterprising young horticulturist.

During the evening, Mr. R. F. Williams introduced several well-known old English songs, etc., which were enthusiastically taken up by all those present. Mrs. S. T. Lees again delighted the Members with songs, assisted by Mr. Williams at the piano. The 1928 function will be remembered as one of the most enjoyable that has been held under the auspices of the Guild.

ANNUAL REPORT, 1927-28.

THE Committee have much pleasure in submitting for the consideration of the Members of the Guild, the Annual Report for the year ending April 30th, 1928.

The Annual General Meeting of the Guild was held at the Clarendon Restaurant, Hammersmith, W.6, on May 26th, 1927, at 6-15 p.m. The Chairman of the Meeting was Mr. R. L. Harrow, V.M.H., and he was supported by upwards of eighty fellow Kewites. The meeting was followed by the Annual Dinner, when the President, Mr. Walter Irving, presided over an attendance of 120 members, among whom, as Guest of the Guild, was Mr. T. Hay, V.M.H., the popular Superintendent of Hyde Park.

The Members of the Committee who retire are :—Messrs. W. B. Turrill, W. Hales, F. J. Longmire and J. W. Besant. The following have been nominated to fill the vacancies thus created :—Messrs. A. D. Cotton, H. Spooner, A. Hosking and B. P. Mansfield. Messrs. T. D. Boyd and F. W. Thorns will continue to represent the Subforemen and Student-gardeners respectively. Mr. R. F. Williams has again consented to be nominated as Hon. Treasurer, and Messrs. A. Osborn and W. H. Young are recommended as Auditors for the ensuing year. Mr. E. G. Dunk has agreed to act as Secretary-Editor, but owing to the uncertainty of his future plans it may be necessary during the coming months to ascertain whether any other member will be willing to undertake this dual office. In the meantime Mr. Dunk will welcome any contributions for future issues.

The *Journal* for 1928 has not yet been published owing to illness and the recent bereavement which the Secretary-Editor has sustained, but members are assured that the number will shortly be available for distribution and will be up to the high standard that has been maintained in the past.

The Committee would appreciate the co-operation whenever possible of Kewites holding higher positions in municipal departments, with special regard to giving advice and assistance to present-day Student-gardeners at Kew who might be desirous of taking up appointments in Public Parks and Gardens throughout the country.

Death has taken a heavy toll from among the Members of the Guild recently, and the Committee deeply regret to record the decease of Messrs. A. J. Hayter, A. Garnett, J. C. Newsham, E. Crump, T. Entwistle and J. Weathers. Floral tributes were sent on behalf of the Guild to the Funerals of Mr. A. J. Hayter and Mr. Weathers.

The receipts for the year amount to £78 0s. 2d., and the expenditure to £96 5s. 5d.

WM. HALES,

Chairman of Committee,

May 18th, 1928.

BALANCE SHEET.—YEAR ENDING 30TH APRIL, 1928.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance from 1926-27 A/c....	*170	3 9	Subscription to Royal Gardeners' Orphan Fund ...	1	1 0
Life Subscriptions ...	21	2 0	Subscription to Gardeners' Royal Benevolent Institution...	1	1 0
Annual Subscriptions—			Special donation Gardeners' Royal Benevolent Inst....	1	1 0
Arrears up to and including 1926 ...	4	12 6	Printing — Journal for 1927	85	12 1
Subscriptions for 1927 ...	10	11 6	„ — Annual General Meeting and Dinner, 1927...	3	17 6
„ „ 1928 ...	1	10 6	Wreath ...	1	1 0
„ „ in advance	1	0 0	Postages and Miscellaneous incidental Expenses ...	2	11 10
Special Sales of the Journal..	2	6			
Dividend on £300 New South Wales Stock ...	12	0 0	Balance ...	*151	18 6
Dividend on £26 6s. 3d. 5% War Stock ...	1	6 2			
Bank Interest ...	3	2 6			
Advertisements in 1927 issue of the Journal ...	17	17 6			
Advertisements in 1928 issue of the Journal ...	4	12 6			
Balance from 1927 Dinner A/c	2	6			
	<u>£248</u>	<u>3 11</u>		<u>£248</u>	<u>3 11</u>

*Includes Balance of War Memorial Fund, £29 0s. 6d.

Note.—This sum is now being transferred to the Benevolent Fund.

CAPITAL ACCOUNT, as on the 30th April, 1928.

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Thomson Bequest ...	92	8 6	£300 New South Wales 5% Stock, (1925-1955) ...	300	0 0
242 Life Subscribers of £1, at two-thirds full rate ...	161	6 8	£26 6s. 3d. 5% War Stock (1929-1947) ...	26	6 3
197 Life Subscribers of £2, at two-thirds full rate ...	162	13 4	Journals in Stock ...	16	5 0
			Value of Typewriter, after allowing for depreciation.	9	9 0
			Balance at Bank and in Cash	151	18 6
			Liabilities over Assets ...	12	9 9
	<u>£516</u>	<u>8 6</u>		<u>£516</u>	<u>8 6</u>

BENEVOLENT FUND.

BALANCE SHEET, Year ending 30th April, 1928.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance from 1926-27 A/c...	15	14 3	Assistance given to Mr. A. J. Hayter ...	8	10 0
Proceeds of Special Appeal Collection at the Annual Dinner, 1927 ...	14	0 0	Balance ...	22	8 10
Donations ...	15	6			
Bank Interest ...	9	1			
	<u>£30</u>	<u>18 10</u>		<u>£30</u>	<u>18 10</u>

CAPITAL ACCOUNT, as on the 30th April, 1928.

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Balance of Assets ...	29	8 10	Balance at Bank and in Cash	22	8 10
			Loan to Member ...	7	0 0
	<u>£29</u>	<u>8 10</u>		<u>£29</u>	<u>8 10</u>

DÜMMER MEMORIAL FUND.

BALANCE SHEET, Year ending 30th April, 1928.

RECEIPTS.				EXPENDITURE.			
		£	s. d.			£	s. d.
Balance	...	...	3 6	Presentation Volume for			
Dividend on 4% Funding				best collection British			
Loan	...	...	2 16 0	Botany Club, 1925	...	2 2 0	
				Balance	...	17 6	
			<u>£2 19 6</u>			<u>£2 19 6</u>	

CAPITAL ACCOUNT, as on the 30th April, 1928.

LIABILITIES.				ASSETS.			
		£	s. d.			£	s. d.
Balance of Assets	...	...	61 15 6	Value of £70 Stock, 4%			
				Funding Loan	...	60 18 0	
				Balance at Bank	...	17 6	
			<u>£61 15 6</u>			<u>£61 15 6</u>	

EDUCATIONAL FUND.

BALANCE SHEET, Year ending 30th April, 1928.

RECEIPTS.				EXPENDITURE.			
		£	s. d.			£	s. d.
Balance from 1926-1927 A/c.	123 19 10			Balance at Bank	...	128 19 3	
Donations during the year...	2 7 6			(Note.—This sum is being in-			
Bank Interest	...	3 1 11		vested in 5% War Stock)			
		<u>£128 19 3</u>				<u>£128 19 3</u>	

MATILDA SMITH MEMORIAL PRIZE FUND.

BALANCE SHEET, Year ending 30th April, 1928.

RECEIPTS.				EXPENDITURE.			
		£	s. d.			£	s. d.
Dividend on £50 L.C.C. 5%				Balance at Bank	...	2 10 0	
Stock	...	...	2 10 0				
		<u>£2 10 0</u>				<u>£2 10 0</u>	

CAPITAL ACCOUNT, as on the 30th April, 1927.

LIABILITIES.				ASSETS.			
		£	s. d.			£	s. d.
Balance of Assets	...	...	52 10 0	Value (at par) £50 L.C.C.			
				5% Stock	...	50 0 0	
				Balance at Bank	...	2 10 0	
		<u>£52 10 0</u>				<u>£52 10 0</u>	

† Tickets and invitations regarded by Post Office as not within regulations as to Printed Paper Rate and charged at full letter rate.

CHAS. A. CURTIS } Hon. Auditors.
A. OSBORN }

11TH MAY, 1928.

THE LATE DR. L. C. BURRELL.—As we go to press, we deeply regret to record that Dr. L. C. Burrell, M.A., M.B., B.C., died in Northampton General Hospital following an operation, on Sunday, February 24th. A full obituary notice, with portrait, will be published in our next issue. Dr. Burrell will be remembered as Medical Officer to the Gardens Staff. We extend to his widow and his daughter (Mrs. S. T. Lees) our deepest sympathy in their sad bereavement.



MUTUAL IMPROVEMENT SOCIETY.

SESSION 1927-28.

THE ANNUAL GENERAL MEETING was held in the Garden Library on September 5th, 1927, for the election of Officers. MESSRS. COUTTS and TAYLOR were re-elected Chairman and Vice-Chairman respectively. MR. F. P. KNIGHT was re-elected Secretary, and MR. W. EVERITT, Assistant Secretary ; with MESSRS. COOK, FARMER and STEDMAN, on the Executive Committee. The Society was without the assistance of its Vice-Chairman during the greater part of the Session, as his duties involved a long overseas trip. Nineteen ordinary meetings were held, with an average attendance of 30 members ; an increase of five members per meeting over the previous session.

The Society is indebted to Major T. F. Chipp, Messrs. J. M. Dalziel, W. B. Turrill and W. Dallimore for their interesting contributions to the Syllabus, which added variety to the purely horticultural subjects.

Fifteen papers having a direct horticultural interest were delivered by Sub-foremen and Student-Gardeners. The papers throughout the session reached a very high standard, revealing in each case, care and forethought in preparation and pointing occasionally to the accumulation of specialised knowledge on the part of the writer.

The average number of members taking an active part in the discussions was 10.6, as compared with 12 during the previous session.

The Hooker Prize, presented by the Director, was awarded to Mr. F. P. Knight, and the Society's Prize to Mr. F. W. Thorns. The Society continues to enjoy the Chairmanship of Mr. J. Coutts. Its flourishing condition is due in no small measure to his activities on its behalf.

Two Summer Outings were arranged, to the Royal Horticultural Society's Gardens at Wisley, where we were met by the Superintendent (Mr. R. Findlay), and to the John Innes Horticultural Institution at Merton, where we were conducted over the establishment by Sir Daniel Hall, and Mr. A. Hosking. Much useful knowledge was gained on both occasions, and the privilege of viewing these important horticultural centres was greatly appreciated by those who took part in the outings.

SYLLABUS.

1927.

Oct.	10	Gardens and Gardening	-	-	-	-	-	Mr. W. Dallimore.
„	17	Begonias	-	-	-	-	-	Mr. W. Shambrook.
„	24	The Pruning of Shrubs	-	-	-	-	-	Mr. L. B. Creasey.
„	31	The Cultivation of Flowers for Cutting	-	-	-	-	-	Mr. G. Catt.
Nov.	7	*The La Mortola Gardens	-	-	-	-	-	Mr. H. Bruins-Lich.
„	14	Sweet Peas	-	-	-	-	-	Mr. G. Stedman.
„	21	Vines	-	-	-	-	-	Mr. G. Poulter.
„	28	*West African Vegetation	-	-	-	-	-	Dr. J. M. Dalziel.
Dec.	5	Dahlias	-	-	-	-	-	Mr. H. Jarman.
„	12	Perpetual Carnations	-	-	-	-	-	Mr. C. Rudd.
„	19	*Some Fungoid Diseases of Hardy Fruits	-	-	-	-	-	Mr. W. Rutter.

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Jan.	9	The British Flora	-	-	-	-	-	Mr. R. Findlay.
„	16	Some Indoor Fruits	-	-	-	-	-	Mr. K. McCready.
„	23	Hardy Aquatics	-	-	-	-	-	Mr. J. Birkentall.
„	30	A Midland Garden	-	-	-	-	-	Mr. R. M. Alcock.
Feb.	6	*The Balkan Peninsula	-	-	-	-	-	Mr. W. B. Turrill.
„	13	Greenhouse Plants	-	-	-	-	-	Mr. A. G. Teal.
„	20	A General Review of the Bulb Trade	-	-	-	-	-	Mr. D. E. Horton.
„	27	*The Royal Botanic Gardens, Kew	-	-	-	-	-	Major T. F. Chipp.
Mar.	5	Secretary's Report.						

* Lantern Lecture.

F. P. KNIGHT,

Hon. Secretary

(1927--28).

THE LECTURES, 1927-28.

Physics and Chemistry. Lecturer, Dr. P. Haas. 25 Lectures. Maximum marks, 100. Highest aggregates : L. B. Creasey, 92 ; G. A. Davis, 91 ; R. Findlay, 90 ; D. E. Horton, 90.

Plant Pathology. (*Fungi*). Lecturer, Mr. A. D. Cotton, F.L.S. 25 Lectures. Maximum marks, 250. Highest aggregates : L. Cook, 240 ; W. Everitt, 233 ; E. W. Studley, 225.

Plant Pathology. (*Insect Pests*). Lecturer, Dr. J. W. Munro. 10 Lectures. Maximum marks, 100. Highest aggregates : V. G. Barham, 80 ; W. Nelves, 79 ; W. E. Stewart, 79 ; L. Cook, 78.

Genetics. Lecturer, Mr. W. B. Turrill, M.Sc., F.L.S. 10 Lectures. Maximum marks, 100. Highest aggregates : L. P. Lee, 99 ; C. E. W. Shambrook, 99 ; L. B. Creasey, 98 ; W. Everitt, 98 ; E. W. Studley, 98.

Soils and Manures. Lecturer, Dr. Crowther. 10 Lectures. Maximum marks, 100. Highest aggregates : W. E. Stewart, 100 ; L. C. Hendon, 98 ; W. G. Rutter, 98 ; L. Cook, 97.

Advanced Systematic Botany. Lecturer, Mr. C. H. Wright, A.L.S. 25 Lectures. Maximum marks, 250. Highest aggregates : W. Everitt, 234 ; E. W. Studley, 221 ; J. C. Nauen, 217.

Geology and Soils. Lecturer, Dr. H. H. Thomas. 10 Lectures. Maximum marks, 100. Highest aggregates : L. B. Creasey, 100 ; L. P. Lee, 90 ; C. E. Shambrook, 85 ; A. G. Teal, 85 ; I. V. Thornicroft, 85.

General Botany. Lecturer, Mr. T. A. Sprague, B.Sc., F.L.S. 36 Lectures. Maximum marks, 300. Highest aggregates : L. B. Creasey, 291 ; G. Catt, 286 ; L. P. Lee, 284.5 ; G. A. Davis, 282.5.

Economic Botany.—Lecturer, Mr. W. Dallimore. 20 Lectures. and Demonstrations. Maximum marks, 150. Highest aggregates : W. Everitt, 150 ; L. B. Creasey, 149 ; W. E. Stewart, 145.

Systematic Botany and Ecology. Lecturer, Mr. W. B. Turrill, M.Sc., F.L.S. 12 Lectures. Maximum marks, 100. Highest aggregates : J. Birkentall, 96 ; L. B. Creasey, 96 ; L. A. Lee, 96 ; G. A. Davis, 95.

CRICKET REPORT, 1928.

THE ANNUAL GENERAL MEETING was held in the Library on the 6th April, 1928, when the following members were elected to hold office for the season:—Mr. L. A. Lee (Hon. Secretary), Mr. J. Farmer (Captain), Mr. C. F. Coates (Vice-Captain), Messrs. C. McGregor and E. Hewitson (Members of the Committee).

A fixture list of 24 matches was arranged, 2 of which we were unable to play owing to wet weather. The weather on the whole was good, but on a few occasions a very sticky pitch made play rather difficult. Of the 22 matches played 8 were won, 11 were lost, and the 3 remaining were drawn. Our success was not what we should have liked it to have been, but luck seemed to be a big factor which we had to battle against throughout the season.

The annual match, Gardens *versus* Staff, which has taken place for several years, was played on Kew Green, on the 6th of June, in brilliant sunshine.

Winning the toss, "the visitors" were sent in to bat (they were led as in the previous years by Mr. J. Hutchinson), and their opening pair of batsmen set about our bowling in a very business-like fashion, and when their third wicket fell they had the useful score of 86—then came our turn, and by excellent fielding and bowling a change of the Staff's chances of success was brought about, the innings closed at 106—3 of the last batsmen were run out. The chief scorers were Messrs. Coates, 44, and Flack, 39.

Tea was taken when the innings closed—we were cordially invited by the Director (Dr. Hill) to tea on the Tennis Courts where Miss Hill was our genial hostess. After partaking of an excellent repast we went back to continue the match with a feeling of satisfaction that we were going to bat and not to "chase the leather."

Our opening batsmen laid the foundation of a good score, but when the third wicket fell we were two runs behind our opponents' third wicket total. When the time came to draw stumps we had the excellent total of 140 runs for 8 wickets, thus defeating our opponents by a very comfortable margin. Our principal scorers were Messrs. Davies, 35; Arnold, 24; Farmer, 20; and Stenning, 18. The match was thoroughly enjoyed by all who took part. Our Umpire, Mr. C. P. Raffill, performed his duties admirably, as he did on two other occasions.

The annual matches were also played against Cambridge Botanic Gardens and Cliveden. The former on July 14th at Cambridge, and Cambridge ran out winners by 58 runs. Our chief scorers were Messrs. Davies, 22, and Arnold, 16, and for Cambridge, Messrs. Finson, 36, and Franklin, 35 (the latter being an old Kewite). We were entertained to an excellent tea, and the whole time was appreciated by those comprising the teams.

The two matches with Cliveden were also very enjoyable, the first on their ground on May 19th was drawn owing to the rain that fell intermittently, it was also very cold, but we spent a very enjoyable evening in their club room. Our match on Kew Green was won by the visitors by 5 wickets, and our chief scorers were Messrs. Lee, 24, not out, and Davies, 16.

The results of the other matches are as follows: Wins against Merton (3), St. Lukes (1), Victoria Working Men's Club (1), St. Cuthberts (1), and Old Ashfordians (1). Our losses were Beverley Park (2), Kew II. (2), St. Lukes (1), Victoria Working Men's Club (1), St. Cuthberts (1), Aldenham (1), and Woodmansterne (1). The other two drawn against Aldenham and the London General Omnibus Company.

The batting honours went to Messrs. Coates, 44, for Staff against Gardens; Lee, 42, against Kew II.; and Davies, 39, against Kew II.

The Bowling honours to Messrs. Taylor, 5 for 8, against Merton; Arnold, 7 for 14, against St. Cuthberts; and Stedman, 5 for 13, against St. Cuthberts.

Batting Averages.—T. Arnold, 181 runs (average 15); H. Davies, 167 runs (average 11); C. Coates, 191, and C. McGregor, 111 (average 10); and L. A. Lee, 105 runs (average 8.75).

Bowling Averages.—J. Secker, 11 wickets (average 5.5); T. Arnold, 30 wickets (average 8.5); G. Stedman, 42 wickets, and W. Taylor, 29 wickets (average 8.7); L. A. Lee, 16 wickets (average 9.4).

Opponents Caught.—C. Coates caught 8, stumped 8 (wicket keeper); G. Stedman and C. McGregor, 7; H. Davies and L. A. Lee, 5.

The Members of the Club wish their appreciation to be recorded of the continued support that is accorded the Club, both financially and otherwise, by the many friends among the Staff of the Gardens.

L. A. LEE, *Hon. Secretary.*

THE SWIMMING CLUB, 1928.

THE ANNUAL GENERAL MEETING was held on April 13th, when the following members were elected to hold office for the season: Mr. F. W. Thorns (Hon. Secretary), Mr. H. C. Hildyard (Captain), Mr. I. V. Thornicroft (Vice-Captain), Messrs. G. C. Stedman and C. McGregor (Committee).

Towards the end of the season Mr. F. W. Thorns left Kew, and Mr. H. C. Hildyard was requested to act as Hon. Secretary for the remaining period

The 1928 season may be considered one of the most successful of recent years. The opening practice nights at Richmond Baths were well supported, great enthusiasm being shown by many new

members. A Trial Handicap Race was held at Richmond Baths early in the season, and some close finishes were witnessed both in the heats and the final. The first three in the final being, G. Carr, 26 secs. (actual time); I. V. Thornicroft, 28 secs.; F. J. Hayder, 31 secs. After some of the hardier spirits had ventured into the chilly waters of the Thames, practice nights became a nightly occurrence, and many enjoyable evenings were spent by enthusiastic members in the river. The splendid weather, maintained throughout the summer months, made out-door bathing a much more pleasant form of practice.

The Annual Mile Championship, the principal event of the season, was held on Friday, July 20th. As some controversy took place regarding the actual length of the course taken in former years, the advice of the Port of London Authorities was taken and the course lengthened and made from the Isleworth Gate to Kew Bridge, instead of from Brentford Gate as in former years.

Major T. F. Chipp and Mr. C. P. Raffill officiated as Umpires, and Mr. J. Mingay as starter and timekeeper. Seven entries were received, but Mr. F. W. Thorns had to stand down as he still felt the effects of inoculation for typhoid necessitated by his recent appointment.

The six competitors were: Messrs. G. A. Davis, I. V. Thornicroft, E. Hewitson, G. Carr, F. J. Hayder, H. C. Hildyard. The evening was fine and the weather warm, with a strong ebb tide flowing. The preliminaries were soon gone through, and the race started punctually at 6-40; all the competitors got away well at the start, but after the first fifty yards, Carr and Hildyard gradually forged ahead. Hildyard eventually took the lead, which he held to the finish, never appearing to be extended. A great fight was made by Hewitson and Thornicroft, both swimming under difficulties, the former being near exhaustion, and the latter troubled with cramp. Davis, however, who had kept to midstream and was consequently helped by the tide, finished strongly, eventually getting third place by a narrow margin.

The times were: Hildyard 17 mins., Carr 19 mins., Davis 21 mins. 17 secs., Hewitson 21 mins. 19 secs., Thornicroft 21 mins. 21 secs., Hayder 21 mins. 45 secs.

Special mention should be made of Hayder, who though the youngest member of the club, being 15 years of age, pluckily finished the course.

The Race was followed by a Flannel Dance, held at the Kew Pavilion, which was socially a success. Mrs. T. F. Chipp presented the prizes, the winner receiving the Silver Challenge Cup, and a consolation prize was awarded to Hayder for his fine effort. It was pleasing to note that practice nights continued right up to the close of the season, and the marked improvement shown by some of the members augurs well for the future of the Kew Swimming Club.

H. C. HILDYARD, *Hon. Secretary.*

THE CROSS-COUNTRY RUNNING SECTION OF THE SPORTS CLUB, 1928-1929.

A MEETING was held on September 19th, when the formation of a Running Club was decided upon, to be run in conjunction with the Football Club.

The initial run of the season took place on September 22nd, from the Black Horse Hotel, Richmond, six members, Messrs. Brown, Catt, Creasey, Lee, Porter, and Hildyard enjoyed a run over a course of 3 miles through Richmond Park.

On October 6th a run was organised from the Lass Hotel, Richmond Hill. The change of accommodation was due to the inevitable stretches of road that were encountered between the Black Horse Hotel and Richmond Park. This change turned out to be of great advantage; 8 members supported this run of approximately 3½ miles. Similar runs took place on several Saturday afternoons; the more important ones were as detailed below.

An Inter-departmental run between the Tropical and Temperate Departments took place on November 3rd through Richmond Park, Mr. C. P. Raffill and Mr. A. Edwards kindly officiated as Time-keeper and Judge respectively; assistance was also given by Mr. Binnington and numerous Kewites.

Results.

Positions.	Times.
1. Porter (Tropical) - - - -	22m. 30s.
2. Brown (Temperate) - - - -	23m.
3. Hewitson (Tropical) - - - -	24m. 30s.
4. Hildyard (Tropical) - - - -	25m.
5. Farmer (Temperate) - - - -	27m.
6. Catt (Tropical) - - - -	27m. 25s.
7. Boyce (Tropical) - - - -	27m. 35s.
8. McGregor (Temperate) - - - -	27m. 36s.
9. Alcock (Temperate) - - - -	28m.
10. Davis (Temperate) - - - -	28m. 10s.
11. Farley (Tropical) - - - -	28m. 11s.
12. Pearce (Tropical) - - - -	28m. 15s.
13. Creasey (Temperate) - - - -	28m. 20s.
14. Korn (Tropical) - - - -	29m. 5s.
15. { Jarman (Temperate) - - - - } Retired.	
{ Steel (Tropical) - - - - }	

Team placings (first 6 in each team to count).

1st Tropical.

1, 3, 4, 6, 7, 11 - - - - 32 points.

2nd Temperate.

2, 5, 8, 9, 10, 12 - - - - 46 points.

The Tropical Departments won by 14 points. Owing to the enthusiasm of the members of the Club for this kind of sport, a meeting was held on January 11th to select a Temporary Committee

(free from the Football Club) to hold office until the next General Meeting of the Sports Club. Mr. Brown was elected Secretary, Mr. Hildyard, Captain, Mr. Porter, a Committee-man.

Permission was obtained from the Director, by the kind assistance of Mr. Bean, to have evening runs in the Gardens. These evening road runs were well supported, as many as sixteen members have turned out in one evening.

The next important race was that between the T. Range and The Rest; the former challenged the latter to a 4 mile race.

Results.

Position.		Time.
1.	Porter (Rest) - - - - -	22m. 30s.
2.	Brown (Rest) - - - - -	23m.
3.	Hewitson (T. Range) - - - - -	23m. 10s.
4.	Hildyard (T. Range) - - - - -	24m.
5.	Rudd (Rest) - - - - -	26m.
6.	Findlay (Rest) - - - - -	26m. 10s.
7.	Catt (T. Range) - - - - -	26m. 30s.
8.	Boyce (T. Range) - - - - -	26m. 35s.
9.	Alcock (Rest) - - - - -	27m. 15s.
10.	Davis (Rest) - - - - -	27m. 17s.
11.	Mann (T. Range) - - - - -	28m.
12.	Arnold (T. Range) - - - - -	28m. 30s.
	The Rest, 1, 2, 5, 6, 9, 10 - -	33 points.
	T. Range, 3, 4, 7, 8, 11, 12 -	45 points.

The Rest won by 12 points.

The first Inter-club team race was run from the Marlborough Hotel, Richmond, on February 2nd, 1929. Aldenham Gardens Running Club were the guests of the Kew Gardens Running Club to a 4½ mile team race. This was a keen race, resulting in a team victory for Kew Gardens, the first six men of each team scoring points.

Results.

Position.		Time.
1.	Porter (Kew Gardens) - - -	28m.
2.	Squires (Aldenham Gardens) - -	29m.
3.	Hewitson (Kew Gardens) - -	29m. 5s.
4.	Brown (Kew Gardens) - -	29m. 10s.
5.	Baker (Aldenham Gardens) - -	29m. 15s.
6.	Bowers (Aldenham Gardens) -	29m. 16s.
7.	Hildyard (Kew Gardens) - -	29m. 30s.
8.	Rudd (Kew Gardens) - -	30m.
9.	Goodship (Aldenham Gardens) -	30m. 5s.
10.	Findlay (Kew Gardens) - -	32m.
11.	Clayton (Aldenham Gardens) -	33m.
12.	Hofedity (Aldenham Gardens) -	33m. 5s.
	Kew Gardens, 1, 3, 4, 7, 8, 10 - -	33 points.
	Aldenham Gardens, 2, 5, 6, 9, 11, 12 -	45 points.

Kew Gardens won by 12 points.

A. J. BROWN, *Hon. Secretary.*

THE ROYAL BOTANIC GARDENS, KEW, WORKMEN'S
BENEVOLENT CLUB.

To the Editor, Kew Guild Journal:—

Recently I promised to give you for publication in the KEW GUILD JOURNAL, a brief history of the above-mentioned club. The Club was instituted in the year 1910, and its present flourishing condition is primarily due to the interest which the Staff of the Gardens, from the Director downwards, have always taken in its activities and welfare. It is doubtful, however, if the Club would have been in existence had it not been for the then Director, Lieut.-Col. Sir David Prain, who took such a lively interest in its inception.

The Club is conducted on thorough business lines, and its Officers are elected annually. Rules, which are strictly adhered to, have been drawn up, and the accounts are subjected to an annual audit. The Officers and Committee at the present time are:—Hon. Treasurer, Mr. W. N. Winn; Hon. Secretary, Mr. J. Sealy; Trustees, Messrs. W. Linney and H. J. Burgess; Chairman, Mr. C. Pateman; Members of Committee, Messrs. B. J. Allaway, G. Burgess, J. Cheshire, R. J. Hill, J. A. Mingay, H. W. Ruck, and C. W. Preston. The Members' subscription (membership being strictly confined to the subordinate sections of the Garden's Staff) is four shillings per annum. This amount is paid by quarterly instalments, which by consent of Members is deducted from the wages due.

During the first year following the founding of the Club (1910), any demands on the Club were met by subscription sheets, and during this period, subscriptions amounting to £18 6s. 0d. were received, which was sufficient to put the Club on a sound financial basis. The Director is President of the Club, and the remaining members of the permanent Staff are Vice-Presidents or Honorary Members. Subscriptions amounting to upwards of £5 per annum are received from this source.

The benefits payable to ordinary members are:—After 8 weeks sickness, £1 per week for a period of 3 weeks, and 10/- per week for a further 2 weeks, making a maximum sickness benefit in any one year £4. Death claims of £5 per member or member's wife are also met from the funds. Convalescent Home treatment is available on a doctor's recommendation, and in addition, any member being granted this privilege, is allowed £1 for travelling expenses. The Convalescent Home, to which an Annual subscription is sent, is the Surrey Convalescent Home for Men, at Seaford, Sussex.

Since its inception, the following amounts have been paid from the funds:—Sickness benefit, £115 7s. 6d.; Death benefits, £52 10s. 0d.; Refunds to retiring members, £40 15s. 11d.; Subscriptions to the Surrey Convalescent Home, £21 19s. 0d.; Expenses for printing have only amounted to £3 0s. 5d., and actual working expenses have not caused a single claim on the Club Funds. The

lowest amount paid in any one year was £2 4s. 11d., in 1913, and the highest amount, £26 2s. 0d., in 1914. The balance standing to the credit of the Club on December 31st, 1928, was £166 5s. 3d.

Before concluding this brief resumé of the activities and usefulness of a little-known organisation within the bounds, so to speak, of the Royal Botanic Gardens, Kew, the thanks of all Members are due to the following gentlemen in particular, in addition to all Members of the Permanent Staff:—Lieut.-Col. Sir David Prain, Dr. A. W. Hill, Mr. J. Aikman, Mr. W. N. Winn, and to past and present Managers of Messrs. Barclays Bank (Kew Green Branch).

J. SEALY, *Hon. Secretary.*

31st December, 1928.

THE DÜMMER MEMORIAL PRIZE.

THE DÜMMER MEMORIAL PRIZE was instituted in the year 1925 to the memory of Mr. R. A. Dümmer. A sum of £61 1s. 6d. was given by the Members of the Kew Guild in Uganda, and invested in British Funding Loan, and it was decided that the annual dividend should be employed to purchase volumes of botanical interest to serve as an annual award to the Sub-foreman or Student-gardener whose Collection of specimens of the British Flora was adjudged the most deserving of special mention during the year under consideration.

The late Mr. R. A. Dümmer was a capable and enthusiastic botanist, who died while on service in the Uganda Protectorate on December 21st, 1922, in somewhat tragic circumstances. His connection with Uganda commenced about the year 1912, and he devoted his leisure time to his favourite hobby "Plant collecting" and to the study of the Uganda Flora. He completed a thorough and systematic survey of the Kyagwe Flora and collected upwards of 20,000 specimens. In addition he undertook botanical expeditions to Mount Elgon and investigated the flora of the crater of Mount Longinot.

The following are the names of those to whom the award has been made:—

1925	-	-	-	Mr. T. H. Everett.
1926	-	-	-	Mr. W. Nelmes.
1927	-	-	-	Mr. R. Findlay.

On the latter occasion, as two collections were considered of equal merit, an additional award was made possible by the generosity of certain members of the Kew Staff, and Mr. W. Shambrook was the fortunate recipient of a similar set of books. It has been the practice up to the present time to present the two handsome volumes, "Trees and Shrubs, Hardy in the British Isles," by Mr. W. J. Bean (the popular Curator of the Royal Botanic Gardens, Kew), and a suitable book-plate has been obtained in which Mr. R. A. Dümmer's portrait is incorporated.

KEW NOTES AND GLEANINGS.

THE total number of visitors to the Royal Botanic Gardens, Kew, during the year was 1,127,003, an increase of 48,915 on the figures of the previous year.

The greatest monthly attendance was during May, the visitors totalling 229,210; the highest Sunday attendance, 36,838 (May 6th), and the greatest single day record, 53,661 (May 28th). The lowest monthly record was December, with 6,564 visitors; the lowest Sunday figures, 433 (December 16th), and the smallest week-day attendance was 7 (December 18th). Visitors on Sundays totalled 490,081, and on week-days, 636,922.

The following are the details of monthly attendances throughout the year :—

January	-	-	-	-	-	-	-	16,740
February	-	-	-	-	-	-	-	43,559
March	-	-	-	-	-	-	-	69,335
April	-	-	-	-	-	-	-	172,038
May	-	-	-	-	-	-	-	229,210
June	-	-	-	-	-	-	-	135,103
July	-	-	-	-	-	-	-	161,230
August	-	-	-	-	-	-	-	143,513
September	-	-	-	-	-	-	-	102,681
October	-	-	-	-	-	-	-	34,158
November	-	-	-	-	-	-	-	12,872
December	-	-	-	-	-	-	-	6,564
Total	-	-	-	-	-	-	-	1,127,003

DURING the course of the aerial manoeuvres on the 16th August, 1928, when many thousands of people were watching the progress of seven single-seater "Siskin" aeroplanes in the neighbourhood of Richmond, onlookers were provided with an unlooked-for thrill. One of the machines developed engine trouble, and, as it transpired later, the pilot, Flying Officer L. C. Bennett, of No. 1 Fighting Squadron, Northolt Aerodrome, realising that the trouble might cause his machine to take fire at any moment, headed his plane away from the thickly populated area of the neighbourhood, in the direction of the Royal Botanic Gardens, Kew. Onlookers saw that the machine was in difficulties, and the excitement was intense when the lone pilot was observed to jump from the machine. The airman's parachute, fortunately, opened, and he landed safely on a house-top in the neighbourhood of Lion Gate, namely, in

Beaumont Avenue. Meanwhile the aeroplane nose-dived, following what seemed to have been an explosion, and fell in flames near the Ha-ha at the west end of the Syon Vista some 250 yards from the Isleworth Gate entrance to the Gardens, the machine buried itself some four feet in the ground and burned fiercely for nearly half-an-hour, being completely destroyed. Crowds eagerly paid for admission to the Gardens, though it was within an hour of closing time when the accident occurred. A Royal Air Force unit was quickly on the scene and remained on guard over the wreckage throughout the night. Next day the debris was removed, and all traces of the accident were speedily covered up by returfing the badly scorched portions of the lawn. The accompanying photograph is reproduced by the courtesy of Major T. F. Chipp.

THE Assistant Director left on the 3rd November on an official mission to Cyprus and the Sudan. The primary object of his visit, which is on the invitation of the Government of Sudan, is to report on the horticultural organisation of the country and the possibilities of developing fruit growing. Kew has supplied the Garden Superintendents in the past, but Mr. Sillitoe is now due to retire, and the question of the development of the Department is under consideration.

The Assistant Director will also be invited to enquire into forest products, especially their development in the Southern part of the Sudan which approaches tropical conditions.

MR. J. HUTCHINSON left Kew on the 27th July for Cape Town. His intention was to go to Namaqualand with Mr. Pillans who was planning a collecting expedition in that district. Afterwards, Mr. Hutchinson intended to make a tour through the Central Coast Region and pay visits to the Knysna forests, Transkei, East Griqualand and Natal, and the regions which are especially rich in succulents.

In the Transvaal and Swaziland Mr. Hutchinson intended to work, assisted by Dr. Pole Evans, the Chief of the Division of Botany, Entomology and Horticulture of the Department of Agriculture. A visit was also planned to British Bechuanaland and the Faure-smith Botanical Reserve. It was hoped Mr. Hutchinson will be able to visit the Karroo and to study the Flora of that very interesting region, as well as the autumn Flora of Table Mountain before he leaves for home in April. During his mission he will also visit the various botanical institutions and gardens in South Africa.

NOVEMBER 16th, 1928, will be remembered on account of the violent storm which prevailed throughout the whole day. At Kew Observatory the wind force was recorded as reaching 60 miles

per hour. In such a storm considerable damage was anticipated throughout the Gardens. The outstanding loss, and to some extent the only one worthy of mention, was that of the magnificent elm which stood on the lawn near the Broad Walk. This tree, probably the tallest in the Gardens, occupied an isolated position and was exposed on all sides, and must have felt the full fury of the gale. Its total length, as it lay on the ground, was 100 feet, its girth at the base was 18 feet, and at three feet from the base, 16 feet. Only one other tree in the Gardens can compare with this fallen monarch, this being a large Sweet Chestnut in the Spruce Collection, which has a girth of 22 feet 9 inches at three feet from the ground level. The number of annual rings was about one hundred and ninety, showing that the tree was probably planted about the time of Frederick, Prince of Wales (1730-1751).

A SUN-DIAL has been erected in the centre of the small medicinal garden near the Timber Museum. This is of particular interest because the pedestal is formed of one of the stone balusters of the Old Kew Bridge which was demolished and replaced by the present one, 1899-1903.

THE Flagstaff was treated with a bitumen-creosote compound following a thorough scraping and filling up of crevices formed by the drying and shrinking of the wood, during the late summer. This treatment is given in order to preserve this fine spar, every three years.

MANY interesting contributions have been made to the Gardens during the past year. Two of the finest examples of Mexican Mammillarias ever seen in this country were presented by Mr. W. Hertrich, of San Marino, California, U.S.A. The species represented were *M. elegans* and *M. compressa*. Several consignments of rare and interesting South African plants and bulbs have been received from Mr. J. Hutchinson, who, as noted elsewhere, is on a botanical tour in the Union of South Africa. During Mr. T. W. Taylor's tour through Java, the Malay States, Ceylon, etc., many interesting plants were obtained, among which should particularly be mentioned a fine specimen plant of *Grammatophyllum speciosum*, which is now established at Kew and making good growth.

THE structural alterations that have taken place in the plant houses are worthy of note. The most important work of this nature during the past year was the enlargement and re-building of the Insectivorous plant house, the annex to the Victoria Regia House. The collection of Droseras, in particular *D. capensis*, made a pleasing display during the summer and autumn months, and it is of interest to note that several rarities have again been secured for this interesting collection; in particular mention should be made of *Cephalotus follicularis*, *Darlingtonia californica*, *Dionaea muscipula*, and *Droso-*

phyllum lusitanicum. Owing to the moister atmosphere that is possible in the new house and the lower elevation which enables plants to be brought nearer the glass, the plants appear to thrive better and the present group of young plants housed therein certainly appear happy in their new surroundings.

The large central block of the Temperate House was repainted during the summer, and, owing to a very ingenious method of interior scaffolding, the operation was completed in a very much shorter time than previously.

KEWITES will remember that in the south transept of the Tropical Fernery, the central stages were occupied by large plants of *Dicksonia antarctica* and similar genera. These central stages have now been removed together with the path which ran between them, and their place is now taken by a large rectangular bed, held in position by an informal arrangement of rock work (similar to that in the small Temperate Fernery near by). Plants which were formerly grown in pots on the stages are now planted out, and a marked improvement in their condition was noticed during the past summer. Their full beauty can now be appreciated, being planted almost on ground level.

A small porch has been added to the north-west entrance of the Palm House. Its object is to minimise the inrush of cold air which is so fatal to the well-being of the tender subjects, such as *Pandanus spp.*, which are to be found within the house. A similar structure was added to the eastern end of the Orchid Houses a few years ago, and has proved a very satisfactory construction.

The general collection of garden roses now occupies 113 beds of varying size, each of which is devoted to one variety, comprising in all about 7,000 plants. This collection is to be found on the south-west side of the Palm House, and is probably the largest and most representative collection in a public establishment in this country. It is, as ever, a source of great interest to the thousands who visit the Gardens in the flowering season, and must be of considerable assistance to the multitude of rose lovers, judging from the many enquiries which are received. The plants succeed very well, considering the ever-present menace of smoke from the many factories which are now springing up in the immediate neighbourhood.

A VERY pleasing improvement has been effected by overhauling the shrubbery which extends from Cumberland Gate to Museum 1. The common laurel, which has been the main feature for many years, has been replaced by about sixty plants of varieties of *Camellia japonica*. The plants, are as yet, quite small, but should they establish themselves, they should provide a pleasing alternative to their predecessors. Several large plants of *Berberis* still remain in the shrubbery, whose orange coloured blossoms will add brightness to the rich green leaves of the Camellias.

Few members of the permanent Staff at Kew have been a member of the Kew Guild since its inception, yet Mr. Walter Irving is one of those who can justly lay claim to this distinction. It will come as a surprise item of news to many who knew and worked with him, that Mr. Irving retired from Public Service on August 2nd, 1928, on reaching the age limit, having completed almost 38 years' service at the Gardens. He entered the Establishment as a Student-Gardener on October 20th, 1890, was appointed Sub-foreman of the Ferneries, January 30th, 1893, and became Foreman of the Herbaceous and Alpine Departments on March 9th, 1893. Owing to a nominal change of states in 1922, the posts of Foremen being abolished, he attained the rank of Assistant Curator.

Mr. Irving was President of the Guild during the years 1927-28, and a brief life story with a portrait appeared in the 1928 issue of the *Journal*.

We wish Mr. Irving and his wife many years of happiness in their retirement, in the delightful surroundings of the Surrey hills where they have made their home.

MR. ALEXANDER EDWARDS succeeded Mr. W. Irving as Assistant Curator of the Alpine and Herbaceous Departments at Kew on August 3rd, 1928. Though quite a young man, having been born on May 4th, 1904, Mr. Edwards has had wide experience. He was employed under the Chief Forestry Officer to the Manchester Corporation Water Works, and was concerned in the extensive afforestation schemes undertaken by that body, at Thirlmere. On leaving this department, Mr. Edwards entered the service of Messrs. T. R. Hayes and Son, of Keswick, remaining with the firm for three years. Later he became a Student-Gardener at the Royal Botanic Garden, Edinburgh. After more than two years service at this Establishment, he again returned to Manchester, entering the Parks Department under Mr. W. Pettigrew, ultimately becoming Foreman of Alexandra Park. Though not directly connected with Kew, it is interesting to note that with the exception of his first appointment at Thirlmere, Mr. Edwards served under Kew trained men at Keswick, Edinburgh and Manchester.

Mr. Edwards was married early in January, 1929, and the good wishes of the Guild are extended to Mr. and Mrs. Edwards for their future happiness in their new surroundings.

THE Senate of the University of London has conferred the degree of Doctor of Science upon W. B. Turrill, M.Sc. (London), F.L.S. Dr. Turrill's thesis has been published in book form by the Clarendon Press, Oxford, under the title "The Plant-Life of the Balkan Peninsula."

KEW METEOROLOGICAL NOTES, 1928.

	Rainfall, in Inches.	Temperature.	
		Maximum.	Minimum.
1928.		F.	F.
January.....	2.97	56°	21°
February.....	1.95	58°	22°
March.....	1.82	68°	20°
April.....	1.33	74.5°	21°
May.....	1.92	77.5°	24.5°
June.....	2.32	78°	30°
July.....	2.34	92°	39°
August.....	2.72	82°	41°
September.....	0.97	84.5°	27°
October.....	3.85	67.5°	24°
November.....	1.90	60°	20°
December.....	2.35	55°	15°
Total rainfall for 1928.....	26.44	—	—

The year 1928 will be remembered chiefly on account of the brilliant sunshine during the whole of the summer and early autumn months. The rainfall during the year, as will be observed from the above figures, was adequate, and only during July for a very brief period, when a maximum shade temperature of 92° was recorded, did a drought seem to be imminent. The early days of the year were ushered in by unusually high winds, and during November gales of unusually high velocity (often approaching 60 m.p.h. force) were recorded. Little damage was done in the Gardens by storms during the past year with the exception of the losses noted in one of the previous paragraphs. The lawns have been in particularly good condition throughout the year.

 LINES WRITTEN IN A UGANDA GARDEN.

When I wander at my leisure,
 In my garden so bright and fair,
 Then my heart is filled with pleasure,
 As I breathe in that incensed air.
 Stately Cannas, borders filling,
 Unfold their flowers of brightest hue;
 Heliotrope, its scent distilling;
 Morning Glory, heavenly blue;
 Carnations and sweet *Verbena*,
 In mauve and scarlet *Salvia* grows;

Clerodendron, Bougainvillea,
 And queen of all, the fragrant Rose,
Gloriosa, weakly climbing,
 Scarlet and gold its blossoms send,
 And the Golden Shower twining
 With richest gold its branches bend,
 And no land, how bleak and lonely,
 But has blossoms fragrant and fair,
 In deserts where sand drifts only,
 Where Arctic winds e'er chill the air.
 They are Flora's choicest treasures,
 Rend'ring each one its meed of praise.
 Filling our drab lives with pleasures,
 Bringing us light in darkest days.
 Whisp'ring to the weary wand'rer
 O'er whose soul life's dark shadows brood,
 Of his home when prospects fairer
 Wove golden dreams round his boyhood.
 Deep in his heart where memory dwells
 Mirrored reflections still he sees,
 Primrose and bluebell covered dells,
 When Spring smiled o'er the flow'ry leas,
 Familiar spots where once he sought,
 The early blooming Celandine ;
 Where smiling June abundance brought
 Of Dog roses and eglantine.
 Visions of some old-time garden
 With Gilly-flowers and Columbines,
 And Our Lady's pure white lilies ;
 Of porch where rose and jasmine twines.
 They are gifts that all may offer,
 For they are joys we all may share,
 Tokens they of love we proffer
 Speaking of friendships that we bear.
 Gifts whose value never alters,
 Around our dead they gently lay,
 Beautifying God's dear altars,
 Brightening up our festal days.
 In her hands the young bride bears them
 Emblems of holy innocence,
 Gloomy thoughts aye fade before them,
 Their purity and sweet fragrance.
 They are gifts that God hath given
 That, seeing them, our thoughts may rise,
 High above all earthly pleasures
 To where He dwells in Paradise.

WEDDING BELLS.

- Mr. Thomas W. Wiltshire to Miss Zella May Miles, at Christchurch, Wellington, Shropshire. April 30th, 1927.
- Mr. J. W. Watson to Miss Nellie Dillnott, at Uxbridge, Middlesex. September 24th, 1927.
- Mr. George Thomas Lane to Miss Phyllis Margaret Poynter, at St. Luke's, Kew Gardens. May 26th, 1928.
- Mr. John G. Grant to Miss Dorothy Ross, at St. Luke's, Kew Gardens. August 25th, 1928.
- Mr. Redvers Case to Miss Kathleen Frances Froome, at St. Saviour's, West Ealing. September 15th, 1928.
- Mr. Walter Everitt to Miss Kathleen Mannion, at St. Barnabas, Bristol. December 1st, 1928.
- Mr. F. Richards to Miss Beatrice Ashdown, at St. Mary's, Bromley. December 2nd, 1928.
- Mr. Reginald B. Hands to Miss Lilian Higgs, at St. Paul's, Balsall Heath, Birmingham. December 22nd, 1928.
- Mr. Alexander Edwards to Miss Catherine Lumsden, at Carlisle. January 2nd, 1929.

WHERE THEY ARE AND WHAT THEY ARE DOING.

Mr. Alfred Keys writes from U.S. Plant Introduction Garden, Coconut Grove, Florida:—

"I was very pleased to receive your letter of October 24th, and note that you wish to obtain a few details of the recent Florida hurricane. Fortunately for us this storm struck the Florida coast near Palm Beach, which is about 80 miles distant from here, so that the wind in Miami did not exceed a velocity of much more than 60 miles an hour and very little damage was done. Higher up the State, however, the damage was very great and the loss of life was appalling, about 2,000 people being killed. Most of these people were drowned in the Okeechobee Lake region. With the roads washed away and the whole of the area flooded it was some days after the storm before the dead bodies could be reached, and when reached the transportation difficulties and the condition of the bodies were such that most of the dead had to be stacked in piles and burned near where they were found. According to newspaper reports, many unidentified bodies that were brought to Palm Beach for burial had to be buried together in long trenches, which were very quickly made with a ditching machine.

"The region south of Lake Okeechobee, where most of the lives were lost, is flat, low-lying, peaty, water-logged land and in many places is below sea level. The vegetation is very largely aquatic or semi-aquatic, being mostly rank-growing herbaceous

weeds. The people who were drowned in this district were engaged in vegetable growing, but how they make a living on this type of soil and under these conditions nobody knows, except possibly the Real Estate men who, with a pencil and a piece of paper, can show just how a man can make a fortune in two years or less—usually less. I used to consider myself an optimist, but after 5 years' stay in Florida I have come to the conclusion that, as an optimist, I am a hopeless failure.

"I have had some interesting experiences in Florida and would not have missed them for anything, although with the Real Estate boom still fresh in my memory I feel that I have been over-charged for at least one of my experiences. However, in connection with the Real Estate boom I have some consolation in the fact that hundreds of thousands of people from all over the United States and other parts of the world were, to use an Americanism, 'caught holding the bag' when, to use another American expression, 'the bottom fell out of the boom,' not to mention my pocket.

"After over 5 years with the United States Department of Agriculture, I am leaving Florida in a few days' time (November 14th) to take employment in Honduras and Costa Rica with the United Fruit Company. Since the 'soil' in south eastern Florida consists very largely of coral rock you will understand how glad I am of this opportunity to get back to the tropics. I felt that Florida was no place for a plantsman as soon as I discovered that dynamite took the place of a spade for digging plant holes, etc., and that dry spells, frosts and hurricanes were among the other disadvantages that have to be taken into account by Florida horticulturists when they attempt the cultivation of some of the more tender tropical plants. While I felt greatly disappointed in the soil and climatic conditions of Florida before the 1926 hurricane, and before I had made my trip to Cuba, Haiti, and Panama in 1927, you can imagine how much greater the desire to return to the tropics became after my experience in the storm, and after my 1927 trip to the tropics had reminded me of the excellent soil and climatic conditions I had left behind in Dominica and which I do not seem to have appreciated while I was there. The climate of Florida is ideal for the tourists—especially in winter—but no place for a man who may be trying to grow some very tender tropical plants. Hurricanes are bad enough in the tropics where damaged trees soon recover or others can be grown very quickly, but in Florida it takes years to replace losses after a storm.

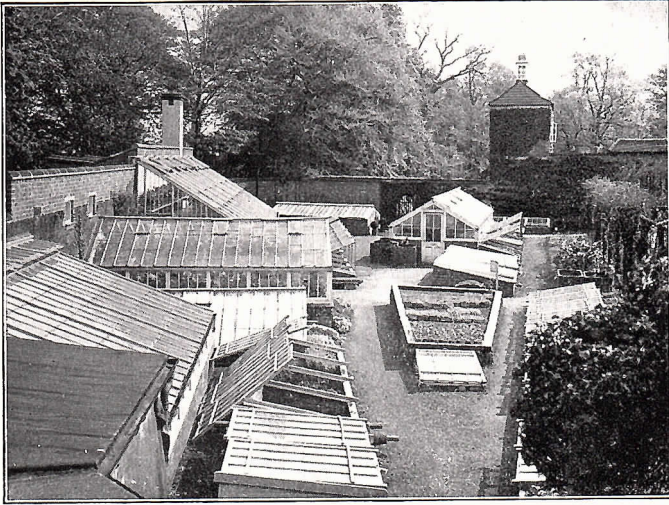
"I am sorry that I am not able to tell you more about the recent Florida hurricane. What I could tell you about the 1926 hurricane would fill a book. We were right in the path of the storm on that occasion, but fortunately escaped personal injury: Our house was flooded and windows were broken, and my car was damaged when the garage blew away. Except for this damage, we got off very lightly. Miami was a wreck after that storm and about 400 people were killed and 6,000 injured.

"Some of these days I will write a little more for the *Kew Guild Journal*, but I shall not be able to manage that for the 1929 issue as I am now very busy winding up my work with the Department. I have been very busy lately trying to get some plant houses, offices and other buildings completed before I leave.

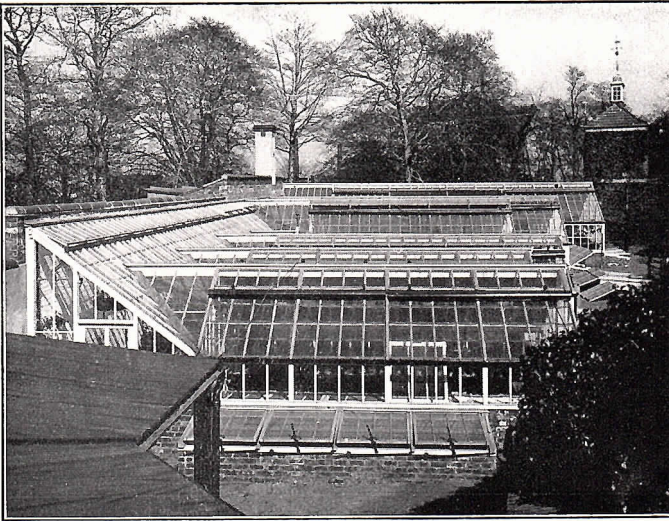
"I must congratulate you on the way you have compiled the *Kew Guild Journal*. Reading the *Journal* is the next best thing to visiting Kew."

Mr. F. S. Banfield writes from Serdang, F.M.S. :

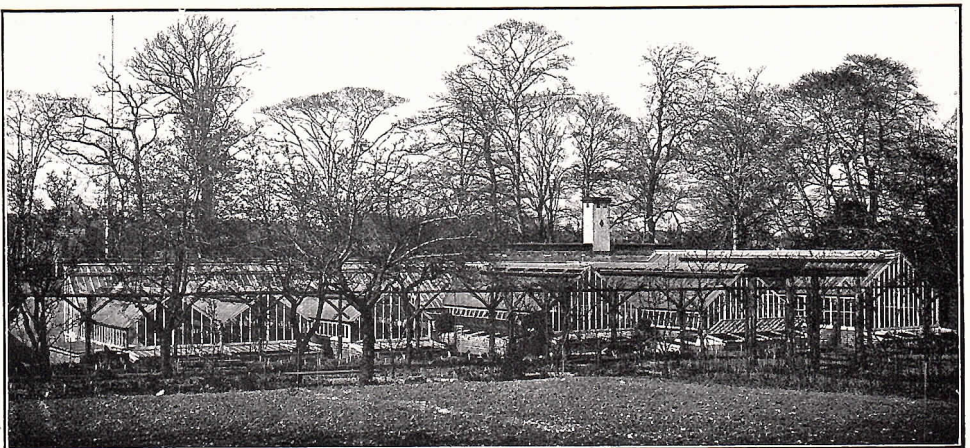
"I am stationed at the Government Experimental Plantation, Serdang, which is an estate of about 1,500 acres. Mr. J. N. Milsum, another old Kewite, is in charge. This plantation has been started with the object of carrying out experiments with crops other than rubber and coconuts, and at present over a hundred crops are under cultivation on either a large or small scale according to their agricultural importance. I find the work very interesting, and my associations with the Labour Force afford me an excellent opportunity of getting accustomed to the Tamil language. Some time ago I paid a visit to Taiping which is about 200 miles from here. I took an exhibit of grasses and fodder crops for the Perak Agricultural Show, and during my stay I was able to get acquainted with the numerous fruits and vegetables grown in this country. Having spent a few days in Taiping, I went on to Maxwell's Hill (3,400 feet alt.), which is one of the Hill stations of the Federated Malay States. From the centre of the town to its summit, the distance is about nine miles, and though the track is rather rough I reached the top in two hours and a half. From the foot of the hill and for about eight miles, the track passes through an extensive tract of virgin forest, but unfortunately at the time of my visit there were not many flowers to be seen. I was able, however, to identify *Sonerilla* spp. *Didymocarpus*, *Alocasias*, one or two *Rhododendrons*, aroids and ferns. English vegetables and flowers are grown quite successfully on the hill. They are grown on terraced plots, but several crops and most of the young seedlings have to be grown under improvised shelters owing to the very heavy rainfall. Annuals such as stocks, zinnias, antirrhinums, cosmoses, salvias and carnations succeed and are sent away daily to all parts of the Federated Malay States. Pergolas of *Ipomoea rubro-coerulea* and *I. coccinea* were exceedingly fine, as also were *Bignonia* spp. *Plumbago capensis* and many other climbers. Cattle are also kept on the hill, but there is very little natural fodder for them, so an attempt has been made to establish a few of the grasses grown at Serdang, and about half an acre of Guinea Grass appeared to be doing very well. Thanks to the Anti-Malarial Department there are very few mosquitoes here, although nets are used for sleeping under, throughout Malaya."



OLD GREENHOUSES AND FRAMES BEFORE
DEMOLITION, May, 1923.



NEW GREENHOUSES AND FRAMES, WEST ELEVATION.



NEW GREENHOUSES AND FRAMES, SOUTH ELEVATION.

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THE PAVILION AND MAIN ENTRANCE TO THE
GARDEN CLUB.



THE GARDEN CLUB: A LEAFY WALK.

THE FACTORY IN A GARDEN.

As requested, I will now endeavour to contribute a few remarks on "The Factory in a Garden" for the 1929 *Journal*.

Bournville, as is well known, is the home of the Cocoa and Chocolate industry of Cadbury Brothers, Ltd., the products of which are known and despatched to the remotest parts of the world. I propose, however, to confine my remarks to welfare items, having regard, more particularly, to the Gardens and Recreation Grounds, at Bournville Works.

Many Kewites, no doubt, have paid a visit to Bournville Works, familiarly known as "The Factory in a Garden." A very large number of people visit here in the course of a year, being conducted over the works and villages by competent guides.

Bournville Works, and the Garden Village of Bournville, adjacent to the Works, are ideally situated. There are now four other villages, in close proximity to the parent village of Bournville—off-shoots as it were—which have come into being, the whole of which cover about 1,000 acres. The Factory covers 75 acres of land. The Gardens and Recreation Grounds extend well over 100 acres. The writer, during his time at Bournville, has seen the development of three of the villages, also a good part of the parent village, although the latter was in existence and in process of development.

A good deal of remodelling, development and laying out of Gardens and Recreation Grounds surrounding the Factory have been undertaken during the last twenty years.

The factory, of course, was the first to come into being, the building of which was commenced in 1879, approximately two-thirds having been built during the above-mentioned period. Building is continually going on, in order to keep pace with modern conditions of manufacture and a steadily growing business. The first buildings were erected in 1879. Being a Food Factory, cleanliness is an essential factor in the manufacture of its products. This, to a very large extent, is reflected in the employees—there are 10,000—and this applies to everything connected with the factory.

Bournville Works and Village lie about four miles South-West from the centre of Birmingham. The Works are built in the beautiful valley of the Bourn, the stream running through the centre of the factory buildings. The Estate on which the Factory is built, together with the Gardens and Recreation Grounds surrounding it, is well timbered and of extreme beauty. The land is undulating, rising gradually on both sides of the stream, thus presenting many and varied aspects.

The several areas and grounds connected with and surrounding the Factory, are, more or less, sectional; these are known under different headings, viz., Works Gardens, Girls' Recreation Grounds, Men's Recreation Grounds, Rowheath Recreation Grounds and Garden Club.

The areas of the above grounds cover approximately 25 acres, 12 acres, 12 acres, and 95 acres, respectively. The Bournville Almshouses Gardens come under the Works Gardens Department for upkeep and maintenance. In addition to the above, land is set apart for allotments, of which there are 290 connected with the Factory. Plots are also provided for the boys' and girls' Gardening Class—50 Students attending the three year course. The classes are very popular, and applications are usually in considerable excess of the vacancies available.

Branches of Gardening.—It will be readily understood that various branches of gardening are carried out in the general upkeep and maintenance of the grounds at Bournville; these include Pleasure Grounds, Plantations and Shrubberies, Herbaceous Borders, Alpine, Rock and Wall Gardens, Water Gardens, Recreation Grounds, Decorative and Greenhouse Sections.

During the war a Sales Department was inaugurated for vegetable seeds and plants. This proved so great a boon to the employees that it was continued until quite recently.

Beautifying the Factory.—Decorative Plants are grown in large quantities for the Offices, Workrooms, Public Rooms, Parties, and Social Functions, etc. Cut Flowers are also used very largely. In the Works there are between 500 and 600 plants (in pots, tubs and other receptacles) in constant use; most of these have to be changed frequently, necessitating the propagation and growing of large numbers of plants, to keep up the supply and maintain a succession. Flowering plants are used as much as possible. In some of the large rooms, large palms are used for furnishing, and other large plants of a similar character are grown in tubs. The total number of decorative and bedding plants used annually is approximately 50,000. Window boxes, at one time, used to be a feature on the private and main offices, but of latter years these have gradually been reduced, allowing climbing and wall-trained plants to take their place; climbing plants and those suitable for training on walls, however, have always been a feature at Bournville, both on the works buildings and on the walls of the houses in the Village. Baskets filled with suitable subjects are also largely used during the summer months, both outside and in the public rooms and offices.

A new range of greenhouses and frames was erected in 1923, bringing this section of the Department more up to date, and in keeping with existing surroundings, to meet the ever-growing need for more and more decorative plants. The old greenhouses were

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SPRING FLOWERS IN BOURNVILLE LANE.

demolished—these had been improved and added to during the period at present being dealt with—and the site completely cleared for the erection of the present and more modern range of houses. In 1909, new potting sheds, tool-houses and stores were erected, of a type in keeping with Bournville traditions.

As previously stated, climbers and wall plants are used very largely for covering the walls of Offices, Workrooms, Pergolas, etc. The following are a few kinds used for this purpose: Roses in variety, Ampelopsis, Clematis, Ceanothus, Cydonia, Escallonia, Garrya, Ivies, Lonicera, Polygonum, Jasminum, Pyracantha, Vitis, Wistaria, and many others.

Approaches to the Factory.—All the approaches, of which there are several, are planted with avenues of trees, bounded by plantations and shrubberies, or by grass banks and borders. Bulbs are naturalised on the grass banks, grass borders and in many parts of the various grounds. Hundreds of thousands of bulbs have been planted in the grass for naturalisation during the past ten years, and a few years previous to the war. For this purpose, Daffodils (*Narcissi*) and Crocuses are the chief kinds planted. Very large stretches of grass areas are planted with bulbs, including approaches, pleasure grounds, underneath groups of ornamental trees, etc., presenting a picturesque sight during the spring months. Large numbers are also used for forcing and bedding purposes.

Flowering trees and shrubs are grown in great variety; added to this the sylvan aspect of the locality tend to make Bournville and its environs an exceptionally beautiful sight during the spring and early summer months. In the various grounds groups of trees and shrubs are planted for effect, the best possible use also being made of the natural surroundings. Where possible existing trees are left standing, no indiscriminate cutting down of trees is permissible even when building developments are taking place. To cut down a large tree—say an oak for instance, over 100 years old, may be a matter of only a few hours, but it cannot be grown in one person's lifetime, hence the necessity of careful discrimination.

Developments. Lay-out of Gardens and Recreation Grounds.—Practically all the Gardens, and two of the Recreation Grounds have been remodelled, or laid out, during the past twenty years or so. Just previous to, and immediately after the war, remodelling and development work was very rapid, much labour and money being expended in this direction, everything possible being done to ensure success, to create ideal surroundings to the Factory, and additional Recreation Grounds for the employees. In this, I think, the firm achieved their object, and deserve all praise.

Bournville Hall Gardens and Grounds (Girls' Recreation Grounds).—The gardens and grounds of Bournville Hall (formerly known as Bournbrook Hall, previous to being purchased by the

firm), are now known as the Girls' Recreation Grounds. These gardens and grounds are situated in a beautiful woodland setting adjacent to the factory, on the south side of Bournville Lane. Entrances to the grounds are available from the factory buildings by two subways under the latter thoroughfare.

The Hall was demolished early in 1907, the old building dating probably from the early part of the eighteenth century. Of its history little record has been found prior to the beginning of the nineteenth century. The gardens and pleasure grounds were laid out in the manner in vogue at that period, including walled-in kitchen garden, vinery and attendant green-houses, sunk fences and pools, together with the usual outbuildings—coach houses, stables, etc.

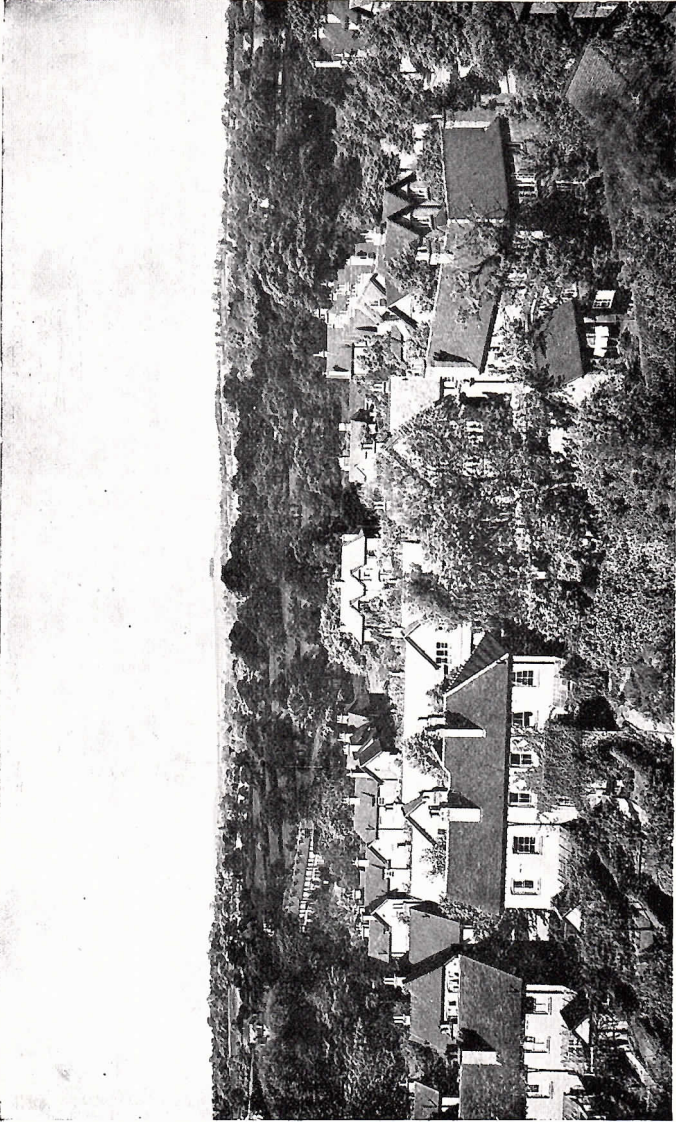
A lily-pool and formal garden, backed by large trees, now occupies the site of the Old Hall, and are enclosed by a yew hedge. Beds of roses, azaleas and Rhododendrons are growing amid a setting of grass margins surrounding the pool. A bank on the south side of the enclosure is planted with *Hypericum calycium*. The pathway round the pool is laid with rectangular stone-paving; this semi-secluded formal garden forms a most pleasant retreat during the summer months. Nymphæas in variety and other aquatic plants are to be found growing in the pool.

In 1911–12 the grounds were entirely remodelled with a view to the provision of more games, and improvements carried out on modern lines in keeping with existing surroundings.

A few old features connected with the place have been preserved, particularly the old Georgian Pigeon House and the walled-in-garden. The latter was formerly the kitchen garden, and many of the old fruit trees still remain, notably, pears and apples. The glass-houses occupy a portion of this garden, together with potting sheds, tool-houses, store-houses and offices, etc., these are separated from the garden by a rustic screen planted with climbing roses. The walled-in-garden is now devoted to a flower garden—herbaceous borders, rose borders and the growing of plants for cut flowers. It forms a pleasant retreat from the other part of the grounds, secluded and entirely cut off from the playing areas.

Recreation Grounds.—The Recreation Grounds, of which there are three, extending over a hundred acres, are at the disposal of the employees, and are laid out to meet the requirements of modern sports and athletics for men, youths, and girls. These include cricket, football, hockey, netball, tennis, bowling, swimming, running, cycling, motor cycling, etc. There are four well equipped Pavilions, one on each ground, viz.:—Girls' Recreation Grounds, Men's Recreation Grounds and Rowheath Recreation Grounds. The last named is the more recent and modern structure, and meets the needs of all who use the grounds. It was expressly designed on a utility principle, with a view to meet the requirements of players

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BOURNVILLE VILLAGE.—The Village now extends over 1,200 acres, and has a population of 7,000. In the five villages comprising the estate there are more than 1,900 houses, and the number is steadily increasing. The ownership and administration are separate from the Bournville Works.

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THE ROWHEATH RECREATION GROUNDS.—These grounds, situated within five minutes of the Works, extend over 95 acres, and materially supplement the older recreation grounds within the factory area.

of games. There are 40 dressing rooms for men, youths and girls, 17 showerbaths, and 25 lavatory basins. The dressing rooms accommodate one team each, and are separated from one another by close mesh expanded metal for through ventilation. An annexe provides dressing room for 6 additional teams.

The following is an extract from the Bournville Annual, "Work and Play," for 1926 :—

"The best way to indicate the extent of the factory sport is to give an abstract of the teams and the games played on all grounds in a single year. These fluctuate year by year. (Tables are not given in these notes).

"Analysing the above, there are 50 Association and Rugby teams, 35 hockey, 39 cricket, 36 tennis, 23 bowls, 39 netball and 5 water polo teams. During the summer of 1925 there were 103 organised men's, girls' and youth's teams, providing games for 850 players. In the preceding winter there were 124 teams, providing games for 1,200 players. In a recent year 453 cricket matches and 5,657 hours of tennis were played at Rowheath alone. Umpires and linesmen are not included.

"These players do not include 'Casual' games played by 'pick-up' sides, nor, it should be noted, do they present a complete view of factory recreation in which angling, rambling, cycling, and cross-country running are very live features. Mention should also be made of the 290 allotments controlled by the Works Allotment Association, and the 54 boys' and girls' gardens controlled by the Education Committee.

"The following gives the number of playing pitches and courts now provided on all grounds :

Association Football	-	-	-	-	12 pitches.
Rugby Football	-	-	-	-	3 "
Cricket	-	-	-	-	15 "
Hockey	-	-	-	-	10 "
Tennis	-	-	-	-	53 courts.
Bowls	-	-	-	-	4 greens.
Netball	-	-	-	-	4 pitches.

"Leisure in the open-air involves more than games, and at Rowheath a Garden Club has been laid out as a retreat for employees and their families. Trees and shrubs border the winding paths, and there are pretty flower beds and rockeries. A large lawn may be used for dancing, and at one end slopes towards sheltered stages on which dramatic entertainments and concerts are given. On a pleasant lake the Model Yachting Club sail their craft in competitions, which are keenly watched; and there are also croquet lawns and a 9-hole course for Golf Putting."

Branch Factories.—There are six branch factories, and milk collecting stations, situated in the Counties of Worcestershire, Gloucestershire, Shropshire, and Staffordshire. All of these have grounds surrounding the buildings which have been laid out on the lines similar to those at Bournville. The laying-out has been undertaken or supervised by the Works Gardening Staff. Three of the factories have extensive grounds attached, including Recreation Grounds in proportion to the number of employees. All the grounds are kept in a very high order of excellence.

At most of these branch factories houses and bungalows have been erected, for the accommodation of employees. In one instance a bungalow was built for the accommodation of single men. Where houses have been erected by the firm, either at Bournville, or at the outlying factories, the gardens have been laid out and fruit trees planted by the Bournville Works Gardening Staff. All houses belonging to the firm, or built by the Bournville Village Trust, have gardens. The total number of houses on the Bournville Estate is over 1,900, of these 170 belong to Cadbury Bros., Ltd. These are laid out when the houses are built, and a number of fruit trees planted—mostly apples. (The Village Trust, of course, has its own Gardening organisation).

Convalescent Homes.—There are two Convalescent Homes connected with the Factory, one for girls and the other for men. Spacious grounds are attached to both places, for recreation and the production of vegetables and fruit for use in the homes. The former is pleasantly situated at Bromyard, among the Herefordshire Hills, and has accommodation for about 30 girls. The men's home is "Hafod Wen," N. Wales, and has accommodation for about 12 men.

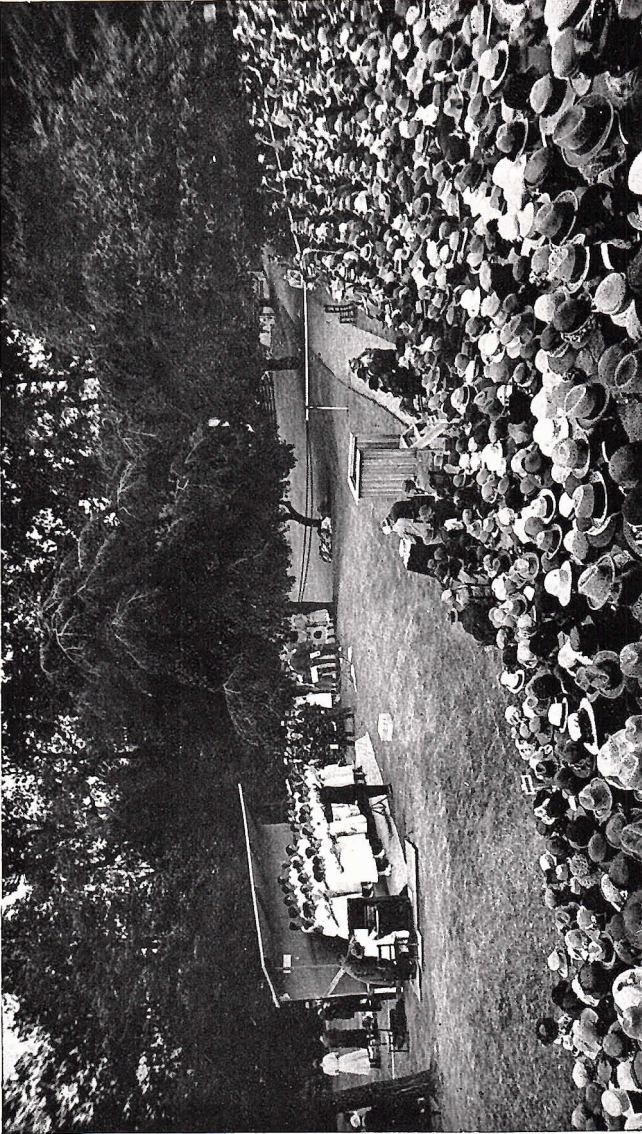
Gardening Staff.—It will be seen by the foregoing remarks that a large permanent staff is necessary for the upkeep and maintenance of the Gardens and Grounds connected with the Factory at Bournville. The Staff increased from 6 in 1906 to 60 in 1925. In addition to the above, when development schemes were in progress, extra labour had to be employed, the Staff, at such times, being augmented to over 100 at different times. Since taking over the charge of the Bournville Works Gardeners' Department, in 1906, remodelling, laying out, and development work has been more or less continuous.

The Department comes under the same rules as those governing the Factory. The working hours are 44 per week.

It is gratifying, and there is a feeling of satisfaction, in having accomplished something—even though it be only a little—and filled a small niche in this hive of industry.

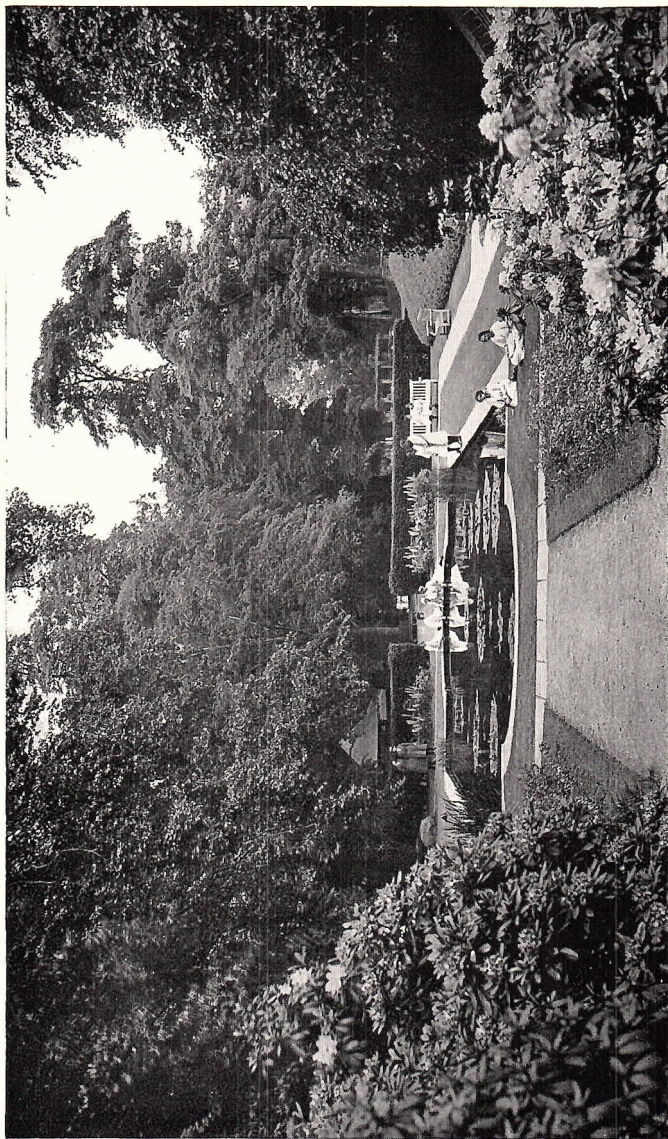
J.L.

To face page 690.]



SCENE AT THE BOURNVILLE MUSICAL FESTIVAL, at which vocal, instrumental, and choral competitions are held over four days. The Festival takes place every year in the Girls' Recreation Grounds. The portion of the grounds shown is also used for Pageants and Masques.

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A SCENE IN THE GIRLS' RECREATION GROUNDS,—THE LILY POND.

Extract from "Bournville Works Magazine," July, 1924 :—

" Beautifying the Factory.—As our readers know, special efforts have been directed during the last year or two through the works councils and the Gardeners' Department toward beautifying the work-rooms and offices in the Works. Many, however, will doubtless be surprised to learn of the amount of work and organisation lying behind the provision and care of the plants, flowers, etc., for decorative purposes, and the following particulars supplied by Mr. J. Lodge, will, therefore, be of interest.

" A year ago last May the work of demolishing the old Green-houses commenced, and by November the erection of the new houses had been completed. There are now eight greenhouses, used to maintain a constant supply of plants and cut flowers for the work-rooms, offices, parties and social functions, also for growing bedding and decorative plants for use in the Gardens and Recreation Grounds. In the Works there are between 500 and 600 plants, while the number of decorative and bedding plants and vases of cut flowers used annually is approximately 50,000.

" As a result of the better accommodation, the report of the Gardeners' Department for the first quarter of 1923 shows a marked increase in the number of plants and cut flowers supplied, also a wider choice of varieties ; roses, carnations and lilies being cultivated. Up to the time of the report approximately 2,500 bowls and pots have been used for decorative purposes, including hyacinths, tulips and narcissi.

" The following figures are eloquent both of the work of the Department and the efforts made to brighten the Factory. It must be remembered that the plants and flowers have to be changed weekly, fortnightly, or monthly as necessary.

Plants in pots and vases of cut flowers supplied	
to workrooms, offices, etc.	3,625
Supplied to Social Functions, Parties, etc.	462
To Bingley Hall Exhibition	20
Total for three months	4,107

" That the presence of the flowers in the workrooms serves not only as a delight in itself, but as an inspiration, is seen in the increasing number of people who grow for themselves. The Allotments Association Department Bulb Growing Competition is a case in point. Truly, as someone wrote in these pages a year or so ago, at Bournville there is not only a ' Factory in a Garden,' but also a ' Garden in a Factory.' "

J.L.

Extract from "Bournville Works Magazine," October, 1925 :—

"A loss to Bournville Works which many will regret was brought about in August by the retirement of Mr. J. Lodge, late head of the Gardeners' Department. He had held that position for 19 years.

"His experience was gained in several parts of England, and abroad, together with a general and thorough course of training at the Royal Botanic Gardens, Kew. When he took over the Bournville gardens and grounds they were already extensive, but the grounds that have been added since then have been so large as to necessitate a permanent staff ten times the size of the original. The Girls' Grounds have been largely remodelled, providing additional playing areas. Rowheath has been brought into being, and the grounds surrounding the branch factories have been laid out by the Bournville Staff. The extension of the Works has made an ever-increasing demand for flowering plants for the decoration of rooms, necessitating the erection of large greenhouses. In all of these undertakings Mr. Lodge has played a leading part.

"Mr. Lodge will be remembered by many girls as the popular teacher of their Gardening Class, a position he held for about fifteen years. He was also a writer of many articles on cottage gardening, which appeared in these columns. His notes during the War were particularly useful in view of the great need of home production. A further assistance to war-time gardeners was the institution of the Sales Department for vegetable seeds and plants. This proved to be so successful that it is still running.

"It is widely regretted that his retirement has been hastened by failing health, and we merely repeat the expressed wish of all when we hope that the rest he is now able to take will prove beneficial and restorative. Upon leaving, his colleagues of the Foreman "A" Association presented him with a gold watch, suitably inscribed, as an expression of their regard."

(The photographs accompanying this article are reproduced from electros loaned by Messrs. Cadbury Bros., Bournville).

J.L.

A KEWITE IN THE HEBRIDES.

THE JOURNAL duly arrived and I have found it, as usual, interesting. Time flies ! Not a few good names have dropped out from the list of Old Kewites in the interval since I left Kew. I was there but ten months before taking an appointment—far too brief a period for taking full advantage of the many opportunities offered for improving one's knowledge. I did my best in the limited time at my disposal, confining, for obvious reasons, my attention more to the economic aspect of things. The museums were a never-failing source of interest. Later, during a period of convalescence, I made use of the knowledge of Botany then acquired in investigating the Flora of my native isle—primarily for the purpose of finding out what plants made up the herbage of the Hebridean pasture, low land and hill country, with possibly a view to its improvement—a difficult but interesting problem. The result of my efforts in this direction, together with a general description of the island, was afterwards published in book form. Some 650 species and varieties of flowering plants, ferns and fern allies are included in the plant list, others, apart from the useful plants, being gathered by the way. Owing to the long coast-line in comparison with the inland area, sea-shore plants form, as might be expected, an important element of the island flora. *Ligusticum scoticum*, *Spergularia rupestris*, *Crithmum maritimum*, *Beta maritima*, *Asplenium marinum*, *Sedum roseum*, *Silene maritima*, etc., on the sea-rocks ; *Salsola Kali*, *Atriplex laciniatum*, *Cakile maritima*, *Eryngium maritimum*, etc., on the sandy shore ; *Salicornia herbacea*, *Suaeda maritima*, *Triglochin maritimum*, *Juncus Gerardii*, *Scirpus maritimus*, *Glyceria maritima*, *Carex vulpina*, etc., are found in the salt-marsh, some abundant, others quite rare.

Marsh, and fresh water-loch plants are common—White Water Lily, Common Reed and Bottle Sedge being the most conspicuous about the lochs. *Scirpus lacustris*, *Cladium Mariscus*, *Littorella uniflora*, *Juncus bulbosus*, *Lobelia Dortmanna*, *Myriophyllum alterniflorum*, *Potentilla palustris*, *Menyanthes trifoliata*, etc., frequent shallow water and marshy ground. Dragging in deeper water produced :—*Callitriche autumnalis*, *Potamogeton perfoliatus*, *P. pusillus*, *P. heterophyllus*, *P. purillus*, *P. nitens*, *P. filiformis*, *P. graminifolius*, *Elatine hexandra*, *Utricularia minor*, *U. neglecta*, *Najas flexilis*, *Myriophyllum spicatum*, *Sparganium minimum*, *Juncus bulbosus* var. *fluitans*, *Chara fragilis*, *C. vulgaris*, *C. aspera*, *Nitella opaea*, *N. translucens*, *Ranunculus Drouetii*, etc. Inland species include :—*Epipactis palustris*, *Malaxis paludosa*, *Listera cordata*, *Valeriana sambucifolia*, *Eupatorium cannabinum*, *Inula Helenium*, *Carlina vulgaris*, *Pyrola minor*, *Centunculus minimus*, *Gentiana campestris* var. *baltica*, *Ajuga pyramidalis*, *Orobanche rubra*, *Lemna minor*, *Hymenophyllum Tunbridgensis*, *Asplenium Trichomanes*, *Osmunda regalis*, *Polystichum angulare*, *Polypodium Phegopteris*,

Botrychium lunaria, *Lycopodium Selago*, *Selaginella selaginoides*, etc. Some *Rosa* and *Rubus* were puzzling, not corresponding with any known named variety.

For mildness the Hebridean winter climate is comparable to that of the South Western extremities of England and Wales. Tender exotics thrive, and from now onwards, gardens are brightened by the blossoming of various shrubs from the Southern Hemisphere, conveying to us, as it were, throughout the darkest days, reflected rays of the Antipodean summer sun. As gardens have been enriched—even to the verge of congestion—so might the grazing period of pastures be prolonged, and washes—moor and sand-dune—be more profitable by introducing plants from other lands. This is a wide question, and if it could be done, would immensely benefit areas in the Hebrides.

MURDO MCNEILL

(left Kew, May, 1899).

RIVER OAKS.

HOUSTON is the largest city in Texas. It is a rapidly growing seaport, in which millions of dollars of Federal money has been invested in the creation of a waterway, connecting it with the Gulf of Mexico.

River Oaks is about a ten minutes' drive from the heart of the Houston business quarter. The approach to River Oaks is along a curving parkway drive that follows the beautiful Buffalo Bayou, and is such, that within four blocks after leaving the city, one is out of the dense traffic of the business section and on a park-like road. This road is entirely without railroad crossings.

River Oaks is a beautiful residential sub-division which, when fully developed, will comprise a thousand acres, with 500 acres in reserve; at present there are about 500 acres fully developed. Under the able leadership of Mr. Hugh Potter, President, this well wooded tract has been transformed from crude timber land into one of the unique sub-divisions of the country. It is designed for the future and will be an integral part in the development of Houston City. The general theme has been to conserve natural beauty and to sub-divide it in such a way that the park-like effect of the Old World country estates could be carried out in general effect throughout the entire addition.

Advantage has been taken, through the engineering ability of Mr. H. A. Kipp, Vice-President and Chief Engineer, of any interesting topography, and used as an asset to accentuate the natural beauty of woodland and forest. In addition, the streets are first-class asphalt paving, and in each section the street and public work is completed before a home is built. As part of the whole,

many of the larger lots overlook River Oaks Country Club and Golf Course. The golf course ranks as one of the finest in the country and has special natural beauty, of which full advantage has been taken.

The building sites range from 65-foot lots for smaller homes, to several acres for the suburban estates. The whole addition is highly restricted with ample reservation for schools, churches, shopping centres and recreational facilities. In conjunction with the last-mentioned, the property is within a stone's throw of a 1,500-acre city park, called Memorial Park, which, in its wild state, offers great possibilities for such recreation as horseback riding, polo, etc.

In the design of River Oaks, perhaps the most important feature is an esplanade system two miles in length. This esplanade is intensely landscaped with a varied, yet coherent design, and bedded with seasonable flowers of a low growing nature. With the ordinary South Texas weather conditions, we have flowers practically the whole year.

The latest landscape achievement is a rock garden located in a large gulley near the entrance gates of the property. This gulley, although a difficult place to treat on account of washes and erosions, through the rock construction, has stood the test of the heavy rains and is now transformed from what would have been an eyesore into a unique beauty spot. This rock garden is extensive, about two thousand feet long, with banks about twenty feet high. To vary the scenery a large cascade has been built—the water tumbling down the rocks and culminating in a large waterfall and pool.

The construction of this garden required a whole hillside of rocks to be moved down from Austin, Texas, a distance of about two hundred miles.

For plant material we have the Cacti from Western Texas in one section, and for the balance of the garden, Alpine and rock plants suitable to climatic conditions, have been arranged and planted in such a way as to give effect of natural beauty, while every species of plant is labelled.

In keeping with the scope of work of the sub-division, we have a large Architectural Department, with Mr. Chas. W. Oliver, A.I.A., at its head. The function of this department is to assist the people of River Oaks in the design and construction of their homes; however, the property owners are free to choose their own Architect and Landscape Architect.

Our Maintenance Force consists of about fifty men, and will increase with the further development of River Oaks. This department is under the supervision of the Landscape Department, and takes care of the public grounds of the sub-division in general. Included in the Maintenance Department is a Home Service Section, which has as its special duty the design, planting and upkeep of the various lawns and gardens. This Department is a decided help to the smaller home owners, as those without regular gardeners

depend entirely upon it for professional advice. There is also a Forestry Department which has as its duties the care of all trees in the neighbourhood, and which acts in an advisory capacity to all home owners requesting its services. A large nursery has just been added to take care of the development of the estates with regard to flowers, trees and shrubs. In the Landscape Department experimental work is going on at all times, trials of new lawn grass, soil fertility and the suitability of various trees, shrubs and flowers to the climate of Houston.

The Addition is at all times kept scrupulously clean and in the spick and span condition one might expect of the well developed parks of larger cities. (This important section is under the control of Mr. H. Hutchinson, Landscape Architect and Superintendent of Maintenance.—*Editor*).

I should like to write a few words on what young Kewites should prepare for in coming to this country, that is, from the standpoint of landscape gardening. By far the greatest field for horticulture is landscape gardening. Good landscape architects are greatly in demand, but to succeed in this line of endeavour a good training in design and plan drawing is required, and a general knowledge of architecture (although not essential) is better. Most of the large State Universities now give a four-year landscape course for which on graduation they give a B.S. Degree. This course includes landscape design in all its branches, also city planning, also a good general training in horticulture, architecture and engineering.

The ethical method for the Landscape Architect is to design on paper in water colour, or by blue prints, the grounds of the home or park, or whatever he may be designing. After it is accepted by the client, he draws up specifications for construction and planting material, then invites tenders from contractors and nurserymen. When the most suitable offer is accepted, he supervises the whole until completed. For his services he is paid a fee by the client, the amount of which, as a rule, depends upon his reputation.

Landscape Architects generally supervise several projects at the same time.

There is a great demand at the present time for the design of gardens to type, such as Colonial, Spanish, Italian, etc., in keeping with type of home, and one can readily see where a knowledge of architecture is beneficial.

I have often wondered why a little landscape design has not been included in the lectures at Kew. The student, with his training beforehand, is thoroughly trained in horticulture, yet he misses the climax when he lacks the necessary training by which he may use his knowledge to the best advantage of the public, *i.e.*, the artistic arrangement of planting material.

Many Americans are travelling to England and are coming back impressed with English Gardens, and the Kewite with his background can readily find a market for his services with the necessary training mentioned.

HENRY HUTCHINSON.

HORTICULTURE AND ITS GREAT VALUE TO THE PROVINCE OF ONTARIO.

HORTICULTURE in all its branches is progressing by leaps and bounds in the Province of Ontario. It is, however, with that phase which pertains to the making beautiful of home surroundings that the writer proposes to deal in this article.

With truth it may be said that the progress made during the last ten years is amazing, with the result that Ontario is becoming noted for its beautiful homes and gardens. This coupled with its natural beauty renders it the most attractive Province in the Dominion of Canada, which may be proven by the fact that it attracts annually some ten millions of tourists who expend therein approximately 100,000,000 dollars.

To the activities of the Ontario Horticultural Association much of the credit for the vast improvement to home surroundings should be given. This, an amateur Association with 280 Societies and 80,000 members, scattered throughout the Province, is converting the towns, cities and even the smallest villages into attractive municipalities. Even in the nothern localities the pioneer shack is being transformed, and flowers are taking the place of weeds.

The Ontario Horticultural Association is controlled by a special Act of the Ontario Government, which maintains a Superintendent and staff, and in addition makes an annual grant of \$20,000, which is apportioned to the various Societies according to their expenditure. The Province is divided into fourteen districts for purposes of administration, each district having a Director through whom representations are made at Directors' meetings called by the Government.

If the reader will now take a map of the Province and study it for a few minutes, he will see how widely separated are the Societies. The total distance by rail between Societies in the extreme south east (Cornwall) and north west (Fort Francis) being over 1,200 miles, or twice as far as that between John O'Groats and Land's End. As you scan the map and think of these facts, give a thought to the poor Horticultural Lecturer (the writer) who covers the Territory year in, year out, and yet withal is probably the happiest man in the service.

So effective is the organisation that each Society is privileged to send delegates to the annual Convention in Toronto, some five hundred usually attending this gathering. It is here that the inspiration is largely gleaned for the year's work, and it is questionable if more enthusiastic horticulturists ever conferred. Illustrated addresses are a feature of the Convention, and are so chosen as to furnish information to people from every section of the Province.

In a short article it is impossible to mention all the activities of the Societies. One of the greatest, however, is that of establishing Demonstration gardens for various permanent garden subjects in the various districts. For instance, there is one for roses, established at both Hamilton and Markham, the former a city of 114,000 population, the latter a village of 1,000. Pæonies are established at Galt (13,000 population) and Lindsay (8,000 population). Roses and miscellaneous perennials at Sudbury (9,000 population). Other gardens are projected at Sarnia, a city of 15,000, and Clarksburg, a village of about 500 people. These gardens are maintained by the local horticultural society, and there is possibly no finer way of spending money than this. These gardens, which may be visited at little or no expense, by local people, are serving in each municipality a real educational purpose, and are a source of the greatest pleasure to the inhabitants of the many neighbouring townships.

In other ways the Ontario Horticultural Association is proving a blessing to the people. Through this channel the Government sends out lecturers to the various Societies and judges to the horticultural exhibitions which are held annually in many municipalities. It pays all expenses of Staff and one-half of others (under certain conditions) whom it may select. The Societies are also privileged to secure the services of any lecturer or judge, and this service is paid by the Society. Exhibitions, like Demonstration Gardens, are proving of great value educationally, and in many municipalities are regarded as indispensable events.

Ontario is a Province of vast size, many times larger than the British Isles ; its distances are enormous. Thus the administration of Agricultural and Horticultural instruction necessarily differs from that practised in Britain. Long ago the fallacy of expecting the rural home maker to visit the educational centres such as the larger cities, Agricultural Colleges and other Colleges was realised. In horticulture, as in other fields, the instruction has to be given where the people need it most, and none need it more than the pioneer. As a result of this policy the desert is being made to "blossom as the rose." Even beyond the line of the trans-continental railway, in that practically unexplored region James' Bay, the influence of the Government's policy is being felt. Away beyond Cochrane, flowers are grown around the pioneer shack, and sooner or later even to the 60th parallel of latitude wonderful homes and beautiful gardens will be the rule. The most pleasing feature of all this is that the people consider it necessary to grow flowers and shrubs as contributory to their happiness. Surely there must be a good reason for this ! Perhaps the memories of beautiful old-world gardens ; perhaps the refinement of the surroundings of other days, while that inward longing for the beautiful things of creation may be the inspiration. It is certain that the people of Ontario are setting an example to other Provinces in the way that they have organised to make their Province beautiful,

and it is questionable whether in all the world any horticultural organisation has worked to such purpose and achieved so much in the time and under the pioneer conditions as the Ontario Horticultural Association.

It is a great privilege to live in Ontario, but an infinitely greater one to be enabled to assist in the development of such a wonderful Province. Especially in that sphere of activity which has for its object the beautifying of its homes and municipalities, and incidentally bringing happiness into the lives of its inhabitants.

Many readers will have the thought that Ontario is entirely an inland Province. Glance again at the map and it will be seen that Hudson Bay and James Bay bound it on the north. Now for a prophecy:—In the not far distant future, Ontario will have access to this ocean water by rail and by road, and a most wonderful summer resort will spring up on these shores, and when this happens the local horticultural society will start the pioneer work of beautification, and its parks and promenades will eventually become the mecca of the people of a continent.

In all the wide domain of the British Empire, there is no part of similar size more blessed with natural resources (agriculture, minerals and timber). It is part of a great Dominion. It is helping to make a magnificently beautiful Dominion the finest and greatest of all that enjoy the privilege of place under the Old Flag.

HENRY J. MOORE, C.M.H.

ARDTORNISH GARDENS, MORVERN.

I REMEMBER almost a full year ago how some of my colleagues smiled when they heard I was leaving Kew to take up a position in a private garden in lonely Morvern. I was told my destination was an extremely outlandish part of the Western Highlands.

What a contrast for me leaving Kew with its fogs, floods, and flat landscape (to say nothing of the gay attractions London can bewilder a young gardener with), to come to a wild isolated, mountainous country. Here, one is amongst a Gaelic-speaking people. Inhabitants are few in number, picture-houses, public-houses and police are unknown. Yet I find Morvern possesses a glorious solitude. One can fully enjoy the beautiful panorama nature sets before us. Tall, lofty mountains, towering up until they kiss the blue sky, mirrored in the blue-green glassy lochs beneath. At times these Highland monarchs are obscured by an ever-floating veil of mist. Then the hills are weeping, while tears in torrents rush down to mingle themselves with the sea.

During fine weather one can make delightful botanizing trips 'midst hill and glen. I have found a good general flora growing abundantly on all sides. Naturally one will find little or no flora on the very high mountains. On the lower hills heather is abundant, but all more or less belonging to the common species such as *Calluna vulgaris*, *Erica tetralix* and *E. cinerea*, along with *Vaccinium uliginosum*. Other plants I have found both on the hills and in the valleys are *Pinguicula vulgaris*, *Narthecium ossifragum*, *Valeriana officinalis* and *Orchidaceae* is well represented. *Parnassia palustris* is very common here; it is found growing in the valleys about August. What a picture it makes, gracefully nodding its white flower heads in the gentle breeze, suspended on a tall slender stem, thus making itself conspicuous amongst the tall coarse grasses of the Highland pastures.

Most of the valleys are well wooded. Some are natural, while others have recently been planted. I must mention the Rowan tree (*Pyrus Aucuparia*), for it alone furnishes many a hillside. In the autumn these trees are simply loaded with berries. I have never seen anything to surpass it for autumn colouring. The bright red berries and glossy green foliage harmonise with the tall bracken underneath. It is in such surroundings that one will chance to get a glimpse of the fleeting, wild deer, thus completing a typical Highland scene.

This has been a trying season for gardeners in these parts. Early in the summer we experienced a very dry spell of weather (here the rainfall is extremely high, but nature provides a remarkably good drainage system, so that any surplus water is rapidly carried away), consequently a dry spell of three or four weeks will soon begin to tell on plants. In June, the weather broke and while the rest of the British Isles was basking in sunshine, the west coast of Scotland remained dull and very wet.

Sweet Peas when first planted made plenty of growth, but absolutely refused to bloom. Later on they appeared to repent for their obstinacy and bloomed quite freely; but, alas! their's was a short existence, for an exceptionally early frost soon cut them down. Chrysanthemums standing outside in pots required very little watering during the summer months, and made good growth. One derived much satisfaction, however, by growing plants under glass, and we are troubled very little with pests. Mealy-bug (so well known at Kew) is unknown here; White-fly is about the only troublesome pest we have.

There are extensive Pleasure Grounds here, where one will find a good collection of flowering and ornamental shrubs. The Rock-garden certainly would prove to be a paradise for all rock-garden lovers, as it is made on the natural rock. Recently a gigantic rock has been cleaned and all its pockets and crevices filled with loam and planted with choice alpine plants.

A noticeable feature of the grounds here is the number of small burns. The banks of each are set off with rock work and planted with moisture-loving plants.

Summer time soon passes, carrying with it all the pastimes one can enjoy, such as boating, fishing, and all sorts of Highland games. Though winter is here, we will not find the nights long and dreary, for my employer has provided a library and a recreation hall, where the male population can gather together and enjoy their leisure moments.

In concluding, I would like to say that one can find enjoyment in an isolated district as well as in a town, by adapting oneself to the surroundings. This attitude alone can bring about contentment.

R. C. McMILLAN.

THE GREAT BANYAN TREE (*Ficus bengalensis*, Linn.)
AT THE ROYAL BOTANIC GARDEN, CALCUTTA.

WHEN one considers the number of Kewites that began their tropical career in the Royal Botanic Garden, Calcutta, and the privileged ones that have been more intimately associated with the institution, it is really surprising that so few attempts have been made to bring out some of its wonderful features.

This institution is, no doubt, one of the most interesting of its kind in the tropics. Equatorial gardens more favourably situated from a climatic point of view may rival it, with their collections; but from a landscape architectural standpoint, from the boldness of their conception and the disposition of their collections, the Calcutta Gardens cede nothing to their more privileged contemporaries.

The Great Banyan tree, that is the subject of these notes, is one of the many interesting features of this interesting institution and has for upwards of half a century been the pride of the gardens.

This species which is so largely planted throughout the plains of India is indigenous to the sub-Himalayan forests and the lower slopes of the Deccan hills. It is undoubtedly a glorious representative of the *Urticaceae*, and quite distinct in general habits from its allied species.

This world-famed tree has a majestic appearance of its own, and from a distance appears like a small forest. Many are the tourists who have never suspected that it is but the evolution of a single tree. We have here a most striking example of aerial roots growing in succession out of its ever-spreading branches and running in a vertical direction to the ground. Forming so many natural pillars or stems supporting its ever-expanding cupola, they have all the appearance of so many trunks. This production of aerial roots is one of the peculiar characteristics of this great *Ficus* tribe; no other species, to my knowledge, produces them more abundantly.

One has only to notice their curious positions to see that these aerial roots are always thrown out from branches growing in a

more or less horizontal position and which require, in consideration of their forthcoming extension, a new support. Once again, we have here a striking example of the wonderful manner in which Nature provides the most appropriate help for her every need.

Milton, in his "Paradise Lost," in a few graphic lines conveys to the mind a vivid picture of one of these trees surrounded by its numerous offspring of pillared roots.

"Branching so long and broad that in the ground,
The bended twigs take root and daughters grow,
About the mother tree, a pillar'd shade,
High over-arch'd, and echoing Walks between."

When I first made the acquaintance of this gigantic tree in the closing days of the 'nineties, its wonderful trunk was 51 feet in circumference at $5\frac{1}{2}$ feet from the ground, and the number of aerial roots which had already reached the earth numbered not less than 417. The total circumference of its leafy crown was then 920 feet, and its total height 85 feet. Ten years later its trunk had not increased, the number of aerial roots actually rooted in the ground was 562, and its leafy head had attained 997 feet in circumference. In 1926 its trunk had not changed in size, but decay had set in, and this monumental stem is fast reaching the end of its span of life. It still towered high above the surrounding trees, its height being then 89 feet. Its aerial roots or pillars had reached the phenomenal number of 601, and its glorious crown exceeded 1,000 feet in circumference.

In spite of its ever-increasing development it is feared that in another decade or so very little will be left of its original trunk, but its wonderful history. Even in 1899 this tree was far from being symmetrical, and the main stem or tree trunk was not in the centre of the space covered by it. These irregularities were due, according to the late Sir George King, to the breaking of branches by the severe storms which prevail so often during the hot season. But the chief damage appears to have been done by the great cyclones of 1864 and 1867, which, besides making a complete wreck of the majority of other trees growing in the gardens, also removed from this one several of its largest limbs on its western and northern sides. The southern part seems to have escaped damage of any kind.

Tradition has it that this tree was already existing when the gardens were first established, that is to say, some 143 years ago. It must, however, have been very small then as it is reported to be growing at the top of a wild Date tree. Perhaps we shall be nearest the truth when we say that it is about 150 years old. Its birth will ever remain as the old stories of chivalric times our

"Old legend of the monkist page,
Traditions of the Saint and Sage,
Tales that have the rime of age,
And chronicles of old."

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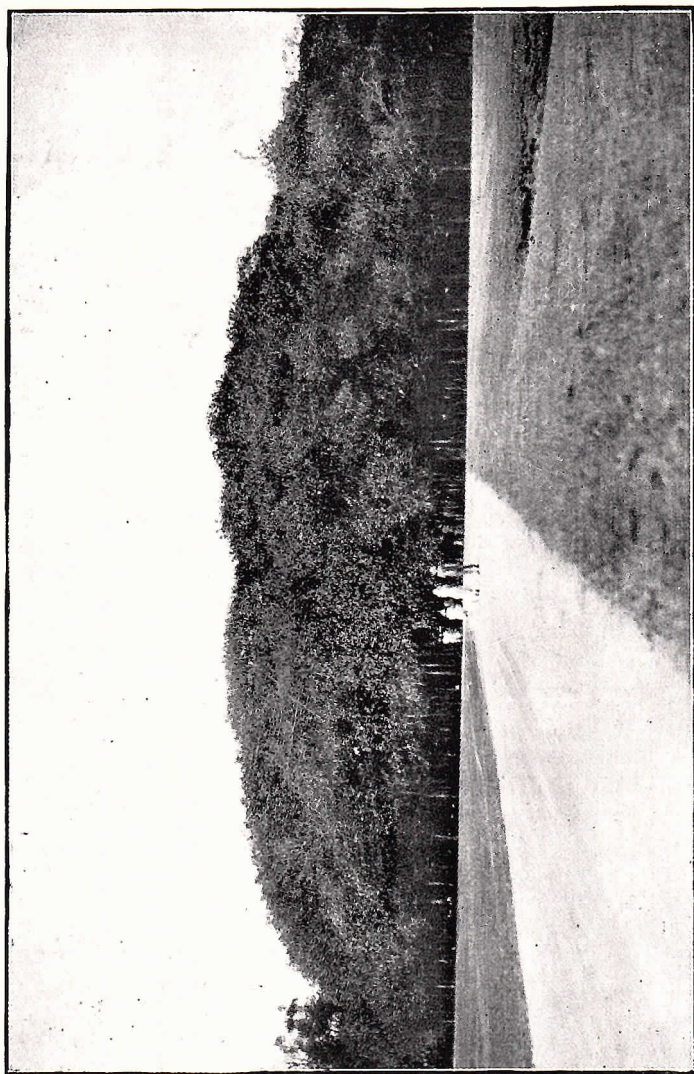


Photo by A. E. P. Griessen.

THE GREAT BANYAN TREE.

The under-part of this curious tree is also very interesting, as most of its branches are clothed with a variety of specimens of parasitical and epiphytal plants, such as Aroids, Cactus, Orchids, as well as other species of climbing Ficus. All seem to grow with great luxuriance. Many are the picnics annually held under its spreading branches. It affords a tent-like shelter to the visitors, and a home to innumerable birds.

Southey, in his "Curse to Kehama," gives a very curious description of the tree. But Moore's charming lines are no doubt far more appropriate :

" They tell us of an Indian tree,
Which, howsoe'er the sun and sky
May tempt its boughs to wander free,
And shoot and blossom wide and high,
Far better loves to bend its arms,
Downward again to that dear earth,
From which the life that fills and warms
Its graceful being once had birth."

A. E. P. G.

MICHIGAN, THE STATE COLLEGE, AND THE BEAL BOTANIC GARDENS.

If one studies the map of North America, it will be found that the State of Michigan resembles the outline of an outstretched hand. This hand is overflowing with vast natural resources and great wealth, and offers a pleasant welcome to all, especially to the tourist in summer.

The State contains approximately 37,000,000 acres, and in the North is distinctively beautiful, although in some districts the grandeur has vanished with the removal of the pine forests. Happily, however, the Forestry Department of the Department of Conservation is making great headway in re-afforesting the State, and Michigan now holds third place among the States carrying on this work. Michigan is a leader in five of the world's greatest industries: automobiles, agriculture, tourist and resort trade, furniture and mining (copper and iron ore). The population of Michigan is about 5,000,000, and is rapidly increasing each year. This is chiefly due to the enormous progress made in the automobile industry. Detroit, the leading city of Michigan, and the automobile capital of the world, has a population of about one and three quarter millions, and this has been increased by over one million in the last fifteen years.

The climate of Michigan is somewhat influenced by the large bodies of water that surround it. The midsummer heat, although sometimes almost tropical, is tempered by the cool breezes from the large lakes, and in winter the cold waves are less pronounced than in other States of the same latitude. Occasionally, however, tremendous temperature variations take place in twenty-four hours and at this time plant collections do really suffer.

Of inland lakes, Michigan has indeed her share, and has something like 5,000 of these, generally crystal clear, and spring fed sheets of water scattered over the State. Some are quite large, the largest being Houghton Lake, which is sixteen miles long and seven miles wide, others, although smaller, are quite as beautiful, and all are a veritable fisherman's paradise. Many beautiful summer homes have been built along the shores of most of the inland lakes, which enables one to spend a very enjoyable vacation without going out of the State. I must also mention Glen Lake, which is situated in the Northern part of the Southern half of the State, and which has the reputation of being the second most beautiful lake in the world. I spent my vacation at this lake this year, and am willing to believe that it is Michigan's most beautiful stretch of silvery water. The golf course, a short distance from the eastern shore, is truly ideal. Magnificent views can be obtained from any point. The scenery varies greatly, one part of the course is situated on the edge of the wilderness, while other paths lead through beautiful towering pines. It is not uncommon to see the wild deer watching the progress of the game in wonderment.

In education, Michigan ranks highest among the North Central States. It has a magnificent University at Ann Arbor, and at Lansing, which is the capital of the State, is located the oldest Agricultural College in America. Undoubtedly no other educational centre has done so much to further and assist the Agricultural industry of this country than Michigan State College. Much valuable work is also being carried on in the Horticultural Section, and on the rolls are many honoured names. It must not be forgotten that Dr. David Fairchild, Dr. L. H. Bailey and Professor W. A. Taylor all received their early training at Michigan State College.

Attached to, and supported by the College, is the Beal Botanic Garden, which garden I now have charge of, under the directorship of Dr. H. T. Darlington. Until recently the garden was known as the "Wild" or "Sunken Garden," and it is as a well-deserved tribute to the late Dr. W. J. Beal that the garden now bears his name. For over thirty years he laboured to make this the most attractive spot on the Michigan State College campus. His desire was to bring together in one place the commoner plants of woods, field and swamps growing naturally in Michigan, and how very well he did succeed. Dr. Beal actually started the Garden in 1877, the site chosen being along the banks of a little stream running into the Red Cedar River. At present the garden is roughly three acres



Photo. H. L. R. Chapman.
SUMMER ON THE CAMPUS, MICHIGAN.



Photo. H. L. R. Chapman.
WINTER ON THE CAMPUS, MICHIGAN.

in extent, but it is proposed in keeping with other improvements taking place at the College to extend the area along the banks of the Red Cedar River, which will enlarge the garden by several acres. Plans have already been drawn up and presented, and I hope before long to receive the word "go." It has been evident for some time that the garden was inadequate to the demands made upon it, and although several new introductions have been made in the last year or two there still remains much work to be done in plant introduction. The garden functions as a supply for living plant material for the College laboratories, as an outdoor laboratory in connection with landscape design, and furnishes illustrative material for certain classes in art and home economics. I am pleased to say that the garden is very well patronised by visitors not connected with the College, many coming from other States and often covering a distance of over 300 miles. Something like 50,000 persons visited the gardens last summer. Included in the new ideas put forward are:—Ecological Garden, Experimental Plot for Research, Test Garden for Annuals, State Flower Conservation Plot, Children's Garden for Nature Study, Plants for English Literature, and Chinese Plants. It is believed that these improvements will raise the standard and greatly increase the educational value of the garden.

It is also proposed to erect an office building at the main entrance to the garden. This building is to stand as a memorial to Dr. Beal, and as well as serving the purpose of an office, will afford laboratory and reading facilities for visitors who may be interested in any particular plant in the garden. Likewise it would house a museum of botanical material.

There is no reason why the Beal Botanic Garden should not be *the* Botanic Garden of the whole of the Central States of North U.S.A. As the outstretched hand of the State of Michigan offers a welcome to all visitors, so I extend my hand of welcome to all Kewites whose travels may bring them to this part of the United States.

May I quote the words of F. G. Walsingham, whose company I had the pleasure of enjoying last year:—

"Chappie, your garden is indeed England in America."

H. L. R. CHAPMAN.

Beal Botanic Gardens,
East Lansing.

THE ASSOCIATION OF KEW GARDENERS IN AMERICA.

THE Association of Kew Gardeners in America held their Annual Meeting and Dinner at the Hotel Brunswick, Boston, Mass., on Saturday, March 24th, 1928. Those present for the Dinner at 6-30 p.m. and the social time which followed were Mr. and Mrs. E. H. Wilson, Miss Muriel Wilson, Mr. T. D. Hatfield, Miss Jane Hatfield, Mr. and Mrs. W. H. Judd, Mrs. Smith, Messrs. J. Macgregor, Robert Cameron, M. Free, Robert Barton, E. H. Thomas, J. A. Sample, and A. J. Thornton.

After dinner the Secretary read the minutes of the previous meeting, and the financial report of the funds showed an expense of thirty-two cents for postage with no receipts for the past year, leaving a balance of \$20.98 (twenty dollars and ninety-eight cents) to which fund Mr. E. H. Wilson donated two cents., making the finances of the Association an even \$21.00 (twenty-one dollars). Mr. Free then entertained us with a very interesting resumé of a trip which both he and Mrs. Free took to Bermuda in January of this year. Mr. Free dealt briefly with most of the outstanding features of the Island, and showed by his talk the value of close observation of the principal characteristics. The Island of Bermuda, he said, is seven hundred miles from New York, and seven hundred and fifty from Halifax, N.S., standing out in the Atlantic, a journey of forty-eight hours from New York. Geologically it consists of about one thousand feet of limestone reposing on top of an extinct volcano, which was discovered after a drilling of twelve hundred feet failed to produce water and compelling the inhabitants to subsist on what falls from the sky for their water supply, and for which reason the tops of all or most of the houses are white-washed, and the absence of fresh water ponds consequently govern the number of birds found there, of which there appear to be only about eight common ones, including the tenaceous English sparrow. The Island was probably submerged in earlier days, and has now a surrounding atoll whose reefs are from eight to ten miles from shore on the north side, but much closer on the southern side and through which there are only two suitable channels whereby sea-going ships may enter the lagoon and proceed to the chief port of Hamilton. The most fascinating features of the lagoon are the numerous beautifully coloured fish that inhabit it and the pools around the coast, such as the Parrot Fish, the colour of macaws; and the Angel Fish, with its conspicuous blue border. These features may be enjoyed by the aid of glass-bottomed boats, allowing a view of at least sixty feet into the water. An aquarium has recently been built, which is being lined with coral, and will give those who prefer to stay on shore some opportunity of seeing a few of the fish. The upper surface of the limestone is quite soft and easily cut with an ordinary saw, thereby affording a ready supply of building blocks from which most of the houses are constructed. As the Island is frequently visited by hurricanes, all the houses

are equipped with hurricane shutters to keep out the wind, and during these "blows" the salt spray carried inland causes considerable damage to foliage on plants, by blistering. On this account the valleys only are cultivated, as the Island, while not mountainous, is quite rugged. Although only about twenty square miles in area, and with less than half of this under cultivation, mostly in small allotments, the chief crops are potatoes, celery, carrots, parsley, onions and lilies, the latter undergoing a revival now that scientific research has stepped in to try and eliminate the diseases so prevalent heretofore. A considerable number of lily bulbs are regularly shipped to English markets. The seed potatoes are mostly obtained from Long Island in preference to Maine, on account of earlier ripening, and by a recently discovered process of chemical treatment at the Boyce Thompson Institute, they can now be induced to germinate very quickly after a short resting period.

Bougainvillaeas and Hibiscus are commonly cultivated, as are hedges of Oleander and Tamarisk, and the outstanding feature on the uncultivated areas is, of course, the Bermuda Cedar (*Juniperus bermudiana*). *Musa Cavandishii* is commonly cultivated, and even on the coral reefs above high water grow wild Opuntias and Agaves. There are over sixty endemic species of plants on the Island, and a very large quantity of introduced species such as one would expect where frost is unknown, the temperature ranging from 54-76 degrees F. in the shade and a mean temperature for January of 70 degrees F., with an annual rainfall of seventy-three inches there is no generally delineated wet and dry seasons. The permanent residents consist of about twenty thousand people, most of whom are coloured, but having compulsory education, they are a very sociable race of people. There are no taxes, no automobiles, no railroads, and no prohibition on the Island, and to vote, it is necessary to be a property holder. Caves are plentiful, and some, such as the Crystal Cavern, are very beautiful, in which the blue waters rise and fall with the tide, and which, for convenience of visitors, is lighted electrically.

Mr. Free was extended a warm vote of thanks for his talk, after which Mr. J. A. Semple briefly referred to a recent trip he had made to Ireland and Kew. The remainder of the evening was devoted to singing songs, assisted by Miss Wilson at the piano. Mr. Hatfield very thoughtfully decorated the tables with cut sprays of his Azalea "Miss Louisa Hunnewell," and everybody spent a very pleasant evening.

WM. H. JUDD,

Secretary and Treasurer.

A MUNICIPAL PARKS DEPARTMENT.

THE Editor having asked me to write a short article for this year's Guild *Journal*, it has occurred to me that a few notes on public park work might prove of some interest to many readers. This subject, too, would be quite a change from, if not so interesting as, the description of Botanical Gardens abroad and accounts of foreign travel which usually are the outstanding feature of the *Journal*. So far as I can remember, little or no mention has been made in any previous issue regarding the experiences and activities of Old Kewites in the domain of Municipally owned Parks at Home.

During the short period I served as a young gardener at Kew—from the end of 1888 to the beginning of 1890—the one outstanding ideal of most of my fellow-workers was to secure an appointment abroad in one or other of the Botanical Gardens under the Crown. I well remember shortly after my advent to Kew the wonder—not to say the envy—with which I regarded the first real live Kewite I met who had been given an appointment in the West Indies. Youthful and romantic as I then was, I pictured him going to live in a fairy land, if not into a veritable El Dorado! Naturally, I sincerely hoped that sooner or later I would be one of the fortunate ones to be called to the Curator's Office and offered one of the coveted "jobs" in the Colonies. Although the opportunity of going out to a Tea Plantation in India was certainly given me by the late Mr. Barron, of Chiswick, the authorities at Kew in those days apparently did not regard me as a likely colonist, as they never asked me if I would care to take a position abroad.

As far as I can remember, young Kewites at that time regarded Municipal Park Service as something that was not quite worthy of their mettle. Consequently, very few of my contemporaries attempted to obtain positions under Municipalities in this country. Recently, being interested in the question, I made enquiries with a view to finding out how many Kewites actually occupied head positions in public parks prior to the year 1890. Beyond one or two in charge of parks belonging to some of the London Boroughs, I have not been able to trace any Kew trained men who at that time were chiefs of Parks Departments in Great Britain. This is no longer the case to-day, as one has only to consult the List of Old Kewites published year by year in the *Journal* to learn that a considerable proportion of the leading positions in the public park world are held by those who have in their time been Kewites. The Chiefs of the Glasgow, Liverpool, Salford, Swansea, Cardiff, Weston-super-Mare, Hull, Blackpool, Bermondsey, Camberwell, Harrogate, Preston and Manchester Parks Departments are all Kew trained men.



MAGNOLIA STELLATA AT WYTHENSHAW PARK.
Photo. W. W. Pettigrew.

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Photo. W. W. Pettigrew.

A HYBRID RHODODENDRON AT WYTHENSHAW PARK.

Although, no doubt, the majority of these would have been sorely tempted in their young days by the glamour and romance of going abroad had they been offered a suitable post, they are now quite reconciled to the hum-drum life of a public official. Some even may be quite thankful that they were stay-at-homes, as they consider that their lines have been cast in pleasant places. Notwithstanding the fact that they did not exactly follow a botanical bent, their Kew experiences, far from being lost, have proved a very great advantage to them. That the Municipal Parks Superintendent has ample scope for the exercise of his botanical and horticultural knowledge and skill I trust the following notes may prove.

Climatically and atmospherically, Manchester bears an extremely bad reputation—a reputation, fortunately, that in some ways is undeserved. Although the annual rainfall is heavy and the smoke pall overhanging the city fairly dense, the accompanying illustrations must bring it home to those who understand anything about cultivation, that the general conditions cannot be so terribly bad, otherwise plants could not grow as well as they do. As might be expected, in a City covering an extent of over 21,000 acres, with its parks distributed fairly evenly over the whole area, considerable differences in the climatic and atmospheric conditions must obtain in many of the parks. Naturally, horticulture is greatly hampered and limited in the centre and industrial parts of the City, whereas on its south and south-western boundaries horticulture can be carried out with fairly satisfactory results.

Even on the north extremity of the City, horticulture is successfully practised in the Parks. Heaton Park (640 acres) and Boggart Hole Clough (190 acres) while mainly used for games and sports, possess some distinct horticultural features. At the former named park, certain varieties of roses grow and flower so freely that a large rose garden is one of its outstanding attractions. A collection of dahlias, set out in an Old English Garden, is of such a comprehensive character, and is so well grown, that it is not excelled in the North of England. In this same park ranges of vineries and peach-houses are still in use, wherein grapes and peaches are produced in quantity each season. This is some indication of the breadth of the horticultural outlook required by the parks staff in this city.

Boggart Hole Clough is one of the most natural-like of all the parks in Manchester. It contains numerous miniature valleys, passes and hill-sides, all of which are planted up in such a manner as to make the whole place a delight to lovers of landscape effects. While, of course, the class of plants that succeed in this district is a somewhat limited one, nevertheless, the valleys are so well sheltered and out of reach of the smoke that quite a good variety of hardy plants can be cultivated in them. As might be expected, however, conifers cannot grow here, or indeed in any part of Manchester except on its extreme south and south-west boundaries. This is regrettable, as it means such a loss in furnishing woods and shrubberies.

Kewites, no doubt, will be greatly interested to know that Manchester Parks Department possesses the finest collection of succulents in the British Isles. The nucleus of this was presented to the Corporation by one of its citizens about twenty-seven years ago, and since then it has been added to from time to time by gifts and purchases until now it is pre-eminent, not merely as a municipal, but even as a national collection.

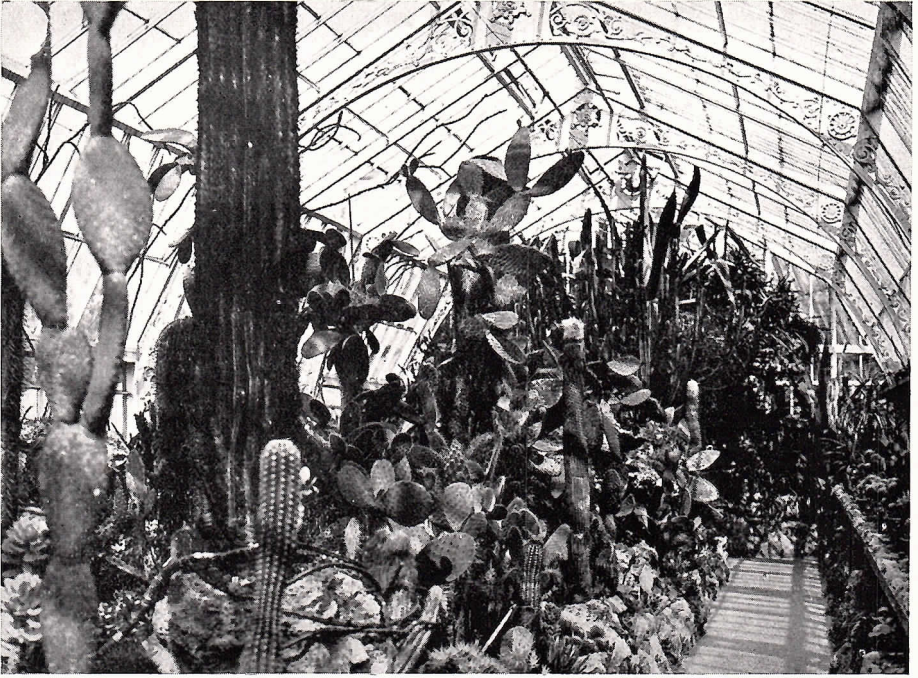
About three years ago a fine private estate (known as Wythenshawe), covering some 250 acres, was presented to the Corporation by one of its Lord Mayors for a public park. This lies adjacent to the southern boundaries of the City, but is actually on the outskirts of Manchester proper. The home park contains some fine old, well-matured timber, and numerous kinds of ornamental trees and shrubs. So expansive and charming are the grounds of this estate, and so proud are some Mancunians of them, that a suggestion which has been mooted of late is to make Wythenshawe the Kew Gardens of the North. These enthusiasts even go as far as to imagine and picture it as being one day a rival to the one and only Kew Gardens in the World !

Whatever this magnificent park may yet be, there is no denying the fact that so far as parks are concerned, it is one of Manchester's most cherished horticultural possessions, for it gives the Parks Department a horticultural standing it never previously possessed. Rhododendrons grow most luxuriantly in the shrubberies and flower as profusely as they do in the Rhododendron Dell at Kew. The commoner kinds of Bamboo also grow freely, and with only a little imagination one can picture a Bamboo Garden laid out in one of the numerous spinneys, which would prove a never-ending attraction to the public, as does the one in the grounds at Kew.

In conclusion, it may not be out of place to mention in connection with these notes, that on the Parks Staff at Manchester there are now several old Kewites. Also, that under them there are quite a number of young men who are being trained in horticulture, each one of whom hopes some day to enter Kew as a student gardener. Of these, no doubt, some will return to municipal service and one day become the head of one or other of the Public Parks Departments in this country.

W. W. P.

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CACTI AT ALEXANDRA PARK.

Photo. W. W. Pettigrew.

IN MEMORIAM.

WILLIAM FALCONER.

WILLIAM FALCONER, Superintendent of Allegheny Cemetery, Pittsburgh, a former Superintendent of Parks in Pittsburgh, and one of the foremost horticulturists in America, died April 30th, in West Penn Hospital, Pittsburgh, following a stroke of paralysis which occurred April 23rd, at the age of 78 years.

William Falconer had long been a leader in the Councils of the Association of American Cemetery Superintendents, and was known and honoured by the entire membership for his sterling character, and his mastery of horticulture and landscape work.

Mr. Falconer was born in Forres, Scotland, November 2nd, 1850, and was a son of Alexander and Margaret Falconer. When a young man he entered the Royal Botanic Gardens, Kew, on May 15th, 1871, and left for the United States of America, February 3rd, 1872. After a short time spent in Massachusetts and Texas he became Superintendent of the Botanical Gardens at Harvard University. He left there to manage the estate of Mr. Charles A. Dana, of the New York "Sun," at Dosoris, and while there edited a horticultural paper, "Gardening," and contributed largely to other horticultural and popular magazines, as well as contributing gardening stories to the New York "Sun."

In 1896, Mr. Edward M. Bigelow, then Director of Public Works in Pittsburgh, persuaded Mr. Falconer to come to Pittsburgh as Superintendent of Schenley Park. Soon afterwards he was made Superintendent of all city parks, and an era of park building was opened that affected all parts of the city. During Mr. Falconer's term of office many neighbouring parks were laid out. Mr. Henry Phipps was greatly interested in Mr. Falconer's work and sent him out yearly on collecting trips to bring back new and rare plants.

Mr. Falconer was instrumental in securing the Phipps Hall of Botany, adjacent to the conservatory, where flowers and plants were provided for botanical study for high school students. He was widely known for his landscape work, and was consulted on planning of many parks and public grounds throughout the country, among them the grounds of the Masonic home at Elizabethtown, Pa.

Under Mr. Falconer's direction the Eastern flower show and the annual chrysanthemum show at Phipps Conservatory were developed into occasions of public importance. He was called into consultation for the planning of many of the large estates in Western Pennsylvania.

In 1903 Mr. Falconer resigned as Superintendent of Parks to become Superintendent of Allegheny Cemetery, which position he held at the time of his death.

In October, 1883, he married Miss Jane Gordon Murchie, of Glen Luce, Scotland, in New York. She died in 1909. In 1912 he married Miss Louise Furnival, who survives him. He also leaves a daughter, Mrs. Frank Kirkpatrick, of Pittsburgh, and one sister, Mrs. Katherine Calder, of Forres, Scotland.

He was a member of the Masonic Veterans' Association, of the Shrine and of Tancred Commandery, Knights Templar. For many years Mr. Falconer was a member of the Association of American Cemetery Superintendents, and of the Botanical Society of Western Pennsylvania, and he was a former president of the Pittsburgh Florists and Gardeners' Club. He was a life-member of many horticultural and scientific societies, and during his life acquired a voluminous library on horticulture.

THOMAS CHARLTON FORSYTH.

It is our sad duty to record in this issue the death of one of the most promising young Kewites. Mr. Thomas C. Forsyth died in the Royal Hospital, Richmond, Surrey, on July 27th, 1928, as the result of a distressing accident in the Kew Road. Mr. Forsyth was only 24 years of age.

Mr. Forsyth entered Kew on May 16th, 1927, and was employed in the Temperate House, and promoted to the position of Sub-Foreman on September 21st of the same year. Prior to his service at Kew he was employed in the Sunderland Corporation Parks Department, at Mowbray Park. Mr. William Hall, Parks Superintendent, writing of him in September, 1926, spoke of the "intelligent interest" which Forsyth always took in his work, and testified to his activity. While at Sunderland, where it is believed he made his home, he became a student at the Sunderland Technical College, where he obtained certificates for courses in Botany, which comprised lectures, laboratory and field work. Before commencing his duties with the Parks Department Mr. Forsyth was employed at Grindon Hall, Sunderland, and with Messrs. Wilson and Sons, of the same town. Among his other activities while in Sunderland he was a member (as Driver) of the 65th (Northumbrian) Medium Brigade Royal Artillery (Territorial Army), from which unit he obtained his discharge on leaving the district.

The funeral, which was attended by his colleagues in the Temperate House, and representative of the Staff of the Royal Botanic Gardens, Kew, took place at Richmond Cemetery on August 1st, 1928, and the many floral tributes testified to the high esteem and affection which was always accorded him. He took a keen interest in his duties at Kew, and was of a very companionable nature, and his early death is to be much regretted.

E. G. D. 1928.

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THOMAS CHARLTON FORSYTH.



HARRY HOLLEY.



ERNEST HORTON.

FRANK JAMES EVANS.

WE have to record with much regret the death of Mr. F. J. Evans, which occurred at Perseverance, Maraval, Trinidad. Mr. Evans entered the Royal Botanic Gardens, Kew, as a Student-Gardener in March, 1902, and left in June, 1903, to become Assistant Superintendent of the Royal Botanic Gardens, Trinidad, and also Curator of the Government House Gardens. In 1912 he was appointed Assistant Superintendent in the Agricultural Department, Southern Nigeria. In 1915 he took charge of the German cacao estates in the Cameroons. Speaking of the conspicuous efficiency with which he performed the arduous duties attending the control of these plantations, Sir Hugh Clifford, the Governor of Nigeria, in an address to the Nigerian Council, December, 1920, said: "It is an extraordinary feat that Mr. Evans has accomplished, carrying out, with the aid of half-a-dozen white men, the work which, in German times, was done by as many hundreds; controlling a labour force some thousands strong, and saving the lives of those valuable plantations year in and year out, through their dogged energy and determination. That these plantations to-day are not only saleable, but are still properties of really great value, is due to Mr. Evans, and, after him, to the men who have worked under and beside him."

On the completion of his duties for the Nigerian Government, he retired from Government Service and returned to Trinidad to take charge of the Perseverance Estate. His health, however, was completely shattered, and he lay ill for some months, and died at Golden Grove, Perseverance, on August 9th, 1928.

HARRY HOLLEY.

WE learn with much regret of the death of Mr. Harry Holley, formerly Curator of the Queenstown Public Gardens, Union of South Africa, on August 15th, 1928, in his 53rd year.

Mr. Holley entered Kew as a Student-Gardener, January 11th, 1897, having previously been employed in the nurseries of Messrs. Hugh Low and Co., at Clapton, and left April 30th, 1898. Proceeding to South Africa, he became a very notable and popular man in the municipal life of the people of Queenstown, and the following extracts from the Queenstown press will doubtless be read with interest:

"It was not only in the making of gardens that Mr. Holley was proficient. The streets of the town nearly all bear witness to his care, and if the town had been in a position to undertake larger improvements, those who have induced him to talk on the matter have realised what an idealist he was, and at the same time an idealist with sound common sense. Any scheme for the beautifying of the town, if practicable, instantly met with his hearty support.

"He will be missed, not only by the town, but a very wide district—he always gave of his best, whether it was advice to a child coming to him for a ticky's worth of flower seeds, or a farmer with a large order for trees, whether he was helping to plan a child's rockery, or struggling to lay out the Hexagon. Another point in his character was his wonderful memory for botanical names.

"The Horticultural Society will miss him sadly. He was a most helpful member of the committee, and he was always willing to give his services as judge, though this is not an enviable task. As a judge he will be hard to replace, he took such infinite pains with each exhibit, weighing its merits and taking the smallest points into consideration. He always summed up his decision with the greatest care and fairness, and it was invariably sound.

"I hardly dare think what his loss will mean to the bowling greens—they owe their entire production and excellence to his skill and care.

"The public funeral took place at St. Michael's Church; so large a concourse had not been seen since the funeral of Mr. James Lamont, M.B.E., Mayor of Queenstown.

"The Rector took the service, and speaking after the Lesson paid tribute to the sterling character of the deceased, his obliging, kindly disposition, his honourable record, his excellence as husband and father, and his love for his church as shown in frequent personal decoration, and being one of the first to support the War Memorial extension. Few men had made so enduring a mark in Queenstown. The Gardens outlay, as well as many private gardens, testified to his love for the beautiful, and skill he learnt at Kew. He enjoyed the confidence and love of all, and never made a foe, because every one trusted his honour in dealing with them."

ERNEST HORTON.

It is with profound regret that we have to record the death of Mr. Ernest Horton, General Manager of Messrs. Bees, Ltd., of Liverpool, which took place on Friday, December 14th, 1928, with tragic suddenness, at the early age of 52 years. Mr. Horton was a well-known personality and was a regular visitor to Kew.

Mr. Horton received his early training in the gardens of Earl Grey, at Howick, Lesbury, Northumberland, and elsewhere, and entered Kew on May 15th, 1899. He was promoted to the position of Seed-collector in March, 1900, and left the establishment in May of the following year. On leaving Kew, Mr. Horton gained further experience at Messrs. J. Veitch and Sons, Chelsea and Langley, J. Backhouse and Sons, and Clibrans. Later he joined the newly-formed nursery and seed business of Messrs. Bees, of Liverpool, as Assistant Manager, and subsequently became General

Manager. Mr. A. K. Bulley, founder of the business, in 1909 wrote of Mr. Horton :—" He is a first-class garden and nursery man, a tireless worker and a man of the highest personal integrity. He is also a very capable, adaptive and inventive organiser." Mr. Horton was the Founder of the Rose Growers' Association, a member of the Rotary Club, the Liverpool Astronomical Society and the Association for the Advancement of Science (U.S.A.). The following notes will go to show in what high esteem Mr. Horton was held :—

" His contributions to the Press were vigorous and direct, spiced with humour and rich in original ideas" (*Horticultural Trade Journal*), and " Ernest Horton played a more important part in the popularisation and advancement of the hobby of gardening than many of us are aware " (*Nurseryman and Seedsman*).

His recreations were motoring, reading and music, and his special hobby was the study of the British Flora.

His son, " Don," only recently left Kew to take up a position with his father in the business of Messrs. Bees, Ltd., and to him and his family we extend our deepest sympathy in their early bereavement.

E. G. D. (Dec., 1928).

SIR W. T. THISELTON-DYER.

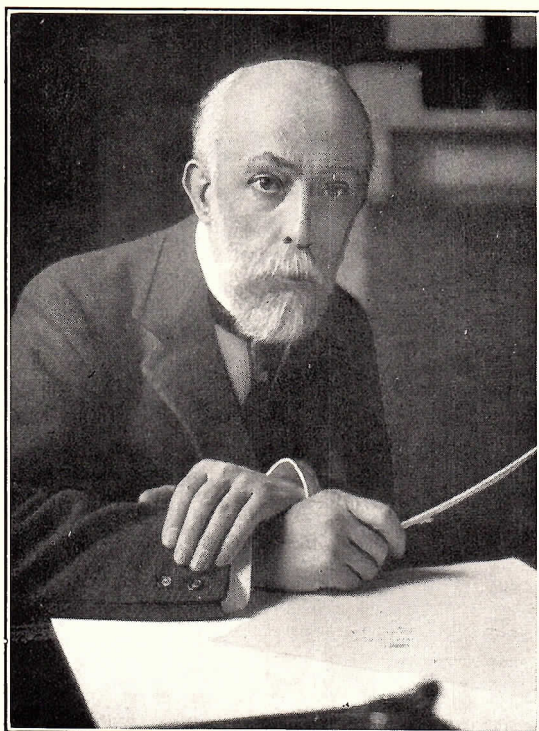
A GREAT BOTANICAL ADMINISTRATOR.

SIR WILLIAM TURNER THISELTON-DYER, K.C.M.G., C.I.E., F.R.S., F.L.S., etc., who died at his home at Witcombe, in Gloucestershire, on Christmas Eve, at the age of 85, was for 20 years Director of the Royal Botanic Gardens, Kew. He will be remembered as a great botanical administrator.

The son of a fashionable physician of early Victorian days, practising in St. James's, Westminster, he was born in that parish on July 28th, 1843. With the succession to his father's practice in view, he was sent to King's College School, where he was first mathematical scholar, and then entered King's College with the intention of qualifying in medicine. Other influences, however, prevailed, and at the age of 20 he went up to Christ Church, Oxford, as a junior student. There he came under the influence of Rolleston and Daubeney, and in his work on the chemistry of plants, his experiments in the field of agricultural research, and his interest in the plants of the ancients, Daubeney left a lasting impression on Dyer's mind. To Rolleston's influence Dyer owed the methods of botanical teaching which his students knew so well.

At Oxford began a life-long friendship with Moseley, who was his contemporary, and with Ray Lankester, who was a few years his junior, and between them the three naturalists profoundly

To face page 715.]



By permission of "The Field."

SIR W. T. THISELTON-DYER.

influenced the course of biological teaching and thought in the second half of the 19th century. After obtaining a first class in the final school of natural science in 1867, Dyer began a rather meteoric career as professor. In 1868 he was appointed to the Chair of Natural History at the Royal Agricultural College at Cirencester, where he collaborated with the Professor of Chemistry in the useful text-book, "How Crops Grow." Soon afterwards, together with Henry Trimen, he published a "Flora of Middlesex," which is of historical interest in tracing the habitats of wild plants in an area peculiarly affected by movements of population.

After graduating B.Sc. from the University of London, Dyer was appointed, in 1870, Professor of Botany at the Royal College of Science at Dublin, but after two years he returned to fill the Chair of Botany at the Royal Horticultural Society, then at South Kensington. He held that chair till 1875, when he accepted the post of Assistant Director of the Royal Botanic Gardens at Kew—an office which had been in abeyance for some time. In this post, and subsequently as Director, from 1885 till 1905, he spent the rest of his official life, and his career as a great administrator dates from his appointment at Kew. At that time the teaching of botany had not emerged from the trammels imposed upon it as an aid to the study of *Materia Medica* in the education of medical students. Laboratory work was rare, and practical instruction was limited to that obtained in field excursions, which were few. England was still behind Scotland, where microscopical and experimental work in the laboratory was an accepted course of botanical education.

The opportunity to reform the teaching came to Dyer in 1872, when Huxley initiated his laboratory course of biology at South Kensington and gathered round him as assistants, Dyer, Burdon, Sanderson, Foster, Ray Lankester and Rutherford, all of whom were destined to leave their mark on the scientific thought of the day. In Dyer's competent hands Huxley placed the organisation and execution of the botanical section of the course, and he made it the model which was afterwards followed generally by other schools. Far-reaching as this example was, it depended for its full effect on another service Dyer rendered to botany by associating himself with Bennett in the preparation of a translation of Sachs's standard "Text-book of Botany," which formed a landmark in botanical education among English-speaking nations. In the seven years of his professional career Dyer did such notable and lasting work as to suggest regret that the teacher was so soon to be merged in the Government official.

Amid the many-sided activities of Kew as we know them to-day—many of his own creation—Dyer found himself in a congenial sphere of work, for he was a born bureaucrat. The Hookers—father and son—made Kew and established its scientific position; Dyer developed it as a place of enjoyment, a centre of scientific horticulture, a botanical establishment, and an Imperial institution. To the improvement of Kew as a beautiful garden for the delight of

the public he brought a highly cultivated artistic sense. His great powers of organisation showed themselves in every department, in the equipment of staff, the education of young gardeners, in reconstruction of plant-houses to the needs of modern horticulture, the enlargement and extension of the Herbarium, the formation of a Forestry Museum, as well as in botanical research at the Jodrell Laboratory, the carrying on and editing of the Botanical Magazine, the initiation of the Kew Bulletin, and the various Colonial Floras prepared by the Herbarium staff.

Of all his work that which absorbed him most was the endeavour, in close touch with the Colonial Office and the India Office, to make Kew the centre of reference upon all questions of botanical economic products in the Empire, and a medium for the interchange of plants and seeds, while he encouraged the establishment of botanic gardens overseas. Kew has thus come to be a truly Imperial institution, and its interests were Dyer's obsession. It seemed the more singular that, by having it placed under the Board of Agriculture in the last years of his administration, he should have sacrificed the independence which had enabled him and his predecessors to carry out their aims and their policy.

Living throughout the biological renaissance of the 19th century, he was in intimate relationship with its pioneers and apostles, and the mantle of representative biologist on the botanic side fell upon him. An out-and-out Darwinian, he was an alert and undaunted champion of the position in discussions of his time. His influence was felt in all botanical movements, and he became what with gratulatory deprecation he called himself—a botanical pope. He was Vice-President of the Royal Society in 1896-97, but declined nomination to the Presidency of the British Association. Honours from universities and from scientific societies came to him abundantly. He was often appointed on Royal Commissions, and was created C.I.E. in 1892, and K.C.M.G. in 1899. In 1899 also he was elected Hon. Senior Student of Christ Church. In social life a brilliant conversationalist and skilful raconteur, he was a welcome companion, while to the younger men of science he was always ready with guidance and counsel.

Official work left Dyer but little leisure for scientific research or for the preparation of books, but before he went to Kew he was helping his future father-in-law, Sir Joseph Hooker, in the preparation of a "Flora of British India." In 1877 he began, as editor, to gather together the threads of the "Flora Capensis," which had been in abeyance since the publication of the third volume in 1865, and was finally completed three years ago; he also resumed the publication of the "Flora of Tropical Africa," in the preparation of which, too, there has been a considerable hiatus, and carried it on to the first section of Volume 6, which was published in 1913. Dyer contributed many short papers to scientific journals, and on geographical botany wrote with the authority of his position at Kew. In Dyer were combined the rare qualities of savant and administrator, and though it was perhaps inevitable, his absorption in his administrative duties

led to some slackening of his scientific activities, which his friends always regretted. Dyer was an autocrat, and though he suffered fools impatiently, to those who knew him he was a most likeable man.

In 1905, on retiring from Kew, he made his home in Gloucestershire, finding an outlet for his activities in the work of a county magistrate and in the investigation of the botany of the classics. He married in 1877 Harriet Ann, eldest daughter of his chief, Sir Joseph Hooker. Their children, a son and a daughter, are both married.

(Reprinted from "*The Times*," December 27th, 1928).

Sir William T. Thiselton-Dyer's association with the Kew Guild commences with its inception in December, 1892, and the following correspondence, published in the first issue of the *Journal* will doubtless be read with interest :—

Sir,

Kew, December, 1892.

The Gardeners of Kew, past and present, desire to form themselves into a Guild, to be known as the Kew Guild, and to publish annually a *Journal* containing the names and addresses of all members, with interesting notes of the Gardens, etc. We shall be glad if this scheme meets with your approval.

I am, Sir, Yours faithfully,

W. WATSON.

W. T. Thiselton-Dyer, Esq., C.M.G., etc., Director.

Dear Mr. Watson,

Royal Gardens, Kew.

I think the idea of the proposed Kew Guild is a very excellent one. Such an organisation cannot but have the effect of consolidating the *esprit de corps* which already exists amongst our young men, and its doing so will, I do not doubt, be of great benefit to the establishment.

It has often struck me that the young men—of whom there is now a not inconsiderable body employed—who come to Kew for a period of advanced training and instruction, enjoy in no small degree much the same advantages as in other classes of the community are afforded by University life. It is generally considered that the most important of these are the formation of character and the reception of those impressions which determine an intelligent interest in, as opposed to a merely mechanical pursuit of, the occupations of life. The age at which young men come to us is about the same as that at which others go to the Universities. It is the age when the responsibilities of life begin to emerge above its horizon, and it is the age when, for better or worse, the future career, as far as it depends upon the influences under which a young man is thrown, pretty distinctly shapes itself.

I have always felt that a great responsibility falls upon the Staff in doing what can be done to maintain a healthy and somewhat stimulating tone throughout the establishment. As you know, we do not "coddle."

We treat our young men as "men," and expect them to work out their own salvation. We wish them to be manly, self-respecting, and strenuous. We put, with the aid of the Government, what help we can in their way, and leave them to make an intelligent use of it.

Just as the Universities, one of the great advantages of Kew, as it seems to me, is the association within it of a large body of young men of the same age and with the same pursuits. Such an association is itself an education and a preparation for the bigger world of life. Rubbing together in the work of the day, in the lecture-room, the reading-room, the Mutual Improvement Society, and the cricket-field, they learn to appreciate and understand those good personal qualities which enable capable men to advance themselves with modesty, and everyone to get through the business of life without undue self-assertion or individual friction. This is the great merit of University training, and something of it I am sure is attained at Kew.

Out of this grows one of the greatest charms of life, the formation of permanent and valuable friendships. But stay at Kew is short, and I have always felt that some organisation such as you propose would serve the double purpose of keeping Kew in touch with the men who have passed through it, and of enabling the men themselves to keep in touch with one another. Sometimes in turning up old files of correspondence, I have come across letters from distant parts of the world from men who were once with us. And nothing has encouraged me more as Director than to see the spirit of loyalty, not to say affection, which always animates Kew men towards their *Alma Mater*.

Men go from us to all parts of the Empire, some in official, some in private employ. The maintenance of correspondence with every individual would be impossible. Still, to have a record of their whereabouts, to rescue their names and work from oblivion which sooner or later falls on everything human, will be of interest to everyone concerned.

After all, it is interest which makes work enduring, and anything which stimulates it in the long run well repays the trouble.

Kew has now completed the first half-century of its existence as a national and public institution. It has accomplished work already of which any institution might be proud. It carries its influence through its men to every part of the world. That it is so strong arises in great measure from the fact that the uniform tradition which has animated every member of the staff from top to bottom is to work self-sacrificingly for Kew rather than for himself. Officials and employees arrive and pass away; the institution remains, and grows in usefulness, in strength, and in beauty. All who have had a hand in the work are content that that should be their "record."

Believe me, dear Mr. Watson,

Yours sincerely,

W. T. THISELTON-DYER,
Director.



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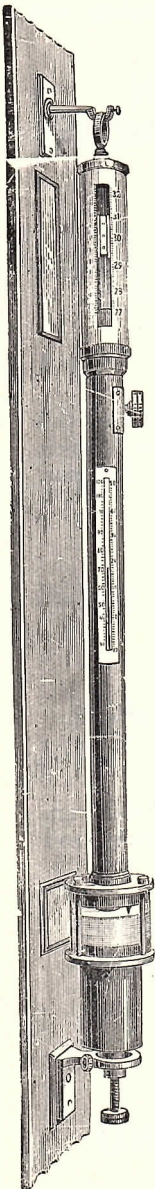
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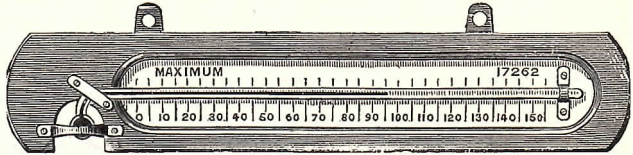
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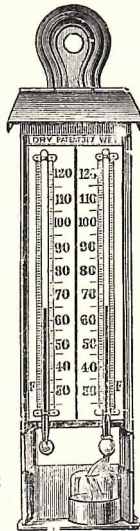
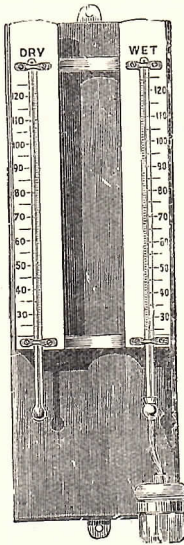


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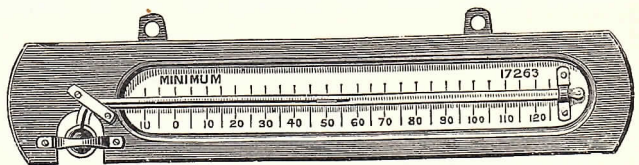
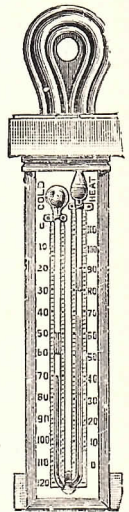
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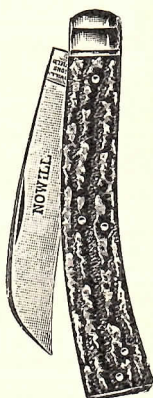
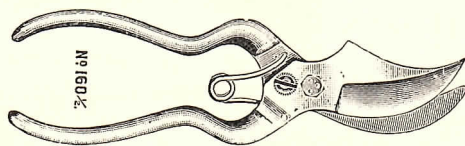
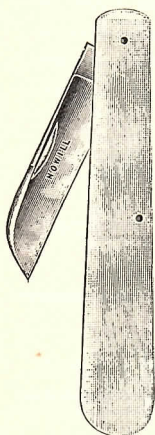
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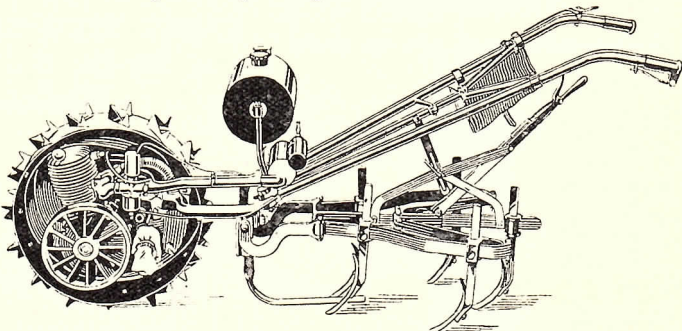
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- 1.—The Society shall be called the "KEW GUILD."
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- 3.—The object of the Guild shall be to promote mutual and friendly intercourse between past and present Kewites, and to further their interests.
- 4.—The business of the Guild shall be conducted by a Committee constituted as follows :—Seven present Kewites, one sub-foreman, one student-gardener, and twelve Old Kewites. Four non-official members (three of whom shall be Old Kewites) shall retire annually in rotation, and shall not be eligible for re-election for at least twelve months. The election shall take place at the Annual General Meeting. Candidates may be proposed by any member of the Guild provided that the names of Candidates be sent in writing to the Secretary at least seven clear days before the Annual Meeting. A Chairman of Committee shall be elected by the Committee for a period of three years.
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