



THE
JOURNAL
OF THE
KEW GUILD

AN ASSOCIATION OF
MEMBERS OF THE KEW STAFF
PAST AND PRESENT

1943 (Published 1944)

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„ 1943-44 :—J. W. Besant, A.H.R.H.S.

Trustees : E. J. Salisbury, C.B.E., D.Sc., F.R.S., and
W. M. Campbell, N.D.H.

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

(To whom all remittances should be addressed.)

Hon. Secretary and Editor of Journal : A. D. Cotton, Herbarium
House, Kew, Surrey.

Assistant Editor : H. S. Marshall, Herbarium, Royal Botanic
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JOHN WILLIAM BESANT, A.H.R.H.S., F.Inst.P.A.

Mr. J. W. Besant was born at Longforgan, Perthshire in August, 1878. He received his early education at Longforgan School, and was a student at the Harris Academy, Dundee. "J.W." was the eldest of the three sons of the late Mr. James Besant, Head Gardener at Castle Huntley, Perthshire, the seat of C. Paterson, Esq., all of whom have made their mark in the horticultural world. Our President, who is Keeper, Botanic Gardens, Glasnevin, is the brother of W. D. Besant, also an Old Kewite, Director of Parks, Glasgow, and of J. G. Besant, Superintendent of Parks, Harrogate, both ex-presidents of the Institute of Parks Administration. His only sister, Miss Helen Besant, M.A., had a post in the Passport Office and was Assistant Registrar at the British Legation at Berne during the war of 1914-18.

J. W. Besant received his early training in several well known Scottish gardens, namely, Rossie Priory, Alloa Park and Callander Park. I have no doubt it was his stay of $2\frac{1}{2}$ years at the Botanic Gardens, Glasgow, from 1899 to 1901 under the late Daniel Dewar, an Old Kewite and a well known authority on hardy Alpine and herbaceous plants, that influenced him to make application for employment at Kew.

On coming to Kew in February, 1901, John Besant worked first in the Tropical Fern House No. 2 and then in the Succulent House. In both these departments I had the pleasure of being associated with him. His ability and sound practical knowledge as a plantsman, which he had acquired in Scotland, were noted by the Assistant Curator, Mr. W. Watson, and after a time he was appointed sub-foreman of the Flower Garden Department under Frank Garratt.

During his $4\frac{1}{2}$ years at Kew Besant took an active part in both the study side and social life of the student gardener. His interest in the *Mutual* was evidenced by the reading of several papers and by his being awarded the Hooker Prize in 1903. For his lectures he reminds us that he went to Richmond for Surveying and Levelling and to the Paddington Technical College for Advanced Systematic Botany and paid his own fees. In the cricket field he is remembered as a steady bat and a useful change bowler.

Besant left Kew in June, 1905, and became Assistant Manager of Bees, Ltd., The Ness Nurseries, Cheshire, then recently established by Mr. A. K. Bulley. Mr. Bulley, who was a leading Liverpool Cotton Broker of considerable wealth, was an enthusiastic horticulturist. He not only founded Bees, Ltd. but entirely financed George Forrest's first expedition to China (1904-6) and also the second in 1910, and some of the first of the new *Primulas* and *Meconopses* to reach this country from those expeditions were raised under Besant's care at the Ness Nurseries.

It was at these Nurseries that Besant made the acquaintance of Sir Frederick Moore, the Keeper of the Botanic Gardens at

Glasnevin, and in 1907 he was invited by him to fill the post of outdoor foreman at the famous Dublin Gardens. This position he held until 1920 when he became Assistant to the Keeper and on the latter's retirement in 1922 Besant was appointed Acting Keeper. After two years he became Keeper, a position which our worthy President has now held for 20 years.

In addition to his official duties at Glasnevin, Mr. Besant has actively associated himself with Societies, Clubs and Associations in and around Dublin, his wide knowledge and kindly help, always readily given, being much sought after. Among the posts he filled may be mentioned that of Chairman of the Royal Horticultural and Arboricultural Society of Ireland for 2 years and President of the Dublin Naturalists' Field Club for 2 years.

For some years he has been an external examiner in Rural Science for the National University of Ireland. He represented the Department of Agriculture for Ireland at the International Botanical Conference at Cambridge in 1930 and at a similar conference at Amsterdam in 1935.

In 1931, Besant was elected an Associate of Honour by the Royal Horticultural Society and in 1939 was awarded one of the first five gold medals presented by the Royal Horticultural and Arboricultural Society of Ireland. He was Editor of *Irish Gardening* from 1914 to 1922 when economic conditions compelled the proprietors to cease publication.

Much more could be written of the activities of our President but enough has been said to indicate his manifold activities. I need not add that Besant is highly esteemed everywhere in his adopted country. Those who have had the pleasure of meeting him in Ireland, as I have, and going round Glasnevin with him, cannot fail to be impressed with his wide knowledge of plants and with the keen interest he takes in gardening and all that pertains to it.

We are proud to have such a man as our President for 1944.

A.O.

SIR GEOFFREY EVANS.

As most members of the Guild are aware, Sir Geoffrey Evans was appointed a member of the West African Commission which was set up by the Colonial Office last autumn.

The Commission is to report on the organisation and facilities provided by the existing centres of higher education in British West Africa and to make recommendations regarding future University development in that area. The Chairman of the Commission is Col. Walter Elliot, M.P. The Commission held various Meetings in London during the autumn, collecting evidence, and the members left by plane for West Africa in January 1944 and will spend about three months in the three West African Colonies of Nigeria, Gold Coast and Sierra Leone.

Sir Geoffrey Evans has the best wishes of all members of the Guild and they look forward to welcoming him back on his return to this country.*

*Sir Geoffrey returned safely in April.

OUR NEW DIRECTOR.

It was announced in the Press of June 2, 1943, that Professor E. J. Salisbury, C.B.E., D.Sc., F.R.S., Quain Professor of Botany at University College, University of London, had been appointed by the Ministry of Agriculture and Fisheries, Director of the Royal Botanic Gardens, Kew, in succession to the late Sir Arthur Hill. The news of the appointment gave great pleasure to the staff. Dr. Salisbury took up his duties at Kew on September 1.

His special interests in Botany have for many years been in the fields of ecology, physiology and taxonomy. As well as belonging to many learned societies he is a member of the Agricultural Research Council which is the advisory body to the Government on all matters connected with Agricultural Research and which itself initiates and finances research work in Agriculture and Horticulture. Dr. Salisbury has always had a great interest in horticulture as is evidenced by one of the books which he published — "The Living Garden." He is a member of the Wisley Committee of the R.H.S., represents London University on the Council of Swanley Horticultural College, and is a member of the Governing Bodies of the John Innes Horticultural Institution, the East Malling Research Station, and the Rothamsted Experimental Station.

THE KEW GUILD.

ITS FIRST FIFTY YEARS.*

The year 1943 is the Jubilee of the Kew Guild and the occasion may be appropriately marked by providing members with a sketch of its history and functions and in making some observations with regard to its future.

The Guild was founded in 1893 and we are told in the first Number of the *Journal* that it was the "offspring of the Mutual Improvement Society." The Director, Sir William Thiselton-Dyer, gave it his blessing. In a letter to the Assistant Curator, the following were the opening words: "Dear Mr. Watson,—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."

The Committee empowered to carry out the scheme consisted of Messrs. W. Watson, W. J. Bean, G. H. Krumbiegel, J. Brown, A. A. Pettigrew, and J. Aikman. The object of the Guild was outlined in the prospectus, the heart of which is contained in this sentence: "The aim and object of the Guild is the very laudable one of uniting all Kew men in the bond of fellowship by means of a

*Compiled by a few senior Members of the Guild.

Journal which will convey to them news of interest and enable them to communicate with each other. There are probably 500 Kewites distributed all over the world but of the whereabouts of all, except a small proportion, there is at present no record." This circular was sent out in April, 1893, and the motto "Floreat Kew" adopted.

So much may be learned from the pages of the first Number of the *Journal*. Mr. W. Dallimore who, with Mr. C. H. Curtis, was also a moving spirit in the formation of the Guild, sends the following notes on the inner history of the movement:—

"The formation of the Kew Guild was the outcome of a suggestion made by me at the final meeting of the Mutual Improvement Society for the Session 1891-1892. I had nothing exact in view but thought that a sort of brotherhood of Kew Gardeners would be of mutual benefit to past, present and future Kewites, and more particularly to those who had gone abroad. Mr. G. H. Krumbiegel, amongst others, thought well of the idea and it was arranged that he and I should work out detailed proposals and that these should be brought before a special meeting. My first idea was that only young gardeners should be eligible for membership, but before the meeting took place we decided that it would be better to include all members of the Kew staff. This was, however, overruled. When the special meeting was called, the Director was present and Mr. Watson, the Chairman of the Mutual, presided, and from that time onward he took charge of the whole scheme.

"The meeting, as far as I remember, was held in the old Gymnasium in Princes Road, Kew, and which was later burned down (not the present one which is on the same site).

"One of our ideas for the *Journal* was that it should be a medium for the publication of the Mutual Improvement Society's Annual Prize Essay and another point we made was that the Guild should not be used for political purposes. This, as it happened, proved important for in later years an attempt was made to divert its activities, an effort which very nearly wrecked the whole organisation.

"An early donation to the funds, made by a fine old gardener, J. W. Thomson, is worth recalling. He wrote in 1894:— 'On Wednesday next, March 21st, I shall be 90 years of age, and as a birthday gift to the Kew Guild I send you a cheque for five guineas. If the Almighty . . . permits it, I shall make annually a donation to the funds of the Guild for I entertain towards it warm feelings and hearty wishes for its success.' "

The promised *Journal* materialised and received a very warm welcome. Though more modest in scope and in size it was on the same lines as present issues. For several years it consisted of exactly 48 pages. One of the main items in the first Number was an historical article by Mr. W. Botting Hemsley, F.R.S., then "Principal Assistant" in the Herbarium, and the prize essay for the year, which was by Mr. Dallimore "On the Pruning of Hardy Trees and Shrubs" is still not out of date. The first President of

the Guild was Mr. George Nicholson (author of the famous "Dictionary"), Curator of the Gardens, an office he held until 1902. Mr. W. J. Bean was the Treasurer, Mr. W. Watson, Editor of the *Journal*, and Mr. J. Aikman, Secretary. There was no change in the officers for several years. On Mr. Nicholson's retirement Mr. Watson succeeded him as President.

At first the Guild was admittedly for past and present members of the Gardens staff, Rule 2 reading: "The Guild shall consist of all who are or have at any time been employed as gardeners at Kew." But this basis was found to be too narrow and in 1898 the Rule was altered and read: "The Guild shall consist of all who are or who have at any time been employed as gardeners or in any position of responsibility in the Royal Gardens, Kew." This vague qualification for membership still holds. In practice it usually embraces all members of the horticultural, clerical, and scientific branches of the staff but excludes constables, labourers, and stokers. On the scientific side amongst those who early became Life Members were the Director (Sir William Thiselton-Dyer), Dr. D. H. Scott, Mr. I. H. Burkill, Dr. W. B. Hemsley, Sir Joseph Hooker, Professor W. H. Pearson, Mr. Burt Davy, and Sir Daniel Morris.

An analysis of members given in the *Journal* for 1900 is not without interest. A total of 580 names were distributed as follows: Royal Gardens, Kew, 89; Europe, 345; Asia, 42; Africa, 26; America and West Indies, 62; Australia and New Zealand, 16. Kew men were to be found in China, Chili, Fiji, Falkland Islands, Congoland, Angola, the West African Settlements, British Central Africa, the Transvaal, Haiti, Sumatra, Java, etc. It will be noticed that the proportion of overseas members was much higher in those days than it is at present.

The first Dinner was held in 1900 at the Holborn Restaurant. In the early days the Director always took the chair and not the President of the Guild. Sir William greatly appreciated his position as Director and he was a good and often pungent speaker. He undoubtedly enjoyed the opportunity of presiding at these functions and punctuating his speeches with jokes and sly thrusts in directions where he thought they were needed. Later on distinguished botanists were asked to preside, for instance, Dr. D. H. Scott, Dr. Augustine Henry, and Dr. Daydon Jackson. Noteworthy botanists and horticulturists or officials from the Board of Agriculture, such as the Earl of Onslow and Sir Thomas Elliott, were often brought as guests to the Dinners by Sir William. The practice of having guests has of course been continued and one of the most recent we had the honour of entertaining was Sir Cecil Hanbury, M.P., the late owner of the wonderful garden at La Mortola, who was so good to many Kew men. The custom of inviting ordinary members, or non-members, to preside ceased with the retirement of Sir William as Director in 1906 and from that time onwards this duty has fallen to the President of the Guild. The enthusiasm expressed with regard to these early Dinners by past and present Kewites was only equal to that of the letters concerning the founding of the Guild itself. From 1900

until 1921 the Dinners were held (with two exceptions) at the Holborn Restaurant; then came four years at the Imperial Hotel, Russell Square. From 1927-1938 the Clarendon Hotel, Hammer-smith, was the meeting place. In 1939 a change was made for the Empire Restaurant, Victoria.

From about 1935 onwards the Guild was much indebted to the Assistant Director, Mr. J. S. L. Gilmour and also to Mrs. Gilmour for providing the musical programme which followed the Dinner. Each year for many weeks previous to the Dinner the performers used to practise at Descanso House and Mr. Gilmour spent much time both in discovering and in encouraging Kew's local talent.

The formation of branches of the Kew Guild commenced in 1903, the first being the Birmingham Branch founded on the occasion of Mr. T. Humphreys, Assistant Superintendent of the R.H.S. Garden at Chiswick, taking up his position as Curator at Birmingham Botanic Garden. Since then branches have been founded in Ireland (1910), in America (1917), in Uganda (1920), in Lancashire and Cheshire (1923), and in New Zealand (1932). The Uganda Branch which was very active for a time came to an end in 1923 (owing to so many Kew men leaving Central Africa) and the balance of its funds was handed over to form the Dummer Memorial Prize. The American and New Zealand Branches are, however, still very vigorous as will be seen by reference to recent numbers of the *Journal*.

The staff lists show that women gardeners first came to Kew in 1896 and that they were nearly all Swanley trained. They were allowed to become Members of the Kew Guild (strange to say!), their names appearing in the Directory as past members as soon as they left. As with the men students, as long as they were at Kew there is but slight reference to their doings in the *Journal*, but anyone wishing to master the subject of the "women gardener movement" should hunt for items in the early volumes of the *Journal* and again during the war period 1914-18.

The Guild has had its ups and downs. In 1910 and again in 1926 there was no Dinner. The financial depression of 1931-2 caused anxiety and the publication of the *Journals* was delayed. During the present war the *Journals* for 1939 and 1940 had to be amalgamated. But the most serious crisis in the Guild's history was in 1908 arising out of trouble which had been brewing since 1905. A number of Members desired to use the Guild for bringing pressure to bear on the Government to obtain increase of salaries, not only at Kew but for gardeners generally. This amounted to using the Guild for political purposes. There was much discussion and matters came to such a pass that several Members of the Committee felt compelled to resign. It was pointed out that there were other means open to Members for rectifying abuses and that by using the Guild as a Trades Union its proper functions would be imperilled. Happily the "forward policy" party saw the truth of this and the following year the opposition was withdrawn. No *Journal*, however, was issued during 1909. The Guild began to function again in 1910, but without the pleasure of a Dinner. Since that date no further embarrassment of this sort has been experienced.

During the Great War 1914-18 the Guild felt the strain. The publication of the *Journal* became difficult and during the last two years it was reduced in size to 30 and 40 pages respectively, and Dinners were naturally abandoned. The system of voluntary enlistment at the beginning of the 1914-1918 war meant that after the first two or three months every fit student-gardener had joined the Forces and there was a rush to the colours from other categories. The present scheme of conscription with a systematic call-up by age-groups produced a more leisurely passage of student-gardeners into the armed forces. The much longer list of Old Kewites who joined the Forces also strikes one on reading the *Journals* of those years. This may indicate either that owing to the present extended system of reservation and deferment the numbers then were actually greater, or that we have not been able to keep in such close touch with older Members as we were 25 years ago. Perhaps both are true. Another fact which those of us who were at Kew at the time well remember was the heavy casualty lists during the four years of war. Nearly a whole page in the *Journal* for 1918 is devoted to the Roll of Honour (covering the 4 years), names which we still recall with gratitude and a sense of loss. There were representatives on this Roll from all branches of Kew — Student gardeners, labourers, constables, and Herbarium staff, besides many Old Kewites. A War Memorial, designed by Sir Robert Lorimer, was erected by the Guild in the Temple of Arethusa and was unveiled by Sir David Prain in 1921. It commemorates the names of 37 Members of the Guild and other employees of Kew.

The subsequent history of the Kew Guild, apart from the activities dealt with below under special paragraphs, does not call for much comment.

It was agreed by the Committee that the women gardeners who came to take the place of the men during 1914-18 should be eligible after 3 months' service at Kew for Guild Membership. That this was appreciated was shown by the fact that for many years after the war was over a considerable number attended the Annual Dinner. Indeed, until quite recently it was usual to have at the Dinner at least one representative of the first batch of women gardeners who came to Kew over 40 years ago. The same facility as to Membership has been extended to the present body of women gardeners working at Kew, though with the better organisation of women to-day they decided to form, in addition, a "Kew Women Gardeners' Guild."

Kew has always had a certain number of voluntary workers both in the Gardens and in the Scientific departments. In 1937 volunteer student gardeners at Kew were sanctioned by the Committee as being eligible for "Associate-Membership" provided they had completed one full year of training at Kew and had paid the life-membership subscription. Dr. D. H. Scott, for many years Honorary Keeper of the Jodrell Laboratory, set a good example on the scientific side by becoming a Life Member of the Guild soon after it was founded.

The method of selection of the President is a matter which has often been discussed, and proper balance of past and present members has to be maintained. The sequence of candidates for this important office was revised at a Committee Meeting held in April, 1936, and the present arrangement is as follows: (1) Past Kewite at home; (2) Overseas Kewite; (3) Past Kewite at home; (4) Present Kewite. The revised sequence was necessary in order to obtain an adequate representation of the increasingly large number of senior members who have left Kew and have posts at home.

The subscription for Membership has twice been raised, firstly in 1919 when the annual subscription was raised from 1/- to 2/6d., and the Life Membership from £1 to £2, and secondly at the Annual General Meeting of 1943 when these two subscriptions were raised to 5/- and £3/3/- respectively. On both occasions Life Members were asked if they would forward the amount outstanding according to the revised figure though no pressure has been brought to bear. Recently the Guild has been very heavily hit (temporarily, it is hoped) by loss of advertisements in the *Journal* amounting to a quarter of its income. In addition expenses have gone up owing to increase in size of *Journal* and extra cost of both printing and publishing. The Committee felt that for any Guild worthy of the name, a subscription of 5/- a year was not excessive and that, at all costs, a good *Journal* should be maintained.

It may be pointed out that the 5/- paid on receipt of the *Journal* is not a payment for the *Journal* but represents the annual membership subscription which is due on January 1 each year. The practice existing at Kew of collecting subscriptions when handing out the *Journal* is merely one of convenience and could with advantage be given up.

THE JOURNAL.

The *Journal* is generally regarded as the "high light" of the Kew Guild and certainly its production is one of the most important as well as the most tangible of the Guild's activities. In function the *Journal* somewhat resembles a college Magazine, though everyone realises that Kew is not a mere training centre but a national institution. On the one side the *Journal* chronicles Kew affairs, the list of present staffs, the proceedings of the "Mutual," the account of the Dinner, new appointments, the lectures and the sporting activities. On the other side it presents the doings of past Kewites and prints a selection of letters received from Members scattered at home or abroad, letters which are read with interest and delight by all. This social service is of inestimable value in fostering fellowship. It helps present Kewites to take a wider view and greater pride in their work, and interests the men who have left Kew and helps to retain the link with their Alma Mater.

The group-photograph of the Gardens staff is a treasured possession in recalling friends and old times. The sports side came in for more notice after the last war and group-photographs of the Football, Cricket and Swimming teams were included, a feature which we hope will persist as far as funds allow. Mr Brooks writes:

"Those of us who have been far afield and have received our copy of the *Kew Bulletin* month by month used to wonder why the Herbarium staff, who contributed so regularly to that Journal, never sent a group-photograph for inclusion in the Guild *Journal*. Many members of that staff were well known to us as lecturers and we mixed together at the Tennis Club on Saturdays, but on leaving Kew a young man was apt to lose touch with his former teachers and indeed, often with the entire scientific side of Kew. He had not even a photograph to remind him."

An important feature of the *Journal* has been the more formal letters and the articles, several of which are usually printed in each Number, and which are of more permanent value. Of these Sir David Prain's article on "India" (a "Mutual" lecture) is an outstanding example, but there are many others contributed alike by the former Gardens staff or by the scientific staff. Some of these may be noticed here as indicating their wide scope: W. B. Hemsley, Historical (1893); D. Morris, on Kew and Empire (1896); J. R. Jackson, Historical (1911); E. W. Davy, on Nyasaland (1914); W. Head, on Kashmir (1915); G. Neville, on the Ruhleben Camp (1917); R. A. Gould, Imperial War Graves in Gallipoli (1920); E. H. Wilson, on Kewites in Australia (1921) (Historical); W. B. Turrill, on the B.Sc. Degree in Horticulture (1923); W. B. Turrill, on Plant Ecology (1927); A. W. Hill, on U.S.A. and Canada (1927); W. N. Sands, on Malaya (1927); F. L. Squibbs, on Dominica (1930); E. Coward, Posts under Municipal Authorities (1931); H. R. Cocker, on the La Mortola garden (1932); B. P. Mansfield, on Earthquakes in New Zealand (1932); T. Hunter, on W. Africa (1932); W. Dallimore, Historical (1933); H. J. Moore, on the International Peace Garden (1934); C. S. Walsh, on Morocco (1934); W. B. Turrill, on Education (1934); J. D. Snowdon, on Uganda (1934); H. R. Cocker, on Lake Maggiore (1936); J. C. Taylor, on Plant Explorers (1936); N. E. Brown, Historical (1937); R. W. Younger, on Tierra de Fuego (1938); G. T. F. Wyndham, Moselle Wine Mountains (1938); H. Bruinslich, on Tropical Plants (1939); W. M. Campbell, Horticulture after the War (1941); B. Cooper and B. Tarver, The Training at Women's Colleges (1941); and W. Dallimore, Bedgebury (1941).

There is naturally a number of articles on Botanic Gardens of which the most important are those by R. O. Williams, on the Trinidad Garden (1916 and 1924); C. Hazel, on the Entebbe Garden (1921); I. H. Burkill, on the Singapore Garden (1924); F. R. Long, on the South African Parks (1939); and F. N. Howes, on the Pietermaritzburg Garden (1939). Articles on Botanic Gardens outside the Empire include papers on the Gardens at Brooklyn, Dahlem and Hamburg by M. Free (1924), F. L. Simmons (1937), and G. T. F. Wyndham (1938) respectively.

Another useful item in the *Journal* has been reviews of books both horticultural and botanical. These, if fairly full, and written by appropriate experts, should be of great value to Kew men working in isolation as indicating whether or not the works in question are

worth purchasing. This service we think might be extended in the future.

Last in position, but certainly not least in usefulness, is the Address List of Past Kewites. In any office copy of the *Journal* no part sooner becomes dog-eared than this and its value is obvious. Members wishing to serve the Guild and their fellow members can do so by notifying the Secretary promptly of change of address.

It is worth recording that the *Journal* is valued by outsiders. A certain number of non-Kewites acquire copies every year. It is filed, for instance, in the Library of the Royal Horticultural Society and also in the Arnold Arboretum Library and we know of at least one well-known horticulturist who purchased a set for his own library. Lord Wakehurst, better known as Mr. Gerald Loder, President of the R.H.S. previous to Lord Aberconway, at his own request always had a copy of the *Journal* sent to him. On account of the article on Sir Arthur Hill and that on the Cambridge Cottage Garden applications for copies of the 1942 *Journal* have come from quite unexpected quarters. The activities of Kew were therefore brought to the notice of a much wider circle than usual, and it is hoped that the Number proved a worthy memento of our institution.

It will be seen therefore that the Guild's *Journal* operates in many ways; it forms a bond of union between Kew men; it serves as a magazine recording present events both horticultural and botanical; it provides instructive reading matter as well as articles of reference, and it is respected and valued by our confrères outside Kew.

The most frequent criticism levelled at the *Journal* concerns its belated appearance. This is sometimes deserved. But the work of bringing out the *Journal*, even though it is a semi-official publication, is very largely a "private-time" job, and the work of compiling, arranging, editing and proof-reading consumes a vast amount of time and energy. In most Societies the office of Secretary and Editor are kept separate and if the editorial work is to be discharged efficiently it will probably be necessary for the Kew Guild to return again to this procedure.

THE KEW TRAINING.

The training provided by Kew is a matter of intense interest to each successive generation of student-gardeners. The pages of the *Journal* show that this subject has often been considered by the Guild Committee, and that the Guild has been active in bringing the need for improved educational facilities before successive Directors.

In the early part of this century University graduates who had taken Botany began to be appointed to posts hitherto held by Kew men, such as Inspectors in the Board of Agriculture at home and various posts in the Departments of Agriculture or in Botanic Gardens abroad. This caused a stir. "Fear of competition from college trained men" led to an article by Mayhew in the *Journal* for 1910, and in the same Number we find the Irish celebrity John Weathers seriously disturbed by "young ladies hardly out of their

teens" being "boomed" as some of the most capable gardeners in the country. The following year the matter was referred to at the Annual Dinner. The President, Mr. J. Hooper Pearson, a prominent horticulturist and Managing Editor of the *Gardeners' Chronicle*, in proposing the toast of the Guild urged that the best training possible should be given men during their time at Kew and that the Kew curriculum should be revised. The same year there was a movement for the bestowal of a Kew "Diploma" as distinct from the "leaving certificate" which it was claimed was gained by practically everyone. For this idea there was a good deal to be said. Miss Gunnell's article on "Horticultural Training on the Continent," including that of women, though only a sketch, is of interest in giving us a wider outlook on the whole question (1914, p. 233).

After the war the matter was raised again with renewed vigour. In 1922 there was a movement within the Guild for the establishment of an educational fund for helping Kew men. The aim was to raise £1,000, the income of which was to be used for the purchase of books and part payment of fees. The fund was started in May, 1922. The prime movers were Mr. J. Coutts and Mr. W. Hales. The latter, as Curator of the Chelsea Physic Garden, came in very close touch with the Botanical Departments of the Imperial College of Science and of the Chelsea Polytechnic Institute, and he realised, as few can have done, how great would be the value of a scientific education to the modern gardener. Subsequently the balance of the Watson Memorial Fund was merged with the Kew Educational Fund and the joint Fund was renamed the "Watson Memorial Education Fund." The proceeds have been useful and many students have been helped in a modest way, but the response to the scheme as a whole was disappointing.

In September, 1922, there was a deputation of Kew Guild Members to the Director when various points which had been discussed were brought up. A full account of this meeting is given in the *Journal* (1922, p. 153). The results which accrued were important though they did not go very far. They consisted in the raising of the standard of entrance for future student gardeners, a revision of the standard required for the Leaving Certificate and an intimation that Kew men were eligible for certain Ministry of Agriculture scholarships. Later a delegation of students themselves waited on the Director. From this meeting an extension of "Demonstrations" to the student gardeners during official hours resulted and some revision of the lecture courses. In both these interviews Sir Arthur was most sympathetic and he did all that was possible at the time. Dr. Turrill's article on "the B.Sc. degree in Horticulture" published in the *Journal* the following year is indicative of the goal in contemplation.

Eight years later, at the Annual General Meeting in 1930, the subject of training was again brought up and a resolution was passed supporting the student gardeners in their efforts to obtain improved courses of Lectures and Demonstrations.

As to the Lectures, these have been greatly improved during the course of years. Plant Pathology was introduced in 1908, and there was a further revision in 1914 when Lectures on Soils and Manures were introduced. About that date also students began to attend the course in Land Surveying given at the Richmond Technical Institute. In 1920 Geology and Insect Pests were added to the syllabus. Ecology was brought in during 1923, and in the same year the valuable special Friday lectures were started in which Forestry and Genetics had a prominent place. Some years later both of these subjects were added as a separate course to the lecture syllabus. A series on Plant Nomenclature was commenced in 1934. But although the lecture courses at Kew have been brought up-to-date one serious defect in the Kew training has remained, namely, the absence of a laboratory available for the student gardeners. At present they themselves are unable to carry out any chemical or physiological experiments and any experiments performed are in the nature of a demonstration at the lecture table. Several of the keener students have indeed supplemented the Kew training by attending one or more courses at the Chelsea Polytechnic. It is realised of course that Kew is not a teaching establishment as is the Horticultural Department at Reading University or the women's colleges at Swanley and Studley, and the special difficulties as to Kew have always been recognised by the Guild. At the same time it has to be admitted that the teaching facilities at the Royal Botanic Gardens are not equal to those available for student gardeners at Wisley and Merton—institutions which are in a general way comparable to Kew. There is no doubt that Kew is behind hand in this respect. As is often the case, an old institution has been outstripped by the younger.

Though only indirectly connected with the Guild, a special feature of the Kew training may be mentioned, namely, the facilities afforded for student gardeners to extend their knowledge by experience gained abroad. For many years a limited number of foreign students have been permitted to work at Kew, but soon after the last war the practice was greatly extended and an arrangement was arrived at by which a definite exchange of students took place. Such exchange has since operated between Kew and Sir Cecil Hanbury's Garden at La Mortola; the Luxembourg Gardens, Paris; the Horticultural School, Vilvorde, Belgium; the Botanic Garden at Göteborg, Sweden; the Gardens at Potsdam, Hamburg and Dahlem in Germany; a private garden in Spain; Correvon's nursery, Switzerland; and the Botanic Gardens at New York and the Arnold Arboretum in U.S.A. Similar arrangements were also made with Institutions in the Empire, namely, with Pretoria, and Kirstenbosch in South Africa, and the Ontario Agricultural College, Guelph, and with a private Nursery in New Zealand.

Curiously enough no Kew men went to Holland, a country in which scientific horticulture reaches a higher standard than anywhere else on the Continent. On the other hand, many good Dutch student gardeners have worked at Kew.

The exchange system was always hampered through lack of funds to meet travelling expenses and there were nearly always a greater number of foreign students anxious to come to Kew than there were English students ready or able to go abroad. Sir Cecil Hanbury paid the travelling expenses of all students (over a dozen from Kew) to and from La Mortola, and the English Speaking Union paid those of students going to the United States. Sir Arthur Hill interested the Worshipful Company of Gardeners in the scheme and travelling expenses to other countries were in part met by grants from this body; the Kew Guild was also able to help, though to a very limited extent. In spite of the financial difficulty, however, a very considerable number of Kew men have been able to take advantage of these facilities to extend their knowledge and obtain a wider outlook on horticulture in general.

OTHER ACTIVITIES OF THE GUILD.

Apart from purely official duties, almost all the collective activities of Kew are associated with the Guild. On the social side there are the Annual "Social" and the Dinner, to which we may now add the Summer Tea which we hope, when the war is over, will become the Annual Garden Party. When the late Director came into office he repeatedly remarked on the value of such informal gatherings and the need of something in the nature of a "Staff Room" where members of the various Departments could meet together so that the existence of watertight compartments would be minimised.

As the badge on the sports blazers testifies, the Sports Clubs (Cricket, Football, Swimming, and Tennis) are also run under the auspices of the Guild, and the two Tennis Cups, given by Mr. R. L. Proudlock, were presented by him to the Guild.

The Educational Fund and the Special Prize Funds are invested in the name of the Guild. The proceeds are used in various ways such as the repayment of examination fees to all student gardeners who are successful in passing the N.D.H. examinations, the payment or repayment of fees for courses of instruction or for grants for the purchase of books. Two prizes are given yearly for the best collection of British plants, the first being the Dummer Memorial Prize, and the second being the R. L. Proudlock Prize. The Matilda Smith Prize is awarded every year for the student having the highest marks in Lectures for the past two years. The Educational Fund (and on one occasion the Benevolent Fund) has, moreover, been drawn upon to assist payment of passages for young men going abroad, namely, to New Zealand, Canada, and South Africa, the amount to be refunded later. In one instance not only was the sum advanced refunded but a material donation to the Fund was enclosed with it.

Another investment controlled by the Guild is the Benevolent Fund from which Members or their dependents are helped in times of adversity. An allied Fund is that raised on behalf of Prisoners of War. Several prisoners were helped in the last War from the P.O.W. Fund. At the present time (December, 1943) one Kew

man is a prisoner in Germany and eight are interned or are prisoners in the Far East.

The Educational Fund and the Benevolent Fund have naturally been used almost exclusively for the Gardens staffs, these being larger and more often in need of assistance, but both Funds are open to all members of the Guild.

In accordance with a generally recognised principle, activities such as these (especially where financial disbursements are concerned) are not left in the hands of individual officials but in the hands of a committee or other body. The Guild or its Committee is the recognised body at Kew for this purpose and hence the responsibility of Members in taking an interest in its well-being.

Owing to the prevailing conditions it was not possible to celebrate the completion of the first 50 years of the Guild's career. But at the Annual General Meeting of 1943 the President, Mr. A. J. Brooks, made an eloquent appeal that the financial position of the Guild should be placed on a more secure basis, and as a result of this appeal the event will be commemorated by the special fund which was inaugurated on that occasion and which it was unanimously agreed should be termed the "Jubilee Permanent Security Fund" (see pp. 298-9).

A list is appended of the Officers of the Guild from its inception to the present date. It will be seen that of the many members who have served the Guild we have been very particularly indebted to Mr. Bean who was Treasurer for eleven years and Editor of the *Journal* for five years; to Mr. Coutts who for sixteen years held the office of Treasurer; to Mr. Osborn who held the double office of Secretary and Editor of the *Journal* for eight years; to Mr. Dunk who, as Secretary and Editor for seventeen years, holds the record, whilst Mr. Stenning bids fair to equal or exceed Mr. Coutts's term of office as Treasurer since he has already served for thirteen years.

CONCLUSION.

In this sketch we have sought to outline the history of the Guild. It will have been seen that the Guild is not merely a name but that it is a body taking an active part in the welfare of its members. Of the matters we have considered two are of outstanding importance. Firstly, the welfare and training of the student gardeners. A high and up-to-date standard must be maintained; better education is in the air and now is Kew's chance. We wish the Director every success in his efforts to obtain an improvement in the training. Secondly, there is the *Journal*. A good journal is of great value, not merely to the Guild itself, but in serving to uphold the prestige of the establishment. Kew is a great botanic garden as well as a great national and public garden; its men hold important posts throughout the Empire, where its name is held in immense esteem, and above all, Kew is a great scientific institution renowned throughout the world. The *Journal*, therefore, must be worthy of Kew.

LIST OF OFFICERS OF THE KEW GUILD, 1893-1943.

<i>Year</i>	<i>President</i>	<i>Secretary</i>	<i>Editor</i>	<i>Treasurer</i>
1893	—	J. Aikman	W. Watson	W. J. Bean
1894-96	C. Nicholson	"	"	"
1897-1902	"	W. Watson	"	"
1902-06	W. Watson	W. N. Winn	W. J. Bean	"
1907-08	"	"	*Committee	"
1908	W. Pettigrew	"	"	H. H. Thomas
1909	"	"	"	"
1910	"	A. Garnett	"	J. Coutts
1910-11	R. H. Pearson	H. Cowley	H. Cowley	"
1911-12	Sir David Prain	"	"	"
1912-13	W. Goldring	"	"	"
1913-14	W. J. Bean	A. Osborn	A. Osborn	"
1914-15	L. Gentil	"	"	"
1915-16	Miss Matilda Smith	"	"	"
1916-17	C. H. Curtis	"	"	"
1917-18	J. A. Gammie	"	"	"
1918-19	G. Stanton	"	"	"
1919-20	A. W. Hill	"	"	"
1920-21	J. Jones	"	"	"
1921-22	C. Cundy	A. C. Bartlett	A. C. Bartlett	"
1922-23	E. H. Wilson	E. G. Dunk	E. G. Dunk	"
1923-24	J. M. Hillier	"	"	"
1924-25	M. T. Dawe	"	"	"
1925-26	W. Dallimore	"	"	R. F. Williams
1926-27	R. L. Harrow	"	"	"
1927-28	W. Irving	"	"	"
1928-29	W. N. Sands	"	"	"
1929-30	J. Coutts	"	"	C. P. Raffill
1930-31	F. S. Sillitoe	"	"	"
1931-32	D. Bliss	"	"	L. Stenning
1932-33	G. T. Lane	"	"	"
1933-34	A. Osborn	"	"	"
1934-35	W. Hales	"	"	"
1935-36	R. L. Proudlock	"	"	"
1936-37	C. P. Raffill	"	"	"
1937-38	R. E. Gill	"	"	"
1938-39	H. J. Davies	"	"	"
1939-40	L. G. Godseff	W. M. Campbell	W. M. Campbell	"
1940-41	A. D. Cotton	"	"	"
1941-42	W. L. Lavender	A. D. Cotton	A. D. Cotton	"
1942-43	A. J. Brooks	"	"	"
1943-44	J. W. BESANT	"	"	"

* See *Journal*, 1908, p. 400.

H.S.M.

ANNUAL GENERAL MEETING 1943.

The Annual General Meeting was held at the Lecture Room at Kew on July 3, at 2.45 p.m., the President, Mr. A. J. Brooks, F.L.S., occupying the Chair and over sixty Members being present.

After the formal business was transacted, including the adoption of the Report of the Committee and the Accounts, the Officers and the Committee were elected as follows :—

President	...	...	Mr. J. W. Besant.
Hon. Treasurer	...	...	Mr. L. Stenning.
Secretary and Editor	...	...	Mr. A. Osborn (to take up his duties in January 1944).

The nominations for the new Committee were elected as follows :—

Miss E. M. Wakefield to succeed	Mr. F. Ballard.
Mr. F. S. Sillitoe ,, ,,	Mr. C. Jones.
Mr. T. R. N. Lothian ,, ,, (Australia)	Major F. R. Long (South Africa).
Mr. F. G. A. Goldsack ,, ,,	Mr. H. Maw.
Mr. A. J. Brooks ,, ,,	Mr. G. W. Robinson.

PRISONERS OF WAR FUND.

Mr. Dunk reported that the Prisoners of War Fund stood at £26, but so far the £10 from the Benevolent Fund which was sanctioned at the Annual General Meeting last year had not been transferred to it from the Benevolent Fund.

MUTUAL PRIZE.

It was announced that the Mutual Prize had been awarded to Miss V. E. Paine and the Hooker Prize to Miss C. Scott. The volumes had been ordered but had not been received so that the presentation could not be made.

ALTERATIONS TO RULES 6 AND 7.

The President pointed out that though the Guild had always paid its way it had always lived from hand to mouth and he felt it was time that the Officers and Committee should be relieved from this continual anxiety. Though the *Journal* was not the only benefit Members received from the Guild, it was the most tangible and he was very anxious that its standard should be maintained at as high a level as possible. This could not be done without a secure income.

Two proposals which had been made by the Committee were being brought forward and they involved the alteration of Rules 6 and 7. These were to increase the Life Members' Subscription from £2 to £3 3s. and to raise the Annual Subscription from 2/6d. to 5/-. In reply to a question by Miss Joshua it was pointed out that after the last war the Annual Subscription was raised from 1/- to 2/6d. and the Life Members' Subscription from £1 to £2. The Secretary

explained that the increase in the cost of the *Journal* was largely due to the increase in the price of paper and printing although the *Journal* had also tended to become larger. After some discussion both proposals were carried *nem. con.*

JUBILEE PERMANENT SECURITY FUND.

The President said he wished to carry the matter further. The year 1943 was the Guild's Jubilee and he had proposed to the Committee that a special appeal should be issued asking for funds which should not be used for current expenditure but invested. He suggested that the list of contributions received should be published annually in the *Journal* as is the case with a fund of this nature opened some years ago by the Royal Empire Society. Several members present in the room had repeatedly helped the Guild in the past but had remained anonymous. He would like a special fund opened which should be of a permanent nature. These proposals were warmly welcomed by members, Messrs. Gullick, Coutts, Coward, Dallimore, Sillitoe and Stock, strongly supporting the idea of a special Fund. On the proposal of Mr. Gullick, seconded by Mr. C. H. Curtis, it was suggested that such a fund should be founded and called the *Jubilee Permanent Security Fund*. The proposal was put to the Meeting and was carried enthusiastically. On being passed it was met with immediate response, one member promising a donation of £25 and several others handing donations to the Treasurer on the spot. (For list of subscribers see pp. 298-9).

METHODS OF INCREASING THE USEFULNESS OF THE GUILD.

Lack of time prevented this matter from being discussed, but the President invited suggestions from all members present with regard to ways in which the Guild could be made more helpful to both present and past members.

THE TEA.

The Tea in the Director's Office Garden which followed was a very pleasant function. It was a perfect summer day and the number of members and friends present was exactly 170. The new President, Mr. J. W. Besant, was convalescing after an operation and was unable to leave Dublin, and the guests were therefore received by the past President, Mr. A. J. Brooks and by Mrs. Brooks. Sir Geoffrey and Lady Evans were unfortunately away from Kew and the Curator, who though he was at the Annual General Meeting, could not manage to come to the Tea. Mr. H. C. Sampson, the former Economic Botanist, was amongst past Kewites present. Members of the staff who attended both meetings included Messrs. F. Ballard, A. D. Cotton, E. G. Dunk, F. N. Howes, J. Hutchinson, K. N. Kaul, A. Osborn, S. Pearce, G. H. Preston, C. P. Raffill, L. Stenning and Miss E. M. Wakefield.

Amongst guests were Mr. and Mrs. H. N. Ridley, Dr. Glasnorova (Prague) and Dr. Portheim (Prague). Service uniforms were few

but Mr. B. L. Burt, Mr. B. Perkins and Miss Mollie Tanner represented the Army, Air Force and A.T.S. respectively.

Amongst old Kewites who were present were the following :—

Miss M. C. Aikman	Mr. K. McCready
Mr. F. S. Banfield	Mr. F. MacKinnon
Mr. A. C. Bartlett	Mr. C. H. Middleton
Mr. S. W. McLeod Braggins	Mr. W. Mullins
Mr. H. G. Butcher	Mr. C. A. Newman
Mr. P. Chandler	Mr. W. Page
Mr. S. Chantry	Mr. Temple Powell
Mr. J. S. Christie	Mr. W. D. H. Prior
Mr. E. Coward	Mr. M. C. Prior
Mr. J. Coutts	Mr. N. J. Prockter
Mr. C. H. Curtis	Mr. R. L. Proudlock
Mr. W. Dallimore	Mr. C. W. Rudd
Mr. C. E. C. Fischer	Mr. H. C. Sampson
Mr. W. F. Gullick	Mr. T. Sargeant
Mr. A. Hearn	Mr. and Mrs. W. J. Sheat
Mr. C. Howlett	Mr. F. S. Sillitoe
Mr. W. J. Jennings	Mr. H. Spooner
Mr. C. Jones	Mr. C. R. Stock
Miss L. Joshua	Mr. R. Sudell
Mr. W. L. Lavender	Mr. H. B. A. Tindall
Mrs. S. T. Lees	Mr. A. P. Walby
Mr. H. F. Macmillan	Mr. C. S. Walsh
Mr. A. R. Marshall	Mr. A. C. Whipps
Mr. H. Maw	Miss M. L. Yeo
Mr. F. McCartney	

KEW GUILD GENERAL ACCOUNT
(for financial year ending 31st December, 1942)

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance from 1941 account ...	83	4 8	Printing 1941 Journal, supplying Book Post envelopes.		
Annual subscriptions and arrears	12	10 11	Author's corrections, etc. ...	163	13 8
Donations ...	61	11 8	Hon. Secretary's Postages ...	3	12 11
Life subscriptions ...	30	6 0	Hon. Treasurer's Postages, and incidental expenses ...		14 10
Advertisements in 1941 Journal	21	12 0	Country Life, Ltd., supplying 6 half-tone Blocks ...	6	17 9
Dividends on £300 3 per cent. New South Wales Stock, 1955-58, less Income Tax deductions ...	4	10 0	Insurance for Proudlock's Tennis Cups. ...		7 6
Dividends on £26 6s. 3d. 3½ per cent. War Stock ...	18	4	Wreath for the late Mr. R. F. Miles ...	1	13 6
Dividend on £500 3 per cent. War Savings, Sir A. W. Hill's Bequest for half year ...	6	14 9	Balance in Bank ...	46	17 5
Interest on Post Office Savings Bank ...	2	9 3			
	<u>£223</u>	<u>17 7</u>		<u>£223</u>	<u>17 7</u>

CAPITAL ACCOUNT

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
198 Life Subscribers @ £1, @ ½ rate ...	99	0 0	£300 3% New South Wales Stock @ par ...	300	0 0
283 Life subscribers @ £2 @ ½ rate ...	283	0 0	£26 6s. 3d. 3½% War Stock at par ...	26	6 3
Assets exceed Liabilities ...	514	3 8	£500 3% Savings Bonds. Sir A. W. Hill's Bequest ...	500	0 0
	<u>£896</u>	<u>3 8</u>	Valuation of Journals in Stock ...	20	0 0
			Valuation of Typewriter ...	3	0 0
			Balance in Bank... ...	46	17 5
				<u>£896</u>	<u>3 8</u>

WATSON MEMORIAL EDUCATIONAL FUND

Assets £100 3½ per cent. War Stock at par and Balance in Bank £114 3s. 8d.
Liabilities Nil.

DUMMER MEMORIAL PRIZE FUND

Assets £70—4 per cent. Funding Loan at par and Balance in Bank £15 16s. 1d.
Liabilities Nil.

MATILDA SMITH MEMORIAL PRIZE FUND

Assets £50—3 per cent. Savings Bonds 1955-65, and Balance in Bank £13 10s. 0d.
Liabilities Nil.

THE BENEVOLENT FUND

Balance in Bank £91 14s. 1d. Expenditure Nil.

THE PROUDLOCK PRIZE FUND

Assets £25—4 per cent. Funding Loan and Balance in Bank £3 4s. 1d.
Liabilities Nil.

PRISONERS OF WAR FUND

RECEIPTS.				EXPENDITURE.			
	£	s.	d.		£	s.	d.
Subscriptions	26	19	11	Cigarettes and Tobacco. D. W.			
				Sayers		19	6
				Balance in Bank	26	0	5
	<u>£26</u>	<u>19</u>	<u>11</u>		<u>£26</u>	<u>19</u>	<u>11</u>

KEW GUILD GENERAL ACCOUNT (for financial year ending 31st December, 1943)

RECEIPTS.				EXPENDITURE.			
	£	s.	d.		£	s.	d.
Balance from 1942 account ...	46	17	5	Printing 1942 Journal, supplying Book Post envelopes, author's corrections, etc. ...	152	17	10
Annual Subscriptions and arrears	60	15	6	Hon. Treasurer's Postages and incidental expenses	1	14	9
Donations	9	18	0	4 New Receipt Books	1	15	9
Life Subscriptions, and additional subs.	134	14	6	Assistant Secretary's Honorarium	5	0	0
Advertisements in 1942 Journal	14	8	6	For Preparing Index to Vol. V., Kew Guild Journal	2	0	0
Dividends on £300 3 per cent. New South Wales Stock 1955-58 less income tax deductions	4	10	0	The Royal Gardeners Orphan Fund	2	2	0
Dividends on £26 6s. 3d. 3 per cent War Stock	18	4		Insurance premium on the Proudlock Tennis Cup. ...	7	6	
Dividends on £500 3 per cent War Savings, Sir A. W. Hill's Bequest	15	2	5	Balance in Bank	122	17	6
Interest on Post Office Savings Bank	1	10	8				
	<u>£288</u>	<u>15</u>	<u>4</u>		<u>£288</u>	<u>15</u>	<u>4</u>

CAPITAL ACCOUNT

LIABILITIES.				ASSETS.			
	£	s.	d.		£	s.	d.
193 Life Subscribers @ £1				£300 3% New South Wales Stock @ par	300	0	0
@ ½ rate	96	10	0	£26 6s. 3d. 3½% War Stock @ par	26	6	3
272 Life Subscribers @ £2				£500 3% Savings Bonds. Sir A. W. Hill's Bequest	500	0	0
@ ½ rate	136	0	0	Valuation of Journals in Stock ...	20	0	0
46 Life Subscribers @ £3 3s. 0d.	144	18	0	Valuation of Typewriter	5	0	0
Assets exceed Liabilities ...	606	15	9	Balance in Bank	122	17	6
				Due from Advertisements in 1942 Journal	10	0	0
	<u>£984</u>	<u>3</u>	<u>9</u>		<u>£984</u>	<u>3</u>	<u>9</u>

WATSON MEMORIAL EDUCATIONAL FUND

Assets £100—3½ per cent War Stock at par and Balance in Bank £120 0s. 11d.
Liabilities Nil.

DUMMER MEMORIAL PRIZE FUND

Assets £70—4 per cent. Funding Loan at par and Balance in Bank £19 0s. 2d.
Liabilities Nil.

MATILDÁ SMITH MEMORIAL PRIZE FUND

Assets £50—3 per cent. Savings Bonds 1955-65, and Balance in Bank £15 7s. 1d.
Liabilities Nil.

THE BENEVOLENT FUND

Balance in Bank £94 0s. 3d. Expenditure Nil.

THE PROUDLOCK PRIZE FUND

Assets £25—4 per cent. Funding Loan and Balance in Bank £4 5s. 8d. Liabilities Nil.

PRISONERS OF WAR FUND

RECEIPTS.				EXPENDITURE.			
		£	s. d.			£	s. d.
Subscriptions	...	...	61 17 11	Cigarettes and Tobacco (D. W. Sayers)	...	19	6
				do. (D. W. Sayers)	...	19	6
				Toilet Requisites (D. W. Sayers)	...	18	0
				Donation to British Red Cross...	...	10	0 0
				Refund to Mrs. Sayers for Gardening books sent to her son	...	1	0 0
				Donation to British Red Cross	...	20	0 0
				Balance in Bank...	...	28	0 11
			<u>£61 17 11</u>			<u>£61 17 11</u>	

The foregoing accounts have been duly checked, compared with supporting vouchers, bank books, Stock certificates, etc., and found to be correct.

S. A. PEARCE

W. MAW.

28/4/44

MEMBERS OF KEW GUILD SERVING IN H.M. FORCES.

FOREMEN AND STUDENT GARDENERS.

P. L. Benton, Royal Artillery.
 E. Bird, Royal Artillery.
 A. H. Blowfield, Royal Army Service Corps.
 E. H. Bournier, East Berkshire Regiment.
 J. J. Boyle, Queen's Own Royal West Kent Regiment.
 L. R. Brown, Royal Armoured Corps.
 J. Clark, Royal Air Force.
 G. G. C. Cook, East Surrey Regiment.
 P. W. C. Davies, Royal Artillery.
 D. A. Downs, Royal Engineers.
 A. J. Eaton, Royal Air Force.
 F. J. Ford, Royal Air Force.
 F. J. Hebden, Royal Engineers.
 D. C. Hollis, Royal Air Force.
 R. A. Hudson, Royal Artillery.
 K. H. James, Pioneer Corps.
 G. S. Joy, Royal Artillery.
 D. C. Mackenzie, New Zealand Anti-Tank Unit.
 H. Mason, East Surrey Regiment.
 L. F. McElroy, Royal Artillery.
 J. Middleton.
 J. L. Norris, Royal Navy.
 B. L. Perkins, Royal Air Force.
 A. H. Pettigrew, Royal Engineers.
 C. E. Puddle, Army Air Force.
 S. W. Rawlings, Royal Artillery.
 J. Redman, Royal Air Force.
 D. W. Sayers, King's Royal Rifle Corps.
 F. G. Selby, Royal Air Force.
 W. J. Slade, Royal Air Force.
 F. B. Stevens, East Surrey Regiment.
 J. W. E. Stott, Auxiliary Military Pioneer Corps.
 A. G. K. Will, Royal Army Service Corps.
 E. J. S. Willett, Royal Artillery.
 C. J. Wilmot, Duke of Wellington's Regiment.

HERBARIUM STAFF.

A. A. Bullock, Royal Air Force.
 B. L. Burt, Royal Army Ordnance Corps.
 D. G. Collett, South African Forces.
 A. K. Jackson, Royal Air Force.
 E. Milne-Redhead, Royal Artillery.

CONSTABLES.

G. E. Dixon, Royal Artillery.
 T. Elvin, Royal Navy.

A. C. Johnson, Royal Engineers.
 W. F. Leaver, Royal Fusiliers.
 I. Sinclair, Royal Navy.
 C. A. Sullivan, Royal Navy.
 A. J. Topping, Royal Artillery.
 C. G. Topping, Royal Fusiliers.
 A. F. Waters, Royal Navy.
 G. Maunder, Middlesex Regiment.

LABOURERS, STOKERS AND OTHERS.

G. E. Appleby, Royal Artillery.
 G. Clark, Royal Navy.
 L. C. Golding, Royal Air Force.
 H. J. King, Queen's Royal Regiment.
 V. Smith, Royal Marines.
 H. D. Tindall.
 F. Tweedale.

PAST KEWITES SERVING IN ALLIED FORCES.

J. Aves, South African Forces.
 R. Balch, Royal Artillery.
 Eileen A. Bruce, A.T.S.
 Mary A. Canning, W.A.A.F.
 G. E. Carr.
 F. Clarke, Suffolk Regiment.
 J. D. Coales.
 H. R. Cocker, Royal Air Force.
 C. J. Collins, U.S.A. Army.
 J. D. W. Cramer, Royal Netherlands Brigade.
 L. B. Creasy, South African Forces.
 S. Cutting, U.S.A. Army.
 Isobel M. Davidson, W.R.N.S.
 G. Davis, South African Tank Corps.
 G. Dean.
 W. Everitt, South African Forces.
 J. E. Farmer, Royal Artillery.
 F. W. Fisher.
 J. Fisher, Royal Air Force.
 F. Folk.
 P. Fysh, Royal Artillery.
 J. L. Glasheen, Royal Air Force.
 J. G. Gordon, Royal Canadian Air Force.
 G. E. Gough.
 W. Grant.
 F. B. Grinham.
 A. Findlay Gunn, South African Air Force.
 H. Hall, Royal Air Force.
 F. Hazelwood, Australian Army.
 J. R. Hibbert, Royal Army Ordnance Corps.

E. G. Hooper, Gibraltar Garrison Fire Service.
 Diana A. Hutchinson, W.R.N.S.
 F. J. E. Jollie.
 R. H. Keith, Royal Canadian Air Force.
 G. C. Last, South African Medical Corps.
 G. J. Leith.
 F. R. Long, South African Air Force.
 N. Lothian, Australian Army.
 F. M. MacCartney, U.S.A. Army.
 D. C. Mackenzie, New Zealand Expeditionary Force.
 J. G. C. Mackenzie, New Zealand Expeditionary Force.
 P. F. McCormack, Royal Artillery.
 J. A. McPherson, New Zealand Expeditionary Force.
 P. W. Mansell, Royal Air Force.
 B. P. Mansfield, New Zealand Expeditionary Force.
 J. E. May, Royal Air Force.
 A. B. Melles.
 A. T. Mullins, Royal Armoured Corps.
 W. Porter.
 R. E. Purrott, New Zealand Expeditionary Force.
 L. G. Riley, Royal Canadian Air Force.
 I. R. Robbie, Royal Artillery.
 F. L. Simmons, Royal Artillery.
 W. J. Slade, Royal Air Force.
 J. M. Sparrow, Royal Air Force.
 M. Stanley, Royal Artillery.
 J. W. Sutch, Royal Armoured Corps.
 H. W. Swift, U.S.A. Army.
 Mollie W. Tanner, A.T.S.
 G. Urton, South African Forces.
 B. B. Wass, Royal Artillery.
 J. E. Waters, Royal Air Force.
 D. P. Watson, U.S.A. Army.
 R. H. Widdy, Royal Air Force.
 H. H. Willis, Royal Air Force.
 G. Wolstenholme, Maritime Anti-Aircraft Regiment.
 E. C. Wray, Royal Air Force.
 F. H. Wright, Royal Air Force.
 G. F. T. Wynham, Royal Air Force.

PRISONERS OF WAR FUND.

As will be seen from the Accounts £61 17s. 11d. has been collected for this Fund. Of the 11 Kew men who are prisoners, it has so far been possible to get into touch with D. W. Sayers only, and four small parcels have been sent to him.

A collecting box was kept in the Curator's Office into which small contributions were paid every week by the Gardens staff and up to the 7th December, 1943, these had amounted to £18 5s. 6d. At the

express wish of those who had contributed, the sum of £10 was despatched to the Red Cross Society in recognition of the magnificent services rendered on behalf of Prisoners of War in general.

As there was a large balance in hand and as it was impossible to get in touch with our men, the Officers of the Guild felt it would be in accordance with the wishes of the members to send a contribution from the General Prisoners of War Fund, and a sum of £20 was therefore forwarded to the Red Cross early in 1944.

The following Members of the Kew Guild are now Prisoners of War or Interned :

ADDISON, GEORGE H.	of Singapore, S.S.	Interned
BIRKINSHAW, F.	of Kuala Lumpur, F.M.S.	Interned—Changi Camp, Singapore.
FLIPPANCE, F.	of Hong Kong	Prisoner of War.
HUDSON, ROY	Royal Artillery	Prisoner of War, Malaya.
MILSUM, JOHN NOEL	of Perak, F.M.S.	Interned—Changi Camp, Singapore.
NAUEN, JOHN C.	of Penang, S.S.	Interned.
RICHARDSON, L. A. L.	of Bahru, S.S.	Interned.
ROBBIE, IAN	Royal Artillery	Prisoner of War, Fukuoka Camp, Japan.
SAYERS, DENIS W.	King's Royal Rifle Corps	Prisoner of War.
SPARE, GORDON H.	of Perak, F.M.S.	Prisoner of War.
WATSON, J. G.	of Johore, F.M.S.	Interned—Changi Camp, Singapore.

PERSONAL.

We record with deep regret the death of Sergeant W. S. H. Menzies which occurred on July 2, 1943, as the result of an air crash. Menzies was at Kew from February, 1936—January, 1938, and was classed as a Garden boy. (Obituary—see pp. 305-6).

It was with great regret that news was received at Kew that F. G. Selby failed to return on the morning of December 4, 1943, after an operational flight over enemy territory. Selby was an Air Gunner and held the rank of Sergeant. Before he joined the R.A.F. he was Foreman of the Decorative Department and visited Kew on Wednesday, December 1. December 3-4 was the night of the great raid on Leipzig.

Mr. Ian Robbie is a Prisoner of War at Fukuoka Camp, Japan. He joined the R.A. and it is believed that the whole of his regiment were taken prisoners on their arrival in Java in March, 1942.

Mr. L. A. L. Richardson, Superintendent of the Palace Gardens of the Sultan of Johore at Johore, Bahru, S.S., has been interned by the Japanese.

Information was received from the Colonial Office in July, 1943, that a prisoner of war card had recently been received from Mr. J.

C. Nauen by his brother. No further news of him is so far available.

Mr. G. H. Addison who was Assistant Curator of the Singapore Botanic Garden and left Kew in 1938, is a prisoner of war in Japanese hands, a postcard to this effect having been received by his sister, Mrs. N. Atkinson.

News has been received that Messrs. F. Birkenshaw of the Agricultural Department, Kuala Lumpur, F.M.S., Roy Hudson, Foreman in Temperate House, Kew, J. N. Milsum of the Department of Agriculture, Taiping, F.M.S., J. G. Watson, Conservator of Forests, Johore, are safe but that they are prisoners of war in Malaya. This was stated in a footnote in the 1942 Number of the *Journal* and may have been overlooked.

We learn from one of his fellow prisoners who is now in England, that Captain Mark Ogilvie Grant succeeded in escaping from a Prisoners of War Camp in Austria to which he had been transferred. He was recaptured after three weeks and is now in a camp in Germany.

Dennis Sayers has been transferred from his Prison Camp in Italy to one in Germany. The latest address received is as follows:— Rifleman D. W. Sayers, P.O.W. 70, 76990, Stalag 8.C. K.D.O. 4005, Germany.

A letter from Roy Hudson was received by his wife at the close of 1943. It gives his address at No. 4 P.O.W. Camp, Thailand (Siam).

It has been learned that Mr. Walter Everitt, Curator of the Gardens at Queenstown, Cape Province, who has been serving with the S.A. Forces and has had a "gruelling" time in Abyssinia in the Motor Transport, has recently been recalled by his Municipality and is back at Queenstown.

Captain F. R. Long received promotion in October, 1942, and is now a *Major* with the title of Deputy Commander Regional Engineer, South African Engineers Corps. He is responsible for keeping the aerodromes in order for flying in S. and S.W. Africa, and he tells us that this involves an extensive study of South African grasses as most of the surface is under grass. On the other hand there are some tarmac and cement runways.

We extend warm congratulations to Corporal George Cecil Last of the South African Medical Corps attached to the Cape Town Highlanders on being awarded the Military Medal. Mr. Last left

Kew in 1935 having obtained an appointment in St. George's Park, Port Elizabeth. He joined up in 1940 and went through the Abyssinian campaign and thence to Libya.

The following notice, which appeared in the South African press, has been sent us by Major Long:—

“ During recent operations Cpl. Last has carried out the duties of a medical orderly with complete disregard for his own personal safety. On the night of October 23-24, 1942, this N.C.O. went forward with A. and C. Companies 1/C.T.H. into the attack. When the A. Company medical corporal got detached from his force Cpl. Last attended to the wounded of both companies. Throughout the action he attended to the wounded and supervised their evacuation in the face of intense shell-fire. Again on the night of October 26-27, 1942, this N.C.O. showed complete lack of fear in helping to attend to the wounded of B. Company 1/C.T.H., while exposed to intense enemy machine-gun and shell-fire.”

Mr. Derrick Collett, who was Assistant for South Africa on the Herbarium staff and joined the South African Forces in 1940, writes that he is now with the R.A. and finds himself in Europe again. He has “ landed up somewhere south of Rome.”

Miss D. A. Hutchinson, who is in the W.R.N.S., is now in Kenya. A letter from her has recently been received from an address near Mombasa.

The Committee wish to express their thanks to Mr. E. F. Coward for his ready and spontaneous help in the provision of mimeographed notices for postage to Members or for circulation in the *Journal*. The promptitude with which these are supplied is specially appreciated.

We noted with pleasure in the King's Birthday Honours List for 1943 the name of Mr. R. O. Williams, Acting Director of the Department of Agriculture in Trinidad as having received the award of O.B.E. Mr. Williams left Kew in 1916, and is not only a well known agriculturist, having served in the West Indies and Palestine, but is a competent botanist, and is engaged as part author of the new Flora of Trinidad and Tobago.

Mr. A. D. Cotton was elected President of the Linnean Society in May, 1943. The Linnean Society is the senior biological Society in the country, and the President usually holds office for 3 years. We tender him our sincere congratulations.

We noted with satisfaction Mr. Raffill's name in the list of Birthday Honours for 1943, the honour of M.B.E. being conferred upon

him. Mr. Raffill has been the recipient of congratulations from Old Kewites from all parts of the world.

Kew men were pleased to note that the Lyttel Lily Cup, given each year by the R.H.S. to someone who had been noteworthy in promoting lily cultivation, was awarded in 1943 to Mr. J. Coutts for his share in the volume "Lilies, their Culture and Management," published by Judge H. Drysdale Woodcock and himself. Mr. Coutts has a unique knowledge of lilies and assembled at Kew a very fine collection of species, varieties and hybrids. By his writings and kindly help he did much to bring about the recent revival of lily cultivation.

Mr. G. R. Groves has been appointed Curator of the Botanic Gardens in British Guiana. Mr. Groves had his early training at the Department of Horticulture, Reading University. He was 4 years at Kew, the last two of which he was Deputy in the Ferneries. In 1937 he was appointed Horticulturist to the Department of Agriculture, Bermuda.

Mr. Walter J. Corkhill, recently of the Government Gardens at Khartoum, left in October, 1942, to take up an appointment in the Department of Agriculture, Kenya.

Miss C. I. Dickinson, M.A., of the Cryptogamic Department of the Herbarium, was seconded during the autumn to the Ministry of Food for work connected with the campaign for the destruction of rodents.

Mr. G. H. Preston, Assistant Curator, Herbaceous Department, was seconded to the Ministry of Agriculture and Fisheries on September 1, 1943. He has the rank of an Inspector and is concerned with fruit and vegetable crops chiefly in the county of Kent.

During Mr. Preston's absence from Kew Mr. R. Holder is in charge of the Herbaceous Department. Mr. Holder was head gardener to Lady Elizabeth Knott at Samares Manor, Jersey, C.I., and at the time of the German invasion had to vacate the island with his family at a few hours notice and leave everything behind except what could be carried by hand. He has been at Kew since June 21, 1940.

Mr. W. G. Sheat, formerly of Roxburgh Estate, Otago, New Zealand, who saw service in the Middle East, has been promoted and is now Senior Agricultural Adviser in the Ministry of Works. He is attached to the Headquarters in London.

Mr. F. A. Barham, for several years Superintendent of St. James' Park, London, has been seconded to the Ministry of Works as Agricultural Adviser.

Mr. B. J. J. Moran, of the London Passenger Transport Board, has also been seconded to the Ministry of Works in the same capacity. He is in the Camouflage Department.

Mr. P. W. Page, late Assistant Superintendent, St. Albans Parks and Reserves, who has served two years in H.M. Forces, has been appointed Agricultural Adviser in the Ministry of Works.

Mrs. N. L. Alcock, who worked in the Pathological Laboratory at Kew from 1915-1920, is now doing work at Oxford for the Red Cross on behalf of Prisoners of War who are in camps in Italy, Austria and Germany. She is a "recommender for agriculture" and her work consists in supplying books, arranging tests and examinations and doing everything possible to facilitate their studies. Amongst these prisoners are 40 men who hope to sit for the N.D.H. examination and several who were students at Wye College.

Mrs. G. B. Wallace (formerly Miss Maud Duke) who was on the Cryptogamic staff of the Herbarium from 1925-28, has a post as Temporary Scientific Assistant at the Coffee Research Station, near Moshi, Tanganyika, where her husband holds a senior position. Her work mainly concerns plant pathology.

Mr. H. B. A. Tindall has given up his business in Coventry and has taken up an appointment in the Coventry Public Parks Department.

Miss Isobel Davidson, formerly a Sub-assistant in the Herbarium who resigned her position in the Civil Service in 1941, is now in the W.R.N.S.

Miss Joyce M. Watson left Kew in January, 1943, and took a post as Garden Superintendent at the Ladies College, Cheltenham.

Miss Freda Mundy, B.Sc., of Reading University, left Kew in February to take up the post of Gardener to the Department of Botany, University College, Bangor, N. Wales.

Miss E. B. King, formerly a student at Swanley, left Kew in March, 1943, to take up a position with Messrs. J. W. Page, of Hampton Hill, and was chiefly engaged in wholesale market trade in tomatoes and lettuce. Since then Miss King has been appointed Horticultural Assistant to the Northumberland War Agricultural Committee.

Miss O. Horder, formerly of Agricultural College, Colchester, left Kew in May and is now Junior Horticultural Assistant at the Cheshire School of Agriculture, Reaseheath. Her duties consist of teaching, office work, and supervising women Land Army trainees.

Mr. H. F. Werner, of King William's Town, South Africa, left Kew in June, 1943, to take up a position in Stanley Park, Blackpool.

Mrs. V. M. Brown left Kew in July, 1943, and has returned to Dartington Hall.

Miss K. D. Cornford, who had been in charge of the *Begonia* and *Erica* Houses for two and a half years, left Kew on October 22.

NOTES AND GLEANINGS.

An Index to Volume V of the *Journal*, comprising the years 1931-40, has been compiled by Mr. E. G. Dunk and has been printed as a four page pamphlet. Many copies are being distributed to members with this number of the *Journal*. Any members who possess Vol. V but have not received a copy of the Index and are desirous of obtaining one should apply to the Secretary.

During the year 1943 representatives from the Ministry of Information visited Kew on many occasions to take photographs of various Departments. These were for use in publications which the Ministry sponsors either directly or indirectly in all parts of the world. A set of prints was presented to Kew which has been filed and permission was given for them to be used in the *Kew Guild Journal*. It is proposed to take advantage of this offer and insert a selection in future *Journals* as far as funds permit. The excellent photograph "The Morning Conference" is a first instalment (see p. 242). It shows the Curator, Mr. W. M. Campbell, seated at his table, and around him Messrs. A. Osborn, C. P. Raffill, L. Stenning, S. Pearce and R. Holder (reading from left to right). Mr. Holder is Acting Assistant Curator of the Harbaceous Department as Mr G. H. Preston is temporarily attached to the Ministry of Agriculture and Fisheries.

The historic Rumpenheim Lilac which was referred to in the last *Journal* (Supplement pp. 11 and 20) was one of several trees which were blown down during the great gale of January 31, 1943. The trunk of the lilac was found to consist of a hollow cylinder, the wood and bark being not more than about 2 inches thick. The plant bore an abundance of flower heads every year up to the end, but the new growth made was short and the individual inflorescences small.

A small alteration at the north end of the Rock Garden was made during December, 1943. The path at the north-east corner leading out of the Rock Garden was swung round about 30 ft. to the south so that it emerged at a right angle and faced east. The new path is thus not subjected to the north-east wind as was the old one, and

in addition it is sheltered from the east by the Museum building. On its north side (facing south) there is now an extension of the existing scree with a rock-base surmounted by a bank of shrubs. The alteration is a great improvement, not only for the plants, but in giving a more natural appearance to the scree. The sandstone rock used in these alterations was from part of a supply obtained by Kew from the bombed Houses of Parliament. Its removal from scenes of turmoil to those of peace is regarded as a hopeful omen for 1944.

Tomato trials were a feature of the year 1943. For the indoor crop, one of the large greenhouses (No. 17 F.) in the Melon Yard was used and 200 plants were grown on more or less commercial lines. About 100 of these were planted out in the central bed and trained up strings, supported by overhead wires. Other plants were grown in boxes and a few in pots, on the surrounding staging. The varieties used were—Market King, E.S.1. Hundredfold, Victory, Vetomold and Stonor's All Clear. Of these Market King and Hundredfold produced the heaviest crops, the fruit being even and of good quality. The total weight of the crop from this house was 1,590 lbs. During 1918 (at the end of the last war) the Kew Guild *Journal* records that "over 1,000 lbs." of Tomatoes were cut from this same house (1919, p. 443).

Outdoor trials also proved very successful, with the exception of the Canadian varieties, which were practically a failure. About 300 plants of some of the most popular British varieties were planted out on the 26th May, and the first fruits of the variety Harbinger were picked on July 19th. The varieties on trial were—Ailsa Craig, Harbinger, Best of All, Stonor's Progress, Essex Wonder and Market King. Of these, Harbinger averaged 7.4 lbs. per plant, Stonor's Progress 7.3 lbs. per plant and Market King 7.0 lbs. per plant proved to be the best for weight of crop. The total crop from the above mentioned varieties grown outdoors was 2,007 lbs., of which 1,501½ lbs. were ripe fruit and 505½ lbs. green.

As usual a few notes as to special features of the season were jotted down as the months went by. The first was the unusually prolific flowering of the Common Wistaria. The specimen on the back of No. 2 Museum (facing the Herbaceous Ground) was never more crowded with flowers and the same could be said of the plants on Pitts Restaurant and on other houses on Kew Green. Fine displays were also noted elsewhere. At Kew the trees were at their best about April 20.

Another plant which flowered very well in 1943 was the Tulip Tree. The young trees produced flowers especially on the south side, whilst the older trees including the large tree in the Azalea garden bore many hundreds of blossoms. A good set of fruit followed which showed up during the winter. On the old tree in the Cambridge Cottage Garden the flowers were rather sparsely

distributed on the south side, whilst on the north side they were restricted to a low bough extending to the north-west where they were produced in plenty.

Finally, the exceedingly heavy fruiting of the Common Ash was conspicuous during the autumn and winter. This applied also to Weeping and other varieties and was noted all around Kew and in the squares and parks of London. So great was the profusion of samarae on the branches that in some cases when seen in the half light the trees appeared to be clothed with dead foliage. In the collection at Kew *Fraxinus Oregona* and *F. pennsylvanica* also fruited very freely.

Quite a "major operation" in tree surgery was carried out on the large Cedar of Lebanon on the Flagstaff Mound in the winter of 1943-44. The lowermost limb (extending westward) died during the summer and had to be removed. Owing to its enormous weight and the extreme hardness of the wood Mr. Benton stated that it was the most difficult and toughest "cut" he had ever made. The total scar area measures nearly 4 ft. from top to bottom (though part includes a wound previously made) and 2 ft. across. This single limb apparently originated from two shoots which developed one above another and became fused.

Included in the annual winter felling of trees were four near the Main Gate. The specimen of Golden Larch introduced from Japan by Fortune and raised it is believed from seeds sent home by him (see p. 296) had recently died and was removed during the autumn. A few weeks later the old trunk of the Sweet Chestnut entirely covered with Ivy which stood opposite the group of *Picea Omorika* off the Palace Lawn was cut down. The Horse Chestnut inside the Main Gate, whose fellow was taken down in 1929, was taken down just after the turn of the year. The exact history of this tree is not known but it was probably planted soon after the time that Princess Augusta laid out the Botanic Garden in 1760. For several years it had made but little growth and had been in ill-health for some time. Its removal has greatly opened up the view on entering the Gardens.

Lastly, the removal of one of the two Walnut trees at the end of the Main Walk (the one nearer the Palace and surrounded by a seat) must be referred to. It was stag-headed and the upper boughs were hollow and it had been badly attacked at the roots for several years by the Honey Fungus, *Armillaria mellea*. This Walnut was one of the oldest trees in the Gardens and originally stood within the stableyard which belonged to the White House, and it remained there until that enclosure was done away with in 1905 when the area was included in the Gardens proper. Mr. Bean is of opinion that the tree was about 200 years old and would therefore have been a good-sized one in King George III's time. Hence some of the members of his family of 9 sons and 6 daughters probably

amused themselves gathering nuts. It continued to bear small crops until 1941 and many members of the Gardens staff have partaken of the walnuts from this tree and its neighbour.

Mr. Osborn informs us that Kew was indebted to the father of the present President of the Guild for one of the finest shows of *Lilium testaceum* which has even been seen in the Gardens. Thirty or forty years ago Lilies were interplanted in all the Rhododendron beds along the Broad Walk (the bushes then of course being much smaller) and some species, especially *L. pardalinum*, remained until comparatively recently. The species chiefly employed were naturally those commonly grown in the south of England, namely, *Lilium speciosum*, *L. auratum*, *L. tigrinum* and *L. pardalinum*, but *L. Henryi*, *L. superbum* and *L. Burbankii* were also used. In 1904 a batch of 200 bulbs of *L. testaceum* was received by the Director from Mr. Paterson, of Castle Huntley, Perthshire, whose famous gardens were under the charge of Mr. James Besant, senior. These were planted in a bed on the left at the south end of the Broad Walk (near the old Siberian Crab which was blown down in 1943) and made a magnificent show. As most gardeners know *L. testaceum* is one of the lilies which deteriorate rapidly in the south of England and the subsequent displays at Kew were very poor.

Early in 1943 it was published in the Press that the Botanical Institute at Dahlem, Berlin, had been severely damaged during an air raid. This was confirmed by private letters received at Kew from a professional botanist in Sweden who stated that the Herbarium and Library and Museum were largely destroyed. The Dahlem Garden was known to many student gardeners who have spent a year there in exchange for German students at Kew. The Herbarium, which was a very large and valuable one, is well known to several of the Kew scientific staff who have paid visits there in order to study the collections.

A report was also published in the Press that the Botanical Institute at Lund, Sweden, was damaged through the crash of a bomber aeroplane. The Director has been informed officially that this report is not correct. This is a source of great satisfaction, especially to systematic botanists, as the Herbarium at Lund, though small, is an exceedingly interesting one.

EXTRACTS FROM RECENT LETTERS.

"The Kew film came to Dublin and burst on my gaze unexpectedly. I greeted it with such joyful yelps of welcome that my neighbours turned round and said 'Hush!'"

(From Mrs. Augustine Henry, Dublin.)

"Strangely enough I was re-reading the old Kew *Journals* the evening previous to the arrival of the new Number. It is always

a standby for me when feeling rather out of things or a bit overburdened. A fellow can realise that he belongs to something big and to something of great fame when he gets out his *Guild Journal*. There is a marvellous fellowship amongst Old Kewites and Kew is a source from which we can be continually refreshed."

(From J. Heppell. Sept. 8, 1943.)

"I wonder if you have in the Herbarium any of the specimens of *Spiranthes Romanzoviana* which have been collected here by Lady Strathcona. Miss Isobel Hutchison (the author and well known traveller in N.W. America) had been asked to bring home some specimens from the Aleutian Islands and was very surprised to learn on her return that it had been found growing in Colonsay, an island visited by her before and after her North-West American trip. . . . I am interested to hear you know our good Laird. Since he succeeded to the estate he has given employment to everyone looking for work."

(From Mr. Murdo McNeill, Head Gardener to Lord Strathcona, Colonsay, Inner Hebrides.)

This interesting Orchid is fairly wide-spread in America and occurs in several localities in the west of Ireland, but as far as is known exists in only one in Scotland, namely, the Isle of Colonsay.—Ed.

"I was 'a fish out of water' in the Herbarium, but I did once feel myself a Kewite. It was in the International Institute of Agriculture in Rome. Introduced to a complete stranger, an Italian botanist, as having worked on the Supplement to the I.K., he embraced me, exclaiming, 'Saviour! It is my Bible, without your labours I could not have continued my work.' And at this present time when we think of Italy so much, I am dreaming that perhaps the ideas of David Lubin, American citizen, but Russian Jew who felt himself to be in the line of Hebrew prophets, may come to full international fruition, pointing the path of peace and prosperity to the lovely land he chose for his great experiment in founding the Institute. . . . I echo Mrs. Cooper's sentiments: 'Primroses by the river's brim,' etc., for in the Herbarium, among scientists, I came to feel like a 'tethered balloon.' But now that I am indeed tethered by physical disability, I see all the Kew activities falling into a pattern, the *Guild Journals* faithfully delineating it."

(From Miss Olivia R. Garnett, Wantage, Berks, Sept., 1943.)

Miss Garnett worked in the Herbarium from 1907-1912 compiling the Supplement to the Index Kewensis and her brother Arthur (who died in 1927) had a post in the Curator's Office.—Ed.

"Since May I have been engaged in a Meteorological course which must be unrivalled in intensity. It is designed to fit the student for duties in forecasting and instruction in 'Met' at the Air Force

Schools throughout Canada. The work is quite interesting and after all not so far removed from Ecology, and has the added advantage of being of the greatest importance in these times. . . . I am still in Toronto, but will be posted later in September to some R.C.A.F. School 'somewhere in Canada.' "

(From L. Laking, Aug. 9, 1943.)

Later news shows that Laking is now working as a civilian in "Meteorological Service" attached to the R.C.A.F.—Ed.

"The *Journal* (for 1941) was most welcome. The photos bring back such wonderful memories, and what a contrast to our present camp where not a single blade of grass may be seen. We had a long spell of service in the desert before getting leave to S. Africa so sand and dust storms are no longer a novelty! Actually I started off in N. Kenya and then over the border to Abyssinia, after which British Somaliland and Libya. At the moment we are reorganising and before long will be seeking further fields of conquest. I have often deplored the fact that I have been unable to collect herbarium specimens en route but such a mobile war precludes any such aspirations.

"The news in the *Guild Journal* sets at rest my worst fears regarding the despoiling of the Gardens by bombing during the Blitz."

(From Corporal C. G. Last, 1943.)

"The job here is to develop the production of seeds of temperate climate vegetables to meet demands in East Africa and other tropical possessions and also to export seeds to Britain. This is chiefly a wartime contingency, but several kinds of vegetable seeds, such as beans, are top grade and will become a big industry not only now but after the war."

(From Mr. F. Hawkins, Nairobi, Kenya, March 20, 1943.)

"The conference of the Superintendents of Parks and Gardens (S.A.) Association was held in Salisbury last month and we had a most interesting agenda dealing with such subjects as post war Sporting Facilities, and Parks, Horticultural Apprentices, College Training, Park Finance and the converting of the Association into a Parks Institute on the British pattern.

"The following Kewites were present: Baker (Bloemfontein), Cook (Port Elizabeth), Bruinslich (Pretoria), Van Balen (Johannesburg), Van den Houten (Cape Town), Robertshaw (Durban) and myself. Other Kewites I see from time to time are: Everett, Marriott and Newbury."

(From Major F. R. Long, Pretoria, 28th October, 1943.)

"It will give me great pleasure to carry out work for the *Guild* amongst my fellow Australians. . . . We are settling down to a

full scale vegetable-production which in the near future is likely to develop into the greatest undertaking of its kind yet begun in Australia.

"I am still working at the Administration H.Q. of our Army vegetable growing projects. They have been a great success and in one area produced over 100,000 tons of 'Veges' and tropical fruits in the season. Over 500 acres are under cultivation and crops include Chinese Cabbage, English Cabbage, Silver Beet, Radish, Lettuce, Beans (French and 'Snake'), Sweet Corn, etc., whilst our fruit consists of the Pineapple, Paw-Paws, Bananas, Citrus and Mangoes. We have also a poultry section which is giving good results; as a post war proposition it certainly has possibilities."

(From Noel Lothian, Melbourne, Australia, 24th November, 1943.)

"At last I have finished my long promised Notes and am sending them with a few photographs. I am now stationed at Bangalore in Mysore where I was sent after my last attack of malaria. It is one of the most beautiful cities of Southern India with a fine climate. The place is laid out extremely well and at the moment large groups of *Spathodea campanulata* are making a fine display."

(From Flying Officer H. R. Cocker, Dec., 1943.)

"I returned to the Sudan from U.K. in June, 1939, and have not had an opportunity to leave the country until this year when I spent a most enjoyable holiday in the Usambara Mountains of Tanganyika. The country in that part is unlike Africa, and reminds one of the hills and glens of Scotland.

"I spent happy hours renewing acquaintance with many kinds of plants, whose very existence I had forgotten, and I found time also to golf and to catch a few rainbow trout. I was able, through the kindness and hospitality of Peter Greenway and his mother, to visit Amani, and in that botanical paradise I spent a few very happy days.

"Whilst there, I met F. Hawkins from Kenya, who was on a visit in connection with his important task of producing vegetable seeds for the East African colonies. He very kindly motored me back to Lushoto, and I was able to get some very useful information and hints on the subject of seed collection from him.

"Greenway's work at Amani is widely appreciated throughout the Colony, and one has only to see his Herbarium to realise the immense amount of hard and unremitting toil that has been expended in its making.

"Another well known Kewite of Amani is F. M. Rogers, and I had the pleasure of meeting him while engaged in his new work in connection with rubber production.

"Since Corkhill left the Sudan, my wife has been carrying on as Superintendent of Gardens in Khartoum. It is a difficult task at the best of times, and the shortage of pumping and lawn mowers tends to make it even more so. Nevertheless, she has made a very good impression, and has certainly succeeded in doing rather more

than just keeping the job ticking over until a Kewite can be found. I think I shall be writing officially as to this in the near future as my wife and boy hope to get to U.K. in 1944, so if you have anyone in mind who could fill the post, I shall be grateful to hear from you.

"L. A. L. Richardson, who was with me for a few years, and later became Superintendent of Gardens to the Sultan of Johore, is, I hear, interned. My brother, Ian, whom you may remember, is also in Japanese hands. His regiment, the R.A., was captured on arrival at Java in March, 1942. We have had no news from him personally, and all we know has been supplied from a War Office intimation that he is in Fukuoka Camp, Japan."

(From James Robbie, Khartoum, 16th November, 1943.)

Admirers of Captain Kingdon Ward will be interested to learn that he is now in the R.A.F. Though not a Kewite "K.W." is so well known at Kew as to seem to be part of the Kew family. The following extracts are from a letter from him received by Col. F. C. Stern who kindly allows us to publish them :

"It was most delightful to hear you speak of *Gentians*—the word is as foreign in the R.A.F. as it must be in basic English. . . . When I was in Calcutta last July on my way down from the Front I saw Dr. Biswas, the Director of the Calcutta Botanic Gardens. Most of the library has been moved to Darjeeling and now I hear that the Gardens have been closed to the public.

"Life is a bit dull here after all the interesting times I have had in the last 2½ years—Singapore; across Siam; the Mekong where it forms the frontier between Burma and Indo-China; Rangoon nearing the end; India and Delhi; back to Burma overland after the fall of Rangoon; Mandalay after or rather during the great fire and the 3rd bombing; Myitkyina waiting for the end; Fort Hertz; Tibet; and so to Sadrya. Then a dull time in Calcutta followed by 6 glorious months running supplies into Burma, which unfortunately came to an end last July. So I came to the R.A.F. . . . The lads here are a grand crowd. There are about 40 in the Mess — Canadians, English, New Zealanders, an occasional American or South African and other types. . . . We have two boys who fought in the Battle of Britain and a number who flew in Libya."

(F. Kingdon Ward, Poona, November, 1943.)

"We have lost all the books we ever had and my husband valued his books so much and had had all his Kew *Journals* bound. . . . I have had a card from him and can assure you things are far from comfortable. Some of the prisoners in Singapore are growing vegetables, a welcome addition to a diet of rice. I am sure my husband will be helping."

(From Mrs. J. N. Milsum, Pietermaritzburg. 28/12/43.)

FROM PROF. F. W. OLIVER.

The following is an extract from a long and interesting letter received from Prof. F. W. Oliver, F.R.S., now residing in Egypt. Prof. Oliver, who was Dr. Salisbury's predecessor as Professor of Botany at University College, London, is deeply attached to Kew and has an intimate knowledge of its early history. (See *Journal*, 1942, p. 158.)

Dar el Nabati,
Burg el Arab,
Mariut, Egypt.

30th October, 1943.

It was a happy thought of yours to send me the *Journal of the Kew Guild*. It is a perfect "transverse section" of Kew, and by its sincerity and simplicity reflects the real heart of Kew—no particle of swank anywhere.

The ascendancy of Kew derives, I think, from 3 main causes. (1) The long line of Directors who have always kept in touch with analogous home and overseas establishments in a spirit of mutual helpfulness; (2) The constant outflow of young trained gardeners who have carried the craft and science of gardening to the ends of the earth, together with the spirit of Kew; (3) The British sabbath of the Victorian era, from which foreigners visiting London discovered in Kew a convenient and charming escape. Even to have been a resident at Kew for 32 years (25 of them in Herbarium House!) I find to be an Open Sesame everywhere. At no time had I any official connection with the establishment.

You are to be congratulated on the return of Mr. Brooks to the fold. In response to his appeal I am venturing to enclose a cheque for £3 3s. Although unqualified for the Guild I am *de facto* a life member of Kew, and no power on earth can deprive me of my birthright!

The nearest I ever got to being "taken on" at Kew was once at the age of about 10, when proceeding into the Gardens by the back-way from your house, I ran into an old fellow who might have been a foreman of casual labour. Not recognising me, quoth he, "Hello, my lad, are you looking for a job of work?" to which I replied, "Sorry, but I've got to go back to school next week."

I am able to locate Miss Cornwell's allotment garden from the familiar roof in the distance with tiles set in diamonds. She writes very nicely about her job. What she says about fruit is very true; in a prolonged war period I reckon the production even of bush fruit must be important to relieve the rationed monotony. Here, half I eat is fruit and there is no season in Egypt without it.

When I read the story of the lady of the ring I turned up Pepys's Diary, in case he visited the merchant princes of Kew House or the Dutch House, with possible reference to his wife's losing a ring. In the diary he often refers to pieces of jewellery he gave her after some marital squabble. However, I drew a blank!

Among your "extracts from letters" (p. 156) is Creasey's joyful reference to *Lotus corniculatus* in Cyrenaica. This is what always

delights Europeans about our Egyptian flora—that it is essentially Mediterranean plus a certain number of desert types. The families represented are all familiar at home—nothing exotic or bizarre; that is the source of the compelling charm of the Egyptian wild flora, which in a good year must be one of the world's outstanding displays. This happens about twice in a life-time. For the dress rehearsal of our 1938 show one has to go back to the later 1890's, so the oldest inhabitants told me. But of course there is more to it than this—the sun of Egypt and the incredible fertility of the desert when released by adequate rainfall.

MUTUAL IMPROVEMENT SOCIETY.

The Annual General Meeting was held on September 30 at which it was decided that meetings should continue to be held, but only fortnightly until Christmas, weekly thereafter. The following were the officers elected for 1943-4 :—

Chairman	...	...	...	Mr. S. A. Pearce.
Vice-Chairman	...	...	...	Mr. C. P. Raffill.
Hon. Secretary	...	...	...	Mr. D. Dawson.
Assistant Hon. Secretary	...	...	...	Mr. E. F. Bundy.
Committee	...	...	...	Miss E. V. Paine. Miss J. E. Sharps. Mr. H. Kruger.

The following syllabus was drawn up :—

1943.				
Oct.	6.	*Trees and Shrubs	...	Mr. Raffill.
"	20.	Wreath-making	...	Miss Knight.
Nov.	3.	*The Flora of New Zealand	...	Mr. J. E. S. Souster.
"	17.	*Just Weeds	...	The Director.
Dec.	1.	Tomato Cultivation out-of-doors	...	Mr. F. Burrill.
1944.				
Jan.	5.	*South Africa and some Aspects of her Vegetation	...	Dr. Howes.
"	12.	Gardening on Chalk Soils	...	Miss Cornwell.
"	19.	*Grafting	...	Mr. Pearce.
"	26.	Wall-fruit	...	Mr. R. G. Hill.
Feb.	2.	*Potato-breeding	...	The Curator.
"	9.	Plant Diseases and Weather	...	Miss Wakefield.
"	16.	Intensive Cultivation of Vegetables	...	Mr. J. Nelson.
"	23.	Surveying and Planning a Garden.	...	Mr. R. M. Stuart Brown.
Mar.	1.	Boilers and Heating	...	Mr. Stenning.
"	8.	Carnations	...	Mr. E. C. Lyne.
"	15.	*The Ecosystem	...	Mr. H. R. B. Hack.
"	22.	Orchids and their cultivation	...	Mr. J. Blowers.
"	29.	Propagation of Decorative Plants.	...	Miss Paine.

* Lantern Lecture.

As the season of "Mutual" does not coincide with that of the calendar year and with the issue of the *Kew Guild Journal*, a report has first to be given of the concluding lectures of the last session, namely from January—March 1943.

Sir Geoffrey Evans recommenced after the Christmas interval with a lecture on "Agricultural Development in New Guinea," giving

interesting accounts of the island's administrative history and the cultivation of economic crops; also of the establishment of a gold-field, contact with which may only be by air due to the impossibility of overland transport.

The history and distribution of the genus *Rhododendron* were discussed by Miss Watson, with an outline of attempts at classification by various botanists, followed by cultural details.

A vivid picture of gardening in South Africa was presented by Mr. Werner who by means of slides took members to see many branches of horticulture, in all types of climate, throughout the Union.

Fruit under glass was ably dealt with by Mr. Zobel who enumerated the essential points in growing to perfection, peaches, grapes, figs, melons, pineapples, etc.

Mr. Nelson gave a paper on Public Parks, describing the general lay-out and design, and commenting on the great range of variation of the work in parks maintenance.

Mr. Coates explained and demonstrated many of the methods of vegetative increase of trees and shrubs; he also treated of the seminal propagation at some length.

"Apple Stocks" was the subject chosen by Mr. Durrant who enumerated the advantages and disadvantages of the various types in use, including modes of propagation.

A charming series of slides was shown by Mr. Osborn in his "Impressions of Gardening in the Eastern U.S.A." These included trees and shrubs in flower, landscape views in various botanic gardens, parks and nurseries. He gave also some illuminating facts showing the enormous scale upon which operations are carried out.

Mr. Holder described tomato and potato-growing in Jersey month by month and the exportation of crops to this country. The Jersey Royal Kidney Potato had, he said, been grown there for 50 years.

"Some Interesting Greenhouse Plants" was the subject of a lecture by Mr. Pearce in which he showed on the screen a succession of flowering plants throughout the year. He concluded with some slides of the grafting of the Glory Pea (*Clianthus Dampieri*) on to *Colutea arborescens*.

The concluding paper was given by Mr. Lane and entitled "Onions." He included ornamental and various edible species of *Allium* and touched on their medicinal properties, ending up with cultural details of *Allium Cepa*.

During the summer, visits were made to the following places through the courtesy of our hosts who made them possible.

The John Innes Horticultural Institution, Merton.
Messrs. Carters' Seed Establishment, Raynes Park.
The Cheshunt Experimental Station, Cheshunt.
Messrs. Secrett's Farm, Walton-on-Thames.

The 1943-1944 season was opened by Mr. Raffill who showed on the screen some stirring scenes and views of trees and shrubs in flower not only at Kew but on the Continent. He commenced with the Chinese Witch Hazels and went on through the season and concluded with the autumnal glories.

A paper on Wreath-making was given by Miss Knight who dealt with war-time substitutes and demonstrated the process of making expert floral tributes.

Mr. Souster in his paper on the Flora of New Zealand commenced with the geography of this unique and isolated dominion and showed slides which emphasised the essentially arborescent nature of the vegetation. The economic uses of the plants depicted were also enumerated.

It was with no little enthusiasm that members turned up to hear the first lecture given at Kew by Dr. Salisbury. There was no disappointment, for the Director made our native weeds appear equal to, and indeed to far excel in interest, the choicest exotic flora. Lantern slides were shown of various species augmented by vivid accounts of their introduction followed by diagrams of extraordinary interest on the subject of seed-dispersal.

The outdoor cultivation of tomatoes was the subject chosen by Mr. Burrill. Varieties were enumerated, followed by detailed accounts of propagation and subsequent operations, of soil management and pest and disease-control.

D. DAWSON,
Hon. Secretary.

LECTURES. SESSION 1943—1944.

Wartime restrictions still prevented the normal instruction and lecture courses being given in 1943. Owing to the present Gardens staff comprising so many young men and women who wished to improve their knowledge or who had not had the advantage of a good training in horticulture and botany special wartime arrangements were made by the Director with the Surrey County Council for several series of lectures to be delivered. These consisted of:—

- 26 lectures on Horticultural Principles (N.D.H. Standard) by Mr. E. C. Brown, M.Sc.
- 12 lectures on Horticultural Principles (R.H.S. General Standard) by Mr. E. C. Brown, M.Sc.
- 26 lectures on Horticultural Practice (N.D.H. Standard) by Mr. W. F. McKenzie, N.D.H.
- 26 lectures on Horticultural Practice (R.H.S. General Standard) by Miss M. Thompson, N.D.H.

All the lectures except the course by Mr. McKenzie were given at Richmond Technical Institute.

KEW WOMEN GARDENERS' GUILD.

The Annual General Meeting of the Kew Women Gardeners' Guild was held in December, 1943, and the following Officers and Members of the Committee were elected :—

Miss P. Cornwell (Chairman)
Miss M. C. Eady (Secretary)
Miss J. Pedgrift
Miss J. Thompson
Miss B. Watts

WEDDING BELLS.

Mr. Kenneth H. James to Miss Nina A. Dyer at St. Mary's Church, Cheltenham, on September 7, 1940.

Mr. Charles Edwin Cherry to Miss Joan Alexandra Irwin at Central Methodist Church, Hastings, on May 23, 1942.

Mr. James C. Taylor to Miss Margaret Laking in Ontario, Canada, on June 27, 1942.

Sergt. Stephen G. Cutting to Miss R. K. Shertzer at Williamsburg, Virginia, U.S.A., on May 24, 1943.

Miss Esmé K. C. Thompson to Mr. Gerald W. McCulloch at St. Saviour's, Ealing, on July 18, 1943.

THE ASSOCIATION OF KEW GARDENERS IN AMERICA (BOSTON AREA) 1943.

In order that a continuity of proceedings be maintained, the twenty-sixth Meeting of the Association was held at the Minerva Hotel, in Boston, on Saturday, March 20, 1943.

Owing to difficulties in transportation it was considered preferable this year to hold local meetings. Philadelphian members propose to meet at the Botanic Gardens, under guidance of James Lambert, while in New York, a field day is planned at the Brooklyn Botanic Garden, in May, with Mr. Free. In this manner we intend to carry on until a general meeting can again be called.

Those present at our Boston meeting were James Brown, Robert Cameron, Mr. and Mrs. John Ellis, W. H. Judd and Mr. and Mrs. F. Lazenby.

After dinner a business meeting was presided over by Mr. Cameron and topics relating to Kew Gardens, its old graduates and horticulture in general were discussed to a late hour.

New York and Philadelphia held no flower show this year. The one held in Boston, which ran from March 13 to March 30, proved an overwhelming success. On the first few days queues of visitors lined the sidewalks awaiting admittance and the doors had to be closed frequently to avoid congestion. Probably the finest display

of orchids ever exhibited in America occupied one large lecture hall. Roses, carnations, rhododendrons, azaleas and amaryllis maintained a very high degree of excellence though in smaller quantities due to lack of space. Fifty thousand visitors attended during the week.

Advice on victory gardens given by the State College attracted a great number of people. Suggestions on the best varieties of fruit and vegetables to grow for home consumption together with methods of home canning and storage were given.

Kewites in America desire to congratulate the Editor and his Committee on giving us such a splendid number of the *Kew Guild Journal* for the year 1941. We are well aware of the difficulties under present conditions and the continuation of the high degree of excellence to which we are accustomed is much appreciated. We sincerely hope that contributions will continue so that future issues may be equally good.

W. H. JUDD, Secretary.

THE ASSOCIATION OF KEW GARDENERS IN AMERICA (NEW YORK AREA) 1943.

The meeting was called for 3 p.m. Saturday, May 8, and by the kindness of Dr. C. Stuart Gager we were invited to hold it at Brooklyn Botanic Gardens where Montague Free is head gardener.

Mr. Free called the meeting to order at 3.40 p.m. and as the Secretary, William H. Judd, was not present the Chair called upon Stanley Candler to act in that capacity. The following seven members and two ladies were present: Mrs. George Agate and Mrs. Montague Free, Ernest Dodd, James Brown, James Beale, Robert Barton, George Agate, Montague Free and Stanley Candler. Letters were read from the following members who regretted that they could not attend:— Robert Cameron, Jack Jennings, Thomas H. Everett, Albert W. Close and H. F. Riebe.

There was much informal and friendly talk of doings concerning Kewites here and there, also on problems confronting gardeners and horticulture due to war conditions and the shortage of labour and funds.

It was moved, seconded and carried, that the next meeting place be left open and instructions given the Secretary to get in touch with members when decision as to the 1944 meeting was reached. As there was no further business the formal meeting was then adjourned.

May 8th proved to be the first real hot day for Brooklyn so that when tea was served after the meeting, in real Kew Green style, it was greatly appreciated. Mr. Free then conducted the party through the greenhouses and around the gardens, where a host of plants were just coming to life after passing through a very hard winter, several showing the ill effects of sub-zero weather.

Some parts of the gardens bore marks of a careless public who do not distinguish between Botanical Gardens and Park play-grounds.

Some of the choicer spots have had to be fenced in and put under lock and key, and some greenhouse plants behind bars.

The gardens are well done and are worked out so that the general public, and those interested in gardening on a small scale, can really understand the problems confronting the gardener. The aim is to get the man in the street interested and credit is due to those responsible for this work. The double flowering cherries were in full flower, the school children's gardens looked in very good condition, as did the trial victory vegetable garden.

When the tour of the gardens was over the party sat down to supper at "Sears", a bright spot in Flatbush, where good food was served. After this delightful meal, with no speeches, the party broke up and everyone was satisfied with a very pleasant and profitable afternoon.

STANLEY CANDLER, *Secretary pro tem.*

May 13, 1943.

Southampton, Long Island,
New York.

A WORLD GARDEN.

To those of us now working at Kew it seems that the Gardens are fulfilling special wartime functions. The Gardens are a tangible reminder to our visitors from the continent and overseas of plants and scenes which they love and from which they have been separated. On the other hand, to the younger generation they recall delights which are no more, whilst wondering infants are shown oranges and lemons on trees and that legendary fruit the banana—"but you mustn't touch dear."

In the rock garden where I work Canadian soldiers are lost before *Erythronium*, *Sanguinaria* and *Cornus canadensis*, and ask if we have any Indian paint brushes (*Castilleja coccinea*), while Americans tell us that our plants look more "thrifty" than their own.

The most persistent pilgrimage which we witness is towards the Gentians. From the moment when *Gentiana verna* opens its first flowers in April until the last blossoms of *G. sino-ornata* show in October, there is a procession of one-time followers of Thomas Cook living again those marvellous holidays of other years and seeing in *Gentiana Macauleyi* the exact flower they gathered at Kandersteg. "But where are the Edelweiss and the Alpenrosen?" We are proud to show them our humble sample.

Americans may or may not be garden-minded. Although crest-fallen at the time we gladly forgive one American soldier's comment on seeing our patch of *Phlox subulata*: "Say, we have miles of that back home!" in the knowledge that it *had* reminded him of home. Plants are justifying their existence in a new way and in some respects Kew was never more than at present a World Garden.

B. COOPER.

PARTIES VISITING KEW, 1943.

In addition to the very large numbers of visitors who frequented the Gardens during the summer, there were as usual several organised parties.

The University of London again made arrangements for a "Services Summer School" and four parties of troops visited Kew on Saturday afternoons commencing July 24th. The object of this School, which is comprised of serving officers and men from the Canadian, U.S.A., Indian and Allied Forces is, in the words of the syllabus, to make acquaintance with the political and social thought in this country with special regard to post-war international development and to provide opportunities to gain first-hand knowledge of some of the institutions by means of which the civilisation and culture of this country are maintained.

On these four Saturday afternoons the parties were met at the Gate, as they were last year, and after tea at the Pavilion were addressed by Sir Geoffrey Evans and on one occasion by Dr. F. N. Howes. Afterwards the parties were conducted to various sections of the Gardens by members of the Staff. The Acting Director's address to the last party, attended by about 120, was "recorded" and he afterwards "recorded" a short talk with some Royal Australian Air Force personnel for transmission to Australia. This is probably the first time a broadcast recording van has entered the Gardens and the arrangements were made at the special request of the B.B.C. authorities and with the approval of the Ministry of Agriculture and Fisheries.

During the season many other parties visited the Gardens and were taken round by various members of the staff. Mr. Cotton took charge of members of the South London Botanical Institute on April 17 and of the School Nature Study Union who visited Kew on the same day, and, a few weeks later, of a very large party of the Surrey Archæological Society which came to Kew in order to visit the Church, Kew Palace, and other buildings of interest in the neighbourhood. Mr. Raffill took round a large party of old Kewites early in the year and also a number of American troops, and Miss Wakefield welcomed members of the Reading Natural History Society.

On Saturday, August 7th, a large party of members of the Association of Scientific Workers visited the Gardens. They were met by Dr. Metcalfe who showed them over the Jodrell Laboratory and other parts of the Gardens.

A party representing the Royal Photographic Society were met by Mr. Atkinson on August 14, and with his assistance were enabled to take photographs of certain special plants.

The wartime series of demonstration plots of vegetables, fruit and herbs on the Palace Lawn have been the Mecca of thousands of visitors to the Gardens. The demonstration fruit plot for the small private grower proved a great draw and much interest was shown in the tomato and potato trials and the plots of herbs, soya bean and sweet corn varieties, as well as the model vegetable allotment.

On Saturday, August 28, the Surrey Allotments Council held a summer meeting at Kew which was attended by about 230 members representing eighty-seven allotment societies in the County. The various demonstrations were explained in detail by the Curator, Mr. W. M. Campbell, who was assisted by Mr. Osborn, Mr. Stenning, Mr. Pearce and Mr. Preston and two lady demonstrators, Miss Cornwell and Miss J. Sharps. Very great interest was shown and the staff was kept busy. The proceedings opened with a brief address by the Acting Director who welcomed the delegates and outlined the scheme of work. The visit was arranged by Mr. Richard Sudell, Chairman of the Surrey Allotments Council, a life member of the Guild.

Mr. K. N. Kaul, the Assistant for India in the Herbarium, took charge of all Indian parties and he has supplied the following note: "Commencing in April and continuing through the summer, parties of Indian soldiers numbering 40-50, with their officers, visited the Gardens and I acted as their guide. I took them round the Gardens and showed them the different Museums and houses. They were interested in the temperate plants as most of them were Punjabees from the N.W. Indian hills. The high temperature of the hot houses was not very congenial to them, specially the water lily house which they found unbearably hot.

"I found them very enquiring about everything. They wanted to know a lot about plants of economic importance, which they recognised with a thrill of joy in one of the houses. As all of them were farmers who cultivated most of these plants, I took pains to solve their problems as far as possible and suggested means to improve their crops and soil.

"As a token of good will, a sugar cane was presented to the whole company by the Curator, on my suggestion. This was highly appreciated by their officers, and I received a letter of thanks from Lt.-Col. Bruce for entertaining the soldiers and making their visit so interesting. I was also invited to attend the opening ceremony of the officers club which was opened by Mrs. Amery, the wife of the Secretary of State for India."

H.S.M.

FRUIT DEMONSTRATION PLOT AT KEW.

By S. A. Pearce.

In response to the "Grow more food campaign" local authorities in most cities and towns throughout the country have, during the past four years, arranged for the making and maintenance of Demonstration Plots or allotments to enable the general public to become more familiar with the art of growing their own vegetables.

These plots have been and still are of immense value, for with qualified and practical demonstrators in attendance to answer questions and give advice, the public have generally been able to make good use of their wartime gardens.

It is surprising, however, that little or no effort has been made to encourage the public to grow fruit, even in small quantity, par-

ticularly when one considers the important part that fruit plays in the human diet, and the great shortage of supplies owing to the war.

Many people with gardens or allotments have sufficient space to grow a small amount of fruit, particularly soft fruits, but it is most important to know the type of trees and the right varieties to plant. Without doubt the hesitancy to plant is due to lack of knowledge of suitable varieties and of their cultural requirements.

It was realised in 1942, from the questions asked at the vegetable demonstration plot at Kew, that there was a general demand for advice on the planting and growing of fruit. As an effort to meet this, a fruit plot (50 ft. x 30 ft.) was constructed early in 1943 and planted with varieties of various kinds, selecting those most likely to be needed by the general public.

The accompanying small scale plan will give some idea of the lay-out and arrangement adopted. The site chosen for the plot is at the south-east end of the two existing vegetable plots so that it runs north-west to south-east. The position enables the public to inspect all three demonstration plots with ease and a minimum of walking. So far as it is known this demonstration fruit plot was the first of its kind in the country, although it is possible that some local authorities have made efforts to give instruction on fruit growing in a less formal way.

It must be mentioned that a plan for a fruit plot suitable for a small garden had been prepared by the authorities at the East Malling Research Station, Kent, but had not been put into practice. We are much indebted to the Director, Dr. R. G. Hatton, for help and advice, particularly in the choice of varieties and for a copy of the original plan on which with certain modifications the Kew plot is based.

An effort was made to ensure as much diversity of fruit as possible and to provide a good selection of reliable varieties. The latter have been selected with a view to a succession of good quality fruits which do not require too much space. In view of the different size of tree brought about by different types of stocks great care is necessary with regard to the stocks on which the trees are worked. Buying from a reliable firm who will guarantee the stock is therefore very important.

As to the plot itself the trees are planted in six rows, each five feet apart and consist of the following :—

1. *Gooseberries*, twelve varieties, one tree of each planted at four feet apart in the row.
2. *Black Currants*, four varieties, three trees of each planted at four feet apart in the row.
3. *Red Currants*, four varieties, three trees of each planted at four feet apart in the row.
4. *Raspberries*, canes planted at fifteen inches apart in the row and consisting of two mid-season varieties and one late variety.

5. *Cordon Apples and Pears*, trees two feet apart in the row. Apples—twelve varieties, culinary and dessert, one tree of each. Pears, nine dessert varieties, twelve trees in all.
6. *Bush Apples and Pears*, planted at eight feet apart consisting of three apples and three pears.

Three rows of strawberries are grown as an intercrop between the rows of small bush fruits. Three varieties are planted, one row of each, Royal Sovereign (early), Sir Joseph Paxton (mid-season) and Tardive de Leopold (late).

Raspberries and Cordon trees are supported by wires strained on stout posts; several wires equally spaced being employed. The Plot is permanently wired on the outside with four foot posts and small mesh wire-netting. This with the aid of five or six foot posts conveniently placed in the plot itself to support cross wires, enables light fish-netting to be attached to give protection against birds if required.

The worn turf outside the surrounding fence shows very clearly that the Demonstration Fruit Plot even in its first year was greatly appreciated and popular with the general public. It is hoped, having had a year to become established, that with a favourable spring and a good season following, the trees will fruit well, and thus provide a source of education and enjoyment to the many people interested in growing fruit in a small way.

BEE PLANTS IN SURREY.

By F. N. Howes, D.Sc.

The advent of the war and the shortage of sugar and other sweetening materials has naturally been the cause of increased attention being paid to beekeeping and honey production. The number of beekeepers in the country has increased by leaps and bounds and many beekeeping associations have doubled or trebled their membership since the outbreak of war. Over 20,000 persons are known to belong to recognised associations and there are many more who keep bees but who do not belong to any association. The membership of the Surrey Beekeepers' Association, one of the most progressive in the country and with many branches, now exceeds a thousand. At the present time the shortage and high prices of essential beekeeping appliances and of bees no doubt deters many others from embarking upon beekeeping as a hobby and as a means of supplementing their sweet or 'preserve ration.

It may be useful, therefore, to consider what are the main sources of nectar and honey in Surrey and the Kew area in particular, the flora of which is, or should be, well known to so many past and present Kewites.

Whatever the flora of a district or locality may be, and however well endowed it may be with good nectar yielding plants, the honey crop is of course largely dependent upon the nature of the weather at the time those plants are in flower. Some of the important honey

plants in Britain such as the lime, tree fruits and perhaps hawthorn have a short flowering season. Bad bee-flying weather at this time, due to wet, cold, or windy conditions, may mean that little or no nectar is collected and a poor honey harvest results. Fortunately most parts of the country are not entirely limited to one or the other of these short-season honey-plants, and if one source fails better weather may prevail during another nectar flow. Throughout the country as a whole it has been estimated that on an average the beekeeper may expect two very good and two very bad honey-years for every five that are average, or in other words a really good honey year every four or five years. Unfortunately for the beekeeper there is no means of foretelling when this will occur. This rough average probably holds good also for Kew and most parts of Surrey. Although good honey-years cannot at present be foretold it does not follow that this will always be so, for with increased knowledge of weather forecasting and of the inter-relationships of the various factors that govern nectar-secretion in different plants, it may some day become possible to forecast what the honey-yield will be in the case of some of the important bee plants like white clover and heather.

The question of nectar-secretion in plants and the conditions which govern it has fortunately received increased attention in recent years, as has also the subject of sugar concentration in nectar. Different plants require different conditions for optimum nectar-secretion. Some, like white clover and heather will secrete at quite low temperatures whereas others will only secrete when conditions are fairly warm. Other important considerations in nectar-secretion are the type and texture of the soil, soil moisture, atmospheric humidity and altitude.

The amount of sugar present in nectar is of great importance to the honey-bee and so to the beekeeper. It varies very much, not only between different species, but in the same plant, according to the time of day and atmospheric conditions. On a bright sunny day it is much higher than on a dull day and concentration increases as the day advances. During the day concentration is usually appreciably higher than at night when conditions are more humid. It has been shown that when the sugar-concentration in nectar falls below a certain point it ceases to attract the hive bee. In some plants with an open or exposed type of flower-structure, such as the apple and other fruit trees, the nectar is very liable to dilution by rain or by dew at night when it may entirely cease to attract bees. With other flowers, with a more closed type of structure, this is not so likely to occur.

These differences in sugar-concentration in nectar explain why bees prefer different blossoms under different conditions of time and place. In work carried out in large deciduous fruit orchards in connection with pollination by the honey bee it was found by Vansell (*Bee World*, October, 1934) that sugar concentration of the nectar varied from 2-17 per cent. for pears to 35-55 per cent. for apples (different varieties). Plums ranged from 10-40 per cent. and cherries 20-50 per cent. These figures are of interest in that they confirm

a belief held by generations of beekeepers, from the days of the skep, that apple and cherry are better honey plants than pear and plum. In the same experiment it was found that the sugar-concentration in the nectar of the plum on a fine day increased from 6 per cent. at 7 in the morning to 24 per cent. at 3 in the afternoon.

Figures such as these are of interest in that all the fruit trees concerned are commonly grown in Surrey in both urban and rural areas, although not to the same extent that they are in Kent. It is apparent that from the bees' point of view a load of nectar gathered in the afternoon may be worth four gathered early in the day. Why be an early riser? Perhaps the bee prefers to make hay while the sun shines in case, with the fickle climate of Britain, rain falls later in the day!

In the Kew area where fruit trees are found in most gardens and a few old orchards still exist, fruit blossom affords the first appreciable nectar-flow of the year and is eagerly awaited by the beekeeper, more for the sake of his bees than himself, for it is seldom that a surplus of any consequence is obtained from it. Certain ornamental trees belonging to the genera *Prunus* and *Pyrus*, which are also freely cultivated and not infrequently occur as street trees in Kew, might be linked with fruit, for they are also good bee plants. They include the almond, flowering cherries (single), crabs and purple myrobalan (*Prunus Pissardii*). These trees are of value for pollen as well, providing ample supplies at a time when it is much needed for early brood rearing. Most of the early bulbs so freely grown in gardens, especially the Crocus, Snowdrop and Scillas are also most useful for pollen.

Apple is undoubtedly the most important fruit tree for honey throughout Surrey and in fact in most parts of the country, but its honey is seldom obtained pure. Fruit tree honey is usually dark and thick and of rather strong flavour, growing milder with age and granulating fairly quickly.

Hawthorn and horsechestnut are the next important nectar bearing trees to blossom after fruit. Hawthorn is of course common everywhere and flowers in great profusion, but unfortunately it is a shy nectar yielder, secreting freely in some years, but not in others. According to the bee press the past season was a good one in many districts for hawthorn. The conditions necessary for a good honey year seem obscure for even with fine weather during the whole of the blossoming period bees in some seasons pay little attention to the flowers. When obtainable hawthorn honey is of a dark amber colour with a strong flavour and fairly pungent aroma. If mixed with apple, for in some seasons blossoming coincides, a delicious blend is said to result. With regard to horsechestnut it is generally possible to tell when bees are working the blossoms by the characteristic reddish brown pollen loads with which they return to the hive, the pollen of horsechestnut being of an unusual reddish colour.

The sycamore and probably all the cultivated maples (*Acer spp.*) are good nectar-plants and are worked freely early in the year when they are in flower. The honey from sycamore is not considered first class, being of indifferent flavour, in fact somewhat rank when freshly

gathered, but it "mellows down" on storage. However, the tree provides welcome bee forage, especially as it is so widely distributed in both town and country districts. It is very prevalent in many parts of Surrey.

The holly is another useful nectar-plant although this may not be generally realised on account of the small size and inconspicuous nature of the flowers and the fact that they are more or less hidden by the leaves. The plants do not always flower well and it is not uncommon to notice one bush or tree flowering freely while another nearby bears hardly any blossoms.

Another June flowering tree that is a most useful bee plant, given good warm weather at the time of flowering, is the false Acacia (*Robinia pseudacacia*) so common as a street and ornamental tree. In its native habitat, North America, it is an important honey-plant, and also in many parts of Europe where it is now naturalised. It is the main honey-plant in some places in Italy. Unfortunately its flowering season is rather short and in Britain it appears to secrete freely only in warm weather. The honey from it is of good quality, being dense, colourless or nearly so, and of fine flavour, granulating slowly.

The most important nectar-tree in Surrey and indeed in most parts of the country, especially to the urban beekeeper, is the lime. In Kew it is the bee-plant of the neighbourhood and the only real source of surplus to local beekeepers. The common lime (*Tilia vulgaris* and *T. platyphyllos*) usually comes into bloom in the latter part of June in the south of England and flowers for 3 to 4 weeks, according to weather. At this time of the year the days are long and the weather likely to be sufficiently warm to afford good bee flying conditions. As the lime secretes nectar very freely under suitable conditions good crops of honey may be obtained from this source. A drawback, however, is its tendency to produce honeydew, which bees also collect. If this is present in any quantity it spoils the appearance and quality of the honey, causing it to be very dark. In bygone days the lime was very popular as a street and avenue tree, but in latter years its popularity has decreased for various reasons. This may be unfortunate for future generations of beekeepers. The Kew area is favoured in being fairly well stocked with mature limes. Numerous trees exist in the Gardens and there are some two dozen different species in the *Tilia* collection of the Arboretum. These are all freely worked for nectar by honey bees. In recent years the flowering periods of these different limes have been studied by the writer and work initiated on the sugar content of the nectar which promises to be of interest.

In most parts of Surrey white clover (*Trifolium repens*), one of the most common constituents of pastures, is the important bee plant and a prolific source of nectar. It has been acclaimed the world's premier honey-plant and the greatest actual source of honey. The honey is of superior quality and is universally popular. Much of the imported Canadian and New Zealand honey is from the same source. The nearer the plant approaches to the Equator the less

valuable does it become as a nectar-plant and the darker the honey. Where clover occurs on the more acid soils in Surrey, as for instance in the Camberley area, it is of no consequence as a nectar-plant and may be worked by bees only for pollen. Other clovers important to the beekeeper are alsike, red, crimson (*T. incarnatum*), sweet clover (*Melilotus*), bird's foot trefoil and sainfoin, but some of these are not freely met with in Surrey.

The heathlands of Surrey with their specialised vegetation are of more than passing interest to the beekeeper. Ling (*Calluna vulgaris*) has of course always been renowned as a honey-plant and associated with it in Surrey are usually to be found bell heather (*Erica cinerea*) and cross leaved heath (*E. tetralix*). While the last mentioned is of little or no value to the hive bee, having a corolla tube in excess of 6-7 mm. (the length of the honey bee's tongue), bell heather is a useful bee plant, flowering for a long period and yielding a port-wine coloured honey of good flavour but distinct from typical ling honey which is thick and jelly-like. The heathlands of Surrey are not extensive as they are further north and ling honey is not readily obtainable pure. Good results from heather have been obtained in the vicinity of Bagshot Heath where ling secretes well most seasons on the acid peaty soil. In areas where heather occurs in a layer of soil overlying chalk the results are not likely to be so good.

The chalk areas of Surrey are for the most part good honey districts, for the presence of an abundance of lime in the soil is known to favour nectar-secretion in many plants, both wild and cultivated, especially the clovers and related plants. Sainfoin is essentially a plant of chalk districts and is the source of much fine honey in some of the chalk districts in the South* of England. Wild marjoram is very abundant and freely worked for nectar on some of the chalk hills of Surrey, so also is wild thyme.

Two very useful wild plants to the beekeeper are the rose-bay willow herb or fireweed (*Epilobium angustifolium*) and the blackberry. Both occur freely in most districts, the former being especially common in burned or cut-over areas (woodlands) of which there has of course been a great increase since the war. Willow herb is without doubt one of the most useful of the late summer flowering plants, commencing to flower in July or August and continuing until the first frosts. Where large areas are covered by the plant, surplus honey is very frequently obtained both in this country and the United States and Canada, where it is equally if not even more common. The honey from the plant is pale in colour without a pronounced flavour, and useful for blending with other sorts. Honey from blackberry is seldom obtained pure in Britain unless hives happen to be situated near fields where this plant is cultivated. It is somewhat coarse flavoured, but of value to the bees in building up stores for the winter.

Other wild plants and weeds that are useful as minor nectar sources throughout Surrey and the Home Counties are too numerous to mention. Some of the more important are dandelion, willow, charlock and other Brassicas, various thistles, especially the ubiquitous

creeping or field thistle (*Cirsium arvense*), knapweed, figwort, bindweed, cranesbill, scabious, mints and other Labiates. Ivy, which flowers so late in the year, is the last source of nectar and sometimes on fine days in October old ivy plants may be found to be humming with bees. With the great increase in cultivated land since the war there has been a good deal more charlock in existence. A characteristic of charlock honey is the rapidly with which it granulates and some war-time beekeepers have had the annoying experience of having their honey granulate in the combs before they have been able to extract it.

The common plants of the flower garden that are favourites of the honey bee are of course well known. Probably those that flower late in the year and help in the building up of winter stores of honey and pollen are the most useful to the beekeeper, such as heleniums, golden rod, Michaelmas daisies and sunflowers.

A number of the important bee-plants of other lands, both woody and herbaceous, are in cultivation in the Gardens, but they are not present in sufficient number to affect the nectar flow of the district. While many of these are freely worked by the hive bee there are some such as the Tulip tree (*Liriodendron tulipifera*) and Tupelo (*Nyssa sylvatica*) both natives and important honey plants in the United States, which do not appear to be worked as freely or as regularly as they are in their native habitat. It is quite conceivable that the different climatic conditions adversely affect nectar-secretion in such plants.

PLANT NOTES FROM BOURNEMOUTH.

By Kenneth McCready.

Most Kewites will think of Bournemouth as they have seen it during a holiday in peace-time with its fine piers, crowded promenades, orchestral concerts in a setting of pine trees or perhaps even with its parades of bathing belles.

Those who belong to a Parks Department will have studied the floral bedding and probably critically considered whether it was better or worse than, say, that of Eastbourne, Brighton, Southend or Torquay. When visiting the Pavilion Ball-room, Theatres, Cafés or Swimming Baths the banks of flowering plants will give assurance of the existence of some very well stocked greenhouses hidden away somewhere outside the town. These greenhouses are still well stocked, though tomatoes, lettuce and other food crops have priority. It is not my intention, however, to deal with greenhouse plants or with the outdoor bedding but to confine my remarks in this article to trees and shrubs in the open.

A seaside town has many horticultural advantages over other towns, especially those in industrial areas, and having worked in both I appreciate this very fully. It must be admitted, however, that seaside gales can considerably modify some of the advantages of the sea-coast.

I have been interested in the correspondence which periodically appears in *The Gardeners' Chronicle* upon the effects of sea gales on plants.* Three main factors come into play. Firstly, the deposit of salt upon the leaves which may cause the death of the tissue owing to plasmolysis of the cells; secondly, the excessive transpiration and drying out of the foliage due to the sheer velocity of the wind, and thirdly, the physical damage to tender growth brought about by tearing and by the beating together of the leaves and young shoots under very high winds.

That salt spray is carried inland to a considerable distance cannot be denied, and those of us who live half a mile from the sea are familiar with the sticky deposit which appears on our seaward windows after a gale and to which fine particles of sand adhere. Though the factors mentioned above may work independently they probably more often act together and the action of the salt spray on bruised and torn tissues probably causes more conspicuous damage and blackening than anything else. But plants vary enormously in their resistance to gale-damage and in their ability to recover from it. The subject is worthy of careful study and detailed record, and I have not had the opportunity to do this. It is not so simple as it appears for other factors have to be taken into account.

The nature of the weather at the time is important. Salt causes most damage if followed by drying sun, whereas if salt-laden winds are accompanied by or followed by rain the injurious effect is probably nil. Hot sunshine or drying winds after a storm probably also increase the damage to bruised shoots and foliage, whereas dull quiet weather would give them a chance to heal. The time of year is likewise of significance since this is related to the age and condition of the foliage. Speaking generally autumn gales are far less serious than those which occur in spring and early summer.

The amount of damage caused by long spells of harsh winds is partly bound up with soil conditions especially whether it is dry or moist. But even when the ground is moist, if the soil temperature is low, the roots are not very active and consequently a prolonged spell of drying winds in February or March may cause material damage to evergreen foliage. The plants are then growing under conditions of "physiological drought," for the roots are not able to make good the loss of water quickly enough and the leaves suffer as if from drought.

I have noticed that small leaved plants show considerable resistance to sea winds—for example, *Veronica* spp., *Escallonia* spp., *Rosmarinus*, *Hippophae rhamnoides*, *Azara microphylla* and *Cassinia fulvida*. But the common Sycamore with its large leaves thrives well near the sea and is quite at home on very exposed places on the cliffs. Apart from being somewhat dwarfed and growing away from the direction of the prevailing wind it shows little sign of being affected by exposure. On the other hand the softer foliage of the apple is exceedingly sensitive, the growth being

*There is an interesting paper by Mr. L. A. Boodle, late Keeper of the Jodrell Laboratory, on the Scorching of Foliage by Sea Winds in the Journal of the Ministry of Agriculture (XXVII, 1920, pp. 479-486).

severely affected by June gales—leaves, fruits and young wood all turning black. Later the leaves fall off and the new set appears, a fact which of course has an adverse effect upon general growth.

The Holm Oak, *Q. Ilex*, is commonly planted as a first line of gale defence, within which other trees are planted or even a second and more ornamental hedge. In the Holm Oak I believe it is the late shedding of old leaves, often after the spring gales are over, which preserves much of its growth. These tough glossy leaves usually go brown only at the edges. The young exposed growths, especially on the seaward side, are often completely seared, which accounts for the rounded appearance of so many specimens in exposed places. We have found this tree an excellent shelter hedge in our shrub nursery.

Cupressus macrocarpa grows well all along the South coast. The species illustrates very strikingly the vagaries of plants. The typical green form often browns very badly when grown near the sea which perhaps shows that it is the salt laden air as well as the wind which is responsible. The golden form on the other hand withstands the sea winds much better and thrives even at the base of our cliffs within twenty yards of the sea. An interesting problem for the plant physiologist!

A plant that has not received sufficient attention from seaside planters in this country is *Pittosporum Tobira* (sometimes known as *P. chinensis*). It is a native of Japan and China and unlike the New Zealand species is absolutely unaffected by the severest winter weather we have here. It has large rather fleshy leaves. I am always impressed with a group of these plants near the top edge of the cliff fully exposed to the south-west (from whence our worst gales come) which has not suffered in the least. Bailey in his *Standard Cyclopædia of Horticulture* gives *Tobira* (its native name) as the popular name, and he adds that *Tobira* "withstands violent saline winds better than most other shrubs." Half ripened cuttings root so readily that I hope to see considerable extension of planting in the near future. The better known species *P. tenuifolium* also does well near the sea. It is a good plant for a tall hedge and is, moreover, very useful for cutting.

Other well known plants extensively used in exposed positions here are *Cassinia fulvida*, *Corokia virgata*, *Elaeagnus pungens* varieties, *Euonymus japonica*, *Olearias* of various kinds, *O. myrsinoides* being particularly tough. On the other hand we find the coloured forms of *O. gunnii* very susceptible to frost-damage, even when so slight as not to affect *Coronilla glauca*, *Leptospermum*, *Clianthus*, and other reputedly tender plants growing nearby. *Atriplex halimus* grows so freely as to swamp other subjects such as *Senecio Greyi*, *S. laxifolius* and *Phormium tenax* which are typical of towns on the South coast. All thrive with us and in the most exposed places. A plant which one would expect to thrive here is *Tamarix*, but I have yet to see even a good plant of the common *T. gallica*.

Our Bournemouth soil is naturally acid and in sheltered places *Rhododendrons* are very much at home, but where exposed to gales

they are short lived, and often present an abject appearance. Another ericaceous plant, *Arbutus Unedo*, thrives by the sea as you would expect from its habitat along the north Mediterranean shore. But though it is said to stand being "drenched with spray" the strong winds of our cliffs do not suit it and it prefers the shelter of the chines. Here self sown seedlings come up in plenty.

No account of Bournemouth would be complete without a reference to the Pines. The commonest species is of course the Scots Pine, whilst many Austrian and Corsican Pines have also been planted. But the feature of most interest is the abundance of the Maritime Pine (*P. Pinaster*), a native of the Mediterranean, Bournemouth has probably more good specimens of *P. Pinaster* than any other town on the South coast, so much so that it has often been referred to as the "Bournemouth Pine." It may be recognised by its very long needles, persistent cones and the deep reddish or chocolate coloured bark of old trees. There is still a small portion of the Talbot Woods which has not been built on, where this Pine regenerates itself and where self sown seedlings of all ages may be seen. Another sea-loving species, the Monterey Pine of California (*P. radiatus*, formerly known as *P. insignis*), also does well with us. It is a three-leaved species with deeply fissured old trunks whilst its grass green foliage in summer is in striking contrast to the more sombre hues of the other species. We have also a little of the Weymouth Pine *P. strobus*, a five needled species. This is sometimes badly attacked by Chermes, which has led householders to complain that the Pines were attacked by American Blight (a pest which it somewhat resembles) and that the insect would spread to their apple trees. This of course is not the case. I have found spraying with a soft soap and paraffin emulsion successful in keeping down Chermes on young trees.

The Cordylines which grow everywhere and the Palms form a striking feature of the Lower Gardens and are apt to give an impression of subtropical conditions. But the Lower Gardens are sheltered and about once in a cycle of 10 years we get fairly severe weather which carries off many of the frost-tender subjects. Our Palm is the common Chusan Palm or Fortune's Palm, *Trachycarpus excelsa*, (*T. Fortunei* of the older books). The "*Dracaena*" grown in the Public Gardens and even on the cliffs is a wide leaved form of *Cordyline australis* known here as var. *Parryi*. It is raised from home saved seeds. Old plants cut down by frost five years ago have in every case replaced themselves by sucker growths from the underground stems.

But perhaps the most noteworthy of our tender plants which thrive in the open without protection, and only suffer occasionally, is *Acacia dealbata*. Wisley men will remember the specimen in the west front of the Laboratory and other specimens in sheltered positions in many gardens in the Home Counties. At the time of writing (end of December) it is a mass of buds. When in flower (in January and February) it is one of the loveliest sights we have, and is specially appreciated at that season.

In conclusion I must refer to our shrub nursery which is near Southbourne. It is on hungry sandy peat and situated in a slight depression and thus somewhat sheltered from the full force of south-westerly gales. Our success in striking cuttings in the open in this nursery is remarkable. Quite a lot of hardwooded cuttings are inserted in October and I have been surprised at the high percentage which root, especially in the case of rather difficult plants such as *Hibiscus*, *Elaeagnus pungens*, *Ginkgo biloba*, *Garrrya elliptica*, *Osmanthus illicifolius* and others which it is usually the custom to root either under glass in summer or to graft. Young plants put out in lines make a mass of roots but they must be soon moved or they make little growth and remain dwarf. A batch of Japanese Cherries illustrates this well. After having been in the nursery for nearly ten years they were only about four feet high. When moved in 1939 to a new park lately completed, they responded immediately making very vigorous growth. They are now about twelve to fifteen feet in height, and well shaped trees.

It is tempting to write on some of the good flowering shrubs which we have and of the Mesembryanthemums, South African Composites, spring bedding and our autumn show of late Chrysanthemums, but that may form the subject of a future article.

HORTICULTURE AND POSTAGE STAMPS.

By Charles H. Curtis, F.L.S., V.M.H.

Most boys collect postage stamps but my acquisitive faculty did not work in that direction until I had a grandson already collecting and I myself had exceeded the "allotted span." Don't blame my grandson, however. The blame, if blame there be, must rest upon the shoulders of Mr. R. E. Cooper, Curator of the Edinburgh Botanic Garden, who, several years ago wrote a short story in the Journal of the Edinburgh Garden Guild entitled "Plants on Stamps," and pointed out that very many postage stamps carried a horticultural interest. The story, forgotten as such, must have remained in my sub-conscious memory, and when I seriously considered what little hobby I could take up wherewith to while away some of the long, black-out hours during my period of evacuation at Pangbourne, nothing seemed so attractive as making a collection of Horticultural and Botanical Postage Stamps. A few dozen interesting stamps, casually acquired, had meanwhile been saved and these suggested that the "idea" would prove interesting. Unfortunately these few got lost. They were lost, so why bother! I did bother. The loss and the hunt made me more determined to see what could be done. I purchased a loose-leaf and interleaved album from Whitfield's, Gibbon's catalogues, hinges, a large magnifying reading glass, transparent envelopes, etc. I bought a few packets that obviously contained stamps of horticultural interest. I wrote begging letters to friends abroad and in Eire!

Having got together a rather shaky foundation for a collection I had to decide, before one stamp was placed in the album, the method of arrangement. There were difficulties whichever way I decided,

but at last I made up my mind to arrange them according to plants and subjects and the whole in alphabetical order. In order to make the collection more interesting to those folk who regard philately as a nuisance and the philatelist as a bore, another decision was made, that was to "write up" each subject at the head of the first page relating to it. I can best explain this by quoting a heading:—

"ORANGE. *Citrus Aurantium* Linn.

Nat. Ord. Rutaceae. Nat. Hab. Trop. Asia. Cult. All subtropics—West Indies, Spain, Portugal, Italy, South Africa, Brazil, Southern U.S.A., etc. Numerous varieties. Exports—raw fruits, canned, preserved, juice and marmalade."

The stamps with Oranges or Orange trees are from the Orange Free State, Paraguay, Jamaica, Trinidad and Tobago, France, Pitcairn Islands, and Southern Rhodesia.

I often wish the "idea" had occurred to me when I was attending the lectures on Economic Botany given at Kew by Mr. Jackson; may be I could not have spared the cash in those days, but on the other hand, postage stamps were cheaper, although much fewer in number and in less horticultural variety. I might, moreover, have scored a point or two off the lecturer so educational is this method of collecting stamps.

Some Old Kewites have made excellent stamp collections but so far as I know none has a horticultural collection. The man who arranges his stamps according to countries endeavours to get a complete series, chronologically and in order of face value. He requires only one of each unless he must needs get hot and excited over watermarks, misprints, spacing of perforations, and minute variations in the design. All these things leave me quite cold, but I do get rather irritated when I find a stamp which carries representations of several of my headings, as such a stamp must be represented separately under each subject. Our British stamps provide a case in point. They carry the Rose, the Shamrock, the Thistle and the Daffodil. I don't pretend to have a complete series of all these, but there are sufficient under each of the four headings to satisfy me and with sufficient colour variation to attract lady friends. Let me also add here that I don't concern myself with arrangement according to a value sequence. No; I like the page to *look* well and I even give attention to the colour scheme, although I know quite well that these methods horrify my pure philatelist friends and cause them to shudder.

My alphabetical arrangement commences with *Acanthus*—a motif used with great freedom and by many countries—and concludes, at present, with *Yucca*. Wheat, last but one, picturing ears (sometimes conventionalised), sowing, harvesting, loading, transporting, etc., is illustrated by very many countries. The Natural Orders represented cover a surprisingly large range, namely, Acanthaceae, Alismaceae, Amaryllideae, Anacardiaceae, Araceae, Artocarpaceae, Ampelidiaceae, Bignoniaceae, Bixaceae, Bromeliaceae, Chenopodiaceae, Coniferae, Cactaceae, Compositae, Campanulaceae, Caricaceae, Cycadaceae, Cyclanthaceae, Ericaceae, Fagaceae, Filices,

Gnetaceae, Gramineae, Illicinae, Irideae, Liliaceae, Leptospermeae, Leguminosae, Lauraceae, Loranthaceae, Malvaceae, Marsiliaceae, Nymphaeae, Orchidaceae, Oleaceae, Papaveraceae, Passifloraceae, Pandanaceae, Proteaceae, Primulaceae, Palmae, Piperaceae, Ranunculaceae, Rubiaceae, Rutaceae, Rosaceae, Sapotaceae, Scrophulariaceae, Sterculiaceae, Scitamineae, Solanaceae, Sapindaceae, Tiliaceae, Ternstroemiaceae, Urticaceae, and Zingiberaceae.

It will be gathered from the above list that the stamps portray things pleasant to the eye and good for food. There are representations of Cassava, Kola, Chicle Gum, Copra, Baobab, Cedars of Lebanon, Arum, the rare (in this country) *Ranunculus Lyallii*, Melocactus, Wellingtonia, Eucalyptus, Agave, Aloe, Hydnocarpus, Maple, Bignonia, Auricula, Christmas Rose, *Sisyrinchium*, Vanilla, Cattleya, Acoranthus, Banyan, Balsam of Peru, Cohune, Olive, Cyclamen, New Zealand Flax, Tree Fern, Grape Fruit, Limes, Bread-Fruit, Lilies, Linden, Oak, Bay, Laurel, Holly, Mistletoe, Pineapple, Mimosa, Grapes, Edelweiss, Date, Daffodil, Thistle, Rose, Shamrock, Lima Bean, etc., etc. This method of stamp collecting teaches one much geography and an enormous amount of economic botany.

The sets of Traveller's Tree, the Double Coco-nut and the Lotus (Free French) are particularly attractive, but my liking leans to those sets which show the flower, tree or plant, plantations, fruits, grading manufacture and export, such as those of Apple, Tobacco, Cocoa, Rubber, Tea, Sugar, Banana, Orange, Rice, Maize, and Cotton. In the making of the collection I have had many thrills, notably those of finding pictures of *Welwitschia*. But I have not managed to acquire at a low price any stamp with a very high catalogue value.

There is scope for imagination in this topical method of classifying stamps and several "incidentals" have arisen in the process of my collecting; for instance, I have interesting sets arranged under the headings of the Plougher, The Sower, The Reaper and Timber Industry. "Landscapes" almost fill one album, and show interesting features of the flora of many countries. At one time I thought of making a set showing the features of public parks, but for the present those stamps I have acquired with this end in view are still included under Landscapes. This part of my collection is arranged geographically and covers a large range of territory—from China to Peru.

A few words in conclusion. Don't talk too much and don't swank. Had I kept my mouth shut my good friend the Editor would never have known about my collection and I should not have had the bother of writing this.

GARDENS AND HORTICULTURE IN TURKEY.

By G. A. Catt.

When I received a note from your editor asking for an article on Turkish gardens, my first reaction was a feeling of despair for there is little in the Turkish gardens I have seen which corresponds in any way to gardens as we understand them in England, and under these circumstances it is difficult to find anything about which to write enthusiastically.

GARDENS.

The reason for the lack of gardens and the absence of a national gardening urge is a little difficult for the untravelled Englishman to understand and as difficult to explain. It certainly cannot be due to the climate which, except for the period July—August when it is hot and dry, has some advantages over the English variety. The winters in the Istanbul area are similar to those experienced in England except for the prevailing northerly wind which makes it more effectively miserable. The spring is comparable to the English spring with the bright days hotter and the rainy periods fewer and more prolonged. The summer as I have said is hot and dry. I have now experienced two autumn seasons here and based on this evidence the autumn here has distinct advantages over the season as experienced in England. It explains why even with a winter climate which is at least as bad as England, many plants, considered almost tender at home, survive the winter without damage. *Olea europaea*, *Eriobotria japonica*, *Punica granatum*, *Clerodendron trichotomum*, *Erythrina Crista-galli*, *Sollya heterophylla*, *Sterculia acerifolia* and *Acacia longifolia* all stand the winters with only superficial damage. The reason is of course not only that the autumn is more prolonged, which makes the winter shorter, but also that it is more open and sunny making for tissues which are better ripened to withstand the vagaries of winter. Nor can the reason for few and poor gardens be attributed to the soil. The soil of the Istanbul area is certainly not ideal. In general there is only the choice between the relatively rich calcareous soil of the many small depressions and valleys or the eroded clays of the hillsides. But the valley soils at least are no worse than many to be found in successful gardens in England.

The reason must, I feel, be attributed to the people themselves. In part this may be due to lack of knowledge, for Turks as a nation are not great travellers, and new habits, new ideas and better systems do not spread rapidly in a country whose language is such a wide obstacle to complete understanding of practices which have developed in the west; and also in part to the historical background. For many years there was in Turkey such a lack of security that, once the problem of merely living had been solved the natural urge was to insure the future by an investment in something more concrete than gardens which cannot be liquidated promptly should the necessity arise. A high standard of horticulture postulates a long era of peace, security and prosperity and even purely commercial horticulture must have national organisation of a high order to be widely successful. For the past twenty years perhaps, a greater sense of security has developed throughout the country, but twenty years is not long in which to obtain a generation of garden-lovers or even a nucleus of skilled garden craftsmen without intensive effort on the part of the government.

Turkey has never had the advantage which we have had, that throughout the nineteenth and during the first decades of the twentieth century a settled economy produced a leisured class which

held the possession of a good garden to be necessary to the maintenance of a certain position in high society and so set a fashion and developed standards of taste which account for the pre-eminence of British gardeners to-day. One hears of magnificent gardens which used to exist in "the good old days." These were commonly associated with the palaces and "yali's" or summer residences of the "pashas" which were dotted along the shores of the Bosphorus. Certainly from the traces that exist to-day in many of the ruined gardens, they must have been considerably better than anything which is evident now but I doubt if they could have been compared with the English gardens of the same period. This view is supported by Loudon who, in his *Encyclopædia of Gardening* published in 1850 is not very appreciative of Turkish gardens. He says "The modern taste for gardens in Turkey is materially influenced by the national character and the nature of the climate. Gardens of taste are considered places of shade, repose and luxurious enjoyment not of active recreation or a varied display of verdant scenery." This sums up quite well the position even to-day.

The prospects of a wider appreciation of gardening as a recreative pastime for private individuals are not very bright and depend in my opinion on the lead given and the standards set by the government and municipalities. There appears to be none of the innate love of the soil which is part of the character of many of the nations of western Europe and America.

The prevalent conviction that lawns are impossible to establish or maintain in this country robs existing gardens of much charm and beauty and complicates matters for those amateurs who would otherwise try to establish a framework of a western pattern in which to attempt to express their own gardening genius. Certainly lawns may be slightly more difficult to maintain, with the almost universal calcareous soil and the hot summers, but I have myself proved that given an adequate water supply, lawns can be maintained in perfect condition and that in fact the most successful species for the purpose here, as in England, are *Agrostis canina*, *Agrostis tenuis* and *Festuca rubra*.

COMMERCIAL HORTICULTURE.

Commercial horticulture in this part of Turkey is confined to the smallholdings of peasants. In the fertile valleys near Istanbul these gardens produce vegetables for local consumption—there are few vegetables grown in private gardens. The best of these vegetables, particularly the cos lettuce in spring and the cauliflower in autumn, compare well with the best English product, while leeks, beets, onions, cabbages, carrots, marrows and cabbage lettuce are produced in quantity and fair quality, though the standard of cultivation is low. Potatoes are poor, the varieties grown are often badly shaped with deep eyes and those placed on the market are often more or less diseased. It is probable that virus diseases are responsible for the poor crops obtained. A change of seed would I am sure work wonders, while the establishment of a centre where reliable

seeds could be bought not only of vegetables but of annual and perennial flowers would give a decided fillip to private gardening.

Fruit growing in general is scattered over a wide field but I have seen no extensive cultivation except of citrus, cherries, and grapes. Strawberries are grown in quantity near Istanbul. The common variety is pale coloured, almost white, and is small, but it has a fine aroma and flavour, on which the Turks set much store, as indeed they should. Some of the fruit offered for sale is grown well but many are seedling varieties and show lack of care in handling and packing. The varieties of apples grown vary greatly in quality, the best are crisp and sweet even if they lack the quality and aroma of Cox's. Many of the grapes which come from the Izmir district are superb, almost up to the standard of our best, and are sold relatively cheaply. Other fruits which appear in good quality on the markets are cherries, pears and figs. The bananas, loquats, mulberries, red currants and gooseberries are all of relatively poor quality. Black currants are unknown.

There are few nurseries devoted to plant and flower production. I know of only four or five which occupy an acre or so of ground and have one or two greenhouses. In the whole of Istanbul, a city of 800,000 inhabitants I know of only five flower shops and doubt if more than double that number exist. The heating of the few glasshouses in the Istanbul area is generally accomplished by means of a flue from a coke or wood stove which is quite commonly placed in the house itself. You will gather that the size and standards of order and cleanliness cannot be compared to those of Lowe and Shawyer's!

The range of plants available in these nurseries to those who would improve or develop their gardens is very limited and very few recent introductions have found their way to Istanbul. It is the same with the modern varieties of common garden plants. This is particularly striking in the case of plants which do particularly well here. I am thinking of Tulips, Irises, Prunus and Pyrus species and varieties and of summer flowering annuals. Outside the Botanic gardens these exist only in the shape of common or deteriorated seedlings or varieties of fifty years ago.

Commercial horticulture is taught to selected students with an appropriate background in many schools throughout the country. Those I have visited are well designed and placed and there seems little wrong with their curriculum, but the product is too young and they are also as yet too few to influence the trend of horticulture in the country.

FUTURE.

Municipal encouragement of horticulture seems to be the only real hope for future improvement and here there are indeed a few rays of promise. It has become the practice, in imitation of western ideas, to establish parks and open spaces in the big towns. Unfortunately even in Ankara the design and layout of these leave much to be desired, but it is a beginning. In this connection I am rather more hopeful of developments in the Istanbul area for here several

gardens of great natural beauty are owned by the municipality and are still in an undeveloped state. I have recently been asked by the Governor to advise him as to the future development of a large park, formerly the grounds of the Sultan's palace at Yiddiz, a few miles along the Bosphorus. This park occupies the whole of a small valley and is indeed a wonderful site if one could have a free hand in its development. It remains to be seen if my advice has any influence on its future development.

What are the possibilities of future horticultural development in Turkey? I think they are limitless. That the region of the Bosphorus could be so developed is evidenced by the success of the native and naturalised flora. At this time of the year (I am writing on the 10th May) the Bosphorus banks are, when viewed from the ferry boats which carry out of town workers to and from Istanbul and on which I travel each day, exceedingly interesting and beautiful. The variable form and colour of the pines, fastigate cypress, cedars, limes, interspersed with the pale green leaves and white candelabra of the horse chestnuts and ornamented by the cloudy pink loveliness of the Judas trees is a background to the occasional laburnum which has escaped from cultivation and, where an old yali exists or has existed, to the wistaria which flaunts its mauve blossoms with a profusion not known in England.

This picture is spoiled by the occasional obtrusive and often tasteless modern buildings which have in places been built along the Bosphorus edge and by the many dilapidated ruins of large houses which strike a jarring note. The old wooden Turkish buildings, bad though they may be, fit into the landscape easily with their curious shapes, red-brown roofs and unpainted weathered grey sides. Later in the year the fresh green of the trees deepens, the corn is cut, the fields such as they are, dry up and the whole presents a very different view though still picturesque. But at the moment it is to me fresh, exciting and very stimulating, even though I have become cynic enough to realise while enjoying the effect, that it will fade even in memory with the heat of the summer.

For Kew men who have the chance to come here, what would I advise? If after the war you have itching feet and are willing to put down a year or two to gain experience this place has undoubted attractions, but more than that I am not prepared to recommend. The language is one of the primary difficulties and the difficulties manufactured by bureaucratic authority is another which is a source of perennial irritation. To give what is, perhaps, an extreme illustration. I petitioned some twenty months ago for another greenhouse to accommodate our rather nice little collection of succulent plants. This had the general approval of the authorities but, they said, "no glass is available." Having my doubts on this point I searched for, found, and with administrative authority, bought sufficient for the purpose in view. It then appeared that suitable wood could not be obtained. I then myself designed a house so that concrete took the place of wood in all the heavy sections. It appeared then that iron for reinforcement could not be found. When I took down an iron frame to provide suitable iron for the purpose, my

design was said to be faulty, the concrete arches, it was said, would not stand the necessary weight and strain. When I made and erected an arch and tested it to prove its strength, money was not available. When money was available cement could not be obtained in sufficient quantity owing to government restriction and only 40 per cent of the required amount could be supplied. When I redesigned the house to cut down the amount of cement necessary and to use such wood as I knew was available, the quota of cement allocated to the University was said to be four months behind the scheduled delivery date! To English reasoning it saves time to say simply NO in the first place. The mention of new greenhouses is now a prohibited topic in our family.

The language difficulty will of course vary with different people, some have a flair for languages but the construction of the Turkish sentence is so different to most other languages that it is only to those people that it will become easy. To take even a simple sentence, "after drinking tea we always work in the garden." In Turkish they say "Cay ictikten sonra daima bahçede calisiriz" which translated literally is "Tea we drank from after always in the garden we work." The mental evolutions necessary for this sort of thing always stump me.

Nevertheless with all the difficulties I am glad I came here, even disregarding the political aspect, which at the time of my coming was important, I think it has been worth while and when the time comes for me to leave I know I shall do so with regret.

G. A. CATT.

SOUTH AFRICAN AERODROMES.

An interesting article* in "Wings," the organ of the South African Air Force, gives an idea of the war-time activities of F. R. Long (now Major Long), so well known in South Africa and among Kewites, formerly Parks Superintendent and Airport Manager at Port Elizabeth. Long is now controlling Aerodrome Maintenance throughout the Union of South Africa, South West Africa, Swaziland and Bechuanaland. This is largely a grass growing problem. On his staff he has a fellow Kewite, several University graduates in science, parks superintendents, fertiliser experts, golf professionals and farmers "all of whom are doing a wonderful piece of work to help on the Empire Training Scheme for Air Force Personnel."

The article in question also serves to give an idea of the value placed upon men with sound horticultural training and experience in the laying out and maintenance of aerodromes under the varied conditions that prevail in South Africa.

The demand for dozens of new aerodromes in South Africa came suddenly.

*Vol. 3. No. 1, Oct. 1943, pp. 14-16. "Union's Network of Aerodromes" by J. Sack.

The extracts from this article are included by permission.

For "the Empire Training Scheme meant that scores of new training schools were being opened up. With the fall of Singapore and the consequent threat to our shores, new operational aerodromes had to be built up and down our coastline. Fortunately, there were Road Construction companies of the South African Engineering Company available, fully equipped with all kinds of heavy construction machinery, who were immediately put to work to provide the necessary landing grounds. These units were the first Road Companies to go to East Africa, and had been returned from Abyssinia for this purpose. Officers and men had worked on the construction of the desert road from Marsabit to Mega and had assisted the advance of the First Brigade from Garissa to Addis Ababa. . . . The men in the construction companies were selected on the basis of civilian experience of the problems of road building. Our officers were expert on bitumen and other construction materials, our men were experienced road-builders. Recently they planned, and laid down, the first cement stabilised runways in the Union. They have to decide on the appropriate surface and methods of construction to be used, having regard to the district, winds, rainfall, aircraft types and other factors. It would obviously be useless to lay down a grass surface in the loose sand of the Kalahari Desert. Where grass grows well and the soil is properly prepared, a grass surface may be better than any other.

"It is in the Maintenance Companies that gardeners are conspicuous. From sappers to senior officers men with horticultural experience are well represented. There are agrostologists, agronomists and agricultural chemists. A number of them have university degrees in agriculture. They plan and carry out research, constantly watching the surface of airfields under their care."

Apparently a son of F. R. Long (Capt. W. R. Long), who is a graduate in Forestry of the University of Stellenbosch, is in charge of one of the maintenance companies.

Many former Parks Superintendents in South Africa are now engaged upon aerodrome work all over South Africa.

"Their job," said Major Long, "is not only to look after aerodromes but to make air stations more attractive by laying down trees, lawns and flowers. In many cases our companies have also built sports fields.

"These airfields may quite easily be converted to commercial airports after the war. Certainly there was very little aerodrome planning before the war. Municipal aerodromes, with very few exceptions, were merely chosen because the ground was flat or near town. No research was made into the soil or the grasses that grew there.

"The result has been that these aerodromes, whatever their size, are far less serviceable than the new ones. A tremendous amount of wear is inflicted on the surface of aerodromes,

particularly where light planes with tail skids churn up the grass and soil hour after hour. By proper planning and fertilisation, we have found it possible to keep grasses growing as fast as damage is inflicted on them. That is where Science comes into the job, and that is why agricultural experts are needed.

"On one occasion a Road Construction Company solved the problem of a particularly difficult aerodrome by turning it literally 'inside out.' They took the layer of gravel that was some distance down and made it change places with the sand that was on top. The experiment was completely successful. At other times the correct use of potash, nitrogen, phosphates and other chemicals has kept airfields from being reduced to an unserviceable condition. Our job may be summed up by calling it 'prevention as well as care.'

"Several typical jobs will indicate how varied are the problems and how much resource is needed to cope with them. In Natal, for example, the face of an entire golf course was 'lifted' and moved next door, where a canefield was cleared to receive it. All the grass from fairways and greens was taken up, and it proved excellent in turfing the entire aerodrome. Three runways were provided and the whole 'grafting' process, probably the first of its kind in the Union, took only a few months to complete.

"In the Northern Transvaal and other parts of South Africa lions have visited the small encampments of engineers building aerodromes where none existed before. I saw pictures of a lioness actually taken from the outskirts of one of these airfields. This is an indication how the Air Force is opening up parts of Southern Africa hitherto inaccessible except to big game hunters and others interested in wild life. The medical profession and the Port Elizabeth Snake Park also benefit by serum and snakes obtained by members of the units who have become expert at catching snakes and 'milking' them of their venom. In many districts they get plenty of scope for their hobby when building new airfields or inspecting those already in existence.

"The Engineers tell this story against themselves. At one air station in the Union they had a double job, to build an aerodrome and construct a Rugby field. After some time the report of an Air Force officer came back: 'Aerodrome not bad; Rugby field excellent'."

Some miles north of Pretoria adjoining an aerodrome is an experimental ground for testing the value of various grasses, indigenous and introduced, for turfing airfields. Some 85 different species are said to be under trial there, including some from Siberia, Texas and East Africa. Among them is one discovered by General Smuts (*Sporobolus Smutsii*).

F.N.H.

SEEING AFRICA WHILST ON ACTIVE SERVICE.

A letter from Mr. W. Everitt, the Curator of the Municipal Gardens, Queenstown, South Africa, who joined the African Forces in 1939 includes a graphic account of a tour that he made whilst on Active Service. That account slightly abridged and amended is printed below.

"I left the Union with one of the first units of the S. African forces to leave for service in East Africa. Travelling by train from Pretoria to Broken Hill in N. Rhodesia, we did the trip by lorries in convoy from there to Nairobi in 15 days. The highlights of this trip included a visit to the Victoria Falls—the Baobob trees in N. Rhodesia and Tanganyika—an avenue two miles long of the 'Nandi Flame' (*Spathodea nilotica*) as we approached Arusha. The trees were in full bloom, a most magnificent sight with Mt. Meru as a background. Beyond the town of Arusha we had a glorious view of Kilimanjaro (19,313 ft.)—free of cloud—its rounded summit impressively outlined against a clear blue sky. From there over the plains we came to Nairobi. The City Park and private gardens were a riot of tropical colour—Bougainvilleas and Poinsettias being predominant. The Park possesses a "Maze," the hedges being of the 'Kei Apple' (*Dorvalis caffra*).

"From Nairobi we moved up to a base on the lower slopes of Mt. Kenya (17,036 ft.): Directly on the equator yet its summit is under eternal snow. Many of the trees were clothed with orchids, in addition to many terrestrial species which unfortunately were not in flower when I saw them. From there on to Fort Wajir where the 1st S. African Division had their initiation in the battle of El Wak in December, 1940. Back again we went to our Mt. Kenya base and from there through the Kisuit desert to Mt. Marsabit which was our base for a while. The forests there were of centuries old Olives, on the branches of which hung streamers of Lichens presenting a most grotesque appearance. I visited Lake Paradise, (discovered and named during the Martin-Johnson expedition). This is an extinct volcanic crater where elephants now roam in huge herds. On we went from there through the dreadful Chalbi desert. Water was very scarce, the only water being at the Oases of Kalacha and Waroma which we were told were referred to in the Old Testament.

"The Mirages were a source of wonder, and confusion to us. What appeared to be a block of flats on the horizon would eventually materialise as a heap of about a dozen petrol tins! The only flora apart from dwarf Palms around the water holes was a stunted species of Mimosa. North Horr, an oasis, and where the temperature was sometimes up to 120° was left behind and the journey continued to Dukana not far from the Abyssinian border. From there we made the successful attacks on Hobok, Mega and Moyle.

"After this we returned to Thika in Kenya to refit and then there was the campaign through Italian Somaliland via Kismayu and on to Mogadishu the Capital, which must be one of the hottest and dirtiest places in Africa. From there across Somaliland to

Neghelli in Abyssinia a distance of over 700 miles. I saw a beautiful chocolate coloured *Gladiolus* on the Somaliland-Abyssinia border, also a snow white *Gloriosa*. Abyssinia is a lovely country. Plenty of water and mountains well covered with bush and grass. I noticed a *Juniperus* (probably *J. procera*) amongst the dwarf trees. The Italians during the occupation had made some splendid roads and opened up the country.

"After the Abyssinian campaign we found ourselves back at the port of Mombasa when we hoped to get a spot of home leave. But the G.O.C. had other ideas, and we were soon on board ship bound for the Middle East. We reached there in time for the 'push' in November, 1941.

"I have no happy memories of the Western Desert. . . . During short leave I saw something of the irrigated and productive lands in the Nile Delta, where wheat and cotton, cabbages and paw-paws grow side by side. In the gardens of the famous Mena Hotel near the Pyramids I saw some excellent specimens of Korean *Chrysanthemums*. . . .

"I returned to the Union just before Christmas, 1942, and after being away for nearly 3 years I eventually returned to civil employment with a new interest in things horticultural."

THE CAMPAIGN AGAINST VERMIN IN THE GARDENS.

During 1943 there was evidence that rats had increased so much in the Gardens that they threatened to become a plague. Visitors began to complain that they were frequently to be seen and evidence of their presence was felt in the loss of young birds among the ornamental wild fowl and damage to stored goods.

It was also noticed that grey squirrels had increased considerably and were doing much damage to wild life, particularly to eggs and nestling and to the trees (see p. 286). They were also a nuisance in the way they ransacked the waste paper baskets as soon as the visitors left the grounds and scattered refuse all around. Rabbits were likewise on the increase and were causing damage to trees and shrubs. It was therefore decided to organise a special drive and to place Mr. J. Claiden on special duty, giving him Mr. C. A. Hopkins as assistant. Mr. Claiden, whose duties include that of Game-keeper and Keeper of the ornamental wild fowl, as well as the ringing of the bell, has an intimate knowledge of the Gardens and its wild life. The advice of the Officer in charge of the Rat Campaign of the Surrey County Council was sought and the methods recommended by him were adopted.

The method used against rats was that of pre-baiting. This consists of baiting certain spots which are known to be frequented by rats, with sausage rusks for three alternate days. Unpoisoned bait is laid down for the second and fourth day and the rats get accustomed to the routine. On the sixth day poison is mixed with the bait and many of the rats subsequently die. The poisons used are zinc phosphide and redsquill.

The only effective way of eradicating grey squirrels is by shooting. This has been effective and few now remain. Rabbits have been dealt with by the same method, but also by the use of cyanogas and "horo" gas in their burrows. As both these rodents infiltrate into the Gardens from outside, it has been necessary to seek co-operation with the authorities in charge of the Old Deer Park, and the President of the Mid Surrey Golf Club is now also carrying out an energetic campaign.

The results of the drive against rats are difficult to assess as the rats destroyed cannot usually be found but there are certainly fewer to be seen than there were when the campaign started in September. The evidence as regards squirrels is more concrete since in the 3½ months ending December 31, 1943, two hundred and twenty-nine have been destroyed. Similarly rabbits are much less numerous, although a few still remain.

It is proposed to continue operations for a few months longer as it is essential to extend it into the spring months which is the chief breeding season.

G.E.

THE GREY SQUIRREL AT KEW.

By R. Melville, B.Sc., Ph.D.

Many visitors to the Gardens have been delighted to see grey squirrels disporting themselves among the branches, scurrying across the ground or even sitting brazenly on the edge of a waste-paper bin after raiding its contents for scraps of food. Rarely does the thought cross their minds that this rather charming little creature could be a pest and even a menace to the sylvan beauties of Kew.

The grey squirrel has been with us a comparatively short time. When the census of the wild flora and fauna of the Gardens was made in 1906 the native red squirrel was still to be seen, and it was not until 1908 that two pairs of its grey cousins were presented to the Gardens by the Duke of Bedford, and acknowledged with gratitude in the Kew Bulletin. No doubt at Kew as elsewhere the grey soon ousted the red on account of its more aggressive nature, and more catholic food habits. Little comes amiss to it, from the eggs and young of wild birds breeding in the Gardens, to the buds, bark, young leaves and fruits of a great variety of trees and shrubs.

For some time it has been necessary to keep the numbers of grey squirrels within bounds by shooting. Since the beginning of the war, however, the squirrels had been left to their own devices, with the result that they increased greatly in numbers. In 1942 they were to be seen everywhere in the Gardens, even within a stone's throw of the Main Gates, where they raided the old *Corylus columnata* for its nuts on the first occasion for some years in which it had borne fertile seeds. It so happened that 1942 was a particularly good season for walnuts, and practically every species of *Juglans* and *Carya* fruited abundantly. Watch was being kept on these to collect samples of the ripe nuts to fill gaps in the museum collections. The nuts were nearly ripe when one week-end the squirrels raided

the trees in force, and much to our chagrin carried off all the more desirable kinds. Probably the fact that there was an abundant crop of acorns prevented serious damage in the Aboretum during the winter of 1942-3.

Early in the spring of 1943 the squirrel population was no doubt hard put to find sufficient food. On one occasion as many as half a dozen were observed in a single beech tree shortly after the leaves had unfolded. There was no difficulty in finding out what they were doing, for the ground below the tree was liberally strewn with leafy tips of the branches. An examination showed that they were eating the young male catkins which are no doubt very nutritious before they have shed their pollen. The beech trees are also raided by wood pigeons for the same food. About the same time the common oak was coming into leaf, and a number of trees were attacked by the squirrels, in the same manner as the beeches, for their young male catkins.

As the season wore on the advent of many new litters evidently increased the food problem of the squirrel population. How many wild birds suffered the loss of eggs or young it is impossible to estimate, but by the end of July all the beech mast had already been taken while still in a green and half grown condition. Even some of the half grown acorns were taken at this period. The sweet chestnuts were saved by their prickly burrs until ripe in the autumn, though much other damage was done in the interval.

The small grove of cascara trees (*Rhamnus Purshiana*) in the Queens Cottage grounds was cleared of its berries, the tips of many of the branches being nipped off in the process. The fruits of all the walnuts were taken when the kernels were half grown, thereby curtailing an investigation of the vitamin C content of the fruit. The only exception was the black walnut, which was left until ripe, probably on account of its very aromatic husk. A tree of the common walnut behind the Aroid House not far from the Herbarium was cleared of its fruits in a few days, despite the comings and goings of numerous people in the vicinity.

It was clear by the autumn that something would have to be done to reduce the number of squirrels in the Gardens. War was declared on the marauders. In the first week 50 were shot and in the second a further 31. Since then the numbers in bag have varied, but the grand total to date is about 230. There is no doubt that the Gardens have been saved from a serious pest.

EXHIBIT OF EDIBLE FUNGI.

One of the major preoccupations of civilians during this war is the question of food. Wherever people forgather the talk turns to this subject, how to manage on the rations, and what "extras" can be contrived through the allotment or by the use of "wild" sources of food. There is no question that Lord Woolton has done a wonderful job,—no one suffers from want and the nation is, on the whole, remarkably healthy. The human body, however, craves

variety. Nerves that are overstrained become irritated by food monotony or are depressed by the lack of occasional little luxuries, now unobtainable.

The desire for variety has been responsible for an increasing interest in the possibilities of using edible fungi apart from the expensive cultivated mushroom. Besides propaganda work carried out by enthusiastic mycophagists, people have seen our Allies, Czechs, Poles, and others, collecting for their own use, fungi which the average Englishman classes as "toadstools" and therefore unfit to eat. One result has been a great increase in the number of enquiries received at Kew as to the identity of various fungi and their possibilities as food.

In the autumn of 1941 a small exhibit of common species of edible fungi was staged in Museum No. III. The time involved in collecting fresh specimens and keeping the exhibit fresh and interesting was found to be impracticable, and in 1942 Miss Wakefield suggested making coloured drawings of some of the most easily recognised species, with their appropriate natural surroundings. A few were prepared and proved very attractive, so that in 1943 the plan was extended.

Life-size drawings of over a dozen edible species were exhibited, together with two or three of the most dangerous poisonous forms. When possible fresh specimens of the fungi were displayed in dishes to supplement the drawings, but the figures remained a permanent exhibit for about two months during the fungus season.

These drawings by Miss Wakefield attracted a great deal of attention from the public and various notices appeared in the Press. One which was published in *The Times* brought to Kew the Minister of Agriculture, the Right Hon. R. S. Hudson, who one afternoon in September spent some time examining the drawings. He expressed great interest in them and suggested the possibility of having them reproduced for distribution to such centres as Women's Institutes. With this in view the drawings were sent in to the Ministry with suitable explanatory text, and the matter is under consideration.

Unfortunately illustrated books on edible fungi are at present difficult to obtain. The Ministry of Agriculture's Bulletin, No. 23, on Edible and Poisonous Fungi, which was prepared at Kew and mostly illustrated by Miss Wakefield is now unobtainable, owing to the whole of the stock being destroyed by fire in one of the raids during the Blitz in the winter of 1940-41. The re-issue of this Bulletin in a revised form is contemplated.

H.S.M.

A VIRUS DISEASE DEMONSTRATION.

If 1942 was a year for insect damage on the allotments, 1943 was one when Virus diseases were conspicuous. The model allotment at Kew fared better than most, though it did not entirely escape. But the allotment holders around had tomatoes with Spotted Wilt, Peas with Streak, Spinach and Beet with Mosaic. Marrows suffered also, and even the "Long Green" variety, which when sown in the open

came up readily and perfectly healthy, frequently contracted a Virus disease. What was new to many of us was Lettuce Virus—Cos Lettuce being affected nearly 100 per cent. and refusing to heart, whilst the old favourite "All the year Round" also had a certain amount of infection. As this disease is seed borne, it suggests that the stocks for seed purposes were not rogued and that seed was saved from infected plants. On the other hand, French Bean Mosaic, which is also transmitted by seed, seemed less plentiful than usual.

Dr. G. C. Ainsworth, an expert on Virus Diseases on the staff of the Imperial Mycological Institute, kindly offered to demonstrate to the student gardeners and others the Virus maladies of vegetables which occur on the various allotments at Kew. With the Curator's sanction a meeting was arranged for July 7 at 6 p.m. and a party of about twenty-five mustered at the Curator's Office gate and went straight to the Palace lawn to inspect the plots. The evening proved most profitable and the advantages of having these diseases—always so difficult to distinguish—explained from specimens growing *in situ* was much appreciated.

Several crops such as Tomatoes and Peas are attacked by more than one Virus and however careful and accurate the book description may be the distinctions are difficult to grasp. A demonstration on the spot by an expert slowly dispels bewilderment and by the end of the evening our minds were much clearer. Dr. Ainsworth has kindly promised an article, for the next *Journal*, on the Virus diseases of Vegetables found on the Kew plots.

THE HYDE PARK DEMONSTRATION ALLOTMENT 1943.

The Hyde Park Demonstration Allotment is situated half-way along Park Lane on the strip of grass between it and the carriage road, where it is easily accessible by London business people and attracts the curiosity of many visitors. It is bordered by Plane Trees and stands where the crocuses used to grow. Even now many of them still come up amongst the vegetables. There is a 10 rod allotment 190 feet by 30 feet and a 5 rod plot 45 feet by 30 feet, with a small lawn between the two and a gate at either side bearing the notice "Come in and Look Round." At the top end, towards Hyde Park Corner, is a small office and toolshed of the design recommended by the National Allotments Association.

The ground was prepared during the Blitz of 1940, by thorough trenching and manuring, but the top layer of soil was brought from the other end of the Park and is darker in colour, and very light and hungry. It is good for winter digging but it suffers very severely from drought in summer. During its second and third seasons the soil had been given compost made from vegetable refuse and leaves actually collected on and around the allotment, one third of the plot being treated each year on the ground where the Peas, Beans and Onions are to be planted. This was supplemented by applications of the National Growmore Fertiliser in spring. Last winter some of the subsoil was removed in an attempt

ultimately to lower the surface of the plot and so help to hold as much moisture as possible, and in the spring the compost was forked in 4 to 6 inches below the soil surface. This was on the whole fairly successful, and it was evident that the Runner Beans appreciated a really deep trench, quantities of good compost, and regular watering. The soil was analysed last winter and yielded the following result :—

p. H.	...	...	5.2
Free CaCO_3	...	...	2.60
Available P_2O_5	...	...	.236
Available K_2O}	...	...	.039
Organic Matter	...	...	7.24
Total Nitrogen	...	...	.280

Because of the abnormally high phosphate-content of the soil, muriate of potash was used in an attempt to improve the balance, particularly for onions and tomatoes. Throughout the summer, however, scorched foliage appeared which may have been due to short potash supplies or to petrol fumes and dust from the constant flow of traffic on both sides of the plot.

Records of crop-weights, sowing times, varietal differences etc. were noted, and it is clear from these, that the winter and spring crops do pretty well (especially Lettuce and Cabbage) up to the end of June; but that during July and August, the effects of hot dusty winds and dry soil conditions were very evident, and that these were not entirely alleviated by watering. Early Carrots and Beet were poor, but the maincrop carrots sown in early June did quite well and were free from "fly." Later sowings of Turnips were also reasonably good, but Swedes practically gave up the struggle. Early Potatoes were much better than maincrop and we shall omit the latter next year. All the beans did very well including one row of Haricots from the Cambridge Horticultural Research Station.

Average amounts of the commoner pests and diseases have been experienced, and it was evident from information received on the plot that the chief troubles this year have included Turnip Flea Beetle, Cabbage Root Fly, Carrot Fly and all kinds of aphides. Identification of Pests and Diseases together with methods of control or prevention, have formed a very large portion of the daily round duties. I have found that preserved specimens or coloured illustrations of the more common enemies are a great help in identifying a pest, as many people find it difficult to describe in detail a given caterpillar or a grub, but they recognise it at once when a specimen is shown to them.

It is cheering to note how many people have now grasped the principles of crop-rotation, and the value of a well-planned garden. Last spring quite a number brought their plans to the allotment for approval and criticism. Many are now very "compost heap" conscious, but on this point I feel there is still room for improvement.

During the year, my duties have involved giving demonstrations and talks to many organisations who are growing their own food. The R.A.F., W.A.A.F., the A.F.S., Metropolitan Police, Railway-

men, Townswomen's Guilds, the Schoolchildren as well as some sections of the Women's Land Army, and some Allotments Associations and Horticultural Clubs. There are vegetable gardens flourishing around the guns on Ack Ack sites and round most of the balloons in the London Area; and in every case I have found much keenness and a high standard of ability.

The Americans too take a lively interest in gardening efforts in this country, and they have watched the growth of the Sweet Corn on the plot with a very critical eye. They seem heartily to dislike Brussels Sprouts as a vegetable. The three American farmers who visited this country recently told me they had never heard of the "Colorado Beetle" until they came to England. We had to explain that their common "Potato Bug" (which they treat with a solution of Paris Green) is to us the officially feared and much dreaded Colorado Beetle.

In a Transatlantic Broadcast to America last June, as part of a weekly programme called "Bridgebuilder," it was a great pleasure to be able to tell the Victory Diggers of America something of the work that we are doing here, and of the results which are obtained in the food-production campaign of this country.

MARGARET LANCASTER.

FURTHER NOTES ON THE CAMBRIDGE COTTAGE GARDEN.

The article on the Cambridge Cottage Garden in the last Number of the *Journal* brought a wealth of correspondence. A few writers commented on the old trees but most were interested in the historical side of the account, and the majority of the letters were from former Kew men who were unanimous in saying that they wished they had known something of the history of that part of the Gardens during the time that they were at Kew. Some suggested that it would be interesting if other portions of the Gardens, such as the greenhouses and area around No. 4, the Palace, and the Herbarium Grounds, could be studied in like detail and accounts published. Unfortunately no opportunity exists at present for making such a study.

Apart from these letters of appreciation were some communications of special interest received from the Keeper of the Royal Library at Windsor, Mr. O. F. Morshead, C.V.O. Knowing Mr. Morshead's interest in Kew a copy of the *Journal* for 1942 was sent to him and a few weeks later he was kind enough to transmit photographs of two water-colours of the Cambridge Cottage Garden which are preserved at Windsor. These drawings are the work of Henry Walter, an artist who specialised in garden subjects. One of them is reproduced herewith; the other shows a view of the Garden taken from the house. As far as is known the work of this artist was almost photographic in character, the picture reproduced therefore is probably strictly accurate though a few

of the trees in the foreground were omitted. It shows several features of the house which have since been removed, namely the balcony, the greenhouse (which later became a lean-to) on the eastern end of the wing and a door into the garden from the library in place of the french-window. The Horse Chestnut was already a fine tree but the Liriodendron is not visible unless it be to the very extreme left of the picture.

In view of the fact that Henry Walter died in 1849 one feature of the drawing calls for comment, namely the presence of the Lily Pond. In the account of the Cottage Garden given in the *Journal* it was pointed out that this Pond was not shown in Hooker's plan of 1852. It appears in the Ordnance Survey map of 1865 and it was evidently in existence by 1856 (see *Journal* 1942, Suppt. p. 9). This discrepancy between Hooker's map and Walter's drawing has not been cleared up though several possible explanations exist.

Another drawing received from Windsor was a watercolour sketch by an unknown artist. This is of less merit but is interesting in showing a pleasant sweep of the lawn outside the house, the seat under the Chestnut tree and the awnings and sun-blinds over the windows.

We were also privileged to see an album of pencil sketches mostly made at Kew during the middle of the last century. They were drawn by Miss Ella Taylor, who was deputy lady-in-waiting to Princess Mary Adelaide, and chiefly depict scenes in various rooms of the Cottage or in the Garden, and shows members of the Cambridge family, the Royal Family in general, and various distinguished visitors. It is clear that Miss Ella Taylor (an aunt of Major Maurice Du Plat Taylor, now living in Branstone Road, Kew) was an accomplished artist and the slight, yet always kindly, caricature which is evident in some of the drawings lends them piquancy as well as interest. The album was presented to the Windsor library by Queen Mary.

We have been permitted to obtain photographs of several of these drawings and one is reproduced on the opposite page. It bears the date 1858 and shows Princess Mary (attended by Ella Taylor) giving instructions to Mr. Craig (the foreman of the Flower Garden) with the Director, Sir William Hooker, standing by. It is known that Sir William did not always approve of Princess Mary's ideas and the artist has caught an amusing expression of patronising tolerance which, no doubt, he sometimes showed on such occasions.

A.D.C.

--- PORTRAIT OF W. B. HEMSLEY. ---

A very pleasant ceremony took place at the Mexican Legation, Belgrave Square, on the afternoon of December 29, 1943, at 4.30 p.m.

The Minister for Mexico, His Excellency Alfonso de Rosenzweig Diaz, was so impressed with Dr. W. B. Hemsley's work on the flora of Mexico and especially the volumes entitled "*Biologia Centrali-Americana*" (Botany) that he decided to have an oil portrait of Hemsley painted (from a photograph supplied by Kew) to be

hung in the Rooms of the Legation in London. Though the portrait was not ready to be unveiled the ceremony was held on the date arranged. In his opening address His Excellency, who was supported by a number of representatives from Mexico and other central American Countries, said :—

“On the 29th December, 1843, William Botting Hemsley was born, that is exactly one hundred years ago to-day. He devoted a great part of his life to the study of the flora of Mexico and Central America.

“We see here a copy of his monumental work, which is highly valued by such Mexican scholars as Ramirez, Callindo y Villa and Alcocer, who said, referring to this work, that in London they know us better than we know ourselves, and to which I would add, that in modern Mexico, we hope to know England even better than she knows herself.

“We have gathered here together to-day to celebrate this date, and I thank Sir Geoffrey Evans, former Director of Kew Gardens, my Central-American colleagues, Mr. Neville Butler of the Foreign Office, Mr. Ralph Deakin of the *Times*, Mr. A. D. Cotton, Hemsley’s successor, Mr. Camacho of the B.B.C. and all of you for coming. I am sorry that some of those invited were unable to be present, and I particularly regret the absence of Sir Malcolm Robertson, Lord Snell, Lord MacMillan and Sir Frederick Ogilvie of the British Council, Mr. Oliver Bonham-Carter of the Ministry of Information and Mr. Kenneth Grubb, President of the British Mexican Society, who is away from England.

“It gives me much pleasure to render this tribute to the memory of Hemsley with this act of remembrance of the past and hope in the future. It is a tribute to the memory of the great men who devote their lives to noble aims and whose spirit lives on illuminating the future.

“Speaking of hopes, I should like to mention the project of the Mexican Government to establish a botanical garden in the beautiful region of Valles and Tamazunchale, for which the necessary studies are being made, based on information supplied by Kew Gardens.

“The idea of botanical gardens—like many another—originated in Mexico. The Aztecs well knew that Mexico is a country of beautiful flowers and plants of an infinite variety, and history recounts that the poet-king Netzahualcoyotl made the first garden. Cortes, in his Letters to the Emperor Charles V, gives an account of this and it is surely his account which inspired the establishment of these gardens in Europe. The first one was laid out in Padua, Italy, in 1545. To-day, botanical gardens are not merely designed to give pleasure to the visitor, but are wonderful centres for scientific study to penetrate more and more into Nature’s secrets for the benefit of mankind. Medicine and industry anxiously seek from plants, knowledge and gifts.

"As a Mexican, I pay this tribute to Dr. Hemsley on the occasion of the centenary of his birth, and at the same time, thinking of the significance of the life of this great English botanist, it has given me much pleasure to tell you that 'the flowers which he loved', in the not-too-distant future, will grow freely and profusely in the botanical garden which it is proposed to make in the country which gave to the world this institution of art and culture and which possesses one of the richest flora."

Sir Geoffrey Evans, in reply, thanked the Minister for the great compliment he had paid to a Kew man and to the botanical work carried out at Kew, and remarked that he still had the honour of belonging to that great Institution.

He pointed out that Hemsley came to Kew as a Student Gardener and that by his industry and perseverance he reached a position of distinction in the scientific world, becoming Keeper of the Herbarium and Library and receiving many honours. Sir Geoffrey concluded his speech with the words: "When your Excellency arrived in this country one of your first actions was to get into touch with Kew and to make a visit to the Herbarium. I remember the keen interest you took in hunting out from the library the evidence of work done in the past on the Mexican Flora, and your skill and erudition and your delight in undertaking what was obviously a congenial task. May I assure your Excellency that we at Kew feel that we have been honoured by your visit and delight to hear that Kew Botanists in the past, as well as in the present, have been able to do something to forward the cause of science and of culture in your country. . . . My old College, the Imperial College of Tropical Agriculture in Trinidad, has recently lent to the Mexican Government the services of two of our eminent Professors to advise in the development of the Cacao industry. I am certain that, by the development of relations of this kind in the scientific and cultural sphere, the comity of nations can best be secured, and on this hope the future of the world rests. It has always been our policy at Kew to establish the closest and friendliest relations with similar institutions abroad and to release such knowledge as we possess for the benefit of science and mankind throughout the world."

After the ceremony refreshments were served and contacts were made with several representatives of the Central American Countries and the questions of the new Botanic Garden in Mexico and the development of botany, agriculture and forestry discussed.

A.D.C.

A ROBERT FORTUNE CENTENARY.

Robert Fortune was the young Scottish gardener who, one hundred years ago was sent to China by the Horticultural Society of London (not "Royal" in those days) in order to collect beautiful and interesting plants and send them home to be grown in England. The success of his expedition was recognised at once not only by the number of interesting plants he introduced but by the many new species he discovered and which were named in his honour. But not all gardeners to-day when writing the name *Fortunei* connect it with Robert Fortune.

He made in all four expeditions to China and the centenary of his first expedition fell in 1943. By an apt coincidence an article on Fortune (one of a series on Chinese explorers) appeared in the R.H.S. *Journal* for June of this year (p. 161).

In order to commemorate this centenary the Linnean Society of London decided to devote the whole of an afternoon Meeting (Nov. 25, 1943) to a series of papers on the exploration of China. Five papers in all were read before the Society:— (1) Mr. Euan Cox*, who dealt with the early explorers, e.g. James Cunningham, Father d'Incarville, William Kerr, Clark Abel, Thomas Beale, John Reeves—all of whose names will be recognised as being commemorated in the names of Chinese plants. (2) Mr. Ernest Nelves, Assistant Librarian at Kew, who had the honour of submitting a paper on Robert Fortune himself. (3) Colonel F. C. Stern "On the discoveries of the great French missionary explorers", namely Perny, David, Delavay, Soulie and Farges—all of whom again are commemorated in the names of Chinese plants. (4) Dr. Malcolm A. Smith, "On discoveries in Zoology", who himself having travelled in China spoke from first hand knowledge, and (5) Dr. Hui Lin Li, who sent a paper from the Arnold Arboretum on "Present-day Botanical Exploration of China." In a full statement of the position Dr. Li showed that the many Chinese botanists who had studied systematic botany in the leading herbaria of Europe and in the United States had returned to China and had now organised a survey of the vegetation of their country with many other botanists working under them. The work, he wrote, had been "somewhat interrupted" by the Japanese, but Chinese botanists were carrying on in spite of all and were industriously working on their flora.

Some of the dried specimens of the more interesting plants which Fortune sent home and which are now in the Kew Herbarium were exhibited at the Meeting, as was also a magnificent series of flower paintings (lent by the R.H.S.) which were drawn and coloured by Chinese artists and were acquired through John Reeves of Canton long before Fortune sailed. Probably these beautiful drawings whetted the appetites of the early Fellows of the Horticultural Society and stimulated them with a desire to see these plants growing in their

* This paper was read on November 11.

fine Garden at Chiswick and also in their private gardens. In any case so great was the enthusiasm of the "Chinese Committee", which was formed under the leadership of Reeves and Lindley, that within six months of the signing of the Treaty of Nanking, Fortune was on his way out. It is interesting to note that he took with him seeds of vegetables and other plants, also some young fruit trees, for the benefit of British residents in the Treaty ports and the hope was expressed by the Consul in Shanghai that the Chinese themselves would learn to appreciate the value of good apples and ask for grafts.

For the details of Fortune's career and of his three subsequent visits, (two of which were made in the employ of the East India Company, when tea was the principal "target") reference should be made to Mr. Cox's paper in the *Journal* of the Royal Horticultural Society 1943 (p. 161). But the following species, many of which are first class garden plants, were successfully introduced to England it is believed for the first time and indicate how much the gardens of those days were enriched by him.

Anemone japonica	Keteleeria Fortunei
Azalea obtusum	Lonicera fragrantissima
Cephalotaxus Fortunei	Mahonia Bealei
Chamaerops Fortunei	*Osmanthus Aquifolium
Cryptomeria japonica	Platycodon grandiflorum
Cupressus funebris	*Primula japonica
*Deutzia scabra flore pleno	Prunus triloba
Dicentra spectabilis	Pseudolarix amabilis
Diervilla florida	Rhododendron Fortunei
Forsythia viridissima	*Sciadopitys verticillata
Jasminum nudiflorum	Torreya grandis

* from Japan.

Some small flowered chrysanthemums which he termed "Chusan Daisies" were also sent home and these are believed to represent the parents of the modern Pompons. Coloured illustrations made at the time, however, show that in some at any rate the flowers were rather larger than in our present forms and it is probable that other types have been subsequently introduced.

The only Fortune plant known to survive at Kew was the specimen of Golden Larch (*Pseudolarix amabilis*, formerly *P. Fortunei*) which stood just beyond the large Corsican Pine on entering the Gardens from the Main Gate. The golden autumn colouring of this species is unique amongst Conifers and the specimen was believed to have been raised from the only consignment of seeds which, in spite of all Fortune's care, reached England in a living condition. (See Elwes and Henry "Trees of Great Britain and Ireland" vi. p. 1479). The tree had been failing for some time and by a strange irony it had to be cut down as dead in the year of the Fortune Centenary.

A.D.C.

THE 150TH ANNIVERSARY OF THE ROYAL BOTANIC GARDEN, CALCUTTA.

The many Kew men who have served in India will be interested to learn that an imposing volume in two parts has recently been issued to commemorate the 150th Anniversary of the Royal Botanic Garden, Calcutta, which was celebrated on January 6, 1938.

Part I gives an account of a meeting which took place on the great occasion. It was presided over by the Hon. Nawab Khwaja Habibullah Bahadur, Minister-in-charge, Agriculture and Industries Department, Bengal, the guests being welcomed by the Superintendent of the Garden, Dr. K. Biswas.

In his address Dr. Biswas, who studied at Kew for about a year in 1937, provided an outline of the history of the Garden, covering the 150 years of its existence, and in the printed volume this is accompanied by a full-page portrait of Colonel Robert Kyd, the originator and first Honorary Superintendent and his successors, together with a map and photographs of the Garden and the Herbarium.

Speeches were made on behalf of the British Delegates to the Indian Science Congress by Sir James H. Jeans and Sir Arthur W. Hill. Felicitations were also offered by Dr. C. D. Darlington and a number of Indian scientists. The various speeches are printed in full, while some 86 letters and telegrams of congratulation sent to Calcutta are also included.

It is interesting to note that Colonel Robert Kyd, the Honorary Superintendent, was succeeded in 1793 by Dr. William Roxburgh, the East India Company's botanist in Madras, as the first salaried Superintendent. Roxburgh compiled the first Catalogue of the 3,500 plants grown in the Garden, which was published under the title of *Hortus Bengalensis* in 1814. Roxburgh's work on Indian Botany is reflected in his well-known *Flora Indica* and *Plantae Coromandelianae* and these publications laid the foundations for further work on the subject. Roxburgh, whose memory is perpetuated by a monument erected in the Garden, died whilst on leave in Edinburgh in 1815.

During the years 1817 to 1846 the Garden was under the direction of Nathaniel Wallich. Dr. Wallich collected extensively in India and copies of the catalogue of these collections were distributed to the principal botanical institutions in Europe. A complete set of Wallich's collection, belonging to the Linnean Society is now housed in the Kew Herbarium, together with a copy of his catalogue. His *Plantae Asiaticae Rariores*, three handsome volumes of coloured illustrations of East Indian plants appeared during the years 1829-1832. Dr. Wallich retired in 1846, after 30 years service and died in 1854.

Among other notable Superintendents of the Garden may be mentioned Sir George King, who was in charge of it from 1871-1897. King's great contributions to the cause of Indian Botany are well known and it was due to his efforts that the celebrated *Annals of the Royal Botanic Garden, Calcutta*, first made its appearance in 1887.

Sir George King was succeeded in 1897 by Sir David Prain, who presided over the destinies of the Garden until 1906. During his tenure of office Sir David did much by his work to enhance the reputation of the Garden and his many noteworthy publications on Indian botany are of very great value. As we all know, Sir David became Director of the Royal Botanic Gardens, Kew, in 1906 and was President of the Guild in 1912.

Lt.-Col. A. T. Gage followed Sir David as Superintendent of the Garden in 1906, while Sir William Wright Smith acted in this capacity during Col. Gage's absence on leave in 1908. Subsequently, when Col. Gage retired in 1923, Mr. C. C. Calder became Superintendent and continued in office until 1937 when he was succeeded by the present Superintendent, Dr. K. Biswas.

It is interesting to find portraits of all these Superintendents collected together in the commemoration volume.

Part 2 of the volume contains 28 scientific papers on botany, which were read or forwarded for publication on the occasion of the Indian Science Congress. They occupy 250 large quarto pages and are well illustrated. Amongst those of special interest to gardeners may be mentioned *The Rhododendrons of India* by J. M. Cowan and *An outline of the Vegetation and Flora of Tibet* by F. Kingdon Ward. The volume is well printed and the editors and their collaborators are to be congratulated on their enterprise in producing such a useful and interesting memento worthy of this historic occasion.

H.S.M.

JUBILEE PERMANENT SECURITY FUND.

The contributions to this Fund, which was opened at the Annual General Meeting, 1943, so far received are as under :—

	£	s.	d.		£	s.	d.
C. H. Curtis	25	0	0	E. Nelmes... ..	...	5	0
R. L. Proudlock	5	0	0	W. N. Winn ... ..	...	5	0
W. F. Gullick	5	5	0	Mrs. E. M. Cotton... ..	...	5	0
E. Knott (non Kewite)	5	5	0	Mrs. G. B. Wallace ... ..	...	1	17
F. G. Preston	2	2	0	F. A. Barham ... ..	...	13	6
A. D. Cotton	5	0	0	T. M. Coventry ... ..	...	1	0
E. Brown	3	3	0	E. V. Willoughby ... ..	...	5	0
Mrs. M. Suckling	1	1	0	E. Avery ... ..	...	5	0
F. Glover	10	0	0	E. G. Dunk ... ..	...	5	0
C. Poulter	10	6	0	Miss E. M. Wakefield ... ..	...	1	0
P. G. C. Woodhouse	5	0	0	W. Nelmes ... ..	...	1	1
H. Eavis	1	0	0	Prof. F. W. Oliver (non			
E. J. Thomas	5	0	0	Kewite) ... ..	...	3	3
G. W. Stonebridge	5	0	0	P. Chandler ... ..	...	7	6
J. Heppell	15	0	0	W. J. Ing ... ..	...	2	0
J. D. Snowden	1	0	0	R. Cameron ... ..	...	50	0
S. A. Pearce	5	0	0	A. J. Brooks ... ..	...	10	10
A. E. Aubrey	5	0	0	C. R. Stock ... ..	...	10	6
Mrs. P. Purchas	1	0	0	W. L. Lavender ... ..	...	5	0
H. Taylor	10	0	0	E. Hewitson ... ..	...	1	1
Miss S. W. Bishop	5	0	0	E. Hemming ... ..	...	1	0
C. R. Metcalfe	15	0	0	Mrs. S. T. Lees ... ..	...	1	0

	£	s.	d.		£	s.	d.
J. M. Dalziel ...	1	1	0	Miss F. Sharps ...	...	1	0
C. E. Cherry ...	17	0	0	Miss P. Cornwell ...	...	1	0
S. F. Ovenden ...	10	6	0	Miss B. Allen ...	...	1	0
Mrs. B. Cooper ...	10	6	0	Miss H. J. Stent ...	...	1	0
H. H. Thomas ...	3	3	0	Miss J. Sharps ...	...	1	0
Mrs. R. M. Morgan ...	2	2	0	Miss E. D. Holyoake ...	...	1	0
Mrs. N. L. Alcock ...	1	1	0	Miss E. F. Kelly ...	...	1	0
Mrs. Sprague ...	1	1	0	Miss C. Scott ...	...	1	0
Miss E. M. Gunnell ...	2	2	0	Miss V. E. Paine ...	...	1	6
Miss Tanner ...	2	6	0	Miss M. M. Armitage ...	...	1	0
Miss Fitch ...	5	0	0	Mrs. B. Hughes ...	...	1	0
Miss N. Wiltshire ...	1	0	0	Miss I. M. Davidson ...	...	10	0
C. H. Middleton ...	5	0	0	T. D. Maitland ...	...	10	0
J. Richardson ...	2	2	0	S. F. Ormsby ...	2	0	0
W. J. Sheat ...	1	1	0	R. Melville ...	...	10	0
Mrs. G. D. Sheat ...	1	1	0	J. Hutchinson ...	...	10	0
J. S. L. Gilmour ...	10	6	0	G. Atkinson ...	...	10	0
Mrs. C. M. Jackson ...	5	0	0	W. B. Turrill ...	1	0	0
J. W. Besant ...	5	0	0	C. E. Hubbard ...	1	0	0
H. K. A. Shaw ...	1	0	0	F. Ballard ...	1	0	0
E. F. Coward ...	2	2	0	W. M. Campbell ...	3	3	0
E. F. Bundy ...	2	6	0	C. P. Raffill ...	2	2	0
J. Troll ...	2	6	0	R. Holder ...	3	0	0
H. Kruger ...	2	6	0	W. S. Sharp ...	10	0	0
P. Clarke ...	2	6	0	Mrs. E. M. Jensen ...	5	0	0
J. Blowers ...	2	6	0	R. W. Balch ...	5	0	0
E. C. Lyne ...	2	6	0	T. A. Sprague ...	2	2	0
J. Nelson ...	2	6	0	G. A. Catt ...	10	0	0
D. Dawson ...	2	6	0	F. M. Rogers ...	5	0	0
C. Howlett ...	3	3	0	H. Thomas ...	3	3	0
Prof. K. W. Braid ...	1	1	0	Miss L. Joshua ...	1	0	0
F. P. Knight ...	1	1	0	F. G. Mackaness ...	4	17	1
H. J. Davies ...	1	1	0	J. R. Sealy ...	10	6	0
Miss B. M. Tarver ...	5	0	0	Miss S. Ross-Craig ...	10	6	0
Miss M. Lancaster ...	5	0	0	Miss M. Kierans ...	5	0	0
G. G. Cook ...	5	0	0	Miss S. K. White ...	5	0	0
F. N. Howes ...	10	0	0	Mrs. Skan ...	1	0	0
L. Stenning ...	10	0	0	Mrs. Evans (Miss I. Watters)	10	0	0
W. H. Ruck ...	2	6	0	Mrs. McCulloch ...	5	0	0
Miss M. Eady ...	2	6	0	H. S. Marshall ...	5	0	0
Miss M. Speake ...	1	0	0				
Miss N. Shallcross ...	1	0	0				
Miss J. Thompson ...	1	0	0				
				Total ...	£240	13	7

In Memoriam.

FREDERICK JAMES COLE.

By an oversight the death of Mr. F. J. Cole which occurred at Seattle, Washington, in 1938, was not recorded in the *Journal* at the time, but though it occurred so long ago a brief notice of his life is inserted in this Number.

Cole was born at Peterborough in 1879. He was educated privately and served for a time on the estate of Sir J. Blundell Maple at St. Albans. He came to Kew in 1899 and left after two years.

The following details have been supplied by a friend who knew him well. In 1904 Cole was appointed Forester to the first Garden City in England which was then being established at Letchworth. Here he revolutionised the idea of street planting using ornamental trees and fruit trees instead of plane trees and distributing material for hedges such as climbing roses. He held the view that if boys had their fill of unripe apples they were less likely to rob orchards. His avenue of Almond trees in Icknield Way, Letchworth, is famous and has often been illustrated in the national press.

In 1909 Cole went on a lecture tour in Canada and whilst there a new section of Winnipeg was being laid out on Garden City lines and he was retained as adviser on forestry, parks, and street planning. This was followed by a spell of similar work in the U.S.A. Later he became an Estate Architect at Seattle where he built up for himself a big business connection along the Pacific coast.

H.S.M.

WALTER EDWARD COXON.

We regret to record the death of Mr. Walter Edward Coxon on May 8, 1940, at the age of 68. Before coming to Kew in October, 1896, Coxon worked in four private gardens, the most notable being Longford Hall, Derby, the residence of the Hon. H. J. Coke, and Glewstone Court, Ross, Herefordshire, where the Head Gardener was Mr. S. T. Wright, afterwards Superintendent of the Royal Horticultural Society's Garden at Chiswick and later at Wisley.

Leaving Kew in August, 1898, Coxon spent nine years as Outside Foreman at the Manchester Co-operative Society's Fruit Farm, Roden Estate, Wellington, Salop. Moving then to the Worthing district he was successively Manager of The Violet Nurseries, Henfield, and The Isis Nurseries, Broadwater. In 1913 Coxon started business on his own account at Braemar Nurseries, West Worthing, growing chiefly Grapes, Tomatoes and Chrysanthemums.

For several years before his death Coxon was in poor health. His last visit to Kew was in 1933 when he spent, as he said, a delightful day accompanied by Mrs. Coxon "browsing" about the Gardens.

He leaves a widow and two sons.

A.O.

MORLEY THOMAS DAWE, O.B.E., F.L.S., F.R.G.S.

The passing of another of my contemporaries at Kew comes as a shock especially when it brings to a close such a brilliant career as that of Morley Dawe. He died as he would wish, in harness, and all Kewites will join in expressing their deep sympathy with his brother, Captain W. Dawe, of Falmouth.

This notice is far too short to cover the pioneer work and life history of one of the Guild's most travelled members and to describe the many important posts he has filled under the Colonial Office. Guild members will find in the 1925 Journal—when he was President of the Guild—an excellent account of his career by Mr. H. Spooner, which was accompanied by a good photograph. Since then he has held the post of Director of Agriculture, Cyprus; and the even more important one of Director of Agriculture and Fisheries, Palestine, which post he had to relinquish in 1938 owing to ill health. Then, when in England, he contracted pneumonia and was ordered abroad by his doctor. Mr. Dawe chose Cyprus, and soon after war broke out offered his services to the Governor which were accepted and he was appointed Assistant Commissioner of Kyrenia, at which town he passed away on July 14 at the age of 63. He was also a Director of the Agricultural Bank of Cyprus.

During our Kew days he and I were, after spending many interesting times on Mortlake dumps collecting specimens, equal Firsts for the British Botany prize. I well remember Dawe and myself going with "W.W." to see the Director in 1902 when the Uganda Botanic Garden post was to be filled. It was thought that "M.D." was not too keen to go abroad, but he accepted the offer and I was given the next post that came along, some six months later, namely, Superintendent of Gardens, Khartoum, so we two became connecting links in the central African chain of Kewites some 1,600 miles apart. It was a great pleasure to see him walk into my compound quite unexpectedly for Xmas, 1904, after his wonderful trek from Entebbe.

From then onwards he held the posts of Director of Agriculture, Uganda; Agricultural Adviser to the Portuguese Government, first in Mozambique and then in Angola.

In 1914 he proceeded to Brazil in connection with a planting proposition which, however, was abandoned on the outbreak of war. Dawe then accepted the post of Agricultural Adviser to the Colombian Government, making his headquarters in Bogotá. He held this post until 1919. Later he was Commissioner of Lands, Sierra Leone; then to Cyprus and Palestine and he also visited the U.S.A. and other countries.

It was only natural that during all these travels Dawe should send home much herbarium material and discover many new plants which were named after him. His fullest collections were from Uganda, several thousand sheets being received from this country, and another large collection came from Sierra Leone, whilst from Colombia smaller but equally interesting sets were received. As an example of his new species, *Pycnophycus Dawei*, whose bright blue flowers adorn "No. 4" early in the New Year, at once springs to mind. He was a keen botanist and observer during his treks, and wherever

he was stationed his introductions of economic plants from elsewhere proved of great value.

Of a quiet unassuming nature, giving sound advice when requested, he was always the same thorough and enthusiastic worker who "got there" in spite of those obstacles which are only realized by men who have actually been in the tropics.

Morley Dawe was a model to Kewites. The following extracts from letters show in what high esteem he was held. The Governor of Cyprus, Sir Charles Woolley, writes: "He had in many ways a remarkable career in the Colonial Service and a splendid record. I had only known him since I came to Cyprus in 1941, but that was more than long enough to enable me to appreciate his fine qualities and to value his advice and friendship," whilst the Colonial Secretary, Cyprus, adds: "He was taken ill a couple of weeks ago and was admitted to Kyrenia Hospital where he died on July 14 from heart failure following diabetes and nephritis. He was buried in Kyrenia Cemetery. The Governor was represented by his aide-de-camp who laid a wreath on behalf of His Excellency, and numerous other friends paid their last tributes to a well known and respected personality."

In his Presidential speech to the Guild in 1925, after 22 years of experience abroad, he stated that "No education without initial practical training can possibly be efficient, as I have seen many instances in my experience." May Kew, when this war is finished, be ready to fill the many vacant posts that must arise, with such men as Morley Dawe who (as his brother reminds us) always held "that the pukka sahib was not the one who did his job in lofty isolation . . . but he should be a true Ambassador of the Empire who could be approached by all."

F.S.S.

FREDERICK GOLDRING.

One of our oldest members, Mr. Fred Goldring, died at his home, Slingerlands, Albany, New York State on January 11, 1943, at the age of 86.

Fred Goldring was born at West Dean, Chichester, on December 9, 1857. He worked with his father at West Dean Park, Chichester, until he was 16. Then he was employed at Dangstein, Lady Dorothy Neville's private botanic garden, until he came to Kew in April, 1878.

According to the office records Goldring was only at Kew for about nine months. In February, 1879, he left for the United States on the recommendation of Messrs. James Veitch & Sons, Chelsea, to take up a post on the estate of Mr. Erastus Corning at Kenwood, near Albany, New York State.

In 1890 Mr. Goldring started in business as a florist at Slingerlands, near Albany, developing a large wholesale nursery, with extensive ranges of greenhouses, supplying the New York and Albany markets with plants and cut flowers.

He leaves a widow, one son, and seven daughters. The son, Frederick Goldring, Junr., and a daughter, Katherine, are carrying on

the business. His eldest daughter, Dr. Winifred Goldring, the author of the *Handbook of Palaeontology for Beginners* (in two volumes) and many other works, is Head of the Department of Palaeobotany in the State Museum, Albany, New York.

Mr. Goldring was a life member of the Guild. He was four years junior to his brother, Mr. William Goldring,* the well-known landscape gardener, and President of the Guild in 1914.

A.O.

ALBERT HARWOOD.

We regret to announce the death of Mr. A. Harwood, who died after an operation, whilst still in harness at Tottingworth Park Gardens, Heathfield.

Mr. Harwood, who was born at Kingskerswell, S. Devon, has for many years occupied responsible positions as a Head Gardener in good private establishments. In every instance he has been respected and much esteemed as a first-class grower of plants, especially choice fruit under glass.

Harwood came to Kew in March, 1901, and left in January, 1903 : he was a contemporary of Mr. A. Osborn and the late Mr. W. T. Taylor. He was employed in the Temperate and Tropical Departments, a fact which perhaps accounts for his efficiency in growing stove plants in after life. Soon after leaving Kew he went to Netherby Gardens, Cumberland, where he had charge of a large estate covering 300 acres, including gardens, glass houses, lawns and pleasure grounds and had a large staff under him, a fact which speaks much for his ability. He joined the Army during the Great War and served in the Devon Regiment and left the Army holding the rank of Sergeant.

In 1919 he went as Head Gardener to an estate near Rugby, where he stayed for four years and after that to a garden in Llandaff, where he remained until 1927, when, owing to financial stringency, the staff was reduced. He went to his last situation, Tottingworth Park, in 1928, and though there was a change of ownership he remained in charge of the Gardens up to the time of his death. Mr. Harwood was hard-working and conscientious, a loyal friend of Kew and a life member of the Guild.

A.D.C.

GILBERT LIVINGSTONE HOARE.

We regret to record the death of one of our younger Kewites, Mr. G. L. Hoare, on July 16, 1943, at the age of 36.

Gilbert Hoare came to Kew in September, 1928, after a three years' course at Reading University. He was previously employed at Messrs. Bath & Co.'s Nurseries, Wisbech.

He was not very strong, and on leaving Kew in August, 1930, he went home and looked after his father's garden at Westlands, South

* Kewites who are interested in the Goldring family may care to be reminded of Mr. Bean's striking tribute to Mr. William Goldring, which appeared in the *Journal of the Kew Guild* for 1913 (p. 71).

Hill Avenue, Harrow. He made a hobby of bees and became quite a well-known local expert, giving many lectures on beekeeping in the neighbourhood.

Recently Mr. Hoare had lived at Royston Park Road, Hatch End.
A.O.

JOHN FREDERICK JEFFREY.

By the death of John Frederick Jeffrey on March 1, 1943, the Kew Guild has lost one of its oldest members, for he occupied a position on the Kew staff when the Guild was first formed in 1892. Born at Saffron Walden in 1866, Jeffrey came of a family interested in Natural History (his father, William R. Jeffrey, helped Mr. George Stacey Gibson in the preparation of his *Flora of Essex*), and in his early years he became interested in botany. The elder Jeffrey and Mr. John Gilbert Baker, F.R.S., at one period Keeper of the Kew Herbarium, were friends, and when his son was 16 years of age an arrangement was come to whereby he entered the Kew Herbarium as an Attendant.

Jeffrey remained at Kew until 1894, when he was appointed Curator of the Herbarium in the Royal Botanic Gardens, Edinburgh, under the late Professor Bayley Balfour, a position he occupied until failing eyesight necessitated his retirement in 1917. While at Edinburgh he carried out a good deal of work on plants collected on the borders of China and Thibet, and he was a very active Fellow of the Botanical Society of Edinburgh, in fact, he was the Acting Secretary at its meetings for a number of years. It is interesting to note that during his service at Kew he helped, in his spare time, the late Curator, Mr. George Nicholson, in the preparation of his famous *Dictionary of Gardening*. It is as a companion of Nicholson in the Gardens that I have my most distinct recollection of Jeffrey.

Jeffrey had been educated at the Friends School, Sidcot, Somerset, and on his retirement in 1917 he left Edinburgh in order to reside near his old school. The sympathy of the members of the Guild is offered to Mrs. Jeffrey and their son and daughter.
W.D.

C. V. B. MARQUAND.

Mr. Cecil Marquand, whose death occurred on July 1, was attached to the Herbarium staff for 16 years. Owing to the researches which he carried out on several "garden" genera he was probably better known by sight to the Gardens staff than almost any other of the botanists working in the Herbarium. The papers which he published on *Cyananthus*, *Buddleia* and *Gentiana* are of value to botanists as well as to gardeners, whilst his work on *Cotoneaster*, which was as urgently needed by the Curator and his staff and which was equally promising, was unfortunately never published.

The excellent Obituary, written by Dr. T. A. Sprague, which appeared in *Nature* for September 18, 1943, is reproduced below:—

"Cecil Victor Boley Marquand, only son of Ernest David Marquand, author of a *Flora of Guernsey*, was born at Richmond, Surrey, on June 7, 1897. He was educated at Elizabeth College,

Guernsey (1906-10), Lycée Henri IV, Paris (1910-11), Bedford School (1911-13), and Christ's College, Cambridge, where he took his B.A. in 1919, proceeding to M.A. in 1922. During the War of 1914-18 he served in the Machine Gun Corps, and held a commission in the Royal Tank Corps, from which he was invalided out.

"On leaving Cambridge in 1919 Marquand was appointed research assistant in charge of investigations on *Avena* at the newly established Welsh Plant Breeding Station, Aberystwyth, and published a paper on *Varieties of Oats in Cultivation* in the second Cereal Bulletin of the Station. This was undoubtedly a very useful piece of work, and supplied keys for the identification of all the varieties that could be got together at that time. In 1923 Marquand was appointed assistant (a title since changed to botanist) in the Herbarium of the Royal Botanic Gardens, Kew, and at first continued work on the grasses, but was soon placed in charge of the Chinese section of the Herbarium, and wrote numerous papers on the flora of Eastern Asia, including revisions of the campanulaceous genus *Cyananthus* (1924), the Old World species of *Buddleia* (1930), and the gentians of China (1937). He was also interested in the genus *Cotoneaster*, many species of which are cultivated in Great Britain. He had charge of the Bryophyta (mosses and liverworts), a group which he had always found very attractive, but his other official work naturally left but little time for its study. He combined a passion for mountaineering with a great love of wild Nature, and was an enthusiastic field-botanist, many of his happiest days being spent in bryological holidays in the Alps, the Scottish Highlands, and North Wales. His ecological interests were reflected in a paper on the Bryophyta of Arctic-alpine associations in Wales (1922), and he continued to take a keen interest in genetics during his period at Kew, though he published nothing further on the subject.

"Though Marquand was physically very vigorous, his constitution seems to have been permanently affected by his service during the War of 1914-18, and he retired from Kew in 1939 on account of ill-health. He then went to live in the island of Skye, where he was able to devote himself to field-work on the Lower Cryptogams. His tragic death last June on a boating expedition in search of a rare alga came as a great shock to his many friends. Generous, and incapable of a mean action, Marquand was a pleasant companion on a botanizing expedition, which his wide range of interests, not to mention his very decided views, helped to cheer and enliven."

W. S. H. MENZIES.

It was with great regret that the Committee heard of the death of Sergeant W. S. H. Menzies, as the result of an air crash near Skipton on the Yorkshire Moors. "Tom" Menzies, as he was always called, joined the R.A.F. in October, 1939. His first training was as a Wireless Operator and for a considerable time he was engaged on special duties for the Air Ministry. After repeated requests to join an air crew he was

put through a course as a Wireless Mechanic and Air Gunner and his father writes that he would never have been happy if he had not been allowed to be in an air crew.

William Sidney Hugh Menzies was born at Scone in Perthshire in December, 1918. He was educated at Crosby House School, Southall and at the Secondary School, Southall. He was just 18 when he came to Kew and was classed as a Garden Boy. He worked in the Rock Garden, the Orchid Department and in the Arboretum and was always interested in his work. I well remember him coming to me for lectures in Plant Pathology and at once noticed his keenness and intelligence. We had one or two chats about Scotland and especially about his birthplace, the capital of ancient Pictonia and the town from whence the "Stone of Destiny" was taken to Westminster Abbey, and over which the Coronation Chair was placed.

On leaving Kew in January, 1938, Menzies went to the Gardens of Emmanuel College, Cambridge, working under Mr. C. McGregor an old Kewite, where he stayed a year. In a letter Mr. McGregor says: "Tom was very proud of the fact that he had received his early training at Kew and it was always his wish to return there as a Student Gardener. I feel sure he would have made good." From Cambridge he obtained a post in Major Dorrien Smith's gardens at Tresco Abbey, Isles of Scilly, being again under a Kew man, Mr. W. G. Andrews. The latter writes: "He was a very promising young man and of a cheerful, friendly and sociable manner and I deeply regret his loss."

The bomber in which he was flying crashed on June 27, 1943. From a private source we learn that the crew had been ordered to their "crash positions" but that Tom remained at his post and sent two messages through to his station in record time—a fact which perhaps helped to save the lives of some of his comrades. The pilot was killed but he and other members of the crew were taken to Rauceby Hospital, Lincs., where he succumbed to his injuries five days later. He was buried in the R.A.F. Cemetery at Sleaford, Lincs.

A.D.C.

PERCY ARTHUR MEYER.

Mr. Percy A. Meyer, of German parentage, was a British subject born at Exeter in 1879 the son of Mr. F. W. Meyer, Landscape Foreman with Messrs. Robert Veitch & Sons, Exeter.

After leaving school Percy Meyer was employed for a short time with Messrs. Robert Veitch. He then spent five years at a Horticultural College and several nurseries in Germany before coming to Kew in October, 1901. He left to take up an appointment with his father in the firm of Messrs. Robert Veitch in November, 1903. We have been unable to get in touch with Mr. Meyer's relatives but it is known that his house at Exeter was damaged in an air raid and that both he and his wife suffered from severe shock.

The following paragraph appeared in *The Gardeners' Chronicle* for Jan. 16, 1943 :—

“ Well known in the south-west of England as a landscape gardener of some repute, Mr. P. A. Meyer died on December 27 last, at Exeter, at the age of sixty-three, as a result of injuries caused by enemy action some time ago. For a long period Mr. Meyer was in charge of the Landscape Department of Messrs. Robert Veitch and Son, Ltd., but started on his own account about eight years ago. He was well known in horticultural circles, and many fine gardens in the south-west are a memorial to his skill in designing. He was a keen attendant at shows, and was greatly esteemed by a large circle of friends.”

A.O.

JOHN GRAHAM MURRAY, F.L.S.

It was with deep regret that the large circle of friends of John Graham Murray learnt of his sudden death at the Old Manor House, Reepham, on February 11, 1943, in his sixty-fifth year.

J. G. Murray was a native of Kippen, Stirlingshire, his school days being spent in Tulliallan Public School, Kincardine. He started his horticultural career in Fifeshire and then went for some time to Dumbartonshire, and later to the Botanic Garden, Glasgow, coming to the University Botanic Garden, Cambridge, July, 1900, where he stayed till February, 1903, going to Kew and remaining there till August, 1904.

On leaving Kew he went as Lecturer in Horticulture to Durham University (Carlisle Centre), where he remained till July, 1908, when he became Horticultural Instructor, Agricultural Department, Preston, but stayed only for a few months, when at the end of 1908 he was appointed Lecturer for Lincoln County Council (Lindsey). His stay there for over 30 years (interrupted by four years of war work in Mesopotamia) developed enormously the fruit and horticultural activities of the county, where his progressive methods, persuasive enthusiasm, and sterling honesty gained him wide respect, evidence of which was shown at the funeral at Reepham on February 14.

J. G. Murray had taken a keen interest in village affairs at Reepham. He was chairman of the local Hospital Association from its formation, Treasurer of the District Nursing Association, a former chairman of the Parish Council, and chairman of the local Horticultural Association. Another of his activities was in connection with school gardening, and the fact that the Lindsey schools are now able to provide vegetables for over 1,000,000 meals a year in school canteens is largely due to his enthusiasm and advice.

He was a member of the Lincoln Scottish Association and its secretary for some years, being its President in 1938. He was also at one time President of the Horticultural Education Association. He was elected a Fellow of the Linnean Society in 1911. For a number of

years he was an examiner for the National Diploma in Horticulture as well as for the B.Sc. in Horticulture, for London University.

Murray was a droll Scotsman and very interesting and good company. He had a good stock of stories, and some of those he enjoyed telling most were at the expense of his own country. I had known him for over 30 years and had had the pleasure of his company on many occasions. He was plain spoken and fearless, pursuing that course which he conceived to be his duty with unfailing courage.

He was a keen supporter of the Kew Guild and of Kew itself and often remarked how he wished he could spend more time there. He was due to retire when war broke out, but decided to continue his work, looking forward to his retirement when peace came, but it was not to be. He was working to within a few days of his death.

He leaves a widow and daughter to mourn his loss, and we who knew him offer to them our deep sympathy.

F.G.P.
Cambridge.

P. V. OSBORNE.

Just as this *Journal* was going to press news of the death of Mr. P. V. Osborne reached Kew in an airgraph letter which was received from Mr. H. Thomas, General Manager of the Cinchona Plantations, Mungpoo, Bengal.

Philip Valentine Osborne was born in February, 1891. He came to Kew in February, 1912, having previously had experience in a market garden and in a private garden in Essex and also a year in the County Garden in Chelmsford. At Kew he concentrated on indoor work, serving in the Palm House and tropical pits. He left for Calcutta in August, 1913. The letter reads :—

“ You will regret to hear that P. V. Osborne died at Kalimoonj, India, on June 16, 1943. He is buried beside his wife who died in 1937, a blow from which he never really recovered. He leaves a son and daughter in England. Osborne left Kew in 1913 and like most Kewites appointed to India in those days commenced at the Royal Botanic Garden, Calcutta. He saw service in the Great War with the East African Forces, returning in 1917 to take charge of the Government Gardens, Calcutta. In 1918 he was posted to the Bengal Cinchona Department as an Assistant Manager, Government Cinchona Plantation, Munsong, and from there after a year he was back in the Royal Botanic Garden, Calcutta to act as Curator. In 1921 he returned to the Cinchona Department to be Manager Government Cinchona Plantation, Mungpoo, a post he held for 20 years, during which time the acreage of Cinchona was greatly increased.

“ Osborne entertained many Kewites at Mungpoo including the late Director, Sir Arthur Hill, who was in India in 1937. In 1941 a reorganisation of the Cinchona Department made it necessary for Osborne to leave his beloved Mungpoo and take over the sister Plantation at Munsong. In August, 1942, he took long

leave preparatory to retirement. He was destined, however, to enjoy his leave for only a few months, and unfortunately was not able to get to England to see his son and daughter. After his death a friend wrote of him : ' Phil Osborne was one of the kindest and most likeable of men and we have many happy memories of our visits to him and his wife. He was a keen volunteer, good rider, and excelled as a revolver shot. He was a good botanist, had always a fund of information to give on the wild trees, shrubs and flowers gained during a stay of 20 years at Mungpoo, which is one of the most beautiful spots we know. No wonder its surroundings inspired the love of nature in men like Gammie, Pantling and others.' I hope this will be in time for the next *Journal*."

H. THOMAS.

WILLIAM NORMAN SANDS.

Early in 1943 the older members of the Kew staff were startled to learn of the sudden death, after a stroke, of W. N. Sands, who had lived on Richmond Hill for some years after his retirement. The date of death was January 17.

The name of William Norman Sands has been well known to many generations of Kewites from the time he entered the Gardens in 1897. When I came to Kew in 1904 his prowess at cricket was still spoken of, a reputation he maintained for many years in the West Indies where he played with and against first-class teams such as the M.C.C.

Besides his keenness and ability in sport, however, Sands made his mark in his profession. When he left Kew there were few specialists in the Colonies and a Kewite posted abroad had often to turn his hand to many tasks. Sands referred to this in his presidential address at the Kew Guild dinner in 1928 :—

" 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."

Sands was ambidextrous and was able to write equally well with each hand, an accomplishment which proved useful on occasions in dealing with superstitious natives. He told a good story in this connection in his presidential address quoted above, which should be referred to for more details of his career accompanied by an excellent photograph.

During my thirty-nine years at Kew I have met many generations of Kew men. Naturally as in other batches of humanity some have

been very good, some not so good. Sands quite definitely belonged to the former, and we older Kewites who knew him well mourn the loss of an engaging personality.

J.H.

Dr. H. A. Tempany has supplied the following tribute :—

During his tenure of office as Assistant Economic Botanist Sands visited Java in 1925 with the object of studying the Java cinchona industry and a valuable article from his pen on this subject appeared in the *Malayan Agricultural Journal*.

In 1930, on reaching the normal retiring age of 55, he was offered and accepted extension of service with the Malayan Governments to occupy the newly-created post of Principal Agricultural Officer, Kedah, and during the ensuing five years was in charge of agricultural operations in that State. He succeeded in establishing these services on a sound foundation and in particular accomplished notable work in the improvement of the rice industry. He established the Central Rice Breeding Station near Alor Star and a series of test stations throughout the peninsula. He retired finally in 1935 on reaching the age of 60. During the intervening period he had succeeded in establishing a number of new varieties of rice, some of which had already passed into cultivation, the results of his work were seen in the appreciable rise in rice yields in that State and a general improvement all round in rice cultivation.

MISS EVELYN STRAWSON.

Miss Evelyn Strawson, whose death took place in April, 1942, was the daughter of Mr. George F. Strawson, who was head of the well-known horticultural firm of that name in London. She inherited her father's interest in natural science and more especially in plant life. From childhood the study of nature was of great interest to her and as she became older she joined several natural history societies in order to enjoy their country rambles. She studied horticulture under Miss Allen Brown at Henfield and during the latter part of the last war she worked at Kew as a gardener in the Herbaceous Department. On leaving Kew she attended botany classes at King's College, London. She was interested in many other subjects including Zoology, Place Names, Archaeology and Greek History. She was gentle and sympathetic and her kindly nature is much missed by her family.

*Entered
Kew***MUSEUMS.**

Keeper.....	† John Hutchinson, LL.D., F.L.S.....	1904
Botanist	F. N. Howes, D.Sc.....	1926
"	R. Melville, B.Sc., Ph.D.	1934
Preparer	L. J. Harding	1913
Shorthand Typist	Mrs. McCulloch (Miss E. K. C. Thompson)	1936
Assistant (Temporary Technical).....	Miss B. Saunders.....	1943

JODRELL LABORATORY.

Assistant Keeper	C. R. Metcalfe, M.A., Ph.D.....	1930
Botanist (Temporary)	C. Leighton Hare, M.Sc., Ph.D.....	1941
"	Dr. E. Glaznerová	1942
Laboratory Assistant.....	F. R. Richardson.....	1934

THE GARDENS.

Curator	† W. M. Campbell, N.D.H.	1922
Deputy Curator (Arboretum).....	*† Arthur Osborn, A.H.R.H.S.....	1899
Assistant Curators :—		
Temperate Department	*† C. P. Raffill, M.B.E., V.M.H., A.H.R.H.S.	1898
Tropical Department.....	† Lewis Stenning	1925
Decorative Department	† S. A. Pearce.....	1937
Herbaceous Department	†† G. H. Preston	1934
" "	R. Holder (Acting).....	1940
Clerk (Higher Grade).....	† Ernest G. Dunk	1914
Clerical Officer	Miss J. P. Ireland.....	1942
" "	† Miss D. P. F. King.....	1935
" "	W. E. Gray	1942
" "	C. F. Norman	1927
Shorthand Typist	Mrs. D. M. Dimes.....	1943
Sergeant-Constable	G. E. Williams.....	1906
Packer and Storekeeper	† H. W. Ruck.....	1907

ACTING TEMPORARY FOREMEN.

<i>Department</i>	<i>Name</i>	<i>Previous Situation</i>
Palm House	H. Colin	Forestry Commission, Gravetye.
Tropical Pits	H. Zobel.....	Southwood Gardens, Hildenborough, Tonbridge.
Temperate House	E. Avery.....	Les Glaciels, Golfe Juan, A.M., France.
Temperate House Pits	W. H. Parmentier...	Channel Islands.
Herbaceous Dept.	E. F. Bundy	Barrow Court Gardens, Barrow Gurney, near Bristol.
Flower Garden	D. Dawson	R.H.S. Gardens, Wisley.
Ferrieres	E. M. Fletcher	The Gardens, Alexandra Palace.

ACTING TEMPORARY FOREWOMEN.

<i>Department</i>	<i>Name</i>	<i>Previous Situation</i>
Rock Garden	Betty Cooper	Correvon et Fils, Geneva.
Decorative Dept.	Victoria E. Paine ...	Battle, Sussex.
Demonstrator.....	Phyllis Cornwell.....	Newnham College, Cambridge.
Asst. Demonstrator...	Frances A. Sharps...	Sefton Park, Liverpool.

STUDENT GARDENERS.

<i>Name</i>	<i>Entered Kew</i>	<i>Previous Situation</i>
Blowers, John W.....	31 May, 1943	Royal Air Force.
§Blowfield, Arthur H.	28 Dec., 1938	Devonshire House, Roehampton.
§Bourner, Eric H.	24 April, 1939	The Dell, Wheathampstead, Herts.
Brown, Geoffrey B.	19 Jan., 1942	Messrs. Wells & Son, Moordown, Bournemouth.
§Clark, James	28 Dec., 1938	Cambridge Botanic Garden.
Clarke, Philip	2 April, 1942	Glasnevin Bot. Garden, Dublin, Eire.
*§Cook, Gilbert G.....	5 Sept., 1938	Parks Department, Southampton.
§Davies, Philip W. C.....	24 April, 1939	Parks Department, Fleetwood.
§Downs, Denis A.....	27 Mar., 1939	Luton Hoo Gardens, Luton.
§Eaton, Horace J.	4 April, 1938	The Nurseries, Borrowash, Derby.
§Ford, Frank J.	25 Oct., 1937	Parks Department, Margate.
Hack, H. R. B.	25 Jan., 1943	
§Hebden, Francis J.	15 Nov., 1937	Cambridge Botanic Garden.
§Hollis, David C.....	9 May, 1938	Llandaff, Cardiff.
§James, Kenneth H.	15 Mar., 1939	Messrs. Aish & Son, Dunstable, Beds.
§Joy, George S.	27 June, 1938	Hillside, Llandaff, Cardiff.
Kruger, Harry J.	22 Mar., 1943	Parks Department, Cardiff.
Lyne, Eustace C.....	6 Sept., 1943	
§Mackenzie, Dugald Carr ...	27 Feb., 1939	Wellington Botanic Gardens, New Zealand.
§Mason, Maurice	16 May, 1938	Rotherfield, Chesham Bois, Bucks.
§McElroy, Leonard F.....	30 May, 1939	Knap Hill Nursery, Woking.
§Middleton, James	20 Mar., 1939	Parks Department, Dudley.
*Nelson, John	1 Dec., 1941	Parks Department, Manchester.
§Norris, John L.	23 Aug., 1937	Royal Hospital Gardens, Chelsea.
§Puddle, Charles E.....	24 July, 1939	Parks Department, Manchester.
§Redman, James.....	13 Mar., 1939	John Innes Hort. Institute, Merton, S.W.19.
Sivvyer, G.	30 Aug., 1943	
§Slade, Walter J.....	26 June, 1939	The Gardens, Trent Park, Herts.
Souster, John E. S.....	27 Sept., 1943	St. John's School, Tiffield.
*§Stevens, Frederick B.	21 Nov., 1938	Parks Department, Manchester.
§Stott, John W. E.....	30 May, 1938	Tresco Abbey, Scilly Isles.
*Troll, John	1 Aug., 1942	Royston Parks, Barnsley.
Werner, H. F.....	31 Dec., 1940	John Innes Hort. Institute, Merton, S.W.19.
§Will, Alistair G. K.....	4 Sept., 1939	Parks Department, Blackpool.
§Willett, Edward J. S.....	6 Feb., 1939	Messrs. Secrett, Walton-on-Thames.
§Wilmot, Cyril J.....	15 Mar., 1939	Parks Department, Folkestone.

WOMEN GARDENERS.

<i>Name</i>	<i>Entered Kew</i>	<i>Previous Situation</i>
Allen, Beatrice.	19 May, 1943	Swinton Castle, Ripon, Yorks.
Ambrose, Ruth M.....	21 Sept., 1942	Studley College (Student).
Armitage, Mary M.....	22 June, 1942	Waddesdon Gardens.
Boddy, Joan	27 April, 1943	British Museum (Natural History).
Bolton, Innes E.....	26 May, 1942	Drew's Gardens, Knotty Green, Beaconsfield.
Clark, Violet M.....	23 Sept., 1940	Landscape Gardener, The Vale, Broadstairs.
Cowell, Margaret C.	13 Sept., 1943	Swanley College (Student).
Driver, Margaret J.	12 Jan., 1942	The Knoll, Amberley, Glos.
*Eady, Molly C.	10 May, 1943	Compton Place, Eastbourne, Sussex.
Evans, C. Grainger.....	13 July, 1942	British Broadcasting Corporation, London.
Gibbs, Iris P.	8 Nov., 1943	Borah Flower Farm, Lamorna, Penzance.

<i>Name</i>	<i>Entered Kew</i>	<i>Previous Situation</i>
Holyoake, Elaine D.....	29 June, 1942	Kneesworth Hall, Royston.
Howe, Olga.....	18 Oct., 1943	Reading University (Student).
Hughes, Bridget E. W. ...	15 Feb., 1943	
Kelly, Eileen Fergusson ...	26 Aug., 1940	Botanic Gardens, Glasnevin, Dublin.
Palmer, V. Keppel.....	23 Jan., 1943	
Pedgrift, Jessie F.....	23 Sept., 1940	Landscape Gardener, The Vale, Broadstairs.
Sanders, Irene	23 Aug., 1943	The Priory, Orpington, Kent.
Scott, Caroline.....	9 Feb., 1942	Eltham Hall, Kent.
Shallcross, Netta	10 Mar., 1941	Shawlands, Lingfield, Surrey.
Sharps, Jean E.....	8 Mar., 1941	Women's Land Army, Lancaster.
Singer, Frances	29 Nov., 1943	Bucks W.A.E.C., Aylesbury, Bucks.
Speake, Myrtle V.	16 Dec., 1940	St. John's Nurseries, Polegate.
Stent, Helen J.....	29 Sept., 1941	Tresco Abbey, Isles of Scilly.
Thompson, Jean M.	17 Feb., 1941	Quarry Wood, Burghclere, Newbury, Berks.
Watts, Brenda C.	1 Oct., 1940	Bidston, Denham, Bucks.

TEMPORARY GARDENERS.

<i>Name</i>	<i>Entered Kew</i>	<i>Previous Situation</i>
Body, H.....	19 July, 1943	Stuart Lowe Co., Enfield.
*Brien, S.	18 May, 1942	New Lodge, Hanbury, Staffs.
Burrill, F. J.	28 June, 1943	Parks Department, Southend-on-Sea.
Coutinho, S.	5 April, 1941	Hamburg Botanic Garden.
Francis, A. W.	14 Feb., 1939	Slinfold Market Gardens, nr. Horsham, Sussex.
Friis, O.	4 May, 1942	Denmark.
Hill, R.	12 June, 1943	The Coppins, Iver, Bucks.
Mullins, W.....	28 Sept., 1942	The Gardens, Pains Hill.
Pawsey, S. J.	28 May, 1940	Norbury Gardens, Ashbourne, Derbyshire.
Williams, G. R.	21 Dec., 1943	Parks Department, Southwark, S.E.

IMPROVER GARDENERS AND BOYS.

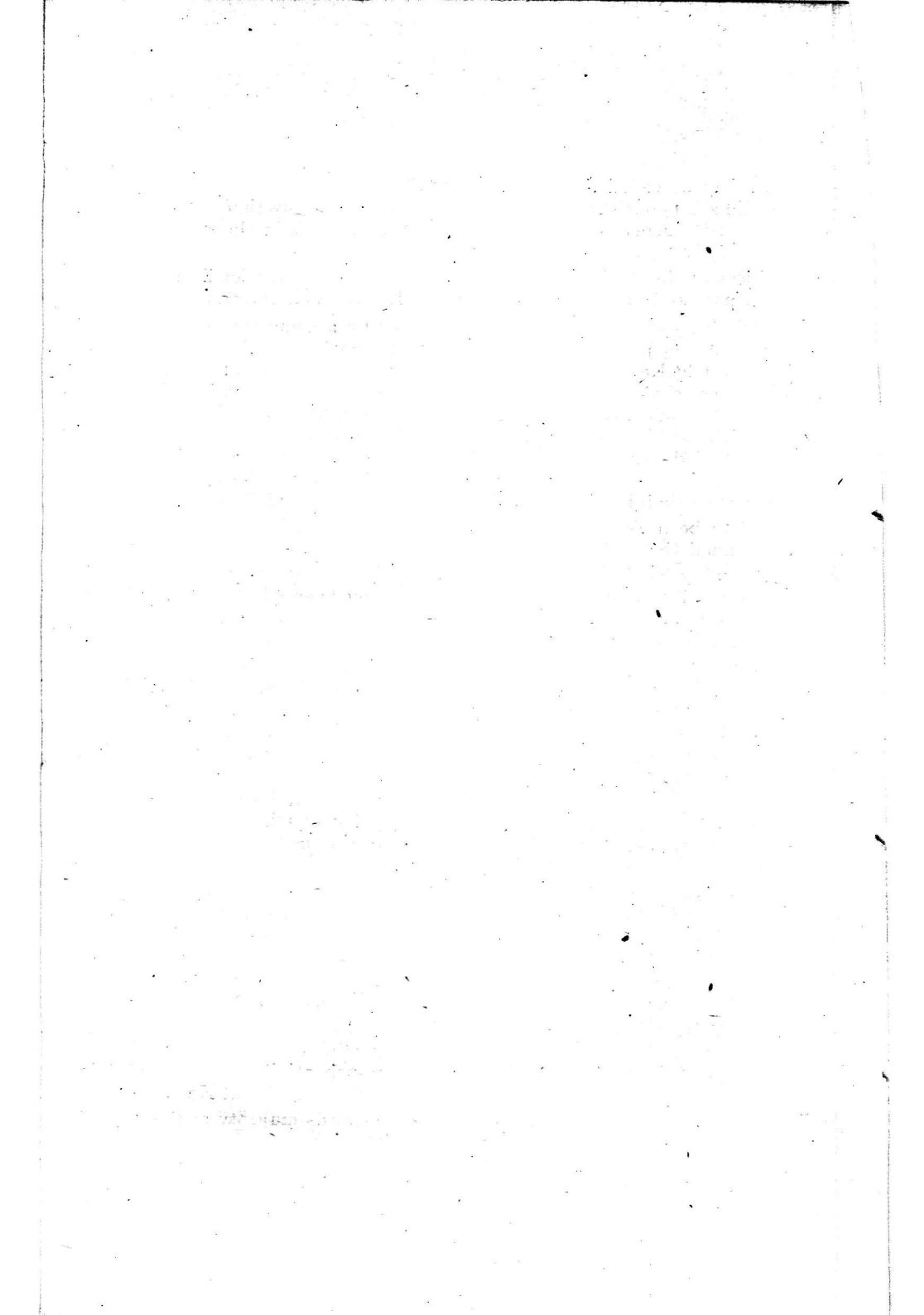
Andrews, R.	Hinton, K.
Benton, H. E.	Howells, D. A. W.
Brown, D.	Parker, R. J. E.
Brown, R. M.	Peck, R.
Clark, D. C.	Pymont, E. W.
Cox, T.	Rowat, J. M.
Funcke, C.	Thomas, J.

ADDRESS LIST OF OLD KEWITES.

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

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

<i>Name.</i>	<i>Left Kew.</i>	<i>Present Position and Address.</i>
Abbing, J.....	Nov. 1936 ...	Beauweu Park, P.B., Grahamstown, S. Africa.
*Abbot, James M.....	Sept. 1898 ...	Guinness Farm, Hoebridge, Old Woking, Surrey.
*Adamson, John	July 1909 ...	N., Dunreggan, Moniaive, Dumfries-shire.
Addison, G. H.	May 1938 ...	Prisoner of War.





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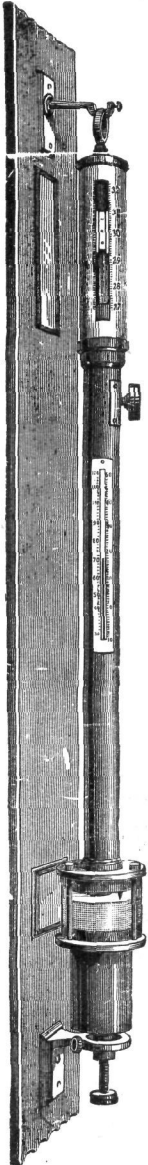


THERMOMETERS.

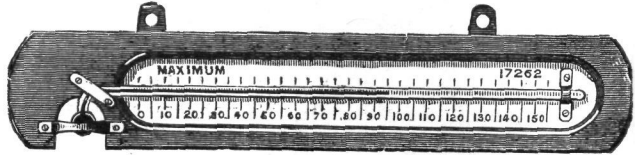
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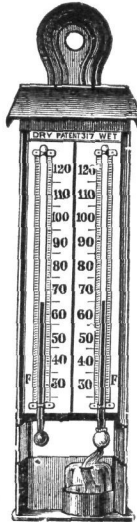
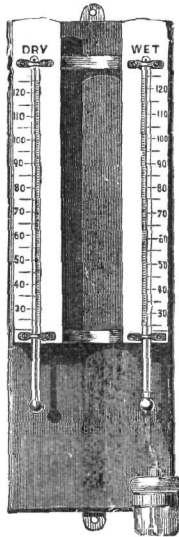


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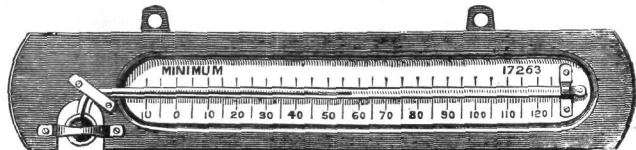
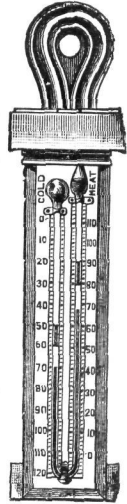
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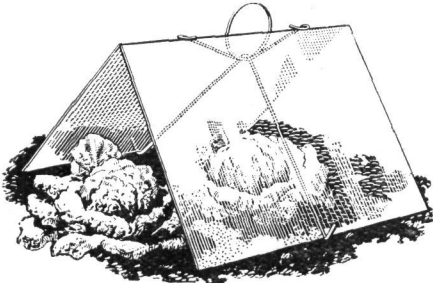
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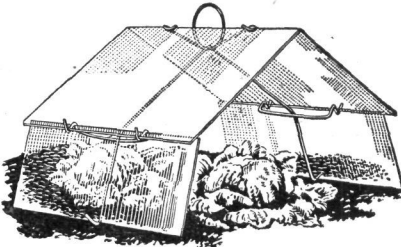
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