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CONTENTS

EDITORIAL — PLANT QUARANTINE, WHY?	289
JACK-IN-THE-PULPIT (Douglas Elliott)	290
THE BANKS LECTURE, 1968 — 'IF SIR JOSEPH BANKS RETURNED'—F. P. Knight, V.M.H., F.L.S., A.H.R.I.H. (N.Z.)	292
TWO JOVELLANA — Mrs. M. Morgan	304
NEW ZEALAND FLORA — SOME PECULIAR CHARAC- TERISTICS [An Address by Mr. A. Farnell, F.R.I.H. (N.Z.)] — Harry George	306
HORTICULTURAL TOWN & AROUND, CHRISTCHURCH, 'THE STORM'—L. J. Metcalf, N.D.H.(N.Z.)	313
WELLINGTON WELCOMES DELEGATES	315
R.N.Z.I.H. CONFERENCE PROCEEDINGS	318
REPORT OF THE EXAMINING BOARD	323
1967 EXAMINATIONS	326
LETTERS TO THE EDITOR	327
DISTRICT COUNCIL REPORTS	329



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NEW ZEALAND PLANTS AND GARDENS

The Official Journal of the Royal New
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Volume VII

JUNE 1968

No. 7

EDITORIAL

PLANT QUARANTINE, WHY?

The recent foot and mouth disease scare in Northland lends emphasis to the words of the Hon. B. E. Tallboys at the Annual Conference of the Institute last March and brings to the forefront the necessity for the quarantine restrictions imposed on livestock and plants (including propagating material) entering this country.

This time it was but a scare, next time it may be the real thing. Certainly we have quite a variety of stock and plant diseases and pests in this country but they are few in relation to those in the outside world. It is cold comfort to reflect if we had been more vigilant in the past we would have had practically no plant infestations in this fair land. Fortunately we are free of the very worst and, in common with our Australian neighbours, we have to thank our insular position which enables us to channel sea and air traffic through a few points of entry.

Probably we are even better off than our neighbours for New South Wales has the dreaded Mediterranean Fruit Fly and every Inter State traveller soon becomes aware of the fruit fly inspection barriers set up on state boundaries. What has this pest cost N.S.W. in inter state trade over the years? Within N.Z. there are minor restrictions, such as not being allowed to send citrus trees into the Auckland Province or grafted vines to the South Island.

The speed of air travel and the ever increasing trade and tourism is rapidly diminishing the protective value of the natural barriers to the importation of pests and diseases. Our artificial barriers, the inspection and quarantine procedures, are not rigorous compared to world standards, though we may find them irksome, and they must be complied with fully if we are to keep N.Z. free of further pests and diseases. They have one real weakness, the human element. They rely mainly on our honesty and integrity, our willingness to suffer minor frustrations and inconveniences for the ultimate good of all New Zealanders.

Unfortunately to err is human and the Minister gave some glaring examples of the lengths some returning travellers and others will go to

in an endeavour to evade the quarantine regulations. No inspection system is completely infallible and we have all heard of cases where someone has beaten the inspectors. One lady declared her wood roses and other floral requisites which had to be sent for fumigation and unconcernedly passed through the inspection unaware of the frangipani bloom in her lapel.

If N.Z. is to be kept free of more pests and diseases it is up to you and everyone else to observe the regulations and to deprecate the actions of those who breach them. Tacit acceptance of such actions will only bring the quarantine laws into contempt and plant pests and diseases into N.Z.

These rules and regulations are not a display of officialdom; they are not designed to frustrate well meaning travellers and horticulturists, nor are they part of a game. They are there for your benefit and protection, to keep our plants and gardens free of pests and diseases that are the bane of horticulturists elsewhere. Which do *you* want?

John Gover.

JACK-IN-THE-PULPIT

DOUGLAS ELLIOTT, NEW PLYMOUTH

Jack-in-the-Pulpit is a hardy American plant that grows well in moist shady borders.

Known to botanists as *Arisaema triphyllum*, it is a member of the arum family and has the typical tuberous root. The handsome three-piece leaves are carried on 12-inch stems and each heart-shaped leaflet is about 8 inches long.

The flowers, which open in September here in New Plymouth, are strange and interesting. They are like other arums but the top or spathe arches over to form the "pulpit" under which stands "Jack", the spadix.

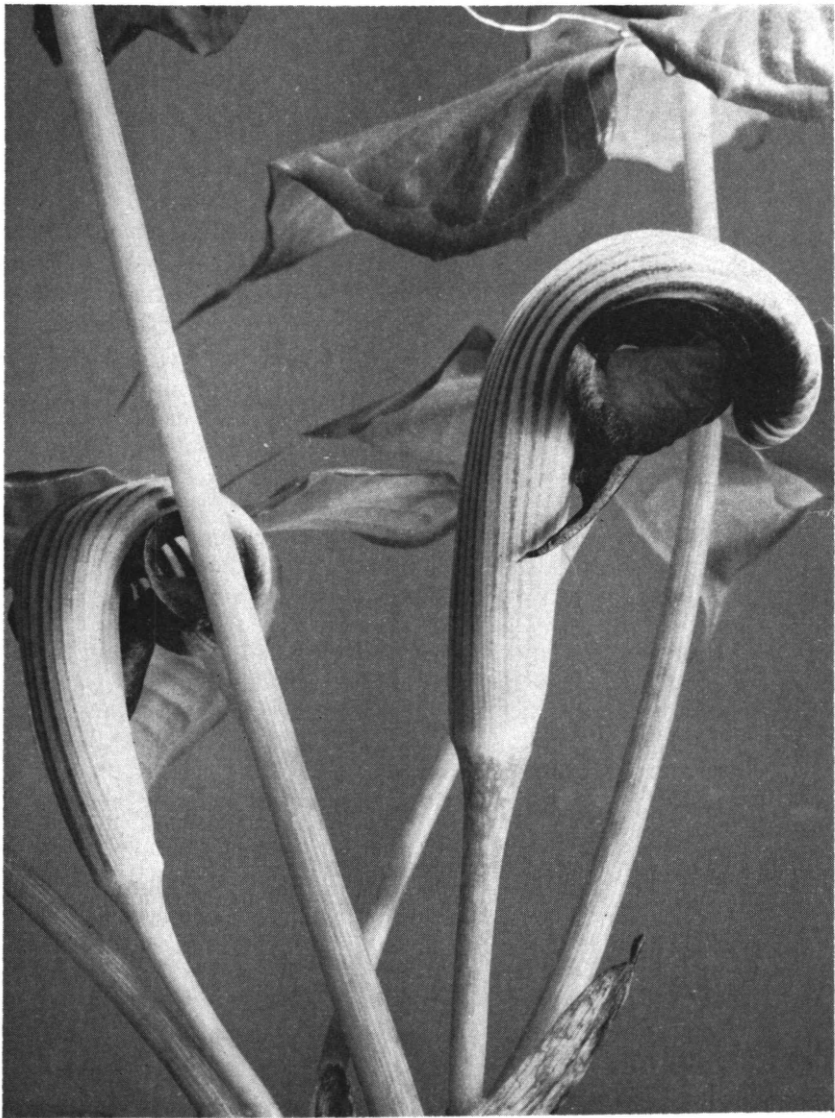
The colour is unusual, pale green with dark purple around the edge of the spathe and in stripes inside. The stripes show faintly through the top of the spathe.

I have read that the flowers may be followed by showy red berries, but our plants have never borne any.

If you grow Jack-in-the-Pulpit in moist shade the leaves last into autumn but in an exposed place they die down in early summer.

The tuber, which has a bitter taste, used to be a folk medicine but I can't find any word about the troubles it cured. Parts of the plant also cause violent irritation when chewed; this causes the mouth to swell.

Though this arum looks tender it is in fact very hardy, and grows in the woods in North America.



Arisaema triphyllum

(Photograph—Douglas Elliott)

THE BANKS LECTURE 1968**"IF SIR JOSEPH BANKS RETURNED"**

*By F. P. KNIGHT, V.M.H., F.L.S., A.H.R.I.H.(N.Z.)
Director of R.H.S. Garden, Wisley, England*

Above the fireplace in the Council Chamber at the Royal Horticultural Society's headquarters in Vincent Square, London, is a portrait of Sir Joseph Banks painted by Thomas Phillips, R.A. Sir Joseph was in his seventy-seventh year when this was painted but nevertheless his expression reveals that enquiring mind which had characterised his very full life, and his eyes follow you wherever you move about in the room.

The Council Chamber measures 36ft x 24ft and is mainly occupied by two large tables, one at which members of the Council conduct the affairs of the Society, and the other at which they take their luncheon and entertain their guests.

It has been my great privilege to attend meetings of the Council for thirteen years, and I invariably sit near the Secretary at the south-east corner of the room within about ten feet of Sir Joseph's portrait. Now, throughout my life I have always been very sensitive and responsive to atmosphere. I feel things happening around me, and long before I had any inkling that one day I would be honoured by the Royal New Zealand Institute of Horticulture by being invited to visit this lovely country and deliver the Banks Lecture I found myself almost believing that Sir Joseph appeared to be watching the Council meetings, and listening intently to the many lively, constructive discussions which take place.

It is this atmosphere which I hope you will capture and share with me in the next hour, so that in your imagination you can come with me to see what Sir Joseph would perhaps do and say if indeed he could come back and take part once again in horticultural and botanical activities.

It should be remembered that not only did Sir Joseph accompany Captain Cook on that eventful voyage of the "Endeavour" when they landed in New Zealand in 1769, but also that he was one of the seven men who founded what in due course was to become the Royal Horticultural Society.

It was on March 7th, 1804, that the seven met at Mr Hatchard's house in Piccadilly and laid the foundation of the greatest horticultural society in the world. Mr A. Simmonds—who until a few years ago was the Secretary of the R.H.S.—states in "The History of the Royal Horticultural Society" in the 150th Anniversary issue of the R.H.S.

Journal for October 1954 that "the most outstanding man of the seven was Sir Joseph Banks".

It will be recalled that Sir Joseph also had a great deal to do with the early days at Kew. He was a close friend and adviser to King George III on matters connected with what up to the time of the death of his mother, Princess Augusta, were two gardens, but were united during his reign.

I spent over six years at Kew and my first longing to visit New Zealand was inspired through being shown by James McPherson in his lodgings one evening numerous photographs of many of your native plants growing in their natural habitats.

In addition to my links with Kew and the R.H.S. I have the good fortune to serve on the Management Committee of the Chelsea Physic Garden. I do hope that any of you who visit London will make a point of seeing this beautifully kept garden—which dates from about 1676—and its wealth of both rare and popular plants. On January 3rd this year I had the thrill of being taken around again by the Curator, Mr W. G. MacKenzie, when he pointed out some of the features which link Sir Joseph with that garden. I saw the very old specimen of *Koelreuteria paniculata*, a member of the family Sapindaceae from China and Japan, which was there in Sir Joseph's time.

I also saw a fine specimen growing against a wall of your Kowhai (*Sophora tetraptera*) which is a direct descendant from the plant originally introduced to England by Sir Joseph and which was planted by William Forsyth in 1774. It was from the original plant that material was obtained for the illustration in the Botanical Magazine, Plate 167, dated September 1st, 1791. A note on the flowering of the original plant was contained in an article by Alison Drummond in the Auckland Herald in October 1959.

I saw, too, the small rock garden built partly of the lava which Sir Joseph had brought back from Iceland in 1772. We talked of Sir Joseph as a boy living just outside the garden wall and pictured him coming through the gateway in Swan Walk to gain instruction in many facets of horticulture and botany by his tutor, Philip Miller, the Head Gardener.

On January 5th I visited Heston Church where Sir Joseph is buried and although no trace of his grave remains I saw the commemorative plaque on the north wall inside the church.

I have looked at several of the original herbarium specimens of New Zealand plants in the Natural History Museum at South Kensington which were collected by Sir Joseph on his visit with Captain Cook. Among these were *Leptospermum scoparium*, *Knightia excelsa*, *Sophora*

tetraptera and *Phormium tenax*. I also examined some of Sydney Parkinson's drawings.

I have read much of Sir Joseph's life and seldom can there have lived a man with such energy and wisdom, nor one who could have accomplished so much in so many fields in one life time.

What I am endeavouring to do is to develop the theme of Sir Joseph coming back now to find out about recent and current events in horticulture and its allied subjects, in so far as these mainly concern the Royal Horticultural Society, the vast programme of work which is entrusted by its Council to the care of numerous committees. These at present number 52 and involve 470 individual people. So many, in fact, that an annual publication entitled "Book of Arrangements" containing some 82 pages is necessary. This book which includes particulars of the procedure to be followed by committees is always to be found at the right hand of everyone concerned with the administration of the Society's work and the interpretation of its policy. I feel that after scrutinising the titles of the various committees and ascertaining their terms of reference Sir Joseph would decide on a list of priorities.

First of all, I am sure he would delve into the activities of the Scientific Committee. This meets thirteen times a year at Vincent Square and twice at Wisley. The present Chairman is Sir George Taylor, the Director of Kew, and at one time Keeper of Botany in the British Museum, where he was responsible for the Banks Herbarium, It would, I think, be partly for this connection as well as his great interest in the Science of Botany and Horticulture that Sir Joseph would give top priority to this Committee.

A copy of the minutes of all the Scientific Committee's meetings at Vincent Square reaches me promptly, in fact, the Secretary of the Committee is normally C. D. Brickell, the Botanist from the Wisley Laboratory. When the Committee meets at Wisley the Secretary of the Society, John Hamer, takes the minutes.

A scrutiny of the minutes since Sir George succeeded the late E. A. Bowles as Chairman soon confirms that Sir Joseph would find no lack of interest. Not only would he find occasional references to plants which were known to be in cultivation during his lifetime, but also to a great number which have been introduced from regions which at that time were unexplored. It is customary for some new plants to be exhibited before appropriate committees at the Fortnightly Flower Shows at Vincent Square, and occasionally it is the decision of such Committees to refer plants of special interest to the Scientific Committee meeting on the same day. There is a thrill in seeing a new species for the first time. I remember the excitement I experienced when Mr James Hunter arrived in London from New Zealand in 1955, bringing with

him young plants of *Tecomanthe speciosa* from your Great Island of the Three Kings Group. This first flowered at Wisley in September 1960, but because it was not possible to remove live material from the plant to take to Vincent Square photographs of this in flower were shown to the Scientific Committee on October 25th and these created great interest. Another lovely new plant to receive attention was *Haemanthus pole-evansii* collected by Dr. I. B. Pole-Evans in Southern Rhodesia in 1962. This first flowered at Wisley in January 1963 and was exhibited before both Committee B and the Scientific Committee at Vincent Square on January 22nd of that year. It subsequently produced good seed from which several plants have been raised and distributed. Many more equally important examples could be listed, and perhaps one activity which Sir Joseph would particularly praise, is that which results not only in introducing new plants of garden merit but also in distributing these as quickly as suitable propagating material becomes available. When the Scientific Committee meets at Wisley, which is usually in April and October, it is not concerned so much with new plants but mainly with inspecting the laboratory and interviewing the scientific members of the staff about their work.

The Botanist may be found identifying numerous specimens of plants which have arrived by the daily post. The Plant Pathologist and Entomologist will be in their departments diagnosing the troubles which are present in the specimens they receive.

It is true that such troubles are the concern mainly of gardeners in the United Kingdom, but at intervals there will be something worthy of accounts being published in the R.H.S. Journal or appropriate scientific publications. These are read by scientists and gardeners residing in other parts of the world and consequently may result in an exchange of relevant information.

As an example, in 1961 it was necessary for the Royal Horticultural Society's Trials Committee to suspend the very important trial of Michaelmas Daisies which had been held annually since 1907, because those in the *Aster nova-belgi* group failed to produce flowers. This failure also resulted in the abandonment of the great borders of these lovely plants which were one of the major autumn attractions in the Savill Garden in Windsor Great Park, and similiar displays in public parks and elsewhere.

The Wisley Scientific Staff set out to investigate the cause of the trouble and at the meeting of the Scientific Committee at Wisley on October 16th, 1967, Keith Harris, the Entomologist, was able to report and demonstrate that this was due to a Tarsonemid Mite (*Steneotarsonemus pallidus* (Banks)). The work has now progressed so far that it has been decided by Council to restart the Trial in 1968. An account

of the investigational work carried out appeared in the R.H.S. Journal for January 1968 and a more scientific note will be published in the March number of "Plant Pathology".

A few years previously Harris's predecessor, Dr. Peterson Becker, helped market gardeners to clear up the ravages of Leek Moth *Acrolepia assectella* (Zeller) in commercial stocks of Leeks. Growers of Norway Spruce (*Picea abies*) for Christmas trees were also helped by the Department in combating a severe infestation of the Spruce Pine-apple Gall Adelgid which caused an unsightly distortion of the branches rendering the trees quite useless for sale in the Christmas market.

Sir Joseph would find for the first time that the Society's Plant Pathologist is a woman, Audrey Brooks, and to her through the daily post and from visitors to the laboratory come thousands of specimens of plant troubles.

The care with which these are diagnosed and the remedies prescribed in language readily understandable by the amateur could not fail to impress. No one is turned empty away and the joy of gardening is sustained for many whose plants are restored to health through the dedication of the Pathology Department.

In a broader field could be pointed out the work undertaken over a number of years in breeding and distributing to British seedsmen seed of *Antirrhinum*s resistant to the rust fungus (*Puccinia antirrhini* (Diet. and Holw.)). Five resistant cultivars bred at Wisley gained the Society's Award of Merit after trial.

Parsnip canker was investigated by the Society's Pathologist at the request of the Agricultural Research Council and one result was the sending to the Department of Agriculture in Adelaide in 1955 seed of three stocks bred at Wisley for experimental purposes there. Selection continued at Wisley and the work was eventually taken over by the National Vegetable Research Station at Wellesbourne and from there the cultivar 'Avonresister' was put on the market.

These few instances of scientific work beneficial to horticulture generally would, I think, reassure Sir Joseph that progress is being maintained and he could turn his attention to the activities of other committees. He would doubtless note in passing that the Scientific Staff include in their activities lecturing on their subjects to the student gardeners in the School of Horticulture.

Next in priority, remembering his own work on plant introduction and the great impetus he gave to this by sending out other plant collectors, would be that of the Society's Expeditions Committee. Here again he would find Sir George Taylor as Chairman and in recent years would discover the emphasis has been in plant collecting expeditions to Iran, Turkey and Afghanistan by Admiral Paul Furze and his wife,

and also by three Wisley Student Gardeners, Mathew, Baker, and Barter, who were awarded the Bowles Memorial Travel Scholarship in 1963. They were accompanied by a fourth (David Pycraft) who paid his own way. The Furze expedition in 1966 resulted in the distribution from Wisley to 155 recipients of 582 packages of bulbs, 2433 packets of seeds and 216 packages of other plant material, some of which has reached New Zealand. In addition copies of the collector's field notes were also prepared and sent. Altogether ten expeditions have been supported by the R.H.S. since 1962.

The Scholarship Committee, also under Sir George Taylor's chairmanship, would rank closely with that dealing with expeditions. The Society's chief scholarship is the Bowles Memorial Travel Scholarship which was established as a memorial to the late E. A. Bowles, V.M.H. (1865-1954). The object of the Scholarship is to enable the holder to travel abroad for either or both of the following purposes:—

- (a) The collection of plants for introduction to British gardens.
- (b) The study of practical horticulture in other countries.

It has been awarded for 1968 to Paul Miles who was a Student Gardener at Wisley from 1964-1966. He is training as a Landscape Architect.

The Worshipful Company of Gardeners, one of the Livery Companies of the City of London, also awards a scholarship and relies for help from the R.H.S. in selecting suitable candidates. Two recent holders were David Sayers, a Kew Student Gardener, who among other activities collected plants in New Guinea, and Graham Carr, a young Scot who travelled and worked in nurseries in Holland, Germany, Denmark, the U.S.A. and Canada. In January this year it was awarded to Stuart Dodson (a Student Gardener who left Wisley in September 1967), to enable him to study Tree Surgery and Arboriculture for two years in the U.S.A.

The work of the Society's Examination Board would be sure to receive close attention from Sir Joseph. His flair for organising and "getting things done" would find a parallel here. The Board meets in the Council Chamber and bears the great responsibility of planning the Society's examination policy. It also appoints the examiners who prepare the question papers. The present chairman is Dr. R. H. Stoughton, at one time Professor of Horticulture in the University of Reading, and among the twenty members who assist him is Prof. J. P. Hudson, who must be known to many of you as an Associate of Honour of the Royal New Zealand Institute of Horticulture. I sat at the Council luncheon table with him on October 31st and November 21st, 1967, when he gave the Masters Memorial Lecture on "the Plant and its Environment".

In 1967 the number of entries for the Society's examinations were:—

General Examination in Horticulture	.....	.....	619
Teachers' Diploma in School Gardening:			
Intermediate Examination	.....	.....	8
Final Examination	.....	.....	3
National Diploma in Horticulture:			
Intermediate Examination	.....	.....	240
Final Examination	.....	.....	91
Honours Examination	.....	.....	2
National Certificate in Horticulture	.....	.....	240

Horticultural Education in England is undergoing changes at the present time, mainly as the result of recommendations made in the Pilkington Report to the Secretary of State. I shall refer to this in a talk I am to give at Christchurch on March 15th in so far as it affects the three courses of training with which I have been concerned at Edinburgh, Kew and Wisley.

The end product of the courses of training and the examinations connected with these are the successful candidates, and a glance through the lists of names and addresses of past student gardeners of the three establishments named will show the important horticultural posts throughout the world which are held by them.

The Library Committee under Sir George Taylor's chairmanship bears a great responsibility. It meets regularly during the afternoons of the Fortnightly Shows and in addition to dealing with matters directly connected with the day-to-day working of the Library, the members are responsible for advising the Council on the purchase of old and new books. Sometimes rare and valuable books come into the market which it is desirable to add to the great collection in the Lindley Library. Sir Joseph would see with much pleasure that on a number of occasions would-be donors of books, copies of which are already in the Society's possession, are advised to offer them to other institutions, particularly to the newer universities. This Committee also cares for the Society's collection of drawings of plants and now and then arranges for an exhibition of these to be exhibited at the Flower Shows as, for example, the late E. A. Bowles's framed drawings of daffodils, anemones and tulips in February 1963.

The Publications Committee would claim a considerable portion of Sir Joseph's attention. The Society's monthly Journal is sent to over

70,000 Fellows and has a wide appeal in its very varied articles. It has taken on a new look this year by appearing for the first time in January with a coloured cover.

The specialist Year Books keep abreast of developments in Rhododendrons and Camellias, Daffodils and Tulips, and Lilies. The Peer Memorial Lecture on *Camellia reticulata* by Col. T. Durrant is contained in the 1968 Rhododendron and Camellia Year Book. The Vegetable Garden Displayed and the Fruit Garden Displayed are in constant demand, while the numerous pamphlets on various important gardening subjects are eagerly sought by numerous amateur gardeners.

The Society's great work in continuing to publish Curtis's Botanical Magazine which was commenced in 1787 when Sir Joseph was 44 years old would above all have pride of place, and the Society's Dictionary of Gardening would, I think, be the second choice.

Sir Joseph Banks was a gardener, he liked to grow plants and he would place high on his list the work of the Wisley Advisory Committee. A scrutiny of the minutes of this Committee for the past ten years would soon show the major matters which are dealt with.

The Committee members, under the chairmanship of the President, visit Wisley five times a year. On each occasion they spend the morning inspecting the Garden and in the afternoon hold a formal meeting based on the Director's report which has been circulated at least a week in advance. The Garden is visited by nearly a quarter of a million visitors yearly and changes are always taking place. I hope that you may have the opportunity of seeing pictures which I have brought to illustrate my talks on "Round the Year at Wisley".

This Committee settles matters of major policy such as important alterations to the Garden and also the broad pattern of administration. Sir Joseph would be impressed by the care with which decisions are taken, and particularly the attention given to running the School of Horticulture. A look at the prospectus and the training in progress, both in the lecture room and in the Garden, would reveal a balanced course of instruction between theory and practice.

Two places are available for suitable overseas student gardeners in each group taking the two-year course, and as half of the thirty-six resident student gardeners leave each year this means there can be four in the Garden at one time. There is play as well as work and New Zealand has not been without worthy representatives in both spheres. Douglas Field who came from Christchurch, and Colin Pugh from Timaru, have left their mark. Douglas was in the winning Wisley team on two occasions in the gruelling eighteen mile relay race between

Wisley and Kew, and gained the important Nicholson Prize as the best all-round student gardener of his course.

A major part of the work at Wisley is that of the trials of flowers and vegetables. This is carried out under the general direction of the Trials Committee which meets once a year in the Council Chamber. Here the recommendations of the Floral and Vegetable Sub-committees are received and passed on to the full Council. The results of the trials prove to be of world-wide interest and many copies of the Society's Proceedings which contain the final reports are sent overseas. An account of "The Flower and Ornamental Plant Trials at Wisley" appears in the Society's Journal for May 1964.

Sir Joseph would find three very busy people striving to get up to date with Trials recording if he looked into the Trials Office on the first floor of the Wisley laboratory. Seeds, plants and bulbs are received from growers from all the temperate countries of the world. As many as 400 entries have been received in one year from overseas for the trials programme. I can recall Iceland Poppies, Lilies, Polyanthus, Delphiniums, carrots and a climbing French Bean from New Zealand, and cauliflowers from Australia. Committees made up of specialists spend much time in judging the resultant plants for the purposes of recommending awards which are submitted to the Council for confirmation. In 1965, 86 meetings of the various Trials Sub-Committees were held at Wisley for the purpose of judging flowers and vegetables entered in the Trials. The total number of stocks which were judged was 3,328.

Another Wisley Committee which would interest Sir Joseph as an administrator is the Housing Committee, as with the growth of the Garden it is necessary to provide accommodation for staff and student gardeners. This would be seen in the shape of good houses for the staff in Wisley Village and the Hostel for student gardeners in the Garden (Aberconway House) which was opened by the Queen Mother in 1954.

A restaurant was also built to provide for the thousands of visitors. These, particularly from the U.S.A. concerned with the development of public gardens, come to Wisley to get information on the ways and means employed to run the Garden and its School of Horticulture.

Work of greatest importance to millions of amateur gardeners is carried out by the Award of Garden Merit Committee. This was formed in 1921 for the purpose of selecting plants considered to be worthy of growing in all gardens. A collection of plants to which the award is given is planted at Wisley. Continuing the theme that Sir Joseph would wish to see the Society's progress in this sphere he would find at the present time a major revision in this Committee's work. In 1965 a new committee was formed and since then seventeen meetings have been

held. The work is unfinished but so far some 1,300 plants have had their names put forward for consideration as follows:—

	Total submitted	Total which received a preliminary award
Trees	130	45
Shrubs	530	153
Bulbous plants	90	17
Perennials	430	70
Alpine/Rock plants	100	39
Water plants	20	5

Each plant to receive the preliminary award has still to be reconsidered and those finally honoured will have to be described in straightforward language which can be readily understood by the amateur. It is expected that the descriptions will be published in one or two illustrated volumes which will take the place of the present publication "Some Good Garden Plants". This has been a standby for several years and can be found ready at hand on the book shelves of many gardeners both in the U.K. and abroad. Those among you who have to deal in your professional lives with plant descriptions will appreciate the great task which faces someone in the near future to complete the work required. This would be a good opportunity to draw Sir Joseph's attention to the Society's new Colour Chart which is now used for all its plant descriptions and is the outcome of twenty-six meetings—some of which lasted all day—of a special committee which commenced work in April, 1963. The Colour Chart consists of a set of four fans with four tints each of 202 colours.

I feel that in New Zealand many plants which have stood the stringent test of the R.H.S. Award of Garden Merit Committee will be grown.

It is clear to anyone reading various accounts of the life of Sir Joseph Banks that he was a man of boundless energy. He liked organising and doing things, and perhaps no committee at Vincent Square would impress him more than the Shows Committee. This performs a tremendous task in dealing with the planning of the Chelsea Flower Show, the Great Autumn Show, and also the Fortnightly Shows at Vincent Square. The latter fall into a well ordered pattern, but to keep up the very high standard expected, certain basic rules have to be followed. At Chelsea the demand for space always exceeds that available and the Committee has to allocate this with utmost fairness. In four days Chelsea can be visited by nearly a quarter of a million people and the importance of this to the exhibitors of gardens, nursery stock, plants from seeds, horticultural sundries, greenhouses, etc., is of great significance when applying for and allocating space.

I spent about 23 years in the leading retail nursery trade and have staged exhibits, large and small, at R.H.S. shows. I never failed to appreciate how much work must be done by the Shows Committee which allows for exhibitors to arrive at the Shows and off-load, sometimes several lorry loads, including heavy plants and cut material in a restricted space with the minimum of fuss. I have been responsible for helping to design and stage major exhibits from Wisley at the Great Continental Shows at Ghent and Hamburg, but so far have resisted the idea that perhaps the plants should be of no more importance than sculpture, or fountains or even "gimmicks". However, I have, I think, progressed beyond the point where it was thought wrong to exhibit roses without a background of black velvet, or that Japanese Maples are essential in a rock garden.

I have little idea at present of New Zealand Flower Shows, but feel that all of you concerned with them will appreciate with what care any show must be planned. There is nothing worse than receiving formal complaints within the stated time allowed for these to be submitted, especially if they are justified and can be traced to some loophole in the show schedule. The Society's publication "The Horticultural Show Hand Book" is generally taken as the standard work for the organisers of the main flower shows in the U.K.

It is time now for me to take a serious look at the remaining programme which I would set for Sir Joseph. He has already seen much but much still remains. At the risk of taxing even his great resilience, I feel he ought to peep in at the Committee rooms in the New Hall at Vincent Square during the ordinary Fortnightly Shows. The committees which meet there so regularly, perform perhaps the backbone of the Society's work which deals directly with plants. There are so many committees that the Secretary has to plan their times of meetings very carefully in order to provide rooms in which they meet without overlapping.

There still remain the following: Floral A, B and C, Fruit and Vegetable, Joint Border Carnation, Joint Perpetual Flowering Carnation, Joint Chrysanthemum, Joint Dahlia, Joint Delphinium, Joint Iris, Joint Narcissus, Joint Rock Garden, Joint Sweet Pea, Lily, Narcissus and Tulip, Orchid, Rhododendron and Camellia, Rock Garden and Alpine.

It must prove encouraging to note the number of Joint Committees and to realise how closely the Society—which Sir Joseph helped to build—co-operates with specialist separate bodies dedicated to the well being of single genera.

One thing most of the committees listed have in common is the judging of the special exhibit at the Shows of the plants they represent.

It is fascinating to watch the knots of judges immersed in their work of appraising the merits of the groups with the assignment of recommending to the full Council the Awards which should be bestowed. Third in value is the Silver Gilt Banksian Medal, and I know from long experience it takes a very fine exhibit to gain this high award. The Banksian Medal in Bronze is generally the premier award in flower shows which are held by affiliated societies. It is offered "to the winner of the largest total amount of money in prizes in the whole of the horticultural classes in the show". The minimum amount, however, must be £10. About 1,200 medals are awarded annually. The Banksian Medal was instigated in 1822 at the time when the country was deploring the loss of Sir Joseph. The account of this, with a list of recipients of the Medal from May 1st, 1820, to May 1st, 1821, is recorded in the Transactions of the Horticultural Society, Vol. IV, 1822.

Following their round of the exhibits each committee meets formally and deals first of all with the awards for groups and then considers each individual plant shown before it. Voting takes place and, according to the result, a plant may gain the First Class Certificate, Award of Merit, or be given a Preliminary Certificate, the latter encourages the exhibitor to show the plant again on another suitable occasion. The awards are published in the Society's Proceedings, which are published twice a year and are in addition to the monthly Journal.

In the short space of about one hour I have crammed in only a part of what goes through my mind. I feel I cannot possibly be the only one whose imagination would take the line which mine has followed were he or she to sit for as many hours as I have done in the past thirteen years in the R.H.S. Council Chamber and feel Sir Joseph looking down and listening. Somehow I am bold enough to think that the man whom we commemorate by this lecture would not be disappointed if he could be brought face to face with one body which is working through its Council and committee members for the benefit of horticulture and the millions who enjoy gardening. I have wondered what he would have made of up to four million people looking at the Gardening Club weekly programme on B.B.C. television.

I am sure, too, that Sir Joseph would be inspired by all that has been done so well in New Zealand by those who have followed his example in collecting from the wealth of its native plants and distributing so generously those worthy of cultivation. The work in producing seeds of grasses which help to make many of our English lawns so perfect, and the distribution far and wide of the lilies, camellias and azaleas you have bred, and your help in feeding us with the wonderful fruit which you grow so skilfully, would be recorded with gratitude.

I would give a great deal to live long enough among you to gain

sufficient knowledge of the development which has taken place in horticulture and botany in your country to be able to draw once again on my imagination and write an account of "If Sir Joseph came back to New Zealand" but perhaps some of you may like to think about this.

To use a radio term, we will now "re-cap" by looking at some slides which will illustrate several of the points I have mentioned.

The address was followed by a series of colour slides that emphasised admirably the theme of Mr Knight's address. Ed.



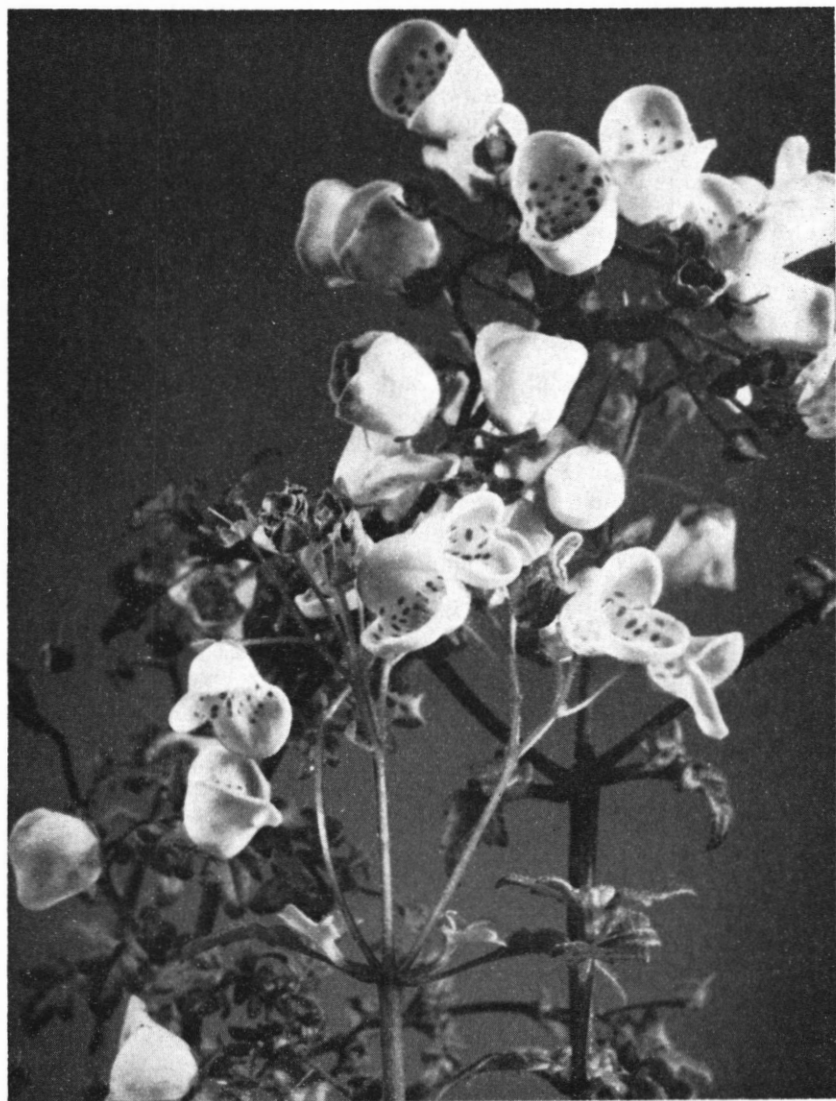
TWO JOVELLANA

MRS M. MORGAN (*Te Kuiti*)

The heat of an early summer day is upon the garden so a browse in the cool shade might be a good idea. Under the leafy branches of the liriodendron or tulip tree we have an up and coming *Rhododendron giganteum*. Some of its leaves are more than eighteen inches in length, so it is a pleasure to pause and turn one over when a shaft of sunlight catches a glint in the silver reverse of this noble leaf. But—at last, the little *Jovellana sinclairii*, roaming at the base of the rhododendron is in flower. I have been awaiting the flowering of this native, but missed seeing the buds, probably because mats of pratia with its abundance of white flowers is also there in full flower. The jovellana, rather reminiscent of a calceolaria, has little hoods of white, spotted inside with purple. It is a member of the Snapdragon family, and likes a cool, moist place, where its stems grow up to a foot in length, and at the time of writing, December, the stems are clothed in flowers. The leaf, about an inch long, is round and toothed.

Around the corner in a sunnier place is its bigger relation, the jovellana from Chile, the flowers are very similar to that of *J. sinclairii*, though the leaf is narrower. It makes a dense shrub, some four feet high, and in November is smothered in flowers. It is then the centre of attraction for visitors, probably because it is not often seen in New Zealand. It seems to be a little frost tender, slow to establish and like its small relation requires plenty of moisture.

The alliance between the flora of South America and New Zealand always provokes curiosity. Was there in ages past a land link between the two—or even a chain of islands. I suppose we will never really know, but whilst enjoying the dainty flowers of my two jovellanas, I find it fascinating to speculate on what might have been.



Jovellana sinclairii

(Photograph—Douglas Elliott)

NEW ZEALAND FLORA
SOME PECULIAR CHARACTERISTICS

AN ADDRESS TO THE NORTH TARANAKI DISTRICT COUNCIL BY
MR A. FARNELL F.R.I.H. (N.Z)

Reported by *HARRY GEORGE*

My address to you tonight is really not just on peculiar or outstanding plants of our flora but the peculiar characteristics of some of those plants. New Zealand has been known as a botanist's paradise ever since Captain Cook brought Banks and Solander here in 1769. They took specimens back to Britain, but eighty per cent of the flora of this country is endemic; it does not grow anywhere else but in New Zealand and they didn't know what they were at all, but, being botanists, when they examined them they could tell to what botanical family they belonged; imagine their amazement to find that where in Britain the staid and stately lily grew only so high here in New Zealand they topped the highest of our forest trees and created those impenetrable thickets you know as supplejack. The supplejack is a lily. We were out today with some children in the Forest and Bird Society and I showed them some mahoe, whiteywood, but would you believe what order that belongs to—the same family as your little violet and pansy. Imagine the amazement of Banks and Solander when they found these botanical specimens. But a botanical paradise is a very different place from a plant collector's paradise. We all know of the famous plant collectors, Farrer, Delavey and Kingdon Ward. My father and Farrer were members of the Paxton Society of Britain when I was a wee youngster and I think it was listening to Farrer when he talked about going to the Alps, Caucasus, and Himalayas and what he found there that probably first started me in horticulture. When I was a boy of twelve I had my own rockery. Farrer had the finest rockery there had ever been in the world but he didn't make it. Nature made it and he planted it. I was most proud of my rockery and the plant I was most proud of you find growing on the roadside here. *Oxalis!*

Now New Zealand was not known for its beautiful flowers because I think you will agree with me immediately that the flowers of our bush are small, uncolourful and inconspicuous, that is excepting the Kowhai which is not perhaps a true native of New Zealand. The Kowhai of Chile, South America, is exactly the same kowhai as we have and they probably came from the same Antarctic continent which existed at some time. They both came from the same source. The others I mention, the pohutukawa and the rata, undoubtedly came from the islands to the north in the Pacific. The rest of our flowers are small, insignificant and uncolourful. Why? Why should they be so? Well

let me try and explain to you that New Zealand has been disconnected from all other land masses, an entity of its own, for something like ninety million years. We have to imagine in the evolution of plant life what stage of development plant life had reached ninety million years ago because our plants have evolved from what was present then. At that stage the wonderful flowers, flowering trees and shrubs had not been evolved. Why did they evolve in other countries and not here? Simply because no flower ever created beauty for you. You have only been here a million years. Those flowers developed those wonderful forms, colours and beauty for their own particular use. What is that? The preservation of the species. In what way? To attract insects, bees and butterflies to pollinate them and thus preserve the species. We in New Zealand were very unfortunate. Just as we had no mammals neither did we have any butterflies nor honey bees—our mason bees are only good for blocking up key-holes. So any plant which did have a mutation or a sport and developed a flower to attract insects had no advantage over its neighbour. In other countries of course, such as Queensland where they have butterflies galore which are attracted by plants, you get beautiful flowers. That is the reason why our flowers are small, inconspicuous, and uncolourful.

Now that is one of the real true characteristics of the flora of this country. Another one I would like to talk about in our plants is juvenile forms. Some of you probably know *Pennantia corymbosa* or Kaikomako. I think that is probably one of the best examples we could use or, perhaps better still, the lancewood—you all know the lancewood. Now I came to this country forty-three years ago and when I saw that lancewood it really intrigued me. You people have seen it all your lives and you ignore it—you don't think much of it but it still interests me and I think it is a wonderful thing.

A good botanist should know something like two thousand plants and have them at his finger tips and not have to refer to a book. The greatest botanist in the world was Hooker. He travelled the world both before and after becoming curator of Kew and now, he had ten thousand species at his finger tips but our New Zealand lancewood fooled him. He gave one name to the juvenile form and a different name to the adult. Who could blame him? He never saw the plant developed from one stage to another. No other country in the world possesses such a high percentage of plants with juvenile forms. Some of them are really amazing. Another group I want to tell you about are the divaricators. My old friend Atkinson used to call them the prevaricators and I think he was right, too. You know what a divaricating shrub is. They have the habit of twisting their branches around one another and sometimes only when they are juvenile and how long

they are going to stop juvenile goodness knows. I was just telling Mr Davies tonight about the *Pittosporum turneri* which Arthur Turner and Cockayne found in 1910 in National Park. They found five adults and eight juveniles. The five adults are dead but the eight juveniles are still there and they are still juveniles. They found them fifty-seven years since and they still have not grown up.

Now there are many more of these peculiar characteristics but the most important one is that we have twenty-six per cent of our flora what we term dioecious; that is they have a separate plant for the male and a separate one for the female. They are not like the pumpkin having the male and female separate flowers but growing on the same plant. These trees and shrubs have a male plant and a female plant. In the rest of the world the percentage is only five but here in New Zealand we have twenty-six.

The rare plants of New Zealand are all away up around the North Cape and on the off-shore islands. Why should they be up there? Now another point that is very interesting—New Zealand has a very meagre total of species of plants; only a little over two thousand species of the higher plants for the whole of New Zealand. Japan has six thousand, Cuba, only three-quarters the size, has seven thousand; New Guinea has probably fifteen thousand and we have only a meagre two thousand. Why? Well now, the ice-age which lasted 800,000 years and finished only 10,000 years ago, took some seventeen or eighteen thousand years to go from the highest to the lowest temperature. What happened? The same thing happened here as happened in the Northern Hemisphere. Just as there was no English Channel in those days so there was no Cook Strait here. Over that long period of years the flora retreated northwards and the alpins came down to sea-level. The trouble was in Europe that the plants were rather handicapped because of the position of the Alps, the Carpathians, the Pyrenees, and the Caucasus, but the flora got around these. What did they do in New Zealand? Once they got up to North Cape all they could do was to do like the Maori does and jump off Cape Reinga.

What we have today is just a remnant of what was possibly a very much higher number of species at one time. We even know that by fossil pollen which is one of the wonderful things we found recently. We can identify plants by the pollen which we find in the swamps and in the bogs. In the bore-hole near Kaponga we find fossil pollen, the only fossil pollen found in New Zealand, that dates back one hundred and forty million years. They can identify a single pollen grain as that of a kahikatea, perhaps not just our kahikatea but practically the same kahikatea as we have today. These plants have perished. Today there is something like one million species of plants in the world,

but all through the ages during the process of evolution nine to ten million have become extinct.

It bears out Darwin's old saying about the survival of the fittest. That is why I showed you that first slide of that little fellow that I take my hat off to, *Phylloglossum drummondii*, because he has survived all those years in spite of all the competition he has had, but if you let any other plants grow near him that's the end of him. That's what happened with the Auckland City Council. They allowed gorse and tea tree to over-run our valuable, unique patch to suppress it. However, a month or two ago we found six plants and by clearing and careful watching we hope to preserve them. This plant is found only in South Australia and New Zealand. Well now as the Ice age advanced the alpine came to sea-level and other plants retreated northward. I told you about that *Dacrydium colensoi*, the silver pine, being found up north where it had no business to be. We have quite a number of other plants up there that have no business there whatsoever. We get the beech, *Nothofagus truncata*, growing north of Auckland. It doesn't regenerate. They are just the last ones that came there—just survivors. All the rest of them have retreated southward and in North Taranaki there are forests of them—that's their home now. And if we watch what's happening in climatic conditions we realise that we have only been here five minutes. I told you the Ice age ceased ten thousand years ago and we do know that climatic conditions are changed tremendously. Holloway told us that there were enormous changes in New Zealand conditions between eight and nine hundred years ago when Southland and Otago, which are now forested with their beech forests, grew magnificent matai forests which needed a much wetter and cooler climate than what they have today. Things are changing all the time. Of those plants which went up north some survived and some disappeared. A few of them which survived are growing on the off-shore islands, particularly the Poor Knights which are a botanist's paradise.

Mr Farnell illustrated the various facets of his talk with some hundred really first class slides, especially close-ups of some of the smaller plants. He had this to say.

Epiphytes: We now turn to epiphytes. You all know what epiphytes are; those plants that grow up in the tops of the trees. But why do they grow up there? You know what the books tell you don't you? The books all say they grow up in the tops of the trees to get the sunlight. Well in recent years we've proved that entirely wrong. The tree that carries most epiphytes of all is the puriri tree, *Vitex lucens*. If you climb up in a puriri tree and take a light meter reading where there's one of those astelias growing and climb down to the ground and go underneath you'll still get the same light reading. You know, of course, that the

puriri tree growing as an individual produces the whole of its leaves on the perimeter of the tree, right round the outside—just a mass of foliage. There's no foliage in the middle of the tree. The light reading then is exactly the same where there are epiphytes growing as it is on the ground. Now first of all you must remember that all these epiphytes grow only in rain forests. You don't find an epiphyte in a beech forest or in a dry forest. They grow only in our rain forest in the tops of all the different trees. Another peculiar thing that we have found out is this. All these epiphytes including the *Senecio kirkii*, including all these astelias and all the epiphytic orchids, grow on the ground instead of in the trees on Rangitoto. Seventy-five per cent of the flora on Rangitoto grows as epiphytes in the Waitakeres. Now why do they grow on the tops of the trees and why do they grow on Rangitoto. Well I'll tell you immediately—just to keep their toes dry. They'd never get wet feet on Rangitoto and that's why they perch in the tops of trees: not to get the sunlight but just to keep their toes dry.

Fuchsia procumbens: The wild species of fuchsia grow only in New Zealand and South America. *Fuchsia procumbens* is the only fuchsia which holds its flowers upright. They also have another peculiar habit. They have three different types of flowers. Here you have a female plant with a magnificent stigma but with abortive stamens that never show any pollen. The next slide will show a male flower with blue pollen and he has an abortive stigma hidden down in the centre. We do get flowers too, which are perfect and complete in every detail. This plant trails along the ground, grows on the sea-coast to the north of Whangarei and is found also down the East coast and around East Cape.

Totara: Now that totara, *Podocarpus totara*, that we saw in flower is the largest totara ever known in New Zealand or anywhere else for totaras grow only in New Zealand. It looks a pretty big tree and I might tell you it is a pretty tall one, too. I couldn't get a photograph of the whole tree. But Tanemahutu, the kauri in Waipoua forest that most of you have seen a chain or two from the roadway, is forty-three feet six inches in circumference. This totara is forty-six feet three inches, that is two feet nine inches bigger than the Tanemahutu. He's got a big fat barrel and I might tell you he, or rather she, is a female.

Golden kawaka: The scarcest tree in the world—what would it be? The scarcest tree in the world I think you would agree, would be a tree of which there had only ever been one known. There has never been any more, no one has ever grown one and there never was one before now. It is the golden kawaka, *Libocedrus plumosa*, fifty-five miles north of Auckland at the Kaipara Flats. Many people have tried to propagate it including J. S. Hunter, V. C. Davies and others, but no



Fuchsia procumbens

(Photograph—D.S.I.R., Lincoln)



Dacrydium laxifolium

(Photograph—D.S.I.R., Lincoln)

one has been able to grow it. The tree is between twenty-five and forty feet high, a magnificent thing, a mutation or natural sport so, of course, it has to be propagated vegetatively.

Dacrydium laxifolium: Did you know that New Zealand has the smallest pine in the world? It is *Dacrydium laxifolium* which grows on the volcanic plateau and also down on the Alps in the South Island. Growing six or eight inches high it might spread a yard across. It is sometimes called the pygmy pine.

Silver pine (Dacrydium colensoi): We do find the Silver Pine or remnants of it with no regeneration whatsoever as far north as Kaikohe. I found a beauty up there a couple of years ago. What was he doing up there when he really regenerates down on the West Coast of the South Island. Well, like several other species of plants at the time of the Ice age, they migrated northward and what we find there are only remnants and they don't regenerate now because climatic conditions are so different.

Rhabdothamnus solandri: This is our famous New Zealand gloxinia. There's only one *Rhabdothamnus* in the world and that's ours and is nowhere else but in New Zealand. Nature does some wonderful things. You won't believe me when I tell you this. I haven't written it up yet but I am pretty certain of my grounds for what I am telling you. The four lower segments of the flower produce a stamen, each with a long filament which follows the centre of the petal, and all the four join together making a pad with four anthers at the end of each stamen. The stamens produce the pollen long before the stigmas are ready to receive it. The pistil there does not appear. It appears underneath the top petal and will project when the pollen has been shed. That's nature's method to ensure cross-pollination. But that's not the wonderful thing. This is it. This tiny flower was evidently evolved to be pollinated by bird or insect, more likely a tiny bird like a humming bird which flew in there to get the nectar, rubbed the pollen off on its chest and under its beak and when that pollen has disappeared that flower turns completely over in a half circle and the old pollen pad appears at the top and the stigma which is now ready for pollen is down below. The bird comes along again with pollen and rubs it on the stigma. Do you think Nature would do a thing like that? Well I can assure you it pretty definitely does.

HORTICULTURAL TOWN AND AROUND—CHRISTCHURCH "THE STORM"

L. J. METCALF, N.D.H. (N.Z.)

Originally it was intended to continue the story of Victoria Park in this issue. However, it was considered that the damage caused to the Botanic Gardens and Hagley Park by last April's storm would be of interest to readers, and also that it should be recorded somewhere, other than in the official files.

The tropical cyclone which hit New Zealand last April and caused such devastation throughout the country is now history, and for many years to come will probably form a topic of conversation. Never in living memory has there been such a storm and its effects on plant life in Christchurch were made worse by the fact that over the three days of the storm, this area had the greatest rainfall ever recorded for such a period.

The total rainfall in various parts of the City, from April 10th-12th, varied from 5.19in to 10.22in, and for Christchurch that is really exceptional. It was probably because the soil was so thoroughly saturated by this rain, that so many trees were loosened in the soil or uprooted. The scene which greeted the staff after the worst of the storm had passed was one of apparent wholesale destruction. Large trees were uprooted, some leaning at precarious angles, others with most of their branches smashed from them, and everywhere an unbelievable litter of debris ranging from small branchlets to large limbs.

In the Botanic Gardens a total of thirty-six trees were either uprooted, or so badly smashed, that they were obviously beyond saving. A further twenty-five were so badly damaged in one way or another that they will have to be removed, and at least twenty-three trees will require fairly extensive tree surgery. However, in spite of this, when one considers the number of trees in the Botanic Gardens and the nature of the plantings, it will be seen that the damage could have been very much worse. We really escaped quite lightly. Even now with much of the Gardens area fairly tidy again, there is little easily visible evidence of the storm in some areas. Practically nothing in the way of valuable specimens were lost, and most of the trees which have been lost can be replaced without any great trouble. It may take a year or two to replace some, but nonetheless they can be replaced. Looking on the brighter side, a few extra planting spaces have been provided and this winter we will be able to do some rather more extensive planting than usual.

There was no pattern to the storm and some unpredictable things happened. Trees which could have been expected to blow over are

still standing while others which were considered particularly strong were uprooted or smashed. Most of the Lombardy poplars in the Botanic Gardens are of one age, and consequently all are showing similar signs of deterioration. However, with the exception of four which blew down they all withstood the gales with very little damage. One of a group of three poplars, all of which were uprooted, crashed down on to the recently constructed Kiosk Bridge. Although the hand-rails were badly damaged the rest of the bridge was unharmed. An adjacent telephone booth was smashed to matchwood. Two Post and Telegraph workmen had a narrow escape when the second poplar of the group came down in the same place only a few minutes after they had finished removing the telephone. There were quite a number of freak gusts and I did observe that often the gusts of wind appeared to come in rather narrow channels. This occurred while watching one tree which was about to fall. A gust would come roaring through without touching the tree. A second one would come along and rock the tree violently without touching an adjacent tree.

The forty-eight-year-old kauri planted by the Prince of Wales on the Archery Lawn was probably on the point of being uprooted, but fortunately the storm lost strength. It has a slight lean and will have to be pulled upright and stayed with guy wires. The specimen of *Arbutus menziesii*, which is acknowledged to be the finest in cultivation anywhere, has been supported inside with wire cables for many years. During the storm one cable frayed through where it bent around the ring-bolt, but once again luck was with us and the tree suffered no damage.

One of the worst losses was the specimen of *Pinus patula* which was uprooted, even though it was growing in a sheltered situation. While it is not a rare tree this one was a very handsome specimen and much admired. Its loss will be regretted by many. An eighty feet high *Pinus torreyana* was also uprooted and in falling damaged two or three smaller trees. Of the numerous specimens of *P. pinaster* in the Gardens only six came down, or were badly damaged. Mostly they are 80-100 feet in height, but I think that their long flexible trunks which were able to bend with the wind, saved most of them from damage.

The extensive range of show houses suffered no damage whatsoever, and even in the propagating department damage was fairly light. Some panes of glass were blown out and one or two ventilators torn off, but this was attributable to the age of the houses as much as anything. Even a new all-metal house (the first in a reconstruction programme) built last year, lost a few panes of glass. The force of the wind caused the metalwork to ripple and a run of glass across the house popped out.

Compared with the Botanic Gardens, Hagley Park suffered very little damage. Only about thirty-five trees being lost. Most of them were oak trees (*Quercus robur*), the remainder being elm (*Ulmus procera*), weeping willow (*Salix babylonica* and *S. alba* 'Tristis') and lime (*Tilia europaea*). Of all the trees in the Park, the oaks suffered the most. Branches were smashed or torn off everywhere and made the damage look much worse than it was.

In other parts of the City there was similar devastation, and some of the worst damage was around the miles of riverbanks. Dozens of willows were uprooted or smashed, many falling into the rivers and causing minor flooding problems.

The immediate cleaning up is being done fairly quickly, but there will be months of work ahead. Standing trees still have to be felled, and innumerable branch stumps need removing. In addition there is a considerable amount of tree surgery to be done, but it is doubtful whether all of this will ever be done.



WELLINGTON WELCOMES DELEGATES

Wellington as the host city really opened its arms to the delegates to the R.N.Z.I.H. Annual Conference on March 7th and 8th. Under the principle of rotating the Conference venues it is only every few years that a Conference is held at the headquarters city of the Institute and on this occasion the members of the local District Council in association with other horticultural bodies really turned on the hospitality. The writer wishes to place on record his thanks to the citizens of Wellington for the warmth of their welcome and is sure that he is speaking for every other visitor to the Conference in so doing.

In association with other horticultural bodies and various specialist societies and the Wellington and Lower Hutt City Councils Reserves Departments advantage was taken of the occasion to hold a Floral Festival and Wellington was appropriately be-flowered for the occasion. The high point was the Wellington Town Hall and the main hall in which a Floral Exhibition was held was a veritable sea of flower and foliage. Appropriate decorations were placed in the various foyers, vestibules and on the stairways whilst the stage of the Concert Chamber, the venue for the Conference was lavishly decorated. Masses of begonias and other tropical flowers and foliage were used at these strategic points and also behind the stage of the main hall as a vast frontal to the Town Hall organ. The balustrades of the balconies were

similarly treated and the stage itself was the scene of numerous pedestal arrangements created by members of the Floral Art Society of N.Z. An inclined catwalk led to the stage and it, too, was enhanced by the use of banked begonias and coleus. The ground floor of the hall was occupied by the many breathtaking exhibits by the various horticultural and specialist bodies of the Wellington and Lower Hutt areas and the general overall effect compared more than favourably with similar exhibitions held in other parts of N.Z. from time to time.

The Conference was opened by the Minister of Agriculture, the Hon. B. E. Tallboys, who traversed a wide field in his remarks on the place of horticulture in the economy and in the lives of the people. He most certainly impressed on his interested audience the importance of the quarantine regulations in keeping New Zealand free of disastrous horticultural pests and diseases. Sir Francis Kitts, the Mayor of Wellington, in welcoming the delegates and other visitors stressed the necessity of forest cover on the watersheds to the waterworks of Wellington City.

On the completion of the morning's formal business, Mr R. H. Mole, Curator of the Otari Native Plant Museum, gave a most interesting address titled, "A Horticultural Analysis of N.Z. Plants". This is one of the most outstanding addresses your reporter has ever heard and surely Mr Mole is in line for the Banks Lecture in the not far distant future and for other important occasions, too. His talk was well illustrated by fine slides and instead of presenting them in the usual manner he would speak on his subject for several minutes and then recapitulate with a series of appropriate slides. This prevented the subject matter becoming subsidiary to the slides, fine as they were, and may be commended to other speakers. It of course requires the closest of liaison between speaker and projectionist.

Upon the completion of the formal business of the Conference in the afternoon members attended a Mayoral reception at which representatives of the various horticultural bodies contributing to the success of the Floral Festival were also present. Many old friendships were re-invigorated and many new ones were made at this reception to which those present did full justice to the hospitality.

The climax of the Conference was reached in the evening when our Guest Speaker, Mr F. P. Knight, V.M.H., F.L.S., A.H.R.I.H. (N.Z.), Director of the R. H. S. Gardens, Wisley, delivered the 1968 Banks Lecture, "If Sir Joseph Banks Returned". This fine lecture is reported in full in this issue but we cannot show you the wonderful sequence of slides shown at the end of the address which lent emphasis to his remarks. Mr Knight appropriately stressed the part played by and the value to the establishments at Edinburgh, Kew and Wisley of many New Zealand plants and showed them in their unaccustomed environ-

ments. It is not inappropriate to mention that it is just on two hundred years ago that Sir Joseph first visited New Zealand, and that from the window where this is typed may be seen the Port Hills, Christchurch, the northern fringe of Banks Peninsula.

The next day was given to less serious business and two bus loads of members assembled at the Town Hall to be conducted on a tour of Wellington. To those whose impressions of Wellington have been gathered on passing through this was a revelation; first to Mt. Victoria where even the haze and scotch mist could not dim the magnificence of Wellington's hills, harbours and coastline. Then a trip around the harbour coastline through Miramar, Worser Bay and past the notorious Barretts Reef and the Heads and back through Lyall Bay. A visit was paid to the Zoo and then we passed Central Park on the way to a fine repast in the Wellington Bowling Club's pavilion overlooking Port Nicholson.

After lunch a short visit was paid to the Botanic Gardens and to the neighbouring Lady Norwood Rose Garden and Glasshouses. Next after a meandering drive through tree clad hills we stopped at the Otari Native Plant Museum where time was all too short for this must be regarded as the highlight of the outing. There is little doubt that many of the visitors on their next call at Wellington will make Otari a "must" so they may study its contents at their leisure. Our final call was at the home of Mr John Living, our Dominion President, to satisfy our not inconsiderable appetites with fare fully worthy of the occasion.

Thence back to our hotels and terminals with that feeling of satisfaction that comes from a day well spent. We thank you Wellington and will try to entertain you equally well when you next come to Canterbury. Little did we realise as we sailed down harbour on the proud and well appointed ship "Wahine" that her days were indeed closely numbered.

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ROYAL NEW ZEALAND INSTITUTE OF HORTICULTURE (INC.)

Proceedings of the Forty-fifth Annual Meeting and Conference of Delegates held in Wellington on 7th March, 1968, commencing at 9 a.m.

Present:

Mr J. F. Living, Dominion President, presided over the Conference which was very well attended by delegates, members and representatives of affiliated organisations.

Apologies for non-attendance were received from several members.

Welcome to delegates and visitors was warmly extended by the Dominion President, especially to the Hon. B. E. Talboys, Minister of Agriculture, His Worship the Mayor of Wellington and Lady Kitts, Mr and Mrs F. P. Knight, guests from England. Mr Living spoke appreciatively of the hospitality shown by the Wellington City Council, the Combined Festival Committee, the Wellington District Council and the Director of Parks (Mr I. D. Galloway). Responding, His Worship the Mayor said it was a notable week for Wellington with the Parks Conference, the Institute's Conference, the magnificent Floral Festival and the visit of Mr and Mrs Knight from England. This was the first occasion that a Director of the R.H.S. Garden at Wisley had visited New Zealand. Sir Francis spoke of the value accruing to the city by the regeneration of native growth on the hills and ranges around Wellington. Where there was previously gorse there is now second growth native bush. Mr Knight expressed great pleasure at being in New Zealand and at the Conference. He expressed appreciation of the honour (Associate of Honour) bestowed upon him recently by the Institute. He felt sure he would be returning to England with a lot of useful material. He conveyed the greetings of the Royal Horticultural Society, Professor J. P. Hudson and Mr J. H. Glazebrook.

Opening:

In expressing his pleasure at being invited to open the Conference, the Minister of Agriculture, Hon. B. E. Talboys, extended the Government's welcome to Mr and Mrs Knight and hoped they would have an enjoyable and fruitful visit. The Minister then went on to give a most interesting address, which will be published in full in the next issue of the Institute's Journal. Mr R. Syme thanked the Mayor for his words of welcome and expressed appreciation to the Minister for his attendance and his inspiring and encouraging address.

In Memoriam:

The assemblage stood for a moment's silence in respect to the memory of those members who had passed away during the year; in particular—Sir Robert Macalister (former Dominion President), Mr G. A. R. Phillips (Editor of the Journal), Mr W. D. Cook (Eastwoodhill), Mr F. T. Morrison (Wellington), Mr D. C. Mackenzie (Palmerston North), Mr T. D. Lennie (Christchurch), Mr A. H. Cockayne (Wellington), Mrs Jean Stevens (Wanganui).

President's Address:

In his Presidential address, Mr J. F. Living spoke of the important role which the Institute must play in future development of horticulture which in turn will play an increasingly important part in the future development of New Zealand. Sir Joseph Banks must have found himself in a botanical paradise when he landed in New Zealand almost 200 years ago; we should not fail to appreciate our natural heritage. During the first century of settlement, tremendous development has taken place in our country agriculturally. Vast exotic forests have been planted to become an outstanding national asset. Horticulture is coming into its own; the possibilities are boundless, but trained and academically qualified men will be required.

The Institute is having a hand in training and equipping them educationally. To secure the best from overseas market prospects research in horticulture and horticultural production is essential. The Government must assist and provide for greater opportunities of research in horticulture. Our Institute is doing all it can to provide educational qualifications for horticulturists, but more remains to be done. The Institute is distinctly interested in all phases of horticulture; it has recently been able to bring producers together for consultations on issues of common concern. Mr Living said he looked forward to the time when greater recognition was given officially to horticulture in New Zealand by the establishment of a Cabinet portfolio in Horticulture as there was already in Agriculture.

Forty-Fifth Annual Report and Statement of Accounts (for the year ended 30th September, 1967):

During discussion on the Report, Miss J. M. Dingley enlarged on the Award of Garden Excellence and encouraged District Councils to put forward plants for consideration for the Award; Mr J. P. Salinger enlarged upon the work of the Nomenclature Committee; Mr J. F. Gover, acting-editor, spoke briefly on questions relating to the Journal. Mr R. B. Burstall, speaking on Historic Trees, said he had received an influx of new material which should be studied and, if possible, the trees inspected. He hoped to make more inspections himself. He referred to over 200 trees on Wanaka Station, the several historic trees on Chatham Islands and at Akaroa. An enlarged list of trees in the Nelson district was being prepared by Mr D. H. Leigh and Mr W. H. Jolliffe. The Annual Report was duly adopted, without further discussion. The Annual Accounts revealed a surplus of \$756.39, of which \$534.06 was profit on the sales of the book "Flowers for Shows"; the Accounts were duly adopted.

Associates of Honour:

Resolved unanimously that these persons receive the distinction of Associate of Honour of the Institute. The citations in support of the nominations were read and Certificates presented. (Citations in March issue.)

Professor H. D. Gordon (Wellington), Mr J. E. Hume (Palmerston North), Mr J. F. Living (Wellington), Mr F. Parker (New Plymouth), Mr J. P. Salinger (Palmerston North), Mr C. H. J. Wily (Auckland).

Examining Board Report:

Presented by Professor H. D. Gordon, Chairman of the Board, and duly adopted. (The Report is published separately in the June, 1968, issue of New Zealand Plants and Gardens).

Mr F. P. Knight:

Mr Knight, Director of the R.H.S. Garden, Wisley, England, had been specially invited to visit New Zealand and attend the Conference of the New Zealand Institute of Park Administration and our own Conference, at which he would deliver the Banks Lecture. At this juncture of the Conference, Mr Knight was formally introduced. In response, Mr Knight said he greatly appreciated the kindness and generosity of the two Institutes and the Pukeiti Rhododendron Trust which had made it possible for him and Mrs Knight to make the visit. He briefly traced the history of the R.H.S. Garden from the year 1820; from an initial 6 acres to the present 300 acres. The purposes of the Trust Deed included:—

1. To teach student gardeners (a two-year residential course).
2. To demonstrate normal horticultural practices to the public.
3. To give advisory services.
4. To conduct trials of growing plants.

Over 250,000 visitors inspected the gardens annually. The R.H.S. gardens had no counterpart anywhere in the world. With reference to the National Diploma in Horticulture, Mr Knight said changes were coming—there would be an ordinary N.D.H. (up to Intermediate level) and a Higher N.D.H. (with a scientific slant), with all candidates having to come through a recognised training course, in which practical work would be an essential part. Major changes were taking place in England following the Pilkington Report investigating education in Agriculture, Dairying and Horticulture. Trials of Plants are planned up to three years ahead, under special trial committees; there are some permanent trials every year (e.g. in dahlias, sweat peas). Eighty-two Judging Committees functioned throughout each year. The Award of Garden Merit by the R.H.S. is one of the biggest services supplied to Fellows of the Society.

Horticultural Education:

Professor T. M. Morrison (Professor of Horticulture, Lincoln College), invited to speak on Horticultural Education, said that New Zealand leads many countries in this field of education. There were no Departments of Horticulture in Australian Universities, whereas there were two in New Zealand. There were two groups of horticultural apprentices—one which moved through training periods to become skilled foremen and servicemen; the other, which showed greater academic abilities, moving through to take Diploma courses. He felt, however, more could be done in educational opportunities. The Institute's National Diploma was instituted forty years ago at a time when there were no other corresponding courses and long before Universities realised the value of Horticulture. The Universities were now becoming more able to make a contribution, with Degrees and Diplomas in Horticulture. The Universities could provide trained teachers with academic background to practical horticulture. They provided contact tuition for students compared with correspondence contact in other courses.

Professor J. A. Veale (Professor of Horticultural Science, Massey University), also spoke and expressed the view that at secondary school level there was an inadequate supply of trained teachers in horticulture. He preferred that horticulture not be taught at secondary schools. Teaching by correspondence was generally an ineffective method, but there was a group of students who were unable to attend universities full-time and this method must therefore continue. He felt the Institute would have a continuing part to play in horticultural education, but it must look at organised instruction for its N.D.H. students. District Councils could help in this. At Massey University their diploma courses were orientated towards the various phases of horticultural history. There was a shortage of graduates in horticulture in New Zealand. Many students who should be taking degrees were not coming forward, on the other hand there were possibly some at University who should not be there. The Institute must look after the industry groups—the Minister of Agriculture had pointed to this—ornamental horticulture should not be belittled (the Institute had done a lot for it)—over \$2 per head of population was spent in New Zealand on parks and reserves each year. The Universities could supply education opportunities up to Masters and Ph.D. levels to enlarging groups of students—the universities are interested in horticulture from the lowest to the highest level—it was now up to the Institute and others to use them to advantage.

District Council Reports:

Points brought out:

Difficult to induce member-interest—T.V. is a counter attraction—many efforts to promote horticultural education—specialist societies largely cater for

members' interests—monthly talks are fully successful in some districts with large attendances—visits to gardens are popular—participation by N.D.H. students at members' evenings—plant trials amongst members—pot plant naming competitions at members' evenings—one-day conferences aimed at helping home gardeners—visual aid lectures on tapes with slides can substitute for lectures—weekend trips to horticultural attractions—plant identification talks at meetings—talks on plants receiving Award of Garden Excellence.

Remits:

Manawatu District Council:

"That a Sub-committee be appointed to study the various ramifications of the following, and make the appropriate representations:—

- a. The status of N.D.H. generally.
- b. The acceptance of the N.D.H. as a qualification by potential employers.
- c. The adequacy of the monetary rewards taking into account the years of study and practice."

Carried.

North Taranaki District Council:

- a. "That Rule (e) (v) be amended to read 'The fee payable by a Fellow shall be the same amount as that paid by an ordinary member'."

After full discussion for and against, the remit was withdrawn by the delegates. (Discussion covered questions of loss in revenue, privileges for Fellows, Social Security Beneficiaries could not afford extra fees, discretion should be used when nominating persons, Fellows were usually enthusiastic and would readily pay extra.)

- b. "That steps be taken by the Publication Committee to modernise the cover, and general lay-out of the Institute's Journal 'Plants and Gardens'."

The cover should draw attention to the Journal (the present cover failed in this)—District Notes were of interest—photographs from District Councils would be welcome. The remit was amended to read:

"That consideration be given by the Publication Committee . . . Gardens," and carried.

Wellington District Council:

"That R.N.Z.I.H., mindful of problems involved in such a nation-wide Department as N.Z. Railways, make an appeal to that Department to do everything within its power to preserve all natural beauty, and where possible to beautify all railway precincts. In particular we request that where the modern methods of weed eradications are used care must be exercised to ensure that nearby trees and roadside plantings are not adversely affected. It is requested that wherever possible that N.Z.R. take steps to beautify their property and co-operate fully with all local authorities, Beautifying Societies, etc."

Carried.

Furthermore, the appointment of a horticultural officer to advise on and control all vegetation on railway lands was considered desirable and could be recommended to the Department.

Canterbury District Council:

- a. "In view of the immediate national need for diversification in primary production the Institute urge the Government to accelerate horticultural research in New Zealand.
- b. In view of the small number of personnel involved in horticultural research, the Institute urge that an investigation of the means of better co-ordination and concentration of funds and facilities be considered by the Government."

Acceleration on research seemed to be the key thought in this remit. The remit was amended in so far that the word "expansion" was substituted for the word "diversification" and then *carried*.

Auckland District Council:

"That the Auckland District Executive recommends that an attempt should be started to document the history of plant introduction in New Zealand. They suggest that a sub-committee in Dominion Council should be set up to advise local District Council and specialist societies in methods of accumulating useful information such as old nursery catalogues; correspondence of noted horticulturists; minutes and proceedings of defunct specialist societies, etc., and placing it amongst the archives of these districts.

Carried.

Dominion Council:

"That membership privileges, except voting, be offered to students registered for the Institute examinations at half rates (\$1.50) p.a. up to the age of 21 years, as from 1st October, 1967."

Carried.

Election of Officers and Dominion Council:

The election of officers and Dominion Council was carried out in accordance with the Rules of the Institute: Patron, His Excellency the Governor-General, Sir Arthur Porritt, Bt., G.C.M.G., K.C.V.O., C.B.E.; Vice-Patron, Hon. B. E. Talboys, Minister of Agriculture; President, Mr J. F. Living; Auditors, J. L. Arcus and Co., along with Vice-Presidents and Dominion Councillors.

1969 Conference:

The 1969 Conference of the New Zealand Institute of Park Administration would be held in Invercargill. Resolved that the Institute's 1969 Conference be held in Invercargill the same week.

General:

Mr J. P. Salinger drew attention to the National Development Conference proposed to be held in Wellington in the near future, and suggested that an approach be made for Horticulture to be included in the subjects for consideration.

Professor T. M. Morrison stated that by 1969 Lincoln College will have initiated a post-graduate course in Landscape Design.

Address by Mr R. H. Mole, Curator, Otari Native Plant Museum, Wellington. "A Horticultural Analysis of New Zealand Plants"—illustrated.

During the morning session the Conference was treated to a singularly outstanding address by Mr Mole, an exceptionally fine subject and most efficiently presented—an address that could well be repeated. (To be published later.)

Appreciation:

The Dominion President expressed sincere appreciation of all that had been done for the pleasure and comfort of visiting delegates. He paid tribute to the work of the Combined Festival Committee (under Mr C. H. Benney), to the Parks Department of Wellington City Council, and to the Mayor, Sir Francis Kitts, for the reception accorded delegates in honour of Mr and Mrs Knight. Mr R. Syme supported the Dominion President in such expression of appreciation, especially to the Wellington District Council who were the hosts for the Conference.

Banks Lecture:

An interesting illustrated address was delivered by Mr F. P. Knight of England on the subject "If Sir Joseph Banks Returned". (The address is published separately in *New Zealand Plants and Gardens*.) Motion of thanks was carried by hearty acclamation.

REPORT OF THE EXAMINING BOARD

On behalf of the Examining Board I have pleasure in submitting the following report for 1967:

(1) MEETINGS

The Board met on four occasions during the year with an average attendance of twelve members.

(2) SYLLABUS OF EXAMINATIONS

The examinations syllabus of the Institute includes the following Diplomas and Certificates:

- (a) National Diploma in Horticulture—N.D.H. (N.Z.)
- (b) National Diploma in Fruit Culture—N.D.F.C. (N.Z.)
- (c) National Diploma in Apiculture—N.D.Ap. (N.Z.)
- (d) Certificate in Vegetable Culture—C.V.C. (N.Z.)
- (e) Certificate in School Gardening—C.S.G. (N.Z.)
- (f) Seedsman's Certificate—S.C. (N.Z.) (Being withdrawn.)

(3) APPLICATION FOR REGISTRATION FOR EXAMINATIONS

During the year applications were accepted from new candidates for the following examinations:

	1966	1967
National Diploma in Horticulture - -	34	36
National Diploma in Fruit Culture - -	2	3
National Diploma in Apiculture - -	1	1
Certificate in Vegetable Culture - -	-	4

(4) 1967 EXAMINATIONS

Results: These are appended separately.

Statistics: The following tables will be of interest; 1966 corresponding figures are shown in parentheses.

	<i>Junior</i>		<i>Intermediate</i>		<i>Diploma</i>	
<i>N.D.H. Examination</i>						
Number of Entries - - - -	(88)	96	(30)	33	(26)	33
Number of Passes - - - -	(56)	77	(21)	18	(17)	27
Percentage of Passes - - -	(63.6)	80	(70)	54	(65.4)	82
Average Marks—passes only -	(61)	60	(60)	60	(61)	63
<i>N.D.F.C. Examination</i>						
Number of Entries - - - -	(4)	6	(4)	3	(10)	9
Number of Passes - - - -	(4)	6	(4)	3	(7)	9
Percentage of Passes - - -	(100)	100	(100)	100	(70)	100
Average Marks—passes only -	(60)	63	(56)	61	(60)	57
<i>N.D.Ap. Examination</i>						
Number of Entries - - - -	(4)	3	(-)	-	(-)	-
Number of Passes - - - -	(3)	2	(-)	-	(-)	-
Percentage of Passes - - -	(75)	66	(-)	-	(-)	-
Average Marks—passes only -	(74)	72	(-)	-	(-)	-
Extra Certificate—N.D.H. - -	(-)	1				
		<i>Cert. in School Gard.</i>		<i>Cert. in Veg. Cult.</i>		
Number of Entries - - - -	(3)	3	(3)	4		
Number of Passes - - - -	(2)	2	(3)	4		
Percentages of Passes - - -	(66.6)	66	(100)	100		
Average Marks—passes only -	(63)	69	(67)	61		

Conduct of Examinations

Altogether, 91 candidates sat 182 papers in 27 subjects at 19 different centres. These centres are extremely varied. Candidates sat in Universities, Colleges, City Council or Department of Agriculture offices, Army Camp, and some even in

private homes. Often only one candidate is involved. Every endeavour is made to enable all candidates to sit in the town where they are working. In all, 13 examiners were appointed by the Examining Board for written examinations. Their co-operation and prompt marking of papers permitted an early release of the examination results.

Oral and Practical Examinations

The Oral and Practical examinations for all Intermediate and Diploma candidates were held in Christchurch where the facilities again proved to be very satisfactory and afforded efficient conduct of the examinations for all concerned. The Examining Board and the Institute are very much indebted to Mr Gilpin (Director) and the staff of the Christchurch Botanic Gardens for their valued assistance and the facilities offered.

The examinations for all Junior candidates were conducted in Palmerston North. The ready co-operation and assistance of Mr J. Bolton (Director of Parks) and staff, Mr J. E. Hume and other officers of his department, Mr J. P. Salinger and assistants from Massey University, ensured the complete success of these examinations.

Help was also received from officers of the Department of Agriculture in Christchurch and Palmerston North in preparation for the examinations, and from members of the Fruitgrowers' Federation and National Beekeepers' Association. Members of the Manawatu and Canterbury District Councils arranged billets with local members for candidates who had to stay overnight. Refreshments for candidates and examiners were provided by a voluntary group in Christchurch, also by the Palmerston North City Council, for which sincere thanks are expressed.

Statistics for Oral and Practical examinations (these are included in the statistics above):

	<i>N.D.H.</i>			<i>N.D.F.C.</i>		
	I	II	III	I	II	III
Number of Entries -	22	9	9	3	2	3
Number of Passes -	19	4	7	3	2	3

The following completed sections or the whole examination:

National Diploma in Horticulture

Junior Stage: J. E. Archer, R. G. Moffitt, L. Stemmer (Christchurch), D. E. Escourt (Hastings), P. J. Richards, M. J. Sheerin (Hawera), N. D. Broadbent (Levin), D. R. Crockett (Masterton), D. J. Hale (Napier), J. Walker (New Plymouth), J. Lyttle (Rotorua), P. Liss (Wellington).

Intermediate Stage: R. M. Scott (Christchurch), G. M. Fuller (New Plymouth), D. K. Chapple (Tauranga).

Diploma—Final: C. M. Walker (Hastings), G. J. Bradbourne (Lower Hutt), C. R. Pugh (Masterton), C. I. McDowell, L. A. Scherp (New Plymouth).

National Diploma in Fruit Culture

Intermediate Stage: C. R. Smith (Hamilton).

Diploma—Final: G. Foxtan (Levin), R. G. C. Davy (Motueka).

National Diploma in Apiculture

Junior Stage: P. W. Marshall (Nelson).

Extra Certificate (N.D.H.)

G. D. Mander (Hamilton).

(5) GOVERNMENT GRANT FOR EXAMINATIONS

The Examining Board acknowledges with appreciation the capitation granted by the Minister of Agriculture for assistance to the Institute in the conduct of the examinations. An increase has been granted for next year following representations to the Minister.

(6) DONATION

The donation of £25 from the New Zealand Institute of Park Administration is acknowledged with thanks.

(7) ASSISTANCE TO STUDENTS

It is pleasing to know that some district Councils are making special efforts to assist examination candidates with coaching and regular educational lectures especially designed for them.

(8) ADVISERS FOR CANDIDATES

The Board resolved to appoint an adviser to assist each candidate in submitting his thesis. This has proved a distinct help to candidates.

(9) HORTICULTURAL SALESMAN'S CERTIFICATE

The Board has given very careful consideration to and finally approved the adoption of a new examination scheme for the issuing of a Horticultural Salesman's Certificate.

This is designed to replace the present Seedsman's Certificate examination which has become outdated and unsuitable for present-day requirements. The Horticultural Retail Trade has undergone major changes and it is expected that the new scheme will meet a growing need for greater basic elementary knowledge by those selling plants and horticultural supplies. The new scheme has been submitted to the Minister of Agriculture for approval and official gazetting.

(10) EXAMINATION ENTRY FEES

Upon the recommendation of the Finance Committee, approved by Dominion Council, all examination entry and registration fees were increased during the year to help meet increased examination expenses.

(11) REVIEW OF SYLLABII

The existing syllabii for the National Diplomas in Horticulture and Fruit Culture have been brought under extensive review to ensure they are meeting present-day requirements. Greater specialisation for candidates is being considered. There can be no changes to the existing syllabii until the revision is completed and officially approved.

If changes are finally introduced, the position of candidates already entered under the present syllabii, of course, will be fully protected.

(12) IN MEMORIAM

The Board expresses sincere regret at the untimely passing of the late Mr Dugald C. MacKenzie, of Palmerston North. The Board places on record its sincere appreciation of the valued assistance received from the late Mr MacKenzie who had been a member of the Board for several years, and one of the panel of examiners for Oral and Practical examinations.

(13) MEMORIAL PRIZE

The donation of \$300 by Mrs B. MacKenzie as a fund to provide a prize for the best thesis (for N.D.H.) is a very fitting memorial to the late Mr MacKenzie; the Board has much pleasure in accepting it, and expresses its sincere thanks.

(14) ACKNOWLEDGMENTS

The Examining Board acknowledges with sincere thanks the help and assistance received from all who have been associated with the conduct of the examinations this year.

(a) The panel of examiners.

(b) The Christchurch and Palmerston North City Councils Parks and Reserves Departments, officers of the Department of Agriculture and Massey University.

(c) Honorary supervisors at centres for written examinations.

(d) The Canterbury and Manawatu District Councils for assistance and hospitality with Oral and Practical examinations.

- (e) The Director of Horticulture and Officers of the Horticulture Division.
- (f) The National Beekeepers' Association of New Zealand Inc., for their collaboration and help in matters relating to the National Diploma in Apiculture.
- (g) The New Zealand Fruitgrowers' Federation for their co-operation and representation on the Examining Board.
- (h) The sub-committee appointed to deal with special business arising throughout the year.

H. D. GORDON, *Chairman.*

THE ROYAL NEW ZEALAND INSTITUTE OF HORTICULTURE (INC.) 1967 EXAMINATIONS

The results of this year's examinations conducted by the Royal New Zealand Institute of Horticulture in Horticulture, Fruit Culture, Apiculture, Vegetable Culture and School Gardening, both written and practical, have been released. Junior Stage Oral and Practical examinations were conducted in Palmerston North and Intermediate and Diploma Stages in Christchurch.

The Junior Memorial Prize for the candidate gaining the highest marks in the Oral and Practical Stage I examination was awarded to W. E. Turner, of Tauranga; the David Tannock Memorial Prize for the highest marks in the Oral and Practical examination Stage III was awarded to R. C. Gill, of Christchurch; the J. A. Campbell Memorial Prize for the candidate completing the Intermediate examination and gaining the highest average marks was awarded to D. K. Chapple, of Tauranga; the Dugald MacKenzie Memorial Prize for best Thesis (for N.D.H.) to B. R. Young, of Auckland.

The coveted Cockayne Memorial Medal for the candidate completing the Diploma of Horticulture and gaining the highest average marks in the final stage of the examination was awarded to C. I. McDowell, of New Plymouth.

The subjects in which passes have been gained by candidates are indicated by code numbers as follows: Bookkeeping (2), Horticultural Botany (3), Plant Protection Stage I (4), Oral and Practical Stage I (5), Principles of Botanical Classification (6), Horticulture Stage I (7), Special Subject (8), Oral and Practical Stage II (9), Horticulture Stage II (10), Plant Protection Stage II (11), Oral and Practical Stage III (12), Thesis (13), Horticultural Economics (14), Fruit Culture Stage I (15), Fruit Culture Stage II (16), Business Aspects of Vegetable Culture (17), Soil and Soil Management (18), Beekeeping (19), Extra Certificate (20).

ASHBURTON	Ashworth, B. J., 3, 5	GISBORNE
Kinvig, D. J., 12	Brakey, G. M., 11	Davis, B. S., 7, 8
AUCKLAND	Currie, B. A., 9	Johnson, C. F., 7
Bradshaw, C. C., 3, 4	Garnett, K. R., 3, 4, 5	Sloan, R. E., 4, 5
Buchanan, B. L., 7	Gill, R. C., 10, 11, 12	HAMILTON
Burrell, P. R., 4, 5	Hart, W. W., 2, 3, 4, 5	Abbott, R. M., 3
Nind, G. P., 8	Martin, Miss J. E., 6	Butcher, E. F., 13
Wilson, R. W., 17, 18	Moffitt, R. G., 5	Featherston, W. A., 2,
Young, B. R., 10, 11, 13	Orr, I. M., 2, 3	3, 4, 5
CHRISTCHURCH	Paterson, G., 10, 11, 12	Howell, I. H., 10, 11
Allen, K. J., 2, 3	Scott, R. M., 8, 9	Langsford, Miss S., 3
Archer, J. E., 3, 4, 5	Stemmer, Miss L., 2, 4, 5	Mander, G. D., 20
		Smith, C. R., 9, 11, 16

- HASTINGS
Crooks, M. R., 14
Escourt, D. E., 2, 4, 5
Walker, C. M., 12
- HAWERA
Richards, P. J., 3, 4, 5
Sheerin, M. J., 3, 4, 5
- INVERCARGILL
Russell, L. B., 4
- LEVIN
Broadbent, N. D., 3
Engert, H. J., 3
Foxton, G., 12, 13, 16
McLennan, J. F., 17, 18
- LOWER HUTT
Bradbourne, G. J., 13
- MASTERTON
Crockett, D. R., 2, 3, 4, 5
Pugh, C. R., 12, 13
- MOTUEKA
Davy, R. G. C., 13
- NAPIER
Hale, D. J., 2, 4
- NELSON
Austin, D. A., 9, 15
Gay, D. S., 12
Marshall, P. W., 3
- NEW PLYMOUTH
Allen, P. T., 3, 4, 5
Cowan, Miss J. M., 6, 7
Fuller, G. M., 9, 10
Garman, N. S., 3
Green, P. M., 4
Jackson, R. P., 2
McDowell, C. I., 13
Pollock, B. S., 4
Rumbal, J. P., 10, 12
Scherp, L. A., 12
Thacker, J., 3, 4
Walker, J., 3, 4, 5
- OKAIHAU
Lees, J. A., 12
- OAMARU
Johnson, P. R., 4
- PALMERSTON NORTH
Burns, J. R., 2, 5
Cantwell, R. D., 4, 5
Eales, M. R., 4, 5
Murphy, B. K., 3, 4, 5
Ryan, H. H. G., 10
Wilde, E. D., 3
Wiltshire, M. A., 6, 7
- ROTORUA
Butcher, D. G., 7, 8
Lyttle, J., 5, 6
- TAURANGA
Chapple, D. K., 9
Turner, W. E., 3, 4, 5
- TUAI
Greenwood, M. J., 3, 4
- WELLINGTON
Liss, P., 3, 4, 5
Lokum, L., 10
Short, J. G., 11
Thomas, M. B., 11
- WHAKATANE
Jones, R. B., 19

TO THE EDITOR

Dear Sir,

Mr Douglas Elliott's letter in the March issue of this journal questions the authority of the Committee of the Award of Garden Excellence 1967 to choose the specific epithets *M. heptapeta* and *M. obovata* for the parents of *Magnolia 'soulangeana'*. From the literature both botanical and horticultural, the following information has been extracted.

J. E. Dandy in 'The Identity of *Lassonia* Buc'hoz' in the Journal of Botany 72: 101-103, 1934 identified *Lassonia heptapeta* Buc'hoz 1779 as the white-flowered Magnolia known as *M. denudata* and by other names and *Lassonia quinquepeta* Buc'hoz 1779 as the purple-flowered Magnolia known as *M. liliflora*, *M. obovata* and by other names. These white and purple flowered Magnolias are the two parents of *M. x 'soulangeana'* (sometimes spelt as *soulangiana*). Dandy made the combinations *Magnolia heptapeta* (Buc'hoz) Dandy and *M. quinquepeta* Dandy and commented 'unfortunately Buc'hoz's specific names, which were legitimately published, are the oldest for these two species and necessitate name changes that are particularly undesirable because the nomenclatural history of the plants concerned is already very complicated'. These names as proposed were adopted and used by the R.H.S. in the 1946 edition of 'Some good garden plants' (i.e. the list of plants which have received the award of garden merit).

G. H. Johnstone in *Asiatic Magnolias in Cultivation* 1955 p. 41-45 and 107-111 uses the names *Magnolia denudata* Desrousseau 1791 and *M. liliflora* Desrousseau 1791 for the two parent species and on p. 108 remarks that 'if a future International Botanical Congress should agree to accept the proposal for 'nomina specifica reficienda' it is understood that *M. quinquepetala* and also *M. heptapeta* are names which would be submitted for permanent exclusion.'

At the 9th International Botanical Congress, Montreal, 1959 the inconvenience caused by changes in nomenclature was discussed and it was decided to ascertain the extent of the problem. Dr W. Punt was employed to check the nomenclatural status of about 2,000 names of plants of economic importance. In a preliminary report in July 1964, Dr Punt listed *Magnolia denudata* and *M. liliflora* as 'correct'. The report was discussed at the nomenclature section of the 10th Congress, Edinburgh 1964 and the secretary, Dr F. A. Stafleu, explained that Dr Punt's final report was not complete; Dr Punt has been unable to consider type specimens for the 2,000 names submitted by foresters, horticulturists and other groups. The preliminary list contained a number of mistakes, and it was intended mainly to indicate the extent of the problem. A further committee was invited to set up a list of names of plants of economic importance and to submit this list to a future session of the International Botanical Congress.

There are faults in the descriptions of Buc'hoz, Desrousseau and Thunberg which may lead future botanists to reject their names—at present Buc'hoz specific epithets would appear to have priority. It will be a matter of time which will sort this argument out. G. H. Johnstone (1955) applied the name *M. obovata* to another species and to avoid further confusion locally, it might be better to refer to the parents of *M. x 'soulangeana'* as *M. heptapeta* (*denudata*) and *M. quinquepetala* (*liliflora*).

Mr Elliott also asked why the Awards Committee has used the name *Tibouchina langsdorffiana* instead of *T. semidecandra*. The original description and illustration of *T. semidecandra* is not available but Don in 1832 described this species as having a pilose style and deciduous bracts. The plant known here as 'Grandiflora' has a glabrous style and persistent bracts that form an involucre or epicalyx. It has been suggested that local specimens of this plant belong to *T. urvilleana* (DC) Cogn. but again 'Grandiflora' does not fit into the descriptions of this species given by Don or Wurdack (*Baileya* 15: 1-6 [1967]).

The name *T. langsdorffiana* (Bonpl.) DC is used by L. Bruggeman in *Tropical Plants and Their Cultivation* 1962, for a plant which resembles 'Grandiflora'. The description and illustration are too poor to be certain but an epicalyx is mentioned and some other characters agree. Further enquiries should be made but the necessary literature is not available in New Zealand.

I wish to record my thanks to Dr R. Cooper, Assistant Director of the Auckland Museum, for his help in researches in the literature necessary for the preparation of these notes. He and his staff hope to carry out further investigations into the species of *Tibouchina* in Auckland gardens.

It will be seen that the committee has a difficult time sorting out botanical names for plants. In many cases it is difficult to know what course to take. If names in common use are known to be wrong, to find alternatives needs considerable research into the literature and the study of material of the plants in question before decisions can be made.

Joan M. Dingley, Convenor.

DISTRICT COUNCIL REPORTS

CANTERBURY

The first M. J. Barnett Memorial lecture was delivered in Christchurch on Friday, 15th March, 1968, by Mr F. P. Knight, V.M.H., F.L.S., A.H.R.I.H.(N.Z.) under the auspices of the Canterbury Horticultural Society. Mr Knight spoke on "The Training of Horticultural Apprentices at Edinburgh, Kew and Wisley" and his address was profusely illustrated with many fine colour slides. This most interesting talk was listened to by a large audience which included many members of the Institute from far and wide including many contemporaries and past pupils of Mr Knight. It has been published in "The City Beautiful", the monthly journal of the C.H.S. The second M. J. Barnett Memorial lecture will be delivered in 1970.

The District Council will be holding another One Day Conference on Tuesday, 30th July, 1968, on the subject "Ornamental Trees and Shrubs for Your Garden". A comprehensive series of talks on all aspects of this subject by leading authorities will be given in morning and afternoon sessions and in the evening a Panel formed from the speakers will occupy the platform. Further particulars are obtainable from: The Secretary, Canterbury District Council, R.N.Z.I.H., C/o Parks & Reserves Dept., City Council, Christchurch.

The District Council is considering the production of taped slide programmes which it is felt would assist District Councils and kindred bodies in areas where it is difficult to obtain speakers. As many members know the National Rose Society of N.Z. has found this a most successful and rewarding activity and it is felt that similar programmes covering the whole field of ornamental horticulture would also be successful and would stimulate interest in the Institute. Many of the Rose Society programmes, which now number seventeen, were produced by members of the R.N.Z.I.H. so we feel that the Institute could well benefit from their experience and "know how".

An interesting letter has been received from the Australian Hibiscus Society, Queensland Branch, as follows:—

53 Chamberlain Street, Tarragindi, 4121, Brisbane, Queensland, Australia.

April 15, 1968.

To:

The Hon. Sec.,
New Zealand Horticultural Society,
Canterbury.

Dear Sir,

I am writing to you, to notify you on the formation of the Australian Hibiscus Society (Queensland Branch), which was formed here in Brisbane on the 10th October, 1967. This is the first Hibiscus Society in Australia, and we are also affiliated with the American Hibiscus Society.

The aims of the Society are as follows:

1. To foster the love of Hibiscus throughout Queensland and Australia, and to maintain and increase their popularity.
2. To disseminate information concerning their culture by means of the Society's news letter, "The Hibiscus Digest", which is put out once every month. This was begun to keep country and interstate members informed of the latest developments in the Society. It contains precise lectures given at meetings, and up-to-date news on the latest Hibiscus varieties.

The objects are:

1. To encourage and foster a friendly exchange between Hibiscus enthusiasts of Queensland, throughout Australia and other countries.
2. To co-operate with horticultural societies.

The Society's year runs from October to the following September.

The annual subscriptions are:

1. Single members: \$3 Aust.
2. Family members: \$5 Aust.

Our first Hibiscus display was held at Weedmans, in Queen Street, Brisbane, on the 5th and 6th April with over 200 varieties of Australian and Hawaiian Hibiscus, and the display was a great success.

Plans are well under way for the Society's first show with the Royal Horticultural Society of Queensland and other specialists societies in conjunction with the Y.W.C.A. This show will be held on Saturday, May 11th, in Brisbane.

Would appreciate any assistance you could give us in notifying your branches in New Zealand, on the formation of our society.

All the best to your society, kindest regards.

Yours sincerely,

Mr Graham McGilvary
Membership Secretary.

This undoubtedly refers to tropical hibiscus so would District Councils interested please communicate directly with the Membership Secretary. Though doubtless there are tropical plants growing well in favoured spots around Christchurch and Canterbury we think some northern members will be most interested in this.

SOUTH TARANAKI

Members of the Royal N.Z. Institute of Horticulture met at Opunake for the first of this year's circuit meetings to be held under the auspices of the South Taranaki District Council, when an attendance of 55 was welcomed by the president, Mr R. Syme. On this occasion, the programme was presented by the North Taranaki District Council whose president, Mr T. French of New Plymouth, was introduced to the gathering by Mr Syme.

The functions of the Institute were outlined by Mr H. George, of New Plymouth, a member of the Dominion Council. He spoke of fostering the fellowship found amongst people with similar horticultural interests; the encouragement of all branches of horticultural activities, such as plant trials; and the pleasure and profit to be found in visiting gardens. Mr George illustrated his points by showing illustrated slides, special admiration being expressed for slides of beautiful woodland gardens in Hawke's Bay.

The art of the floral artist was ably demonstrated by Mrs P. Burn of New Plymouth as she deftly and swiftly built up three delightful arrangements, each showing different combinations and contrasts of colour and material. New to some members of her audience was a delightful arrangement in three dimensions, as taught by Mr Howard Plank in his recent workshop visit to Taranaki. Looked at from back, front or either side, this arrangement presented a complete and harmonious picture.

A large bench display was commented on by Messrs George and McDowell.

who spoke of the variety displayed. Lilies, hibiscus, gypsophilla, lobelia, salvia, ageratum, jasmine, abutilon, *Cotoneaster horizontalis*, plumbago, fuchsia, *Beaufortia sparsa* and many other specimens drew comment for colour and variety.

Speaker for the evening was Mr Ian McDowell, N.D.H., New Plymouth, last year's winner of the Cockayne Medal, who gave his hearers hints on plants for windy situations, specially suited to Taranaki. From his collection of specimens, Mr McDowell showed taupata, pohutakawa, ngaio, olearia, tainui, senecio, hebes, banksias, podalyria, leucospermum, proteas, tamarix, buddleia, oleanders and many others eminently suitable for windy positions.

On March 23rd North Taranaki members again visited this area when 55 people travelled to Hawera by bus and car for a day's outing in South Taranaki. During the course of the day, some 35 South Taranaki people joined the party; and this large number paid several visits in Hawera.

Gathering in King Edward Park for morning tea, the party was welcomed by Mr R. Syme, South Taranaki's President, and was taken to see a willow pattern garden at present under construction by Mr H. T. Beveridge, Superintendent of Parks and Reserves. So impressed were the visitors with plans for the portrayal of the old Chinese story in stone and plants, that they expressed their intention of returning to Hawera for the opening, planned for October next.

Next came a visit to the garden of Mr and Mrs Haddy, Waihi Rd., third equal in the recent garden competition held by the Hawera Horticultural Society. Here it was obvious that the rose was considered the queen of flowers.

Thence to Turuturu Mokai to see the old Maori pa, now left with only one of its five supporting pas visible. Here something of the history of Turuturu Mokai, on July 12th next to celebrate the centenary of its last fighting, was related by Mr Syme.

After lunch, the party moved to the garden of Mr & Mrs H. F. Holloway, first prize winners in the small gardens section of the recent garden competition. Here the lovely variety of trees and shrubs in a small section was much admired.

Then to larger gardens, the first one complete with a delightful spring-fed swimming pool and bush walk as the visitors were welcomed by Mr and Mrs T. A. Snowden, of Inaha. Here also late roses, a rosy lapageria and a large *Cotoneaster horizontalis* were much admired.

The last garden visit of the day took the party to Auroa Rd., to Mr and Mrs H. N. Mills' home. Here afternoon tea was enjoyed on lawns shaded by shrubs and trees, and broken by beds of beautiful roses. In other beds were to be found flowering shrubs, fuchsias, heaths, hibiscus and many other lovely plants.

March 30th saw a party of forty-five horticulturalists leave Hawera by charter bus for Auckland on the first stage of their air trip across the Tasman to embark on a "Gardens of Australia" tour of three weeks. Led by Mr R. D. Chamberlain, A.H.R.I.H. (N.Z.), of Hawera, and Mrs Chamberlain, the party included seventeen members of the Institute. Some hundred well-wishers gathered to farewell the party and good wishes were offered by Mr R. Syme, A.H.R.I.H. (N.Z.), on behalf of the Institute; Mr V. S. Young, M.P., Member for Egmont; and Mr F. W. Finer, Mayor of Hawera.

April 20th saw the travellers return after a delightful holiday during which they had been entertained by the Royal Horticultural Society of Victoria, the Horticultural Society of Canberra and the Royal Horticultural Society of Queensland, whose monthly meeting and show they had attended.

APRIL—For the first time for a number of years, the South Taranaki District Council held a circuit meeting at Eltham, being joined on this occasion by the Eltham Horticultural Society and the Central Taranaki Rose Society.

Associated with Mr R. Syme of Hawera, President of the Institute, on the stage as he welcomed an attendance of about 120 were Mr B. Edwards of Eltham, President of the Horticultural Society, and Mr H. Taylor of Eltham, Secretary of the Central Taranaki Rose Society.

The programme commenced with a tape recording prepared by Miss Margaret Watling of Christchurch and illustrated with colour transparencies, its theme being "The Value of Roses in Floral Art".

Hints on the technique of growing chrysanthemums and controlling their time of flowering were given by Mr Geo. Fuller, Parks & Reserves, New Plymouth, who spoke of his work in Malta from where half a ton of cuttings grown on the Island were flown to London each week in the season. This was followed by a short talk on Mr Fuller's other special interest—orchids. Demonstrating on a large cymbidium, the speaker showed how back bulbs could be removed from the plant, have the roots taken off, and then be planted either in sand or in sawdust. Here they would root in about two months, and should flower in about two years. Thanks were expressed to the speaker by Mr H. Taylor.

An extensive bench of specimens from members gardens provided a wealth of material for discussion by Mr Fuller and Mr A. Jellyman, N.D.H., also of New Plymouth. Crabapples, banksias, kniphofia, fuchsias, brunsvigia, camellias, proteas, alders, roses, maples, lapageria, nerines and many others were displayed, as were variegated natives—taupata, golden totara, pohutukawa and pittosporum. A further bench of berried shrubs which would give bright winter colour was presented and named by Mr Jellyman.

This was followed by a delightful colour film of Kew Gardens—that "small garden of a princess" now, over the years, grown to 300 acres in extent and to world-wide fame. Here were trees from all over the world, specimens gathered by botanists in remote places and preserved in plant libraries; a quarantine house for discovering and controlling disease, and a teaching service for tree surgery. Thanks were expressed by Mr Edwards.

A highlight of the evening was the presentation of framed certificates to two young members, Mr Michael Sheerin of Hawera, and Mr Peter Richards of Karamea, who had gained the award of Junior Diploma of Horticulture. In making the presentations at the invitation of the president, Miss C. E. Free, Hon. Secretary of the South Taranaki District Council, congratulated the recipients on their success in their examinations and, on behalf of the Dominion Council and the assembly, wished them continued success in their chosen career.

WAIKATO

During his recent visit to New Zealand the Waikato was fortunate in being one of the centres chosen for a talk by Mr F. P. Knight, the Director of the Royal Horticultural Society's Gardens at Wisley, England. In February this meeting was held in the Founders Theatre, Hamilton and, as a result of an open invitation to the public, about five hundred people were present. Mr Knight's subject was of Wisley through the seasons and his most interesting talk was well illustrated by slides. His description of the work of the Royal Horticultural Society gave an indication of how valuable this is to British and overseas gardeners. Our own Institute has similar aims and it is perhaps worth

while to point out that the activities of the R.H.S. are financed by the subscriptions of its numerically large membership. If in New Zealand we could greatly increase our membership then the dream of a Wisley here would not necessarily have to be just a dream. There is in New Zealand no garden undertaking similar work to Wisley and such an establishment here would fill a great gap in our national horticultural organisation. As Mr Knight so ably showed, Wisley covers almost all aspects of horticulture from research to purely recreational, and from its world wide reputation does so very well. Mr Knight was introduced by the Mayor of Hamilton, Dr Denis Rogers, and thanked by the Waikato District Council Chairman, Mr R. T. Fear. During his talk Mr Knight said how impressed he was with the wide range of plants growing in the Waikato, but also pointed out that in such a congenial climate a much greater range could be introduced and grown, a very good point we should all bear in mind.

The foyer of the Founders Theatre was very tastefully decorated by several members of the Institute and others, with the theme being native plants. Mr and Mrs Knight spent some time admiring this display and he remarked how much pleasure he was having in seeing so many of the New Zealand plants growing in their natural surroundings. The Waikato greatly enjoyed the visit of Mr and Mrs Knight and hopes that one day they will return again.

The selling of nursery and allied products has undergone great changes in recent years and many of these were shown to the March meeting by Mr S. Palmer, of Palmers' Garden Centre, Auckland. Mr Palmer described his travels overseas to investigate garden centre organisation and their application in New Zealand. He illustrated his points with some excellent slides, and the audience very obviously enjoyed this talk which was so ably presented.

At the April Meeting various films on horticulture were shown including "Wind on the Heath", a well made film of the National Parks in Britain. Obviously great efforts are being made to preserve as much of the natural heritage of Britain as possible at this late date, and their problems emphasize that here in New Zealand we must not let our unique countryside be despoiled in any way.

At this meeting the Chairman had the pleasant task of congratulating local candidates on their successes in the Institute's examinations and presenting their certificates. These were Mr G. Mander, N.D.H. (N.Z.), Hamilton, Extra Certificate in Nursery Management; Mr C. R. Smith, Te Kauwhata, Intermediate Certificate, National Diploma in Fruit Culture, and Mr W. A. Featherstone, Hamilton, Junior Certificate, National Diploma in Horticulture.

WHANGAREI

NOVEMBER—At the November meeting slides were shown by Mrs K. Reynolds, principally of Northland's outlying islands. These included those around the Bay of Islands as well as those closer to Whangarei and are of especial interest as they are the subject of controversy as to whether, though sanctuaries, they should be given over to prospectors.

After seeing the slides one easily realised their beauty and was impressed by their scenic value as well as for the fact of their being the undisturbed habitat of rare plants and rarer animals and birds. Mrs Reynolds has earned our thanks for bringing their value home to members, many of whom have not had her first-hand knowledge of these beautiful places, which should be treasured by all New Zealanders.

DISPLAY TABLE

The November Table showed the great diversity of plants available in Northland. Exotics included azaleas, rhododendrons; three species of *Thunbergia*, all climbers which do so well in our area; the large, blue-flowered *T. grandiflora*, the brilliant orange-flowered *T. gibsonii*, and the yellow flowers with the black centre of *T. alata*, the last named being the hardiest and having the advantage of blooming all the year round. Another perennial was the exquisite flower of *Romneya coulteri*, the Californian tree poppy. It does well in any sunny, well-drained soil rather on the dry side. Perhaps the most striking exotic shown was a bloom of Sturt's desert reed, the Australian relative of our kaka beak, *Clianthus puniceus*. This is not an easy plant for our climate but can be managed with great care in very warm, dry conditions. It was grown by Mrs Reynolds, who brought also a large and varied collection of native plants which included both sedges and grasses. Among the grasses was a specimen of the large tussock *Danthonia flavescens*, now transferred to *Chionochloa*, and the very notable sedge familiar to most of us as *Cladium sinclairii*, now *Vincentia sinclairii*. Other natives included orchids, *Orthorceras* and *Dendrobium*, the latter perhaps the most beautiful among them; *Parahebe catarractae*, which is a good garden plant easily grown, various *Hebe* sp., and our own *Jovellana sinclairii*, a plant for a moist bank. Rarest of all was a specimen of *Elingamita*, the recently discovered plant from the Three Kings.

A very beautiful exotic, a climber related to mandevilla was *Diplandenia rosea* from Brazil. It may be grown in a pot indoors, or if outside in a warm, sheltered position with very notable sedge familiar to most of us as *Cladium sinclairii*, now *Vincentia sinclairii*. Other natives included orchids, *Orthorceras* and *Dendrobium*, the latter perhaps the most beautiful among them; *Parahebe catarractae*, which is a good garden plant easily grown, various *Hebe* sp., and our own *Jovellana sinclairii*, a plant for a moist bank. Rarest of all was a specimen of *Elingamita*, the recently discovered plant from the Three Kings.

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QUESTION SESSION

Flax Disfigured: Half-inch narrow strips denuded of surface tissue in a regular pattern up and down the blade.

Answer: Caterpillars are responsible, spray with D.D.T.

How and when should *Callistemon* be pruned?

Answer: Prune after flowering, cutting off flower heads down to next node. Germination of *Leucospermum* and *Leucodendron* seed is difficult.

Answer: Seeds should be stratified and put in the refrigerator for two months, planted out in spring, keeping soil warm and moist.

MARCH—The annual Dominion Conference of the Royal N.Z. Institute of Horticulture was held in Wellington on the 6th, 7th and 8th of March. Our delegates Mrs Katie Reynolds and Mrs W. Parkinson attended, and gave us an outline of the proceedings.

RHODODENDRONS

Mr O. Blumhardt, who is well-known for his work on hybridising Rhododendrons, gave us some useful information on the growing and propagation of these beautiful plants. Some are easily grown from seed, which should be sown on the surface of a suitably prepared pot. *R. decorum* is one which germinates readily. The species with scaly leaves will grow from cuttings, but most may be grafted as easily as camellias. Various species and hybrids were recommended as suitable for our climate, which is rather on the warm side for many which are popular in colder places. These included *R. griersonianum*, *R. 'Fragrantissima'*, Nosegay, Elizabeth (shade), Xmas Cheer, *R. 'Fastuosum plena'*, Purple Splendour, Cornubia, Unique (a yellow), and if one likes the



The R. Avon flows quietly through Ilam; note millpond and waterwheel.

blue-flowered, *R. impeditum*, which needs water, and the cultivar Blue Diamond. An Ilam hybrid Kaka was especially meritorious. Mr Blumhart then showed us some excellent colour pictures of rhododendrons in various parts of New Zealand, but the most beautiful and exciting were those bred by the late Edgar Stead in his famous garden 'Ilam', Christchurch. Pictures of this very beautiful garden were a model for landscapers, with their green, velvety lawns and backgrounds of interesting trees. The colours of the azaleas massed in large clumps had to be seen to be appreciated.

Among the many pictures shown were some of Otari Native Plant Museum, which our Conference delegates had visited. It was pleasing to see some of our natives so skilfully placed and blooming so profusely. Among others was a plant of the Marlborough *Hebe hulkeana*, perhaps the most striking of that large genus. When well grown it may be a good three feet tall and as much through, with plentiful panicles of lilac flowers. There is also a white form, and both need lime, full sun and rather dry conditions.

QUESTION SESSION

Edible Ginger: Which of the several kinds of Ginger plants grown in Northland are edible?

Answer: None of the so-called Ginger plants grown here is the true ginger, which is a tropical East Indian plant *Zinziber officinale*. The several grown here increase readily and become pests, though the flowers are attractive and sweetly scented, and seed pods striking for decorations. They belong to different genera, *Alpinia* and *Hedychium*.

Liriope: How can I get my plant to flower?

Answer: This is a plant of the Lily family and is native to China and Japan. It likes a shady, rather cool and moist position, and a lightish soil. Heavy soil should have sand added.

Bird of Paradise: How long will it take to flower?

Answer: Some plants have been known to flower in two years, others in five. It is probable that position, amount of sun and drainage influence the amount of time taken to flower. They are South African, but flourish in many countries, especially in Australia and N.Z.'s northernmost parts. Water well in summer, but keep dry in winter.

Beautifying Banks: What plants are suitable for a roadside bank, where little special care can be given.

Answers: Hydrangeas, Agapanthus, Red Hot Pokers.

Callistemon citrinus splendens: How hard may it be pruned? This shrub may be very severely pruned, cutting within a few feet of the ground. It sends up new growth very quickly and soon flowers again.

 DISPLAY TABLE

The varied assortment on the March Table was a sample of what our climate can produce. Natives were represented by the scented orchid *Earina autumnalis*, *Wahlenbergia albomarginata*, and *Coprosma repens*, variegated form. Another *Coprosma* of fine-stemmed, delicate-leaved habit, was shown by Mr Miller, but it is not yet identified. Early blooms of *Eucalyptus leucoxydon rosea* were much admired. This species does well in our area, grows quickly, flowers profusely, and in winter when colour is extra welcome. *Alberta magna*, a brilliant, scarlet flowered shrub from Natal is hardy here and flowers freely in a sunny, well-drained position. *Hoya bella*, not as well known as its sister climber, is quite as attractive but rather more tender. It was grown in a basket which suits it. *H. bella* comes from India whilst *H. carnosa* is from Queensland. Another Queenslanders shown was *Rhododendron lochae*—the only Australian member of that great family. Roses both old and new came from the garden of Mrs Reynolds, as well as a splendid bowl of beans. Hibiscus, *Luculia grandiflora* and *Camellia sananqua* varieties were also on display, and also the handsome leaves of *Homalanthus polyandrus*, Kermadec relative of the Tungoil tree.

Of special interest was a flowering plant of frangipani, *Plumeria acutifolia*, grown in a cool house by Mr O. Blumhardt.

GARDENS OF ENGLAND TOUR

Personally escorted by

MRS. BARBARA MATTHEWS

("N.Z. Gardener")

This Tour will prove to be one of the most interesting and outstanding ever offered to those with Horticultural interests.

In conjunction with many notable gardening authorities and Horticultural personalities in the United Kingdom, Mrs Matthews is planning a 45-day itinerary to take in many of the famous gardens and the stately homes of the National Trust. This will include such places as Bodnant in Wales, Titinhull, Barrington Court, Montacute, Stourhead, Nymans Gardens and Sheffield Park Gardens, Hidcote Manor Gardens, Powis Castle and many other places of Horticultural interest. The English tour will be high-lighted by a visit to the Chelsea Flower Show.

The Tour will be by air and will visit the gardens of Sum Li Wo and John Eades, the famous Orchid Growers in Singapore, the Tivoli Gardens in Rome, Brooklyn Botanic Gardens, New York and Menlo Park, San Francisco.

The Tour would commence during the last week in April, 1968, and finish during the second week of June at a total cost of approximately \$1436 (£718).

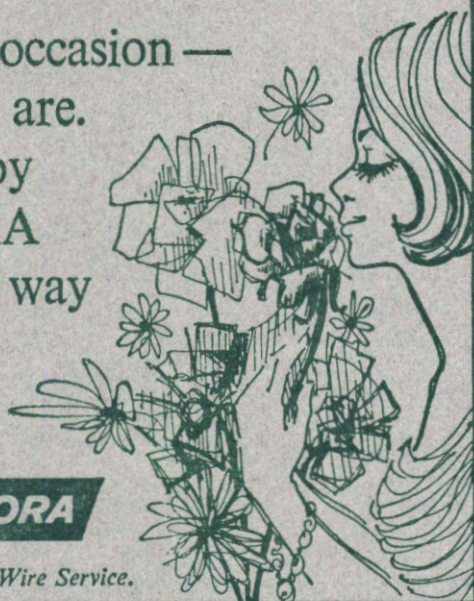
Tentative itineraries can be obtained from:

Johnston's Travel Centre,
P.O. Box 1493,
WELLINGTON

or

Mrs Barbara Matthews,
Editor, "N.Z. Gardener,"
P.O. Box 11,
WAIKANAE

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