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Dominion Secretary:

K. J. Lemmon, A.P.A.N.Z., A.C.I.S., Suite 1, First Floor,
British Sailors' Building, 10 Brandon Street, Wellington.

Correspondence and articles for publication should be addressed to: The Editor, 'New Zealand Plants and Gardens,' Journey's End, Paraparaumu (phone 154). All enquiries concerning advertisements should be addressed to the Editor.

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NEW ZEALAND PLANTS AND GARDENS

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(INCORPORATED)



Editor:

G. A. R. PHILLIPS, F.R.I.H. (N. Z.)

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FLAVOUR IN FRUIT

Flavour may be described as that subtle quality of food, solid or liquid, that combines aroma with taste. In a horticultural sense, flavour concerns fruit and vegetables. Controlling elements are parentage, climate, temperature, soil and, of course, cultivation.

A nation's taste in fruit is naturally influenced largely by the kinds that its climate permits to be grown. Tropical fruit are natural to warm countries where hardy fruit tend to lack flavour. In the more equable climates, like New Zealand, the hardy fruits will dominate even though we may, in our warmer provinces, cultivate citrus and other tropical fruit.

There is no fruit with a greater appeal to the New Zealander than the apple. Apart from this taste being inherent in the British race, the season of the apple is longer than that of any hardy fruit. While the apple season here may not be so long as in Britain, there are certain kinds such as 'Sturmer Pippin' and 'Reinette du Canada' that respond to our long hot summers, the rarity of which cause these two to be somewhat disappointing in Northern Europe. Also peaches and nectarines develop the full flavour we associate with those grown either in an orchard house or on a warm wall in Britain.

Fruits have a wide range of flavour, beyond the capability of our language to describe. Who, for instance, can give any indication of the flavour of apples 'Irish Peach,' 'Cox's Orange' or 'Sturmer Pippin' in such a way that their individual flavours can be recognised by anyone who is a stranger to them? Try to describe the plum 'Greengage' and, beyond stating that it has the true gage flavour, which is simply begging the question, you will make no progress.

The flavour of a fruit is at its fullest development only when quite ripe. It is a too common fault among gardeners that they gather their apples and other hardy fruit while they are unripe. They are, in consequence, more acid in flavour than they should be and are often condemned on that account. Acidity is common to many dessert apples, but it disappears as the fruit matures and the flavour sweetens. Most of the highly esteemed dessert apples have a proportion of acid, and it is the blend of this, with sweetness that gives them the flavour that makes them attractive to the palate.

The complaint that our modern strawberries lack the flavour of those grown by gardeners a few generations ago can often be traced to gathering the berries before they are ripe. There is the temptation, specially in the early part of the season to gather strawberries as soon as they have coloured while they are still firm. Until a strawberry has become dark in colour and very soft to the touch it cannot be said to be ripe enough to possess the full flavour that was the original cause of its popularity. The same applies to raspberries and gooseberries, both of which can be acid or sour respectively in their early stages.

G. A. R. PHILLIPS,
Editor.

BANKS LECTURE 1966

HORTICULTURE AND INDUSTRY . . . PARTNERS IN PROGRESS

Dan A. Watkins

My reaction when I received the institute's invitation to give this lecture was to think up all I know of Sir Joseph Banks, the man who inspired it, and to recall the first time I heard his name. And as I was thinking of Banks I remembered some words by the United States President Calvin Coolidge which to me describe the great 18th century scientist. Coolidge said: 'No person was ever honoured for what he received. Honour has been the reward for what he gave.'

Banks was more fortunate than most of us. He received from a wealthy father money enough to pursue his scientific interests in the grand manner. The world of his day and the world of our day can be grateful that he chose to give for others a fortune in energy and intellect far more valuable than his cash inheritance.

I first heard of Sir Joseph Banks years ago—when I was a boy. His story was told to me by a naturalist who had many of Banks' qualities as an observant botanist and many characteristics which were the direct opposite. Possibly the naturalist will be known to some of you here tonight. He was the late W. W. Smith, an early curator of New Plymouth's Pukekura Park. Where Banks was an international figure, Smith was not even a celebrity in a small Taranaki town. Banks was blessed with money to spend on travel and anything else he fancied; on scientific apparatus and experiments; on expeditions well set up with people and equipment. Smith had to work for a modest living.

Banks was a lively young man booming with energy; and during his 40 years presidency of the Royal Society, as A. W. Anderson describes it, he became something of an autocrat who 'would not gladly suffer fools.' All his life Smith was a quiet, unassuming man.

I make this rather strange comparison of the two men the better to emphasise one tremendous talent (I think I can use that term) they had in common: an ability to observe, note and interpret all that they saw in nature. They had an indefatigable sense of curiosity. Early in life I learnt how Smith with patience and keen observation could unlock many doors. He gave me if not a knowledge then an appreciation of horticulture, and from that I was to understand years later the immense contribution Banks had made to the botanical world and his great services to New Zealand.

Banks, we must remember, was in the broadest sense a scientist, living in an awakening age though still so unscientific that men were convinced the great land mass James Cook was vainly seeking in the Southern Hemisphere must exist to balance the known land areas of the Northern Hemisphere . . . otherwise the globe would be out of plumb and out of position. In many ways he was ahead of his times rather than typical of them. And there is no doubt whatever that he would have left his mark on any century in which he had lived and worked.

You can imagine his excitement if he lived today with all the encouragement of modern technology for search and discovery, and the facilities for using the tools of the modern scientist . . . definition, analysis, measurement, experiment and proof. Some of the effects on horticulture of the amazing scientific developments since the days of Banks and what we can expect in the future really constitute the theme of this lecture under the title suggested for me—'Horticulture and Industry . . . Partners in Progress.'

When I speak of the industry I mean the agricultural chemical industry, and in particular the section of it devoted to scientific discovery, research and development. The activities cover a very wide range of plants and plant life, and directly and indirectly involve horticulture.

They also include pesticides, a name used generally to mean insecticides, herbicides, fungicides, growth regulators, desiccants, acaricides, rodenticides. As well the industry is concerned with the techniques of using the pesticides as finished products—sprays, dusts, granules, seed dressings, fumigants, wetters, spreaders, stickers, solvents and carriers, all of which help the active ingredient to work effectively.

These agricultural chemicals represent a new and dynamic form of energy which is being used to meet the most challenging problem facing us today—the world's exploding population. Now, I realise there are varying views about the development of chemicals for the control of plant growth or the protection of plants, and an issue is often made of it, but in this address I want to do no more than state a factual case.

Ever since man first evolved he has been deliberately altering and modifying his environment to suit his own needs. Many diseases have been conquered and the food supply has been increased tremendously.

This evolution brought what has been termed an 'endless frontier.' Conditions have been created for a rapid population growth, and with it an increasing need for adequate food, clothing and shelter.

Simply stated, man created the problem, then had to find an answer. When Christ was alive there were about ten million people on earth. In the 18th century, in the days of Banks, the population increase was only steady. Today there are 3,220 million people, increasing by 90 million a year (equivalent to the Japanese nation). In 40 years, at its present rate the world population will have doubled.

Of all creatures man has the most consuming desire to stay alive. To do that he must eat, and to eat he must grow food more effectively than ever before in the diminishing living space available. Since there are no satisfactory alternatives he must use specially designed chemicals such as pesticides, fertilisers, plant growth regulators and animal feed supplements.

So by a simple calculation we can see that there are more people on earth than ever before not in spite of but partly because of pesticides. But I must admit that where there are people there are problems, and the more people the more problems. There is an inevitable cycle. Let us look at it this way: Vegetation in its natural environment will not support large numbers of livestock or people. When native vegetation is disturbed for the benefit of people there are also created conditions and circumstances favourable for pests. Weeds thrive on cleared land, and pests such as insects, parasites and blights naturally increase when there is more food in the way of crops, vegetables, fruit trees.

In fact, history is full of the ravages of pests. It is also full of the attempts of people to beat the pests. So far there has been nothing to equal agricultural chemicals. They are by no means a modern invention. Homer 3,000 years ago mentioned the properties of sulphur against pests, and over the centuries various decoctions and recipes have been used against plant pests and diseases. But only in the last hundred years has plant protection with chemicals been developed as an applied science. In that time there has been more progress than in the hundred centuries before. And it is significant that the first protection measures with chemicals were mainly in horticultural crops—vines, hops and fruit.

The first use of an insecticide on a large scale—that of Paris green, an arsenical compound—saved the American potato crop in 1860 from insects. But there was no fungicide to save the Irish crops of 1845-46, which were all but wiped out by blight and caused the death of a million people from starvation or disease. The initial chemicals used in agriculture were simple inorganic compounds such as lime, sulphur, derivatives of copper, arsenic, lead and mercury, and coal tar products, extracts of plant origin, nicotine, derris, pyrethrum and

quassia; and soft soaps and vegetable oils. Many of these have been modified and some of them have since been replaced by more effective chemicals.

Then in the 1930's came a big step forward with the production of a greater variety of man-made chemicals, mainly because of the advances in chemical engineering generally. Till then the long and involved processes had been on the test tube scale. Thus an old established branch of chemistry—organic chemistry—laid the foundation for new industries which could produce not only agricultural chemicals but man-made fibres, synthetic detergents and plastics. It was indeed, a period of technological revolution ultimately spurred on by the needs of the Second World War. At the same time the introduction of vastly improved spraying equipment through engineering research and development and the surge forward in agricultural mechanisation helped tremendously in the effective use of pesticides, fertilisers and plant growth regulators.

None of these advances would have been possible but for consistent research and experimentation, much of it with plants of a horticultural nature. With the help of horticulture biological research has been gaining a deeper insight into the life histories and habits of pests, diseases and weeds.

At this point you might ask: Has the effort been really necessary, especially the battle against the pests? I think so, because in spite of all that has been done to protect plants and crops, the insects still outweigh us, birds, fish and all mammals combined, by a ratio of three to one. One other thing we must remember: the insects have been on earth several million years longer than any other creature, and they are so hardy that man has not succeeded in eradicating a single kind. However, with the help of modern chemicals and techniques, we have managed to reduce the insect plague to a controlled nuisance. This is quite an achievement since there is not only an incredible number of insects—there is an unbelievable number of different kinds. Something like 686 thousand species have been scientifically classified, and it is calculated there are five times as many which have yet to be described and classified. Many of them are useful. Only a relatively small proportion are pests, which is just as well, for the relative few are in sufficient force to beat us if we relent.

Insects become pests only when they adversely affect man, his domestic animals, his crops or the plant and animal products which are important to him. Just how much this damage can mean is illustrated by the locust or grasshopper plague described in the Bible. A single large migrating swarm of desert locusts weighing only 15,000 tons consumes in calories each day enough to support one and a half million people. And one type of insect, the grass grub or brown beetle, causes more than £20 million damage to New Zealand pastures in a single year.



A technician examines a sample for plant parasitic nematodes, the unseen pests which cause much damage to plants.

Small wonder that tight control should be kept on insect pests, especially when today's modern transport helps them hitch-hike to all parts of the world. The white butterfly, for example, was an unwanted assisted immigrant, and every New Zealand cabbage is aware what capers that invader cut.

What all this really boils down to is a race for the dinner table between the insects and us . . . and I cannot see any of us here tonight too eager to give up a place at the board.

Now let us look briefly at the fields of activity in which the chemical industry and horticulture have contributed to a better way of life for human beings.

First Insecticides:

The great break-through with man-made insecticides came in 1939 when the Swiss discovered the insecticidal properties of DDT. This chemical, first made in the laboratory in 1874, was to be used in a dramatic cleanup of malaria by the World Health Organisation. We are apt to think only of food or plant ravaging insects when we talk of insecticides, but it must be remembered to the credit of chemicals that there have been remarkable successes against insect borne diseases such as typhus and yellow fever.

DDT was soon followed by other chlorinated hydrocarbons to kill chewing insects such as caterpillars and grasshoppers; chemicals to kill by contact; systemic insecticides which act after being absorbed through the plant tissues; fumigants to deal with nematodes in the soil; attractants which act like 'a scientific flypaper,' bringing pests to selected places where they can be killed or sterilised; and repellants which drive insects away.

Every horticulturist knows that, like people and animals plants are subject to one or several of about 50,000 known diseases. Bacteria, viruses nematodes and fungi are the chief sources of infection. Some physiological disorders are caused by deficiencies in essential nutrients. Many of these troubles can be treated or prevented with chemicals.

Perhaps it is appropriate that weeds must figure quite prominently in this lecture, for weeds came under the sharp eyes of Joseph Banks when as a young man at Oxford University he became interested in plants, especially wild flowers and the medicinal plants used by London druggists. The weed problem began much earlier than Banks. There were weeds in the Garden of Eden, and they stayed behind when Adam and Eve were banished. In our time there has been evolved a 'weed science'—defined by W. C. Shaw as 'a new scientific discipline which has caused a revolution in agricultural technology.' This revolution is characterised by the rapid extensive acceptance and use of chemical methods of weed control, the expanded scope and diversity of weed research and the advances in technology.

Chemical methods of weed control greatly reduce the energy needed on farms, in nurseries, gardens, forestry, plantations, public reserves and market gardens. Herbicides reduce the manpower, machine hours and machine horsepower requirements in raising crops for food or for other purposes, and thus provide a new dimension for improving all-round efficiency. While there are no better pastures in the world than those of New Zealand, it is significant that much of the green admired by so many overseas visitors is weeds.

With its climate and soil New Zealand is a particularly weedy country, so its interest in weed control has been keen and practical. The simple mechanism of our primary production has been described as a thin sheath of soil and a rainfall. Maybe this is oversimplifying it, but the fact is evident that the association of soil and water is remarkably successful. Ours is a land of abundant plant life. Where all else thrives, how could a weed fail?

Horticulturally, we are heaven blessed. We have also been cursed with plants brought here in the days of colonisation. Gorse for instance. Almost everywhere else on earth gorse behaves as a reasonable horticultural subject. But not here. In New Zealand it has spread with a rapidity rivalled only by the rabbits. It has put thousands of acres out of action. It is one of the major pests affecting the 18 million acres of sown pastures, 13 million acres of natural grassland and the one million acres under crops which make up our effective farm land. And it has been assessed that a 20 per cent weed infestation is a conservative estimate even for our high production pastures. Taking out some of the weed grasses alone had made a significant difference. Had it not been for herbicide, or weedkiller, control of buttercup, barley grass, docks and some of the thistles, dairy production would have suffered a loss of 20 to 30 per cent.

Though the control of weeds with herbicides, or hormone weedkillers as some of them are often called, is the most serious business, I cannot resist quoting from *Punch* a definition of these effective chemicals. According to *Punch*, 'Hormones are messengers that instruct cells how and when to multiply. Their synthetic imitators carry false instruction, the plants obey and perish . . . A diabolical trick which helps to fill human stomachs.'

This sounds like a shady trick. But I can assure you that it is necessary if all of us, having headed off the destructive insects, are to hold our place at the dinner table. And it is no more shady than line- and cross breeding artificially to produce bigger and what are considered better plants than nature would be prepared to grow if left to her own jungle ways.

Before we discuss weedkillers in particular, let us consider how we can justify their development and use. Economically weed control chemically can be justified because its proper use decreases weeding costs generally by 50 per cent and increases the value of the pasture

or the crop by at least 25 per cent. And killing weeds with spraying is no more unnatural than burying them with the aid of the moulding board plough or burning them in the garden incinerator. Man's struggle against weeds has been long and hard. About 6,000 BC the wooden hoe was evolved, but it was 5,000 years before the plough was used to prepare clean ground for seed sowing. In Britain it was not till the middle of the 18th century, in the time of Joseph Banks, that growers used the technique of planting crops in rows so that horse driven cultivators could be drawn between them. Today it is calculated that one man with a gallon of weedkiller can produce the same results as 100 hoe hands.

Let us emphasise, too, that there are many plants which thrive as ornamentals when man has disturbed natural conditions. Native plants especially appreciate lack of competition when grown in cultivated ground free of weeds.

Chemistry began to make an impact on agriculture and horticulture in the latter half of the 19th century. However, it was not till the middle of the 20th century that scientists made significant strides in the use of chemicals for the control of unwanted plants. 2,4-D (2,4-dichlorophenoxyacetic acid), a selective foliage applied herbicide, was the first organic herbicide to be widely used because of its spectacular property of having little or no harmful effect on grass plants when applied at low rates whereas it seriously disrupted the metabolism and organisation of a large number of dicotyledonous species. Either the weeds were killed outright or their growth was so disrupted that they could no longer compete with the crop plants.

2,4-D ushered in an era of intensive chemical activity by scientists and chemical companies. Very soon several compounds related to 2,4-D and belonging to the phenoxyalkylcarboxylic acid group—2,4,5-trichlorophenoxyacetic acid and 4-chloro-2-methylphenoxyacetic acid, for instance—proved to be highly effective and selective in controlling a wide spectrum of broadleaved annual and perennial weeds. Almost all of the modern herbicides were organic chemical compounds and they could be divided into three main classes:

1. Selective foliage applied herbicides
2. Selective soil applied herbicides and
3. Non-selective herbicides.

The development of herbicides such as 2,4-D was an exciting prospect for a country such as New Zealand, so pasture conscious and so dependent on its clovers for nitrogen. Here were two chemicals which could control many common weeds at rates which would not injure red and white clover. Within 20 years of the discovery of 2,4-D agronomists and horticulturists had a battery of herbicides including soil applied compounds such as the triazines. At low rates these particular herbicides killed germinating seedlings without harming the crop.

This showed the way towards selectivity as a growing concept. The strong trend today is for the production of particular chemicals for particular purposes. This way they are more effective. But it has never been considered that herbicides are a panacea for combating weeds. They are regarded simply as another tool, and they should be used correctly as part of good husbandry.

Besides being a means of protecting wanted plants from the competition of unwanted plants, herbicides have a growing purpose for the control of vegetation in many places. In industrial areas, around buildings, bridge abutments, oil refineries, in streets and highways, organic compounds like simazine have a most useful role because they are not readily leached and they are broken down very slowly by micro-organisms.

Now there is another very important part for chemicals to play in agriculture and horticulture—that of plant growth regulation. Basically, it is different from that of weed killing herbicides. Herbicides suppress competitive weed growth and the benefits to the crop are indirect. Growth regulators directly control the developmental processes of the cultivated plant. Several compounds are both a selective weed killer and a growth regulator according to the formulation. We can confidently expect a great deal from growth regulators in the future. Recent work shows that the growth retardant CCC induces drought resistance in beans when applied to the soil. Decenylsuccinic acid not only induces drought resistance but frost resistance in flowering peaches, apple and pear trees. Flowers sprayed with this chemical may survive six degrees of frost. It is thus not hard to visualise a time when it would be possible to utilise arid regions for field crops and to extend fruit belts beyond limits currently imposed by the danger of late frosts. One of the technical difficulties in discovering and developing a new plant growth regulator for practical purposes is finding an organic molecule which combines two essential physiological properties first, to be highly effective within the tissues; and second to be innocuous on the way through the plant till it reaches the site of action. Such a compound is called a systemic agent. When applied to leaves or roots it is easily absorbed and translocated. Its purpose is to attach itself firmly to the biological machinery of the living cell, altering its normal activity. This can lead to death, as with a herbicide, or to control of growth or development. Systemics are being used in different forms, including granules, which release the chemical steadily in the soil and suit such techniques as aerial application to unwanted scrub on high and difficult country.

The growth regulators open up all kinds of possibilities. Developments of vegetative propagation include the use of the very active regulator, 2,4,5-trichlorophenoxyacetic acid as a stimulant for hard-to-root cuttings such as those of some species of rhododendron. Scientists have yet to fully understand the basic physiological action of growth regulators. Auxin type regulators—NAA or 2,4-D, for example—simulate the natural growth hormone, indoleacetic acid, which has a

variety of activities, including the stimulating of root development and the inhibiting of lateral bud development. The natural auxin is of no economic importance as a growth regulator since it is rapidly inactivated by the plant. Growth retardants such as maleric hydrazide and TIBA (2,3,5-triiodobenzoic acid) appear to reverse the action of auxins and are therefore called anti-auxins.



How chemistry aids horticulture with soil fumigation. Here research is carried on in a modern glasshouse to establish the minimum dosage of a soil fumigant for a pre-determined depth of application.

Apple trees sprayed experimentally with TIBA grew noticeably more open and spreading, and had wider crotch angles. Also in some varieties of apple which are usually irregular croppers TIBA promoted uniform and better cropping. Undoubtedly only the surface has been scratched in modifying flowering behaviour. It has been demonstrated conclusively that the flowering patterns in the apple can be altered chemically.

The growth retardants phosphon, Amo 1618, CCC and B-995 appear to reverse the action of gibberellic acid (which promotes the height of growing plants and induces flowering of unvernallized biennial plants).

Plant growth regulators of the future will have a multitude of uses. Grass along our valuable highways will be kept to a desired height. In orchards trees will be induced to flower as wanted and to fruit to a desirable pattern. Chemicals will inhibit the sprouting of stored vegetables. They will break the dormancy of some plants and dwarf others. We will even be able to prune trees chemically as surely as defoliation is being done now on a commercial scale.

With these few examples from my address I have tried to give you some idea of what science through industry in association with horticulture and agriculture has been able to accomplish in helping to solve many of our problems and to open prospects for greater understanding of plants and how they can be developed for better living. With chemistry as the co-operative synergist, horticulture and industry as partners in progress have been able to contribute in a practical and imaginative way to all kinds of human activities. Better fruit from better trees and plants is reaching the kitchens of the world in vastly greater quantity than ever before, in canned form, thus helping the tin industry. Resin from trees is being used for plastics and adhesives, and latex for rubber in thousands of different forms. Oil from the soyabean, safflower, linseed, cocoanut, palm and peanut has a host of traditional household associations including the paint on the outside of a home and the linoleum on the inside. Vegetable fats are a hard working lot, especially when they finish up as detergents.

One of the fascinating dual roles played by a horticultural subject is that of *Pyrethrum*. The white daisy flowers of this familiar member of the *Chrysanthemum* family produce pyrethins, a highly useful insecticide for protecting plants and food from pests.

Herbs and plants for centuries have been favourite sources of drugs and medicines. The most dramatic and certainly the most topical development in this field is the chemical processing of plant extracts for the production of steroid hormones, basic compounds in birth-control pills. And that being so, is it too much to conclude that horticulture with industry is not only helping to solve the problem of how to feed a population threatening to overcrowd the world, but is giving us another means to avert the threat.

And now, I would like to return a moment to Sir Joseph Banks and the 'endless frontier' I mentioned earlier. As a botanist Banks' greatest contribution to posterity was his continuing effort to explain nature and nature's workings.

If he were with us today I am sure he would be deeply impressed with the response by plants to the efforts of scientists seeking knowledge beneficial to man and to all forms of agreeable plant life. In doing this I can best express my own feelings about science and the horticultural world we live in with this thought by Sir Edward Appleton: 'Science has given back to the universe that quality of inexhaustible richness, expectedness and wonder which at one time it seemed to have taken away.'

EDEN GARDEN

P. J. JEW, N.D.H., N.D.H.(N.Z.), A.Inst.P.A.(G.B.), Auckland.

For those plant lovers who are planning a trip to the North during the coming holiday season here is a 'must' to include in the itinerary. This is the Eden Garden, so called because it is situated on the lower eastern slopes of Mt. Eden in a quiet secluded part of Epsom, less than 2 miles from the heart of the City. This voluntary project, which was commenced less than eighteen months ago, is already taking definite shape and concealing the fact that the site was originally a quarry.

In the early part of this century the pioneer firm of J. J. Craig Limited hauled metal and scoria from here for Auckland's roads, until it was closed by an injunction about 1930. However, this was in the horse and cart era, and therefore the devastation was less severe than one would expect to find after the powerful modern machinery of today. In fact the area has been left in a particularly interesting condition with unusual rock formations revealed which give the site real character.

After quarry operations were stopped, part was brought for the Mt. Eden Domain and the remainder sold to the adjoining neighbour Sir Frank Mappin. From that day since, little attention was bestowed upon the area, except to plant several groups of tree ferns and flowering trees.

As the surrounding countryside was developed, it was inevitable that the quarry site should become a dumping ground for rubbish of all types, from bottles and bricks to corrugated iron and car bodies. During the past war treasures from the Auckland War Memorial Museum were stored in a cave on this site. But immediately they were returned to their rightful home neglect continued to reign supreme again.

In 1962 Sir Frank Mappin generously donated his residence and magnificent gardens to the Government for use as a Vice-Regal residence on his death. When the Prime Minister cast an eye over the quarry site, now almost jungle-like in appearance, it was not to be wondered at that he said this area would have to go. With Sir Frank's permission the quarry site was offered to several organisations. All considered its development was beyond their resources.

Finally one day Sir Frank urged a retired nurseryman friend, Mr Jack Clark, to take a look at the wilderness and make suggestions as to what could be done to make it presentable. He saw the possibilities of it as a special garden, and furthermore was filled with contagious enthusiasm. From then on ways and means were sought to carry this idea out. A group of volunteers came forward to support the idea and at their first meeting, in late June of last year, signified their intention of getting on with the task by forming an Incorporated Society. Next a formal lease was obtained from the Crown for twenty years, with right of renewal. To this original area was added the Mt. Eden portion, which is not accessible from the Mountain, and an adjoining road reserve.

The Society was formed with the principal objects of creating a centre of outstanding horticultural interest, by developing the area as a 'special enclosed garden' which will be landscaped to:—

- (1) Contain a wide collection of rare and beautiful plants hardy to the site but with special emphasis on *Hibiscus*, *Magnolia*, *Rhododendron*, *Camellia*, ornamental cherries, conifers, and native trees.
- (2) Test the suitability of new plant introduction for the Auckland region.
- (3) Provide a focus for those people interested in the special plants suited to this area.
- (4) Form an enclosed outdoor space suitable for certain open-air functions.
- (5) Provide a tourist attraction in association with Mt. Eden.
- (6) Plant a tree, shrub or plant and maintain same for 10 years on payment of a fixed amount, and to record on an individual name plate the name of the purchaser or the person in whose memory it was planted.

To further finance the project memberships of the following categories were introduced:—

Life Member — £100 in one subscription.

Sustaining Member — £125 in payments of £25 per annum for 5 years.

Foundation Member — £25 in one subscription.

Subscribing Member — £2 per annum.

Within hours of the first meeting support was being received, and soon sufficient finance was available for a start to be made. This was indeed fortunate, for soon a note of urgency was sounded in that if planting was going to be possible in that same season, over 1000 first class plants would be made available free of charge.

If anyone had seen the site at this stage they would have realised the far-sightedness of the person who had made the decision to form a garden. Here was an area of unsightly scoria scars beneath a canopy

of pines, Chinese privets, wattles, onion weed and ivy. The only topsoil on the site was the accumulation of dead vegetation over the past 35 years. To the less brave souls it appeared a hopeless task.

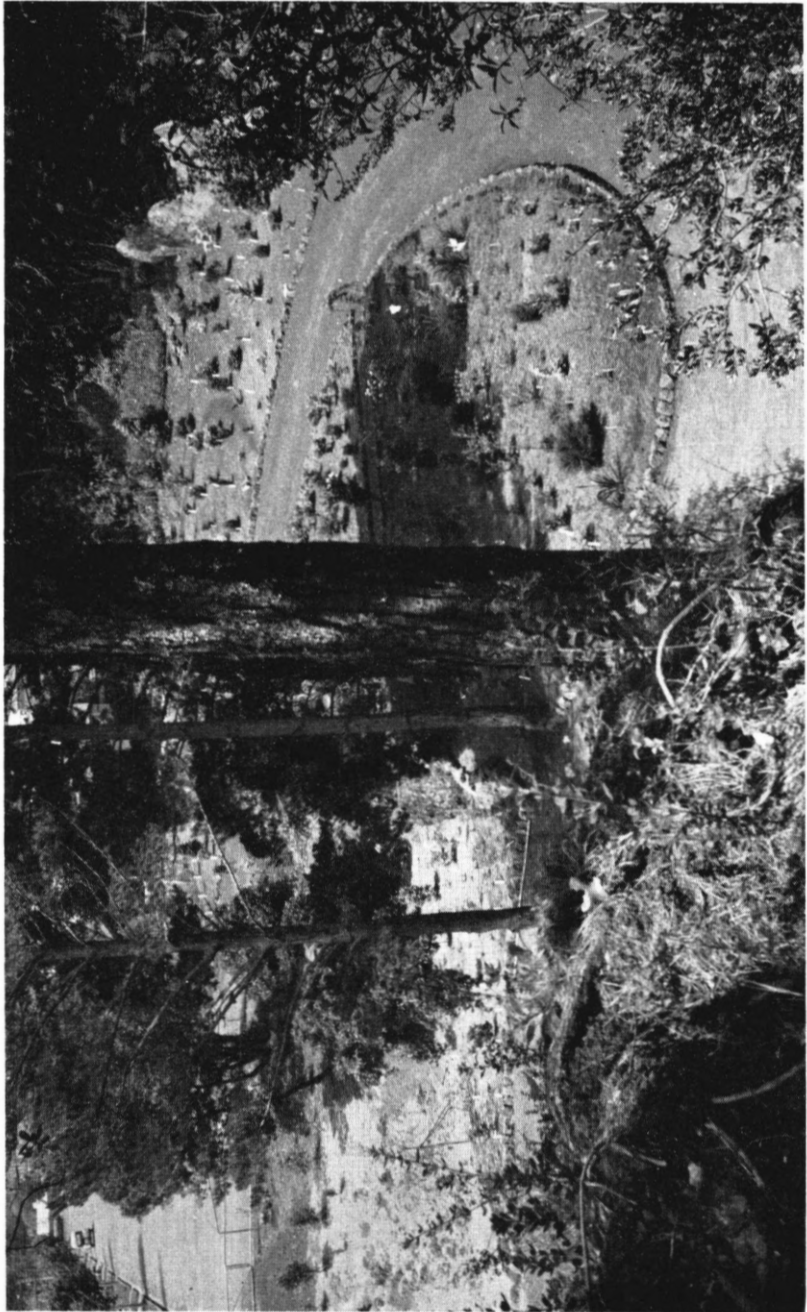
Within a week of the first meeting a contractor was on the site with bulldozer and chain-saws to fell the privets and many of the pines for stage 1 development. However the use of machinery on this terrain and variety of vegetation was limited. This is where the voluntary labour from schoolboys to elderly ladies moved in to clear the difficult sites of unwanted vegetation, particularly ivy and *Tecoma*. It takes little imagination to visualise the difficulty in clearing a quarter of a century of uncontrolled growth of *Tecoma* rooting into every fissure in the rocky faces. However, the helpers were not disheartened and the fires were stoked for weeks on end. The satisfaction of seeing the true terrain appear from under these masses of vegetation encouraged greater efforts and stages 1, 2, 3 were soon ignored. Volunteers were determined not to rest until the whole area was cleared of unwanted vegetation, as the area is seen today.

Clearance of the site was only the beginning. Soon the area was ready for filling and topsoil. However, the weather did not play its part and delivery of soil was held up for some weeks. This delay was used to install a water sprinkler system. Eventually conditions became more favourable and early in September 4,000 cubic yards of filling were delivered, followed by 1,000 cubic yards of topsoil, much of it being spread by hand. As planting proceeded, fences were erected, paths were formed with the readily available supply of scoria, borders were edged with stones and last but not least in importance, labels were set out. The ideal answer here to this universal problem is yet to be reached, but the temporary effort has been much appreciated.

No sooner had operations started than visitors began to trickle in. The good news was passed on, and soon the trickle changed to a stream, some merely to admire, others prepared to assist.

The Auckland Branch of the New Zealand Camellia Society made a generous gift of £100 and this was used to buy soil for a *Camellia* section. A building firm donated a work shed, whilst the Mt. Eden Lions financed soil for a *Hibiscus* garden. Assistance small and large has continued, but with a scheme of this nature more physical and monetary assistance can always be put to good use. At present plans are under way for the construction of a stone visitors' shelter. Ultimately it is hoped to be able to employ a full time gardener-caretaker.

After two planting seasons, over 5000 plants have been set out and generally growth has been excellent. Last summer was particularly kind to newly planted trees and shrubs, but the severity of the subsequent winter left its mark on the *Hibiscus* collection, which is one of the most comprehensive in Auckland. Clearing of the site was completed last summer, and this permitted over 16,000 cubic yards of filling being put over the sheer faces of the crater. This gift has put the development of the garden ahead some years, and has greatly encouraged the organisers.



Eden Garden showing initial stages of development (see page 263)

The planning and planting of this Garden has followed the precepts of good landscaping. Full utilization has been made of the existing character of the site, with its backdrop of sheer cliffs left with sufficient cover to conceal man's part in their making. From these rise stately pines and spreading pohutukawas, with their roots growing out of every crevice. The shape of the area does not permit the complete scene to be viewed from any one position and therefore, as the curved paths are followed, a fresh view unfolds around each corner.

The plants chosen have been essentially reliable subjects which will thrive in most Auckland gardens, although some may not be so well known. This, together with a masterly combination of quick and slow growing subjects, has resulted in ready support of the project. Who doesn't like to see an early return for their investment?

Already the Society has invited distinguished visitors to plant a tree, and both the Governor-General, His Excellency Sir Bernard Fergusson, and the Prime Minister, the Rt. Hon. K. Holyoake, have been delighted to accept. Both gentlemen had seen the area just before development commenced, and the transformation has quite amazed them.

Whilst in Auckland Professor and Mrs Waterhouse planted camellias, and also Brian and Rhyl Doak planted their *Camellia* namesakes before taking up residence in Melbourne. Knowledge of this project has spread further afield and Bill Goertz, of the Southern California Camellia Society, planted on behalf of his members.

In spite of this there is every likelihood that your Auckland hosts will know little about the project. Take them along with you to see this 'garden of the future' which is situated at the top of Omana Avenue, off Mounain Road. We cannot guarantee fine weather, but we can assure you of an interesting visit which you will remember long after you have forgotten admiring skyscrapers in Queen Street.

LODER CUP AWARD, 1965

The presentation of the Loder Cup for 1965 was made to Mr Arthur Farnell of Auckland, by Professor H. D. Gordon, Head of the Botany Department, Victoria University of Wellington and a member of the Loder Cup Committee, on January 24th, 1966. It was regretted that arrangements for the presentation to be made by the Lord Wakehurst, son of the donor, during his brief visit to Auckland on that day, could not be carried out owing to the delay of an aircraft bringing this distinguished visitor to New Zealand.

The Loder Cup was given to New Zealand by the late Mr Gerald W. Loder (later Lord Wakehurst) in 1926, to encourage the protection and cultivation of the native flora. Professor Gordon, in presenting the Cup, said the Award was made to a man with three main attributes — a sincere and passionate love of plants, great skill and success in their cultivation, and an infectious enthusiasm. The donor of the Cup became a great admirer of New Zealand plants, which he planted extensively in his English estate, and it gave the Committee great satisfaction to recommend the Award to a man such as Mr Farnell with a similar love of native plants.

Until his retirement 18 months ago Mr Farnell was in charge of the grounds of the 17 hospitals under the control of the Auckland Hospital Board. His collection of 400 indigenous species in the grounds of Middlemore Hospital has been described as unique. He commented after receiving the Cup, 'It is no good finding something rare and good in life and keeping it to yourself. The satisfaction lies in giving pleasure to others.'

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NOTES FROM THE CHRISTCHURCH BOTANIC GARDEN

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

Generally speaking the weather in Christchurch for 1965 can be spoken of as not very good. After a near record drought year in 1964, rainfall for 1965 was ample (exceeding the average by more than three inches) and at times excessive. The city was battered by storms and gales, and there were frequent and often unseasonable outbreaks of hail, sleet, and snow which often made conditions for plant growth very difficult. However in spite of everything it is the first time for several years that there has been an adequate supply of moisture in the subsoil, and although temperatures have been very variable there has been some good growth on most plants.

Although the weather has been rather unreliable there have been some very warm days and evenings, the latter in particular bringing out the scents and perfumes of many plants. One of the most important of the human senses is the sense of smell and although used every day it is amazing how little attention it receives in the gardens. It is quite true that a person's first instinctive reaction upon seeing a pretty flower is to smell it, but it is amazing how little regard is paid to it when planting a garden. Most people plant for brightly coloured flowers, or attractive foliage, but comparatively few plant with an eye, or perhaps more correctly a nose, for scent. There are many plants which have a scent, or perfume which is attractive and one of the delights of gardening is to be able to wander around the garden and sample the different scents and perfumes which emanate from the various plants. Some plants are day scented while others do not give off their scent until the evening, and to my way of thinking it is the latter group which is the most delightful. Upon looking around the Botanic Gardens it is surprising to note the number of plants which can be grown for their scent, or perfume but within the space of these notes it is not possible to mention all.

One group of plants commonly grown for their flowers is *Nicotiana*. Although generally grown as an annual they are truly perennial in sheltered positions. They are often used in the Gardens for filling spaces under trees and shrubs where many other plants will not thrive. Many of the plants survive the winter in such situations, but there are always plenty of self-sown seedlings for replacements. *Nicotiana alata* var. *grandiflora* (usually listed by seedsmen as *N. affinis*) and *N. x sanderae* have given rise to most of the strains of *Nicotiana* commonly grown. From the former there is a range of colour forms which are usually listed as *N. affinis* hybrids; the colours usually range from white to carmine. *Nicotiana alata* has been crossed with *N. x sanderae* to produce strains such as 'Crimson Bedder,' 'Crimson King,' and 'Daylight.' Normally the flowers of *Nicotiana* close during the heat of the day and open towards the evening; however with the 'Daylight' strain they remain open during the day. All are very fragrant

at night, the fragrance from a single plant being discernable in the air for many yards around. Not so commonly grown is *N. sylvestris*. This is a handsome species from Argentina and it normally grows to a height of 5 to 6 feet. The foliage assumes large proportions and individual leaves often measure more than 2 feet in length, and 16 inches wide. The fragrant white flowers are produced in racemose panicles and are rather densely clustered towards the top of the stem. Each flower is up to 4 inches in length with a long, narrow tube, the corolla lobes flaring at the end and about $1\frac{1}{2}$ inches in diameter. *Nicotiana sylvestris* is a fine plant for display in a border and deserves to be more widely grown.

Among our native plants there are quite a number which have scented flowers and the difficulty with them is not, what to grow, but what not to grow. Probably the best known are the various species of *Pittosporum*. *Pittosporum tenuifolium*, and *P. colensoi* are two of the best. The dark purplish flowers are usually produced in profusion and during the night they emit a very sweet scent. The rather nondescript *P. anomalum*, although nothing to look at for most of the year completely justifies its existence when in flower. The small yellowish flowers are liberally produced and on a warm spring day their delicious perfume pervades the air for many yards around. One little known native shrub is *Olearia fragrantissima*. This is a rather erect growing shrub with reddish-coloured branchlets and pale green leaves. The greenish-flowers are not showy, but they have the smell of ripe peaches. It is the type of shrub which can be accommodated in the back of a border where it can be smelt but not seen. *Olearia solandri* produces masses of small, white, vanilla-scented flowers along the branchlets. They contrast quite well with the yellowish-colour of the branchlets and the small dark green leaves. Some of the New Zealand species of *Clematis* are very sweetly scented and it is a great pity that they are virtually unknown in horticulture. Opinions differ as to the qualities of the scent of *Clematis foetida*, but of *C. afoliata*, and *C. petriei* there is no doubt. Both of the latter are very sweetly scented, the scent being something all of its own, but being very suggestive of *Boronia*.

Few plants have their fruits so strongly scented that they can be smelt many yards away, but one such is the Chilean *Myrtus ugni*. During the late autumn months as the fruits ripen, they emit a delicious spicy aroma which is most distinctive. It is quite possible to detect this aroma 3 or 4 yards from the bush.

There are quite a number of plants which have scented, or aromatic foliage when bruised, or crushed; one of the lesser known being the Californian laurel, *Umbellularia californica*. This is a handsome evergreen tree, eventually growing to a height of 100 feet. When crushed the leaves emit a strong pungent, aromatic odour which has been likened to camphor. If inhaled too much, and too deeply it causes watering to the eyes.

In addition to the plants mentioned, there are the more common ones such as *Chimonanthus*, *Hamamelis*, *Corylopsis*, *Prunus mume*, *Lavandula*, *Lonicera*, and quite a number of others too numerous to mention. The air in the gardens is filled with many different scents and perfumes some of which are very obvious, and yet it is amazing how many people ignore their sense of smell and rely purely on their visual sense.

ANNUAL REPORT OF THE DOMINION COUNCIL FOR THE YEAR ENDED 30th SEPTEMBER, 1965

Ladies and Gentlemen,

The Dominion Council has much pleasure in presenting the Annual Report for the year ended 30th September, 1965, which is the forty-third Annual Report of the Royal New Zealand Institute of Horticulture Inc.

The many matters dealt with during the year by Dominion Council are herein reviewed for the benefit of members and delegates.

1. *Meetings*

- (a) *Annual Conference 1965*: The 42nd Annual General Meeting and Conference of Delegates was held in Hamilton on 18th February, 1965. The local District Council extended very cordial hospitality to those attending. The Conference was officially opened by the Mayor of Hamilton, Dr Denis Rodgers. It was a well-attended and successful Conference. The Banks Lecture was delivered by Mr E. W. E. Butcher, M.A., of Hamilton, on the subject, 'Some remarkable Plants of the Waikato Bogs.' It proved most interesting and instructive, being ably presented and illustrated. The Lecture was published in *New Zealand Plants and Gardens*, Vol. VI, No. II, March 1965.
- (b) *Dominion Council*: The Dominion Council met on four occasions during the year and the average attendance at those meetings was 17. Greater attendances at these meetings would be very welcome and District Councils and affiliated bodies are urged to endeavour to be represented at these meetings.
- (c) *Sub-committees and Examining Board*: The Dominion Council again acknowledges with gratitude the co-operation and help received from the various sub-committees and the Examining Board. They have met regularly throughout the year, attending to the specialised business delegated to them.

2. *In Memoriam*:

It is with most sincere regret that the Dominion Council records the passing of several esteemed members during the year. Their passing is keenly felt and our sympathies are extended to their relatives. Particular reference is made to the passing of Mr G. E. Knowles, A.H.R.I.H. (N.Z.), of Timaru.

3. *Membership*:

The total membership, as at 30th September, 1965, stands at 1768, including 35 Associates of Honour. A strong membership is vital the well-being of the Institute and District Councils are urged to do all they can to enrol new members. The Mayor of Hamilton expressed the view that the Institute merited full support and was worthy of a much larger membership. We welcome all new members who joined during the year. The following table shows membership of the various district councils, overseas and those unattached to any district council. 1964 figures are shown in brackets.

Auckland	167 (182)	Overseas	14 (15)	Whangarei	103 (110)
Hutt Valley	29 (33)	Canterbury	134 (128)	Hawke's Bay	37 (38)
North		Manawatu	43 (48)	Nelson	16 (15)
Taranaki	226 (249)	Northern		Oamaru	4 (4)
Otago	47 (52)	Wairoa	56 (58)	Rotorua	8 (9)
South		Poverty Bay	34 (36)	Southland	18 (17)
Canterbury	42 (44)	South		Wanganui	77 (179)
Taupo	72 (75)	Taranaki	141 (146)	Unattached	43 (44)
Wellington	132 (127)	Waikato	325 (339)	Total	1768 (1948)

Fellowships:

During the year the Dominion Council conferred 'Fellowship' upon 13 members.

4. *Finance:*

- (a) *Annual Accounts:* These reveal a much improved position compared with the previous year. This is brought about by the receipt of the Internal Affairs grant of £800 for the Journal, representing a retrospective payment of £400 for the year 1964, and a like amount for 1965. The effect of the increase in membership subscriptions approved at the 1965 Dominion Conference will not be reflected until next year. The new rates applied from 1st October, 1965. The financial strength of the Institute rests upon a strong membership, which must be increased, and present members are urged to help by enrolling new members. During the year members of the Dominion Council have given detailed thought to matters of Policy and Finance and further comments are included under this heading herein.
- (b) *Trust Accounts:* These are clearly set out in the Annual Accounts. Trust funds are properly invested.
- (c) *Publications Account and Loder Cup Account:* These, too, are clearly set forth in the Annual Accounts. The financial assistance received from the Internal Affairs Department for the Journal is sincerely acknowledged with thanks.
- (d) *Examinations Grant:* The Dominion Council acknowledges also with thanks the capitation received from the Department of Agriculture for examination purposes.
- (e) *J. R. McKenzie Trust:* A grant of £200 from the J. R. McKenzie Trust for 1965 is acknowledged with appreciation. This has given a much needed fillip to the finances of the Institute. This sum was received after the 30th September and therefore will appear in the next year's Annual Accounts. The J. R. McKenzie Trust Board is the major shareholder in McKenzies (N.Z.) Ltd., Department Stores, and derives its distributable income from profits earned by McKenzies Stores.
- (f) *Policy and Finance:* During the year members of the Dominion Council met especially to discuss the general affairs of the Institute, its future policy and finance. Arising from these discussions a circular was sent to affiliated organisations, kindred societies, and district councils for comments and suggestion on ways whereby the Institute's work and influence might be extended and made more effective. A sub-committee was appointed to continue the follow-up of these discussions and to bring down a constructive report to the Dominion Council. This Committee has been doing good work and expects to present a report at the first meeting of the Dominion Council in 1966.

5. *Nomenclature:*

Although this Sub-committee of Dominion Council has not met formally during the year, members have been in touch with each other on questions of plant names.

The collections of cultivated varieties (cultivars) of *Leptospermum* and *Hebe* are well established in Christchurch and the preparation of exact descriptions and the identifying of certain plants is proceeding steadily. Plants and information have been exchanged with overseas organisations. There is no doubt that this aspect of the Institute's activities, though slow and unspectacular, is of importance not only to New Zealand Horticulture, but also overseas.

At the Conference last year, an appeal was made for donations of old plant catalogues and New Zealand horticultural literature to assist in tracing early introductions of plants. It is pleasing to report that several gifts of such publications have been received. All such publications are welcome and are housed in the library of Botany Division, D.S.I.R., Lincoln, thus being of inestimable value to all who study horticultural plants in New Zealand.

6. *New Zealand Plants & Gardens:*

The Institute's Official *New Zealand Plants and Gardens* (Editor G. A. R. Phillips, F.R.I.H. (N.Z.)), Published quarterly has been continued throughout the year and has again maintained a high standard with a wide range of authoritative articles by qualified authors on New Zealand and overseas horticulture. It plays a most important part in maintaining the status of the Institute and is one of the major benefits of membership, particularly for members who are not attached to District Councils.

Revenue from the sale of advertising space has improved and the help of district councils in this is appreciated.

The Dominion Council expresses its appreciation of the continued good work of the Editor, Mr G. A. R. Phillips, and of the quality maintained. Appreciation is also expressed to the contributors of articles particularly those who have submitted articles and illustrations free of charge.

The Publications Committee, under the Chairmanship of Mr A. M. W. Greig, has given careful attention to the business entrusted to it, maintaining regular liaison between the Dominion Council and the Editor.

There has been a welcome increase in the number of reports from District Councils.

The photographs in the Journal are now distributed throughout the text adjacent to the appropriate articles, there being five or more pages of illustrations in each issue.

It has been suggested that a series of illustrated articles on notable gardens, both public and private, would be welcomed by all on similar lines to those on the Wellington Botanic Gardens. Such articles stimulate local interest and their preparation might be undertaken by District Councils as a special project.

The printing of Index to Volume V is in hand.

7. *Historic and Notable Trees:*

The Canterbury District Council has commenced enquiries into placing descriptive plaques on Historic Trees in their locality. A standard marker for all Historic and Notable trees throughout the Dominion was most desirable. The publication of the list of historic trees is a difficult problem, insofar that the collation and checking of the information to ensure accuracy is a major undertaking. The Dominion Council regrets the long delay in publishing this information and hopes that it might prove possible to do so in the near future.

8. *Arbor Day:*

This annual observance was again fully supported throughout the Dominion by the Institute taking an active and leading part.

9. *Loder Cup Award:*

This Annual Award is offered to 'Lovers of Nature in New Zealand to encourage the protection and cultivation of the incomparable flora of the Dominion.' Mr R. Syme, A.H.R.I.H. (N.Z.) serves on the Loder Cup Committee as the nominee of the Institute. The 1965 Award has been made to Mr Arthur Farnell of Auckland and our congratulations are extended to him.

10. *Examining Boards*

The Examining Board is appointed by the Dominion Council annually and bears the full responsibility for the conduct and administration of the Institute's examinations. The Institute has full statutory authority to issue diplomas and certificates as follows:

- National Diploma in Horticulture (N.D.H.N.Z.)
- National Diploma in Fruit Culture (N.D.F.C.N.Z.)
- National Diploma in Apiculture (N.D.Ap.N.Z.)
- Certificate in Vegetable Culture (C.V.C.N.Z.)
- Certificate in School Gardening (C.S.G.N.Z.)
- Seedman's Certificate (S.C.N.Z.)

Under the chairmanship of Professor H. D. Gordon of Victoria University of Wellington, the Examining Board has given meticulous attention to the Examinations conducted by the Institute. The Board's separate report is appended. Again the Dominion Council places on record its sincere appreciation of the valued assistance received from the Canterbury District Council, the Christchurch City Council, the Director of Parks and his staff at Christchurch, also officers of the Department of Agriculture, and members of the National Beekeepers Association for their excellent help in the conduct of the Oral & Practical examinations. The Dominion Council expresses its warmest thanks to the Examining Board for their loyalty and devotion to this important phase of the Institute's work.

11. *Horticultural and Floral Art Show Handbook:*

The sub-committee preparing this handbook worked steadily during the year amending and clarifying many small but important matters. The Floral Art Section was circulated to District Councils, who generally expressed approval. The book has now been passed to A. H. and A. W. Reed Ltd., for publication. Cordial relations have been established with the Editorial Staff of that firm. It is planned that the book will be illustrated both in black and white and colour and will be in a pocket format with a waterproof cover. It is hoped that it will be published in time to give guidance in preparing next season's Show schedules. The book should prove to be of value to all people interested in showing horticultural produce or floral art displays, both competitive and non-competitive. It provides advice on organising shows, schedule making, exhibiting and judging as well as separate sections on individual flowers, fruits, vegetables and Floral Art. It should be of permanent value to everyone associated with both large and small horticultural Shows. If each member of the Institute will purchase a copy and encourage members of other local horticultural societies to do likewise, it will assist the finances of the Institute and, it is confidently hoped, enhance the Institute's prestige and standing. Thanks are expressed to this sub-committee for their efforts on behalf of the Dominion Council.

12. *Careers in Horticulture Booklet:*

The Institute can be proud of the achievement of publishing this booklet. The Canterbury District Council executive members have undertaken this project and congratulations and thanks are due to them. The cost of publication has been sponsored by business firms and organisations. It is calculated to become an excellent medium for spreading up-to-date information and for encouraging young men and women into horticultural careers. 10,000 copies have been printed, almost half of which have already been distributed.

13. *Eleventh New Zealand Science Congress:*

This Congress was held in Auckland in February 1965. Horticulture was included in a section for which the general theme was 'The need to increase primary production and its implications for science, technology and human welfare.' Under the Chairmanship of Professor J. A. Veale, the speakers were: Mr G. J. Wilson (Lincoln College), 'Vegetable Crop Production'; Mr R. J. Ballinger (Blenheim) 'Factors Affecting Vegetable Crop Production'; Mr G. F. Thiele (Lincoln College), 'Fruit Crop Production'; Mr R. Richards (Massey

University), 'Ornamental Crop Production'; Mr S. Challenger (Lincoln College), 'Export of Flowers and Nursery Stock.'

It appeared very desirable for Horticultural Science to have a separate section in future Congresses.

14. 'Eastwoodhill' Property—Gisborne:

This property was eventually sold during the year to Mr H. B. Williams of Gisborne who intends to preserve and develop the planted area, while farming the remainder. The Institute will continue its close interest in the preservation of the tree park. The co-operation of the Institute in this has been offered to Mr Williams and a small Committee comprising Dr J. S. Yeates, Mr J. P. Salinger and Mr J. W. Goodwin (with power to co-opt) has been appointed for this purpose.

15. Opossum Control:

The Dominion Council has continued to keep this subject before it. The N.Z. Forest Service has put out a questionnaire (this was published in *N.Z. Plants & Gardens* Vol. VI, No. V) seeking the help of individuals in gathering greater information on opossum habits and density. Members are urged to co-operate in this. Here and there steps are being taken to curb this menace, and it is gratifying to learn of these earnest endeavours. There is a view expressed that much more research is required into the habits etc., of the opossum before launching into costly attempts at eradication. The National Research Advisory Council is concerned with Animal Research and may be able to assist in research on opossums.

16. Highway Plantings:

The co-operation and assistance of District Councils has been offered to the Commissioner of Works, District Commissioners and District Horticultural Officers of the Ministry of Works. District Councils have been supplied with the names and addresses of these district officers and are now urged to collaborate with them in all matters pertaining to the beautification of Highways and Public Works.

17. Remits before the 1965 Dominion Conference:

Details of these remits and the discussion thereon have already been published in the report of the 1965 Conference in the March 1965 issue of *N.Z. Plants & Gardens*, page 91.

- (1) *As regards the Fencing Act, 1908:* The sub-committee's report on enquiries into proposed amendments was published in the December 1965 issue of *N.Z. Plants & Gardens*, Vol. VI, No. V, p 223. The sub-committee's recommendation that no action be taken was adopted by the Dominion Council.
- (2) *As regards shortage of skilled horticulturists and gardeners:* The Minister of Labour has stated that applications from skilled gardeners are accepted in London provided they meet with occupational standards which their prospective employers expect. The Minister affirmed that skilled gardeners and horticulturists are within the approved categories of assisted immigrants.
- (3) *As regards Oral & Practical Examinations:* This is dealt with in the Examining Board's separate report.
- (4) *As regards the holding of examinations and issuing of certificates in floral art judging:* The Dominion Council has duly considered this question and resolved:—

'That the Institute could consider issuing certificates to state that persons have attended a course and passed an examination in the judging of . . . (subject) organised by . . . (body); the teachers, syllabus and examiners to be approved by the Dominion Council on the recommendation of the organising body.'

The resolution was conveyed to the Examining Board and to District Councils for comment and approval. The lack of response from District Councils was disappointing.

18. *Banks Lecture:*

To date, with few exceptions, the Banks Lectures have been restricted (by choice of lecturer and subject) to lectures on New Zealand plants and botany. Such lectures are nowadays less of interest than formerly. This has probably arisen from a misunderstanding of the wide range of the interests of Sir Joseph Banks and from associating him entirely with his collecting New Zealand plants. Sir Joseph Banks was a naturalist and a great horticulturist; he was a founder of the Royal Horticultural Society in England. The Institute has a wide interest in horticulture in all its facets, as had Sir Joseph Banks in Natural History. In restricting the Banks Lecture to New Zealand flora, which is now frequently a part of botany rather than horticulture, a limit is being placed on the choice of subject and speaker. A sub-committee was set up to consider this aspect of the Annual Banks Lecture and their recommendations were adopted, as follows:—

- (1) The topic should be chosen to cover all major branches of horticulture.
- (2) The Speaker should be selected for his knowledge and ability to present the subject.
- (3) The address should be restricted to a specific time limit.
- (4) The lecture should be made available to the Press and published in full in the Institute's Journal.
- (5) Consideration should be given to a tangible distinction, such as an award for delivering the Banks Lecture.

19. *Associate of Honour, Mr F. P. Knight (England):*

The presentation of the Associate of Honour Certificate to Mr Knight was made by the High Commissioner for New Zealand, Sir Thomas Macdonald at the preview of the R.H.S. Great Autumn Show in London on 20th September. Reports received indicate that it was a very fitting ceremony which brought distinction to the Institute.

20. *Award of Garden Excellence:*

This Award has now been commenced and all District Councils have been informed of the procedure for nominations. The sub-committee handling this Award on behalf of the Dominion Council, under the conensorship of Mr J. A. Hunter (of Auckland), has done excellent work and is warmly thanked for bringing the Award to fruition. District Councils are urged to give their full support to this Award.

21. *Plant Raisers' Award:*

Only one nomination came before the Plant Raisers' Award Committee this year, and, after careful study and trial growing in the four main centres, the nomination was not considered worthy of the Award.

22. *Botany Division (D.S.I.R.) Library:*

The Dominion Council supported an application made by the Botany Division for a substantial grant from Lottery funds for valuable additions to their library. A grant of £24,100 was duly made to the Library and this should prove of tremendous benefit to botanical studies and research in New Zealand.

23. *Anti-Litter:*

Further approaches have been made to the Municipals Association and to the Transport Department, particularly with regard to refuse falling from insecurely loaded trucks.

An approach has also been made personally to the Senior Inspector of Post Primary Schools who was most sympathetic but pointed out that school grounds were already regularly inspected and kept tidy. The school masters

were not responsible for the actions of children out of school grounds and after school hours. The subject is dealt with in school Social Studies. The Inspector undertook to see that the time spent on the subject of litter within these studies was adequate. It is felt that teachers can influence children in their habits. The Scouts Headquarters affirmed that tidiness and cleanliness was already a prominent feature in the instruction given to Scouts. There is an opinion abroad that the Institute should not be over-concerned with this subject which was not, after-all, horticultural in character.

24. *Associates of Honour:*

The Dominion Council's special sub-committee this year received and considered six nominations from District Councils. Four nominations have been endorsed by the Dominion Council for submission to the 1966 Conference recommending their election as Associates of Honour of the Royal New Zealand Institute of Horticulture (A.H.R.I.H. (N.Z.)). They are:—

Mr R. D. Chamberlain, F.R.I.H. (N.Z.), of Hawera (nominated by South Taranaki District Council).

Mr W. D. Cook, F.R.I.H. (N.Z.), of Gisborne (nominated by Manawatu District Council).

Mr G. A. R. Petrie, N.D.H. (N.Z.), F.R.I.H. (N.Z.), of Invercargill (nominated by Southland District Council).

Mr G. A. R. Phillips, F.R.I.H. (N.Z.), of Paraparaumu (nominated by Wellington District Council).

The distinction of Associate of Honour is conferred only on persons who have rendered distinguished service to horticulture. The maximum number of Associates of Honour at any one time, sanctioned by the Constitution of the Institute, is 50.

25. *District Councils:*

The Dominion Council expresses its sincere thanks to the Executives and members of District Councils who have done so much throughout the year to maintain the work of the Institute at the local level and to present the Institute to the people of their districts. It is through District Councils that the Institute is known, by and large, in district areas. There is so much done at the national level which is not readily known or understood by the general membership and citizens, but District Councils have an opportunity of providing the liaison between Dominion Council and these folk. It is true that District Councils are stronger in some localities than in others, but all can and do play a part, for which the Dominion Council expresses its appreciation and solicits strong loyalty and support throughout the ensuing year. The major drop in membership in the Wanganui District Council is regretted.

26. *University Chair of Horticulture—Lincoln College:*

It is with pleasure that the Dominion Council has learned of the appointment of Dr T. M. Morrison, M.Sc., Ph.D., of Lincoln to the first Chair of Horticulture at Lincoln College. Professor Morrison is a son of Otago and our best wishes and congratulations are extended to him. The creation of Chairs of Horticulture at Massey University and at Lincoln College is a major step forward for New Zealand Horticulture and it is sincerely hoped that the young people of our Dominion will seize their opportunities now of taking full degrees in horticulture and horticultural science, and thus enhance status of horticulture in New Zealand, in both practice and research.

27. *Thanks:*

The Dominion Council extends its sincere thanks to all who have contributed to the successful running of the Institute throughout the past year. Particular thanks are expressed to:

- (a) The Government, Ministers of the Crown and Departmental Officers for their courteous attention to the needs of the Institute whenever they have been brought to their notice.

- (b) Local Bodies for their continued interest and financial support and the Directors and Superintendents of Reserves.
- (c) Examiners, supervisors and all others who have co-operated to facilitate the conduct of the examinations during the year. Special reference is made again to the fine assistance received from the Director of Reserves and his staff, and officers of the Horticulture Division of the Department of Agriculture and members of the National Beekeepers' Association at Christchurch, in the holding of the Oral and Practical examinations there.
- (d) District Council Presidents and Executives who have continued to maintain an active front in their respective localities.
- (e) The New Zealand Forest Service, for assistance in matters relating to Historic and Notable Trees in New Zealand.
- (f) Mr E. W. E. Butcher, M.A., of Hamilton, for his presentation of the Banks Lecture at the 1965 Dominion Conference.

28. *Conclusion:*

As Dominion President I wish to place on record my personal sincere thanks to all members of the Dominion Council and of District Councils, and all others, who have worked solidly throughout the year in the interests of the Institute and of horticulture.

In its widest aspects horticulture is rapidly developing and achieving important proportions in economic and industrial values within our Dominion. *Commercially*, it is growing into an industry of some magnitude, finding rewarding markets not only in our own fair land, but also overseas increasingly each year. These commercial interests are well cared for by the Associations and Federations of Commercial Growers. *Scientifically* there is a growing awareness of the need for more and more research in fields of weed, pest, and disease control, in methods of production and marketing, in the selection of material for propagation and production. The Government and Industry are endeavouring to meet this challenge by the establishment of Research Divisions and the appointment of instructional and inspectorial staffs. Along with its development in the commercial and scientific fields there is a vital need for technical knowledge, academic study and the application of practical experience. The provision of University education in horticulture and horticultural science, so adequately provided now by Massey University and Lincoln College, and the offering of Diplomas and Certificates in Horticulture and kindred subjects by the Institute itself, excellently furnish the required fillip here.

But Horticulture is not merely an industry, nor is it merely a science, but intrinsically horticulture is also an art, a craft, a culture whose aesthetic value brings it right into our very homes and into the lives of all our citizens, for the practice of horticulture far preceded the scientist and the creation of the garden far preceded the industry. I am confident that it is within the fields of education and practice in aesthetic horticulture that the future of the Institute's activities lie. It is here where the Institute can make its greatest contribution to the health, wealth and happiness of individual and national life. Let us therefore catch a fresh vision of our future pathway, and being strengthened and encouraged by past experience, let us press forward with a strong determination to succeed in our purpose and function.

On behalf of the Dominion Council,

J. F. LIVING, F.R.I.H. (N.Z.),

Dominion President.

REPORT ON PROCEEDINGS OF FORTY-THIRD ANNUAL MEETING AND CONFERENCE OF DELEGATES HELD IN NEW PLYMOUTH ON THURSDAY, 17th FEBRUARY, 1966, COMMENCING AT 9.00 A.M.

Present.

Mr J. F. Living, F.R.I.H. (N.Z.), Dominion President, presided over the Conference which was attended by approximately 80 delegates, members and representatives of affiliated organisations.

Apologies for non-attendance were received from the following: Messrs T. F. A. Archer, D. Combridge, E. Hutt, K. E. Young, G. A. R. Phillips, A. White, T. H. Reader, Mesdames Macalister, Yendell, Wilson, Colquhoun, Miss J. Dingley.

Welcome to delegates and visitors was extended by the Dominion President who said how happy everyone was to visit the beautiful city of New Plymouth. The warm weather and the warm welcome brought hopes for a happy Conference. The Conference was to be honoured by the visit of the Minister of Agriculture, Hon. B. E. Talboys, who was travelling to New Plymouth to open the proceedings.

In Memoriam

The Dominion President asked those present to stand in memory of several honoured members who had passed away during the year. Particular reference was made to the late Mr G. E. Knowles, of Timaru, an Associate of Honour of the Institute and Mrs Reader, the wife of Mr T. H. Reader of Hawera.

Procedure Rules

These rules, as defined on page 4 of the Conference papers, were formally adopted as the Rules of Procedure for the Conference.

Dominion President's Address

In a brief address to the Conference Mr J. F. Living said how much he appreciated the honour conferred on him at the 1965 Conference when he was re-elected President for the year. He said the Institute was held in high esteem. With the present difficulty with overseas funds he felt that horticulture should receive greater recognition officially as an income-producer. It was a great pleasure to see that Chairs of Horticulture had been established at both Lincoln College and Massey University. He extended a warm welcome to Professor T. M. Morrison, the newly appointed Professor of Horticulture at Lincoln. The Institute looked forward to his help and advice as a member of the Dominion Council. Mr Living went on to say that the one aim of all should be to keep the membership up—this would give a sound base for the future.

Annual Report

As the Annual Report had been circulated in the Conference Papers it was resolved that this be taken as read. The Dominion President made reference to the following special points:

Journal: The standard of this was excellent. The Editor, Mr G. A. R. Phillips, was doing splendid work and it was regretted that his health had prevented him from attending the Conference.

Historic Trees: Mr W. D. Dunne of the New Zealand Forest Service is compiling this list—if the list is to be correct the help of all District Councils is essential.

Loder Cup: Mr A. Farnell, of Auckland, who was present at the Conference, was to be warmly congratulated on receiving the Award of the Loder Cup for 1965.

Examining Board: It was pleasing to have Professor H. D. Gordon, Chairman of the Examining Board, present at the Conference; he would be presenting the report of the Examining Board.

The Horticultural and Floral Art Show Handbook: This is now in the hands of the publishers.

Eastwoodhill: It was pleasing to know that this had been purchased by someone who would preserve it.

Banks Lecture: It had been decided to widen the scope of this Lecture in order to interest as many of the rank and file members as possible.

The adoption of the Annual Report was moved by Mr J. F. Living and seconded by Mr E. H. Latimer. During discussion Mr D. I. West of North Taranaki District Council spoke of the great assistance the *Horticultural and Floral Art Show Handbook* could be to Horticultural Societies. Many people are interested in flowers, not in competition, but it is when there is competition that the best can be brought out. Already judging courses have been held: it was hoped that certificates to be awarded could be retrospective.

Mrs M. M. Martin, of Whangarei, said she disagreed with the opinion that anti-litter was not the concern of the Institute—Mr C. Reader, of Auckland, felt that the Institute is not going far enough. He would like to see further legislation in this matter—drifting paper is a fire hazard and it should be a punishable offence to cast it about. The following resolution, proposed by Miss I. Anderson of North Taranaki was passed:

'That the Dominion Council take further steps to bring the attention of Government to the urgent need for progress being made to enforce present legislation and local body by-laws against litter by conducting campaigns (such as national anti-litter projects) and by improved methods of disposal of public waste.'

Mrs G. Deldyck, of Wellington, said that after the recent visit to Government House gardens by members of all horticultural societies in the Wellington and nearby districts—arranged through the Institute—she had been informed that those who went to clear up could not find so much as 'one dead match.'

Opossums: Indications show that large numbers of these pests exist in the Awakino Gorge, north of New Plymouth. A circular sent to members and printed in the Journal will, it is hoped, help to gain more information about opossums.

Membership: At the 1965 Conference concern had been expressed at the decline in membership and it is disturbing to see a further fall reported in the Annual Report. Membership must be increased and it was hoped that 1967 Annual Report would show a substantial increase. Mr R. D. Chamberlain, of Hawera, felt there should be greater liaison between Horticultural Societies in New Zealand—they should be co-ordinated and helped by the Institute. In a country so horticulturally minded as New Zealand there should be a very large membership and the Institute should examine itself to see why this has fallen away. Mr R. Syme of Hawera, said that District Councils themselves should give serious thought to ways of assisting the Dominion Council; constructive suggestions are wanted from District Councils. He felt the Institute can do more for the Horticultural Societies but they in turn could do more—many are not even affiliated. Dr J. S. Yeates said that all specialist societies have a large membership—perhaps a small affiliation fee per member could be made. Mr R. T. Fear pointed out that this levying is done by the New Zealand Lawn Tennis Association.

Legislation: Mr J. G. Short, of Wellington, pointed out that pressing for legislation often mitigates against the things we are trying to protect. Education of the public to a greater appreciation of nature should stir up public opinion to force enactment of existing legislation.

The Annual Report was duly **adopted**.

Annual Accounts

In moving the adoption of the Annual Accounts for the year ended 30th September, 1965, the Dominion President stated the donation from the Auck-

land District Council of £50 was much appreciated. There had been a retrospective payment from the Department of Internal Affairs—the two years 1964/65 should be viewed together—without the £400 retrospective payment there would have been a deficit of £39/1/8.

The adoption of the account was seconded by Dr J. S. Yeates who drew attention to the examination expenses. He said members should realise that this is not the full cost—a large proportion of the secretary's expenses are chargeable against examinations. Mr Living said that the examinations are one of the most important parts of the Institute's work and entail much clerical work and service. Mr R. Syme, of Hawera, said that examinations are vital. The Parks Institute appreciate the value of examinations conducted by the Institute and might be willing to contribute even further towards it. The examinations are also a great service to local bodies, the nursery trade and to fruitgrowers. Mr A. Farnell, of Auckland, said the Annual Accounts do not show a true figure when the Government grant is given as £557 and the expenses £150.

Mr H. Gaukrodger, of Northern Wairoa, said that his District Council were concerned at the cost of the Journal. There had been considerable decrease in membership owing to the increase in subscriptions. He felt the Institute could not afford to pay the large sum involved in producing the Journal quarterly.

The Accounts were duly **adopted**.

Rumble Estate

Mr V. C. Davies, of New Plymouth, reported that it was hoped to apply to the Supreme Court to alter the terms of the will of the late Mrs Rumble who had left a property for the benefit of Stratford members of the Institute; the trustees are Mr G. Maxwell and Mr V. C. Davies.

Mr Davies was thanked for his report.

District Council Reports

Several written reports from District Councils were published in the Conference papers. The following brief additional statements were submitted.

Auckland. Mr E. H. Latimer reported that student meetings were receiving attention; it was hoped to increase these in the next year. Mr C. Reader said that the appointment of Mr J. A. McPherson, to the Centennial Parks Board was appreciated by the Auckland District Council.

Northern Wairoa. Mr H. Gaukrodger said that his District Council would like more help from headquarters, especially as regards speakers for their meetings.

Wellington. Mr J. G. Short mentioned the difficulty experienced in getting members to meetings.

Whangarei. Mrs M. M. Martin said she had long been a member of the Institute and had attended many Conferences. She felt that it was most important to have regular meetings with good publicity. A display table was always a good draw.

South Taranaki. Mr R. Syme said that the way they had encouraged members in spite of the increased subscription was to offer more trips and meetings in the year.

Waikato. Mr R. T. Fear said that Waikato always had monthly meetings for which a notice was sent. The identification table was a special feature. He felt that more must be done for members; a list of good speakers even from far afield would be welcomed.

Taupo. Mr E. S. West said a list of speakers would be appreciated. Mr P. F. Crawley reported that 70 acres from the Crown and 11

from the local authority had been formed into a Trust called the Wai-pahihi Botanical Reserve; it was planned to develop an arboretum showing what can be grown in Taupo. A booklet has been issued and the Government and local bodies were interested in setting aside additional reserves in the Taupo area. Mr A. Farnell, of Auckland, moved that congratulations be sent to Taupo District Council for what they are doing in the interests of New Zealand as a whole.

North Taranaki. Miss I. Anderson said they had meetings for the public as well as members. There was always a 'Flower of the Week' in the Public Library supplied from the District Council.

Canterbury. Mr J. O. Taylor reported that there had been a one-day Conference; proceedings of this Conference had been published and sold. The Careers booklet had been produced by the Canterbury District Council and now a sub-committee is working on the unification of horticulture in New Zealand—they are looking into all aspects of horticulture in New Zealand, not only ornamental.

Official Opening

Flowers were presented by Mrs W. J. Messenger to the Mayoress, Mrs Aderman and Mrs Living. Mr J. F. Living expressed appreciation of this gesture. He then welcomed the Minister of Agriculture, Hon. B. E. Talboys, the Mayor and Mayoress, the Member of Parliament for New Plymouth, Mr E. P. Aderman and Mrs Aderman. The Mayor, Mr A. G. Honnor, welcomed all delegates to New Plymouth which is a city very conscious of flowers. This is reflected in the appearance of its homes and streets. Mr E. P. Aderman in expressing welcome said that thanks should be given to the Institute for all the valuable work it has done in engendering enthusiasm amongst laymen and disseminating knowledge amongst the people.

Mr W. J. Messenger said the North Taranaki District Council is honoured by the Minister of Agriculture giving his time to attend the Conference. New Plymouth is a city of garden lovers. He would like to thank the Mayor for the part played by the City Council staff in helping to plan the Conference.

Mr B. E. Talboys said that he was glad of the opportunity of visiting New Plymouth, a city renowned for its Parks and Gardens. It is a stimulating thought that the claim for New Plymouth applies also so aptly and adequately to so many other cities and towns in New Zealand. He had already visited the Floral Festival; the beauty, imagination in design and effort of organisation is a tribute to New Zealand people. He felt everyone in New Plymouth should see it. New Zealand has too few money-spinning eggs in one basket. Primary producing horticulture can become another. Air transport is assisting in this as is also the vegetable and fruit processing industry and scientific research. Commercial horticulture in the future will be an increasing factor in New Zealand economy.

Much is also being done with ornamental horticulture in New Zealand as an aid to gracious living—it is noticeable that people are more and more conscious of this in designing lawns and gardens round their homes. He was glad to see Mr Farnell, who had been awarded the Loder Cup for 1965 present at the Conference. Mr Farnell's work with native flora had been outstanding.

Mr Talboys said the Institute has taken a leading part in horticultural education and in disseminating horticultural knowledge. The National Diploma in Horticulture is highly regarded throughout the world. The Institute has also given support to University education and it is pleasing to see the establishment of Chairs of Horticulture at Massey University and Lincoln College but this will not in any way relieve the Institute of the responsibility it has assumed and carried out in New Zealand. More and more trained horticulturists are required and this will not be minimised by university degrees. The syllabus for the National Diploma in Horticulture must be kept under constant review to keep the standard up to present-day developments.

In declaring the Conference open Mr Talboys expressed the hope that a very happy Conference would be held.

Mr R. T. Fear, of Waikato, expressed the thanks of the Conference delegates to the Mayor and people of New Plymouth, the beautiful city renowned for its mountain and for its hospitality. Mr Aderman is known to be a champion for the City of New Plymouth, and rightly so. Special thanks due to Mr W. J. Messenger whose planning and forethought have done so much to make the delegates' stay so pleasant. Mr Fear thanked the Minister of Agriculture for making the trip to New Plymouth. Agriculture is an important part of the nation's economy and it is pleasing to see the sincerity of the Minister's interest in horticulture. As a Minister he might be able to persuade the Ministry of Works and the engineers of the value of trees in national development projects.

Associate of Honour Awards

On the unanimous recommendation of the Dominion Council the nomination of the following four persons for election to the distinguished office of Associate of Honour of the Royal New Zealand Institute of Horticulture (A.H.R.I.H. N.Z.) came before the Conference.

Mr R. D. Chamberlain, F.R.I.H. (N.Z.), of Hawera.

Mr W. D. Cook, F.R.I.H. (N.Z.), of Gisborne.

Mr G. A. R. Petrie, N.D.H (N.Z.), F.R.I.H. (N.Z.), of Invercargill.

Mr G. A. R. Phillips, F.R.I.H. (N.Z.), of Paraparaumu.

Resolved unanimously that these persons be awarded the Associate of Honour. After the citations had been read by the Secretary the Minister of Agriculture presented the Certificates.

Examining Board

The Chairman of the Examining Board Professor H. D. Gordon, presented this report and moved its adoption. He made particular mention of the amount of secretarial work involved in conducting the examinations. The honorary supervision given throughout New Zealand is very much appreciated by the Board. He wished to give special thanks to the Christchurch Parks Department who do so much each year to make the Oral and Practical examinations so successful.

The gift of £100 capital fund by Mr P. J. Skellerup of Christchurch for a Prize in the Junior section was greatly appreciated. It is regretted that two members of the Examining Board are retiring this year, Mr J. A. Hunter and Mr J. A. McPerson. Their help on the Board for many years has been greatly valued.

The report duly adopted.

Remits

From Auckland District Council

1. Venue of Oral and Practical Examinations

'That, because of continued dissatisfaction of North Island students as a result of being forced to travel to Christchurch for Oral and Practical examinations, the Auckland District Council strongly urges action in the arrangement of a more suitable venue.'

Mr J. A. McPherson said that this was not a matter of competition between North and South but it was important that young horticulturists, of whom the country is in urgent need, should be comfortably placed for examinations; at present the cost involved deters some young people as shown by comparing the numbers from North and South Island towns and also by the number of withdrawals after entry. It would be helpful if it were possible to subsidise the cost from Dominion Council funds but this is not possible. Dr Yeates of Palmerston North said Manawatu District Council supports this remit as does Whangarei. Mr J. G. Short of Wellington said a high level of success had

been achieved in Christchurch and students spoke favourably of conditions and facilities there. Mr E. H. Latimer, of Auckland, pointed out that it is largely the fault of students themselves if the cost is heavy. The Secretary had stated that last year of the 27 who could have applied for concession fares only six did so. Mr A. D. Jellyman of North Taranaki said conditions offered in Christchurch were excellent—there are first-class Botanic Gardens which are a tremendous interest for the keen student and lunches, teas and billets are all supplied.

Professor H. D. Gordon regretted the absence of Mr E. Hutt who is chief examiner for Oral and Practical examinations. He is familiar with all the points in favour of the one centre. It would be difficult to do the examinations as well in another centre as they are being done in Christchurch. Another District Council might be willing to accept responsibility as Canterbury had done. Also considerable equipment is needed and this has been laid in store by the Christchurch Botanic Gardens. The climate too is a big factor; Christchurch is very consistent in this respect. The present policy of one centre has enabled the highest possible standard and efficiency to be attained. It has already been agreed to try to find adequate facilities in the North Island, but the Board is not happy to make a change until it is sure adequate facilities are available. Professor Gordon hoped the Conference would accept his assurance that the Examining Board is doing its utmost to relieve the present disadvantage to students from the north.

It was agreed not to put the remit as it was now very clear that the matter was already receiving the careful consideration of the Examining Board.

2. Interpretation of Syllabus for Oral and Practical Examinations

'That a broader interpretation be made of the Oral and Practical examination syllabus with a view to providing equally for students throughout the Dominion.'

Mr P. Everett of Auckland stated that this was a recommendation to the Examining Board in response to comments from students. Some felt that there was an advantage to those who lived in the South. Questions often appeared to be based on conditions applicable to colder regions. Mr E. H. Latimer of Auckland, however, said that, as a student, he had not found this to be so, and, in any case, he felt that students should be familiar with all aspects of horticulture.

Resolved to refer the subject matter of the remit to the Examining Board.

3. From North Taranaki District Council

'That the Institute's Journal be diversified to create greater reader interest by:

- (a) Inviting readers to submit notes on plants of interest as done in Journals of the Royal Horticultural Society.
- (b) A Plants and Seeds wanted, or for exchange, column.
- (c) Provision for letters from readers to the Editor, where views of the individual could be expressed.'

Mr A. Jellyman said it had been felt diversification was necessary because of diverse personality and interests of members—many members are laymen and though it is appreciated that the standard of the Journal must be high it must also fulfill its purpose. The suggestions in the remit collectively should make the Journal more popular. It was also suggested that one page per issue should be offered to a commercial firm for advertising using suitable text matter for the purpose. Mr J. G. Short, of Wellington, pointed out that in the past both readers and District Councils had been invited to provide notes but had failed to do so. Any correspondence would need to be brief.

It was *resolved* that this remit be referred to the Publications Committee. Mr A. M. W. Greig, Chairman of the Publications Committee, said his Committee would receive the remit. The Publications Committee and the Editor were in agreement with the remit.

4. 'That an Award in the form of a Medallion, or Certificate, be presented to the Banks Lecturer, as a tangible recognition in commemoration of the occasion.'

Mr W. J. Messenger said he felt that as it was an honour to give the Banks Lecture a tangible recognition would be appropriate.

The remit was referred to the Dominion Council.

5. 'That with the aim of increasing membership of the Royal New Zealand Institute of Horticulture, and securing the interest of the people we represent, an endeavour be made to incorporate and/or, affiliate the various specialist Plant Societies and District Horticultural Societies and their members to the Institute; and that the transactions of these Societies be published in the magazine *New Zealand Plants and Gardens* so as to correlate activities throughout New Zealand to the advantage of all concerned.'

It was felt that the general state of the Institute called for some specific action. There is a growing trend towards specialist groups and further incentives are needed. Mr C. Reader of Auckland said that in Auckland 73 societies are affiliated with the Horticultural Council. If each were affiliated separately to the Institute they would get our literature and would be contributing to the finances of the Institute. Mr J. O. Taylor, of Christchurch said that the Canterbury sub-committee was endeavouring to bring together the various horticultural groups—we do not yet fully represent *all* horticulture. Mr J. A. McPherson, of Auckland, suggested the sub-committee should ask the Auckland District Council to investigate whether the 73 Auckland Societies would affiliate directly with the Institute. Mr R. T. Fear of Waikato felt that an affiliation fee on a per capita basis would be the wisest plan. It was felt that to obtain members we must have something of advantage to offer—no point in approaching other societies until we can offer something tangible—judges, awards or even trial grounds.

It was *decided* to refer this remit to the Finance and Policy Committee.

6. 'That the Institute examine and compare the curriculum of the Technical Correspondence School with the standards necessary to completed the National Diploma in Horticulture (N.Z.).'

Miss L. G. I. Anderson of North Taranaki said the ultimate aim is the gaining of more candidates for examinations. Students are not going on to completion of Diplomas as they find the tuition is not measuring up to the syllabus set by the Institute.

As a sub-committee is already examining these questions it was *agreed* to refer this remit to the Examining Board.

From Waikato District Council

7. 'That the Institute approach Government to give consideration to legislation for the protection and preservation of historic and notable trees, and groups of established trees of aesthetic value.'

Mr R. T. Fear said it had been found on closer enquiry that further legislation is not the way to deal with this matter and Waikato now wishes to withdraw the remit and to substitute the following:

'That District Councils be asked to co-operate with the Ministry of Works and local bodies to ensure the preservation of notable, established and historic trees when undertaking housing sub-divisions and highway construction.'

It was stated that local District Councils should make every effort to see that notable trees were marked on the Regional Plan.

This amendment was referred to the Dominion Council.

Presentation to Mr F. P. Knight

Mr V. C. Davies gave a brief account of the presentation of the Certificate of Associate of Honour to Mr Knight by Sir Thomas Macdonald and circulated photographs taken at the function. Mr Knight, who hopes to visit New Zealand in the future, said he regarded this Award as the greatest honour of his

life. The suggestion of arranging Mr Knight's visit was referred to Dominion Council.

Election of Officers

Patron: His Excellency the Governor-General, Sir Bernard Fergusson.

Vice-Patron: The Minister of Agriculture—Hon. B. E. Talboys.

Dominion President: Mr J. F. Living, F.R.I.H.(N.Z.).

Auditors: Messrs J. L. Arcus and Co., Public Accountants, Wellington.

Vice-Presidents: One nomination from each District Council.

Election of Dominion Council

The Dominion Council has duly elected in accordance with the Constitution.

Venue of 1967 Conference

It was announced that the 1967 Conference of the New Zealand Institute of Park Administration would be held in Nelson. It was *agreed* that the next Conference should be held in Nelson at the time of the Institute of Park Administration Conference which was expected to be in the second week in March.

General

Mr A. Farnell again emphasised the urgent need for the eradication of the menace of opossums. Valuable forest trees were being destroyed under our eyes. It is a national problem.

Address

At the close of formal business Mr T. C. Davies (of New Plymouth) gave an interesting address on his recent visit to Great Britain and the U.S.A. showing excellent colour slides he had taken. Mr S. Challenger of Christchurch proposed a vote of thanks to Mr Davies for his excellent talk.

Banks Lecture

A most interesting Lecture was delivered in the evening by Mr D. A. Watkins, of New Plymouth, entitled 'Horticulture and Industry—Partners in Progress.' Professor T. M. Morrison thanked Mr Watkins for his very informative address.

Closing

Mr J. F. Living brought the 1966 Conference to a close with an expression of thanks to the North Taranaki District Council who had made the delegates so welcome and had done so much to make their stay in New Plymouth so enjoyable.

HORTICULTURAL HOSPITALITY

By a Delegate

Members of the Royal New Zealand Institute of Horticulture attending Conference first met together in the evening of Wednesday, 16 February, at the War Memorial Hall. We joined the closing session of the Conference of New Zealand Institute of Park Administration to enjoy a most interesting account of New Plymouth's horticultural beauties. This was given by Mr C. I. McDowell of the Parks Department and illustrated by slides projected by Mr F. P. Grundy many of which had been taken by him and the speaker.

Thursday was well occupied by Conference matters but many took the opportunity between times to visit the Floral Festival which coincided with these Conferences. This Festival filled six halls and showed great imagination both in general layout and execution. The Floral

Festival Committee was ably supported by many Taranaki organisations and individuals and had complete sections of floral art displays expressing themes such as emotions, a delightful 'Floral Fairground' as well as horticultural competitive and trade exhibits. Particularly noticeable among the displays was the extensive use of dahlias, *Gladioli* and particularly *Lilium parkmannii* hybrids, which grow so well in Taranaki. It truly justified the Minister's comments on the importance of horticulture, when he officially opened the Conference.

On Friday we were privileged to be taken on a tour of New Plymouth ably conducted by Mr A. D. Jellyman, an officer of the Parks Department and a holder of the Institute's Diploma. We saw many of the beauty spots illustrated on the Wednesday evening and particularly appreciated successful examples of street planting and a stroll through Brooklands and down to Pukekura Park. We were privileged to visit the propagation section of the Park and see the orchids growing in the Agnes Parker Orchid House, recently donated by that keen horticulturist, Mr Fred Parker.

Morning tea was served in the delightful garden of Mr and Mrs V. C. Davies where many of his family were introduced. Then followed a conducted tour through a part only of Messrs Duncan and Davies' extensive nursery. This gave an understanding how thousands of plants can be produced and yet at the same time the needs of, and attention to, each plant is given. A visit to Pukeiti Rhododendron Trust in the afternoon completed a most interesting day. A description such as this cannot pay sufficient tribute to the hospitality or courtesy of members of North Taranaki District Council, the Director of Parks and his staff and many others. The decoration of the Hall with beautiful vases of lilies, cannas and *Agapanthus*, most tastefully arranged and kept fresh, will long remain in our memory.

PUKEITI VISIT BY CONFERENCE DELEGATES

Delegates to the annual conference at New Plymouth this year were, on the final day of proceedings, taken by bus to visit the Pukeiti Rhododendron Trust property on the Carrington Road. The weather was fine and delegates had time to see some of the fine plants that were growing there: the many rhododendrons, portion of the Native bush, such delightful spots as the Waterwheel on the Brewster Walk, the beautiful glades of Prince of Wales Ferns and a fine collection of *Lilium auratum* cultivars which were in full flower for the occasion. Afternoon tea was served by the Trust and the Chairman of Pukeiti, Mr S. W. Peterson welcomed the visitors and spoke for a few minutes. After an enjoyable visit the party returned to New Plymouth via the Coastal Road and thereby were able to see the type of country that this property is situated upon. Time did not permit delegates to see

all of the points of interest at Pukeiti but it did enable them to appreciate the wonderful work which has been done there so far and which is being carried out by a policy which was drafted in the first days of the Trust in 1951, particularly with regards to the Native bushland which I shall discuss now.

PROGRESS AT PUKEITI

A. D. JELLYMAN, N.D.H. (N.Z.)

Year by year, people from all corners of New Zealand visit Pukeiti to see the rhododendrons in flower, and to meander along the sylvan bush walks. This sustained flow of people clearly demonstrates the renown of this private reserve and the esteem in which it is held by those who visit the property. Not only can the visitors see a wide range of azaleas and rhododendrons flourishing, and a diverse collection of exotic shrubs, but the chance to see the native plant community close at hand is for the taking. It will no doubt be of interest to readers to know of some of the work and policy that has governed the development of Pukeiti.

Pukeiti was first visualized by some members of the New Zealand Rhododendron Society who were looking for land suited to the genus of the speciality. Having viewed the potential of this property the Pukeiti Rhododendron Trust Inc. was set up to develop and display the genus *Rhododendron* planted among the native bush and native birds. From the outset a policy was drafted for the overall development of Pukeiti with the preservation and restoration of the native bush foremost.

When Pukeiti was inaugurated the forest community was suffering from damage by the goat and opossum. Subsequently the forest floor was so bare that you could see for considerable distances through the undergrowth, a state unknown in healthy bush. In addition to the poor condition of the forest floor community, the native bird population suffered to a degree as a result of this heavy infestation. This condition presented a great challenge, and the Trust set about overcoming the problem of vermin because it was soon learnt how quickly the browsing animals acquired a taste for exotic trees, particularly the deciduous ones. There began a relentless and systematic war on both goats and opossums. As new tracks were formed it was soon appreciated that the vermin would come out and go along the tracks rather than go cross country. Hence by regular policing of the bush tracks covering the property the menace of the goat was reduced considerably and to some extent the opossum. It will, however, be realised that the latter is a much more difficult adversary in a situation such as this where poisons, if used at all, must be used with great discrimination. Trapping is constantly practised in the areas near the Lodge but is a slow means of reducing the population. Today the menace of the goat is reduced to a minimum and it would appear that most goats seen on the property have come from property adjacent to the Trust and, although the

opossums present a problem, there is renewed vitality in the forest floor community. Once again the regeneration of seedlings is progressing flourishingly and an increasing number of species is appearing, thus auguring well for the future.

The accomplishing of this feat is one facet of preservation but an equally important project undertaken has been to restore the forest to its primeval state as far as possible. Because this area has been the centre of a timber milling industry in years gone by there are only a few mature specimens of rimu remaining. Despite this there are plentiful seedlings of varying sizes growing in the forest, many of which have been retarded by the suppression of light caused by the vegetative canopy above. By letting light into these young plants it is possible to attain normal healthy growth. Thus a programme of planting in selected spots and opening up the shade-bound plants has been implemented. As a result there are numerous rimus making healthy vigorous growth and on their way to making feature trees in the future. However, this practice will have to continue for quite a few years yet if the project is to terminate fruitfully.

Besides preserving and restoring the local species the Pukeiti Rhododendron Trust Inc. decided to develop a specified area as a native arboretum utilizing as many non-local species as could be accommodated. This area is a mile-long broad bush walk along which can be seen plantings of kauri, kahikatea, monoao, pahautea, tanekaha, tawhero and silver and black beech. Each species is planted in a group using the maximum marginal depth available to give the effect of a miniature forest of one species. There are one hundred kauri planted in one area and these are really revelling in the moist soil and rich leaf mould. Similarly, many of the other species are rapidly attaining noticeable size.

Emphasis has always been placed on the principle to exploit the use of natives as a background and as garden plants in their own right. This aspect of policy is limitless in the method of its application and thus I will describe some of the uses made here. Close to the *Rhododendron arboreum* series borders there are several plantings of natives, purely as garden subjects, equalling the distinction of many of our cherished exotics. Fine clumps of flaxes stand out impressively whilst the range of variegated plants is exploited fully. It is pleasing to see the golden tainui, kumerahou, completely at home here, flowering freely and self-sown seedlings popping up here and there. No one can doubt the beauty of the Chatham Island forget-me-not having seen the robustness of the plantings here. The leaves alone would be sufficient in themselves to commend wider use of the plant let alone the lovely flowers. Where the bush is the background to open borders the inevitable karamus and hange hange spring up, and form dense walls of shining foliage from ground level upwards. The coprosmas often berry heavily and delight many visitors.

In the bays opened up for the large leaved species of rhododendrons, viz. in the area below the giant rata, a most interesting and attractive

natural ground cover has arisen. To grow these species the bush has been opened up by the felling of certain trees and tree ferns and the removal of all shrubby material. Within a year, accompanied by numerous karamu and patete seedlings, there develops a predominance of *Blechnum fluviale* and the hen and chickens ferns, *Asplenium bulbiferum*. Great bays of these plants make first-class association plants with the rhododendrons and the only problem faced is the constant removal of fast growing regenerative plants which can shoot up to six feet in height practically while you're not looking.

While speaking of ground cover plants it would be as well to mention the way *Netera depressa* is covering clay banks and exposed soil in some areas; particularly among the group of *Rhododendron lindleyi* in the *maddenii* border. The clear shining red berries are produced in profusion.

In many of the areas nearby numerous colonies of terrestrial orchid *Pterostylis banksii* can be seen in the springtime. Along the borders of the Richardson Walk both *Lycopodium volubile* and *L. densum* can be seen spreading quite happily, the former forming a particularly dense covering.

Attention is being directed to building a collection of *Olearia*, *Senecio*, *Hebe* and other sub-alpine and marginal bush species many of which may be established upon the banks of the driveway to the Pukeiti summit. Here the open situations that many of these plants require would be afforded, and visitors would be able to view them as they drive up to the magnificent lookout across New Plymouth from the Summit.

Over the years a tremendous amount of work has been done, yet in the years to come much more must be attended to, and efforts to ensure the continuity of the Trust's policy must be made. Indeed it would be most depressing to see these already wonderful milestones attained allowed to slip back.

ASSOCIATES OF HONOUR

Citation in support of the Nomination of

Mr R. D. CHAMBERLAIN

Nominated by the South Taranaki District Council

A child's love of plants, fostered by a wise grandmother who encouraged a small ten-year-old boy to exhibit his flowers at shows no doubt helped to lay a firm foundation for the wide interests and knowledge of one of Taranaki's best known horticulturists, Mr R. D. Chamberlain of Hawera.

A journalist by profession Mr Chamberlain spent his schooldays in Manawatu where his interest in growing things was fostered by the Agricultural master, the late Mr O. A. Banner, and by English and Scottish gardeners at 'Westella,' the home of the late R. L. Levin in Feilding, the J. R. McKelvie estate at Carnarvon and at other large gardens in the district. By

the age of 15, the lad was exhibiting flowers, fruit and vegetables in open competition at horticultural shows in Feilding and at the Manawatu A. and P. Shows in Palmerston North.

He studied botany under the late Dr H. H. B. Allen, M.A., D.Sc., later first Director of the D.S.I.R., Botany Division whom he assisted in 1921 as fieldman in the preparation of papers on indigenous plants in selected areas of the Kīwitea stream from its source to its confluence with the Oroua River. It is of interest to note that forty years later, in 1963, Mr Chamberlain was called upon to prepare for the Taranaki Museum in New Plymouth a display of plants indigenous to the cliff faces and sand dunes of the South Taranaki Bight.

During his years in Hawera, to which he came in 1929, Mr Chamberlain has grown flowers in variety, and has also established in his garden every few years plots for the specialised growing of polyanthus, *Gladioli*, begonias, carnations and chrysanthemums. He held the Taranaki championship for chrysanthemums for five years.

Mr Chamberlain has taken an interest in horticultural journalism and has written a weekly gardening feature for the past 37 years.

In 1950 Mr Chamberlain joined the Hawera Horticultural Society and in 1958 when the Society's membership stood at 209 he was elected president. Under his leadership the membership has grown to 567. For nine months each year, the Society holds two meetings each month with an average attendance of approximately 200. The Horticultural Society also holds three shows each year—spring, summer and autumn—and a very large proportion of the work involved in planning and running these successful shows is undertaken personally by the President.

About 1956 Mr Chamberlain joined the Royal New Zealand Institute of Horticulture. He was awarded a Fellowship in May 1958, appointed to the Committee of the South Taranaki District Council in June 1958 and became a Vice-President in June 1960. He is a member of the Taranaki Horticultural Association, the Central Taranaki Rose Society, and the Taranaki Floral Festivals (Inc.) and a committee member of the Turuturu Mokai Historic Reserve. He has been a show judge for about 10 years and is on the Taranaki Judges' panel for Cut Flowers and Chrysanthemums.

**Citation in support of the Nomination of
Mr W. D. COOKE
Nominated by the Manawatu District Council**

Mr William Douglas Cooke is a sheepfarmer at Ngatapa, near Gisborne. During the last 35 years he has devoted practically his whole time, his physical energy and his financial resources to establish on his farm 'Eastwoodhill' the most complete collection possible of woody plants available in New Zealand or anywhere else in the world.

The collection at present occupies some 160 acres and contains a wider range of ornamental trees and shrubs than any other collection, public or private, in New Zealand. It is a most beautiful arboretum, and will be a priceless asset to the country as it develops further as a result of growth and correct management. It is no exaggeration to say that Mr Cook has spent a fortune in importing choice shrubs and caring for them. Now aged over 80 years and incapable of the great amount of work involved in the maintenance of the collection, Mr Cook in 1964 offered it as a free gift to the Royal N.Z. Institute of Horticulture, provided the Institute could secure enough money for maintenance. This proved an insuperable hurdle for the Institute, but

members were delighted to hear that a public-spirited Poverty Bay man (Mr H. B. Williams) has bought Eastwoodhill and intends to maintain it as an arboretum.

Mr Cook was a foundation member of the N.Z. Rhododendron Association and in 1952, bought 250 acres of forest near New Plymouth, which he gave to a new organisation (The Pukeiti Rhododendron Trust) for the establishing of a rhododendron collection. He has since supported this organisation with generous gifts.

Mr Cook is well known in New Zealand and overseas, as an authority on ornamental trees and shrubs in particular. No man in this country has done more for their introduction and growing.

**Citation in support of the Nomination of
Mr G. A. R. PETRIE
Nominated by the Southland District Council**

Mr Petrie is Director of Parks and Reserves for the City of Invercargill. He has been engaged in horticulture in Southland for a period of 36 years, gaining his early experience with Thomas Bros Nurserymen. In 1937 he was appointed to the position of Grounds Superintendent to the Southland Hospital Board and was directly responsible for the layout of the 90 acre area surrounding the Kew Public Hospital. A thesis depicting a suggested layout of the grounds was presented and accepted in 1939 for the N.D.H.(N.Z.).

That rapid progress in the development of the grounds immediately followed is supported by the fact that some time later the grounds were inspected and approved as a Training Centre for Students. Mr Petrie later became responsible for all Hospital grounds throughout Southland directing a staff of 40. In 1950 he was appointed to the position of Assistant Director of Parks and Reserves, becoming Director in 1953, a position he has held ever since.

Mr Petrie has conducted a weekly garden radio session for more than 20 years. He conducted a weekly gardening column in the Southland Times for eight years and was responsible for the revival of the horticultural classes at the Southland Technical College, acting as instructor until a permanent appointment could be made. He is a past President of the Invercargill Horticultural Society, a past President and present President of the Southland Beautifying Society, whose aim and object is not only to make the City look more beautiful but also the country districts and townships of the Province. To this end hundreds of trees and shrubs are grown and distributed each season.

Mr Petrie has acted as secretary of the Southland District Council of the Institute for 15 years and has been a member of the Executive of the Institute of Parks Administration for several years. Mr Petrie is regularly sought by Garden Clubs throughout Southland to speak on a wide variety of subjects. He is also in demand as a Show Judge and has been invited to judge at National Shows on several occasions.

**Citation in support of the Nomination of
Mr G. A. R. PHILLIPS
Nominated by the Wellington District Council**

Mr G. A. R. Phillips was born at Olton, Warwickshire, in 1902. He was brought up in a horticultural environment, his father and brother both being specialist *Narcissus* growers among other horticultural activities.

In 1922 he entered the firm of Hewitt and Co. Ltd., Solihull, who were general nurserymen, and soon specialised in breeding delphiniums. He was

a founder member of the British Delphinium Society and served successively on the joint committees of Royal Horticultural and British Delphinium Societies and the Royal Horticultural Society and Midland Daffodil Society.

In addition to running a successful nursery, he helped found the Stratford-upon-Avon Horticultural Society, assisting and exhibiting at many shows.

He has contributed regularly to the British Horticultural Press and published five books on perennial plants, which have become standard references.

He came to New Zealand in 1951 and from then on he has assisted the Kapiti District Horticultural and Beautifying Society Inc. and horticultural organisations in the Wellington Province. He was President of the Wellington Horticultural Society for the year 1957-58. From 1953 he has contributed regular horticultural articles to *The Dominion* newspaper and has broadcast weekly sessions on radio station 2ZB.

In 1956 he was appointed Editor of the Royal New Zealand Institute of Horticulture's Journal *New Zealand Plants & Gardens*. He has brought to this Journal a scholarly and knowledgeable outlook which has placed it on a very high level and has greatly influenced horticulture by imparting his own broadly-based interest as well as ensuring that whatever is published by the Institute is authoritative. His ideal is the improvement and advancement of horticulture, which he has never made subservient to commercial gain.

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DISTRICT COUNCIL REPORTS

WAIKATO

The Waikato is fortunate in having many attractive gardens within its boundaries and that of Colonel and Mrs Durrant at Mayhills Farm, Tirau, is one of the most interesting. Although the main attraction is the *Camellia* collection this is only part of a garden that has grown in 18 years to achieve an air of maturity that does so much to enhance its beauty. The area around Tirau is good farming country and at Mayhills a light well drained soil with an annual rainfall of about 50 inches give good conditions for camellias which is reflected in their obvious health. Over 600 varieties are grown on about 2 acres of land with a further 1½ acres where specimen trees are grown. The general layout is informal and it is a garden where much thought and planning has been done to create this informality. A rock garden so arranged as to give the impression of natural outcrops of stone contains a collection of alpine and rock garden plants which in some cases one would not expect to find growing so well under conditions so different from their natural habitat. One feels that this adventurous approach to plant growing is of inestimable value in increasing the range of plants in gardens. So often we read that a plant will only grow given certain conditions, whereas it can probably be happy in gardens where it is not grown because of this incorrect advice. Some disappointments will without doubt occur but these are outweighed by the successes and resultant satisfaction of seeing plants growing well.

A collection of dwarf Japanese maples shows much promise. Although some appear to be responding to the good conditions by becoming more vigorous than is usual with dwarf trees, there are some outstandingly beautiful colours which will further increase the garden merit of this group of plants.

An indication of the growth made by plants at Mayhills is exemplified by a magnificent specimen of *Michelia doltsopa* which has in eight years grown to a height of 25 feet and each year is covered with a mass of its lovely scented white flowers.

A collection of magnolias including *M. campbellii*, *M. delavayi*, *M. denudata*, *M. grandiflora*, *M. kobus*, *M. nitida*, *M. sargentiana*, *M.s.* var. *robusta* and *M. sprengeri* are growing well and were imported from Britain. In a shade house plants of *Lapageria rosea* and *L. rosea* var. *alba* produce their exquisite blooms freely.

In the spring flocks of nectar loving birds enlivened the garden as they enjoy the blooms of such plants as the N.Z. kowhai, *Sophora tetraptera* and the containers of nectar so thoughtfully provided for them.

A list of plants growing in the garden would be extensive and include many rare natives and exotics. It is part of the charm of this lovely garden to find so many unusual plants.

The work done by Colonel and Mrs Durrant on Camellias is well known and was acknowledged by the R.N.Z.I.H. in conferring on Col. Durrant the Associateship of Honour. Members of the Waikato Council visited Mayhills Farm by invitation recently to see and appreciate this lovely garden that is so great an asset to horticulture in the Waikato and New Zealand.

WHANGAREI

OCTOBER

As the October meeting fell on Labour Day, there was no speaker, but a programme of slides to which a number of members contributed. These were of gardens and plants in our own area, of gardens and tourist resorts in Queensland, and of countryside and people in Pakistan. Of local pictures, some were from Mr and Mrs Cates' garden at Maunu. A brilliant scarlet

bloom of a bromeliad grown outdoors was especially attractive, as well as a wide variety of lilies. *Ceanothus papillosus* 'Roweanus' the best blue-flowered of that family, azaleas and cinerarias, and drifts of ursinias in shades of yellow and orange were features of Mrs Martin's garden.

Our Vice-Chairman, Mr Miller, who spent five years in Pakistan, showed us a most interesting set of pictures taken in both East and West, and giving some idea of the extremes of climate which these countries experience, with the great difficulties those conditions entail.

Mr K. Wright then showed us some splendid pictures taken on a recent holiday on Queensland's tropical coast. We were filled with envy at seeing such glorious masses of colour in bougainvilleas, frangipanni, hibiscus and crotons, besides the variety of orchids and palms. Also we thought that we in Whangarei could take a lesson from Queensland's efforts to beautify their tourist resorts and attract visitors. When will we ever learn?

Display Table

October is one of the best months in Northland for number and variety of plants in bloom, and this month's display was ample proof of it. Not only did we have natives in abundance, but exotics were also to the fore, including the handsome fruits of the Cherimoya—*Annona cherimoya*, which is a native of Peru, but grows well here in rich soil, warmth and shelter. This fruit came from the Manning's garden at Parua Bay.

Among the most attractive native plants suitable for garden culture were the renga lily *Arthropodium cirrhatum*, the small tree *Ackama rosaeifolia*, various teatrees, singles and double, and the lovely white rata. Outstanding for bloom among the exotics were two branches of *Malus*—flowering apples, from the Manning garden. This was probably *M. coronaria* 'Charlottae,' rather like a Japanese cherry in bloom, with masses of double pink flowers packed along the stems. A yellow *Azalea mollis*, and some excellent sprays of lilac were also outstanding. Lilacs are not often well grown here. The best I have seen had a diet of old cow manure, though it is well known that lilacs like lime. The scarlet flowers of *Calliandra tweedyi*, the white bells of that good *Pieris forrestii*, and a vase of roses from Mrs Wright's garden completed a table full of interest and incentive for gardeners.

NOVEMBER

Our November meeting—the final for the year, was addressed by Mrs R. Trimmer, who had recently returned from a very extensive tour of Japan, India, Russia and other parts of Europe, as well as the United States. Many aspects of life and living conditions in countries of such diverse climates, many so little known to most of us, were brought before us in picture and in the vivid description given by Mrs Trimmer, so that they became as real to us as those of our own country; places such as Samarkand about which we have read and dreamed, but never hoped to visit.

Japan's gardens were of special interest to us, as many of our members have made, or are making, parts of their gardens in the Japanese style. Stone and water were skillfully combined to give an architectural effect rather than the colourful picture we incline towards in New Zealand. Cherry blossom was in evidence, but Mrs Trimmer said was in much paler colours than those we see in this country, particularly those of Invercargill. Pictures of Russia, of its largest and best known cities as well as its lesser known parts, and especially of its 'Golden Samarkand,' gave us many surprises and very great pleasure. The silk-worm country around Samarkand produces fine silks, woven in exquisite colours, and Mrs Trimmer showed us a beautiful dress typical of the country. From the Ukraine hand-woven materials and a beautifully decorated food bowl were shown. May Day in Moscow saw a stupendous array of armed might, and though the Kremlin is a household word in most lands, we were amazed at its age—built in 1154, and occupying 250 acres. Leningrad, Kiev and Stalingrad were other cities visited, and everywhere the cleanliness of the

streets was noticeable, a thing to make us, in New Zealand, ashamed of our litter. Leningrad had fine trees in its streets, and in Stalingrad our flax and cabbage trees were grown. We saw tourist resorts on the Black Sea, and came homewards through Hamburg, rebuilt since the war, to see English gardens, glimpses of America and Honolulu, and finally some colourful pictures of Mrs Trimmer's own attractive garden in Whangarei. A splendid evening of great interest and real value. Thank you, Mrs Trimmer.

DISPLAY TABLE

Rhododendrons were a feature of the November Display. Some of these were hybrids raised by Mr Blumhardt, and were of outstanding beauty and brilliance of colour. One of the most successful species for hybridising is *R. griersonianum*, which is a good doer in our climate. *R. decorum* is useful for scent, and like the former is a Chinese species. *R. nuttalli*, also shown, is said to be the largest flowered of the family, which has at least 500 species. It comes from Bhutan in North Eastern India, and is another suitable for our climate. In nature it is sometimes epiphytic—a perching plant. *Magnolia sieboldii* was also shown, as well as an attractive form of *Azalea delicatissima*.

ERRATA (December Issue)

Page 211 *Quercus robur* should read *Quercus suber* Caption to illustration page 212 'Sir Robert Norwood' should read 'Sir Charles Norwood'

Appeal For Bequests

For the past 40 years the Royal New Zealand Institute of Horticulture Inc. has encouraged the improvement of every branch of Horticulture in the Dominion. It has been unsparing in its efforts to preserve our native flora. By its annual examinations, carried out by fully qualified examiners, it ensures a very high standard of efficiency among the younger generation of horticulturists, on whom will depend the maintenance of the beauty of our land, in town and country.

These and other objectives of the Institute, entail a high annual expenditure, and it is suggested that New Zealanders who have the beauty of their country and progress of horticulture very much at heart might care to give financial assistance by a bequest, which might be worded as follows:

'I give and bequeath the sum of £...../...../..... to the Royal New Zealand Institute of Horticulture Inc., and I declare that the receipt of the Treasurer for the time being of the said Institute shall be a complete discharge to my executors, for the legacy hereby given to such Institute.'

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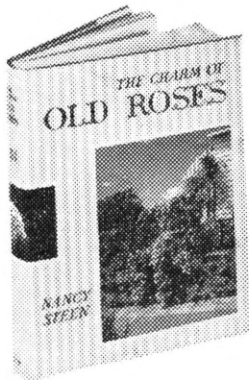
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