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# NEW ZEALAND PLANTS AND GARDENS

The Official Journal of the Royal New  
Zealand Institute of Horticulture (Inc.)

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## GUIDED PROGRESS

One of the signs of horticultural progress becomes evident when horticulturists develop a preference for a certain genus and decide to foster its further development. This logically involves hybridisation or plant breeding with the object of raising and introducing new and improved forms.

Invariably a plant breeder is an idealist and critical of his own productions, but there are others who do not find it easy to distinguish the geese from the swans. The merit of a new seedling lies not alone in the fact that it is merely different from, but that it is a distinct improvement upon its predecessors. Plant breeders developing the same genus but working apart, with no knowledge of what the other is doing, are working in the dark and some measure of control or guidance from an outside source becomes necessary.

This is why, in Europe and particularly Britain, a system of awards to new plants of garden origin, as well as new species, was introduced many years ago. In the early days and, in fact, until shortly before the second world war, awards were granted to cut specimens of carnations, delphiniums, gladioli, narcissi, dahlias and other florists' flowers.

Of recent years, however, the system has been narrowed down considerably. When selecting specimens for award, the raiser naturally exhibited only his best selected from a number of plants and these were sometimes not any guide as to their garden value. Except in the case of pot plants where they can be judged as such, cut specimens of flowers or shrubs may be submitted for adjudication. Any that measure up to a certain standard may be selected 'for trial.' This means that the raiser is invited to send a stipulated quantity of plants of the variety selected to be planted and cultivated at some organised centre, such as the Royal Horticultural Society's Gardens at Wisley, so that, when they are in flower, they may be judged according to their merit as garden plants and recognised accordingly.

The behaviour of a plant will vary according to climate and an award in one country does not necessarily imply the same worth in another. Wherever new varieties of plants are being raised or intro-

duced their progress will need to be guided by an efficient system of awards granted by recognised authorities, but only after trial.

The Institute is fully aware of these facts, has examined the position closely and looks forward to the time when trial grounds under suitable supervision will become available and make it possible to organise properly conducted trials of plants.

G. A. R. PHILLIPS,  
Editor.

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## THE BANKS LECTURE

### The Urewera National Park and the Exotic Forests of the Rotorua Area

A. M. LINTON (*Rotorua*).

When I gave the title above as the subject of this address I realised that I had set myself a formidable task to cover a large and diverse area in a single talk. My purpose in this was to endeavour to show that the National Park and the Exotic Forests were, in a sense, complementary.

I propose to deal with the National Park area first and to develop a discussion on some aspects of the indigenous forest resources and their exploitation.

During the period when I was on the mailing list for the minutes of the Dominion Executive of the Institute, I was always interested to read of references to the Urewera. This interest had its origin in a long association with the area — about 40 years — and also in the fact that I was a member of the Land Use Committee which had the duty to recommend the classification of some Urewera lands, to which I will refer later.

#### History:

The Urewera was traditionally the home of the Tuhoe people — and it is stated by some that these, more than other Maoris, show traces of the original occupiers of New Zealand — the Moriori. Certainly, a large number of the Tuhoe have auburn rather than black hair which is more common among Maoris. However, as to the Tuhoe, I would refer you to Elsdon Best's classic *The Children of the Mist*.

The whole of the Urewera Reserve is officially described in old records as 'mountainous country of which about 90% is bush clad.' There are three main valleys. The Waimana, the Whakatane and the Rangitaiki, running approximately parallel, north and south, and only a few miles apart. The Mangapohatu Range, which is a localised section of the major Huiarau Range, running approximately east and west, and to an altitude of 4,500 feet, cuts off the watersheds of these

valleys from those of the rivers draining into the East Coast or Wairoa Districts.

So it remained until 1896, when the Urewera District Maori Reserve Act constituted and defined the boundary of the Reserve of 656,000 acres. This Act empowered the appointment of commissioners to investigate and to determine the ownership of the Urewera Lands, and it appointed committees 'to deal with all questions affecting the reserve as a whole.' In 1899 the commissioners began their work and continued until 1903 defining the owners of all hapu blocks and their shares.

Between 1906 and 1907 any appeals against these decisions were dealt with by the commissioners. In 1909 the Urewera District Maori Reserve Amendment Act was passed. It provided for the conversion of the Urewera Title orders into freehold orders under the Maori Land Act 1909, and brought Urewera Lands under the jurisdiction of the Maori Land Court.

By 1910 the prophet Rua was asking that the Crown should purchase some of the lands. The General Committee authorised purchases between Waimana and Maungapohatu. Up to 1912 the Crown had bought 40,795 acres in the Waimana Basin and purchases were then suspended, but the Maoris clamoured for a resumption, and further land was acquired by the Crown from 1915 onwards.

In 1921, by direction of the Minister of Maori Affairs and the Minister of Lands, the owners were met by officers of Maori Affairs and Lands & Survey Depts. and the private secretary to the Maori Minister. The Hon. A. T. Ngata attended to represent the owners, and sellers' and non-sellers' interests were consolidated. New legislation as suggested was passed as the Urewera Land Act, 1921. This Act made provision for the appointment of the Urewera Consolidation Commissioners and their powers were defined.

In 1924 the Crown Award was made, by which the Crown became the owner of Urewera A Block, containing 484,300 acres.

With the end of the first war, land settlement was an urgent problem, and portions of the Urewera Lands were considered suitable for this purpose. For several years, up to ten survey parties were operating in the area defining Crown and Maori interests and surveying roads. The first offer of land for selection brought one application for a section in the Minginui Valley, and no further land was offered in later years.

In 1954, 98,153 acres was declared to be a National Park, to be known as the Urewera National Park under Section 10 of the National Parks Act 1952. This was the area adjoining Lake Waikaremoana, and the addition of most of the balance of Urewera A block was made in 1957, when a further 334,300 acres was declared National Park. Thus the Park is estimated to contain 432,453 acres.

In altitude the land within the Park lies from 4,500 feet in the Mangapohatu Range to something less than 500 feet in the lower reaches of the Whakatane River. Throughout the whole range of altitude it is clothed in vegetation which is in marked contrast with the Tongariro National Park, which lies between 2,000 and 9,000 feet with only the lower 2,000 feet in forest cover.

The Park is traversed towards its southern end by the Rotorua-Wairoa main road, and there is reasonably good vehicular access running for considerable distances up both the Whakatane and the Waimana Rivers. The main route passes through magnificent bush areas, considered by some to be among the finest and most extensive bush drives in New Zealand. From a point 50 miles from Rotorua to the outlet of Lake Waikaremoana, 112 miles from Rotorua, the road passes continuously through bush except for short breaks at Te Whaiti and Ruatahuna.

### **Vegetation:**

Forest vegetation in New Zealand appears to lie as to variety in certain somewhat definite bands of latitude and the Urewera lies between latitude 38 and 39. The 38th parallel of latitude is one of the more distinctive dividing lines in relation to New Zealand's indigenous forests — indeed there is a greater distinction at about latitude 38 than at Cook Strait — and because of this the Urewera is able to claim some of these species which normally are found north of latitude 38, but in some cases have penetrated further South. Of the 113 trees listed by Cockayne and Phillips Turner in their very popular work, at least 90 are to be found in the Urewera National Park.

The defections, of course, are mainly those trees peculiar to the northern regions and those whose normal location is in coastal areas. Among the larger trees not found are kauri, taraire, karaka, manaoa, pohutukawa and puriri.

The forest is well clothed with supporting vegetation, though this is being rather severely dealt with by animal life. This again emphasises the fact that the New Zealand forest came into being in the absence of browsing mammals, and is particularly vulnerable to this enemy. Very large portions of the forest are almost stripped of undergrowth, and smaller trees dead from bark stripping are commonly found.

One of the tragedies of this is that it tends to break the rhythm of the forest and in the Urewera this rhythm is evident to a great degree. Our podocarp forests are but a phase in forest evolution. Sooner or later under normal circumstances, they would give way to rata forests, or tend ultimately to tawa forest. The northern rata commences life as an epiphyte, high on the branches of a rimu tree. It puts forth roots which descend to the ground and finally it strangles its host. But then the northern rata comes to the end of its span

and is replaced by the tawa, that is, it would be replaced by the tawa, if browsing animals have left the young trees to grow.

And so the National Park offers opportunity for study, and it affords us a glimpse of forest development and evolution, and if it can be saved from browsing mammals it will give future New Zealanders an opportunity to see what the original forest cover of this country really looked like. It was a forest cover unique in all the world — a tropical forest growing in a temperate zone.

Travelling from Wairoa towards Rotorua the main road follows the valley of the Waikare-Taheke River, until the triple power stations of the Tuai series is reached. The road steepens and climbs steadily to Ngamoto at the outlet to Lake Waikaremoana, where the altitude is about 2,000 feet above sea level.

Well over 60 years ago a friend of mine, still resident in Rotorua, carried a surveyor's theodolite weighing over 40 lbs. from Wairoa to Ngamoto in a day.

At Ngamoto are the graves of some men of the 66th Regiment who were killed in a skirmish with Te Kooti. Following this engagement Te Kooti's party retreated to the top of Panekiri Bluff, where the pursuing troops considered they would be able to come to grips with him. The story has it, however, that Te Kooti and his men lowered their horses over the Bluff, using lawyer and rata vines lashed together with supplejacks. Finally they escaped around the southern shore of the lake to Huiarau and Maunga-pohatu.

Lake Waikaremoana is considered to have been formed by a huge landslide which blocked an entire valley. The lake is the second largest body of water in the North Island, with a shore line of about 120 miles and a depth of over 800 feet. The depth has been considerably reduced in recent years by the drawing off of more water than the lake receives from its watershed, to feed the hydro-electric stations. This lowering of the water contributes nothing to the natural beauty of the lake.

About 6 miles from Ngamoto is the Tourist Hotel Corporation's Lake House. This hotel is built on a promontory overlooking the lake with a road leading down to a jetty and motor camp on the lake edge. A few miles further on, the road crosses the Aniwhaniwha River just above its beautiful falls, and here, too, is the walking track to Lake Waikareiti, with its two islands.

The track generally is through typical beech forest, but near the shore of Waikare-iti, although at greater altitude than Waikaremoana, young miro and totara are frequent. However, the most notable feature of the forest near the lake is the predominance of neinei (*Dracophyllum latifolium*) in the undergrowth. I do not recall any other portion of forest where it has been so prolific.

Continuing on around the lake the forest is about an average mixture of podocarps and rata, though in places the rata predominates, and in January whole hillsides are a blaze of colour. Past the Mokau Falls and so to Hopurahine, where the road runs up alongside the cascade into beech forest, with some fine specimens of *Cordyline indivisa*. Thus it continues to the Huiarau Saddle.

With a background of some years in the Northern Westland, I have always been interested in the beech forests, but I do not know of any place where there appears to be such a variety of types and variation of colour as on the Huiarau Range. I recall one specimen at a bend in the road, about 10 feet high, its colour was brighter than any *Dodonea purpurea* I have ever seen. Others appear to be almost pillar box red at some season. I have had one such in my garden, but the thing that really impresses is the fact that, without exaggeration, there must be thousands upon thousands of seedlings along the roadside. Wherever spoil has been tipped, there they grow. I have been aware that beeches hybridise naturally, but I had no idea of the number of combinations.

At the Huiarau Saddle a new road is being formed through the National Park to log the timber from the blocks of Maori land around Maungapohatu, estimated to contain 32 million board feet of timber.

Continuing on, the road descends from 3,200 feet towards Ruatahuna, which is at about 1,400 feet. At around 2,500 feet the beech forest gives way to podocarp rata and tawa. While from the Huiarau Saddle the view is mainly restricted, there are some very extensive views from vantage points on the way down.

At Ruatahuna, which is equidistant (72 miles) from Wairoa and Rotorua, is the only sawmill operating within the National Park, and here, perhaps, it would be pertinent to comment on the matter of timber extraction within the region generally.

You will recall that I gave the area of the Urewera Reserve, defined in the 1896 Act, as 656,000 acres. The National Park is estimated to contain some 432,000 acres. This leaves 224,000 acres unaccounted for. Of this, 146,000 acres is estimated to be Maori Land and the balance is mainly state forest. From all of this land exploitation of the timber resources is possible. While there is only one sawmill in Ruatahuna, there are twelve others, including two as far afield as Rotorua, which draw their log supplies from the Urewera. About 11,000,000 feet annually from State forest and 14,000,000 feet from Maori land is logged. The timber on 69,000 acres of Maori land has been sold, and if all is removed, it is estimated to be around 100,000,000 feet. This is in addition to the Mangapohatu timber, estimated to total 32,000,000 feet.

Now, there has been much argument as to the result of removing millable timber from indigenous forests. Expert evidence has been



given in court that the removal of the millable timber does not affect the water and soil conservation properties of the indigenous forests. Be that as it may, most practical men think otherwise, and there are many factors to be taken into account.

On the one hand we have the Maori owners with forests which they own, and on which millers are prepared to pay royalties which run from £7,000 to £10,000 per million board feet. These Maoris claim the right to do what they will with their own property, and that is fair enough. Those who live in the lower valleys of the rivers which emerge from the Urewera would like to see the forest cover preserved *in toto*, and those who love our bush for its own sake agree with them. This was the problem which confronted the Government. I doubt if the Maoris cared who they sold to, and if the Government would buy and convert the land to National Park, that would be all very well.

However, experience has been bitter and lands acquired by the Crown from Maoris have been used in the past for purposes other than that for which they were acquired. If the Crown can mill from the State Forest so should the Maoris from their land. In the past, the weakness in the law has lain in the fact that nothing could be done to prevent a Maori owner from logging his own bush and selling logs on the roadside. This practice was followed by several owners, but is now subject to the Soil Conservation Act of last year, in its general application to the use of all land.

In an endeavour to overcome the difficulty, the previous Government set up a Land Use Committee to deal with the situation. This committee, representing owners and various Departments of State, came to the conclusion that the Urewera Forest Lands fell into three categories. These were:—

- A. Land which under normal circumstances could be cleared, grassed, and farmed successfully.
- B. Land from which millable timber could be removed provided the smaller trees and undergrowth were left to grow and were not unduly damaged by logging operations.
- C. Land which was so steep that it should be left alone.

The committee worked many weeks in the field during which we covered, in Ruatahuna area alone, probably 50,000 acres of forest land. Maps were finally prepared and approved as a working basis for milling operations.

This is going some part of the way, but of an estimated 95,000,000 feet of timber on some of the Ruatahuna Blocks . . . .

20,000,000 is in Category A (easy);  
 33,000,000 is in Category B (steeper but millable);  
 42,000,000 is in Category C (too steep to be worked at all).

It is perhaps pertinent to note that the total volume of timber in the Urewera is estimated to be 1,620,000,000 board feet. And so there you have a picture of the problem which is part of the Urewera — a problem which only time, patience, and perhaps a great deal of money, will help to solve. Yet I think it would be worth all this if we could thus round off the whole of the Urewera as a National Park. I could see no harm in the continuation of the various Maori settlements. They have been there a long time and their activities do not to any great extent threaten our forests and endanger our soil.

Just finally, before I leave the subject, I would make this comment. In the State Forest portion of the Urewera and adjacent to the highway there is a block of forest land which many of us consider to be the finest stand of totara we have ever seen. I know that within the Park, in the Waiiau Valley, there is some grand totara forest, but that is inaccessible. The block I have in mind could be to the former totara forests of New Zealand what Tronson and Waipoua are to the former kauri forests of the north. I would like to see this area preserved from milling.

Now we leave the Urewera and approach Murupara, situated on the Rangitaiki River, 43 miles from Rotorua. Here, where the Kaingaroa Logging Co. has its headquarters, the exotic forest begins.

In the Rotorua region there are seven main forest areas:—

- (1) Rotoehu Forest, total area 30,000 acres, with 8,000 acres planted with the following species, all since 1937:—

<i>Pinus radiata</i>	- - -	1700	acres
„ <i>patula</i>	- - -	1750	„
„ <i>taeda</i>	- - -	500	„
„ <i>elliottii</i>	- - -	950	„
„ <i>strobis</i>	- - -	500	„
„ <i>palustris</i>	- - -	600	„
„ <i>patula elliottii</i>	-	100	„
„ <i>echinata elliottii</i>	-	250	„
„ <i>taeda elliottii</i>	-	1250	„
Other species	- - -	400	„

It is interesting to note that this planting was carried out after unsuccessful attempts at tobacco growing in the Pongakawa valley.

It will be seen from the above that opportunity has been taken to make use of the milder climate at Rotoehu with plantings of the southern pines *P. taeda* and *P. palustris*. There is no mention specifically of *P. caribaea* but it could be included in the smaller quantities in the 400 acres listed as 'other species.' *Cryptomeria japonica*, Lawson's cypress, Monterey cypress and western red cedar may be included in this category also, but official

records do not list them. However, I have seen them in the nursery there.

- (2) Whakarewarewa Forest. Total area 10,000 acres with 7,586 planted between 1898 and 1916. The major species are *Pinus radiata*, *P. nigra* var. *calabrica*, *Larix decidua*, *Pinus taëifolia* and *Eucalyptus* species and some quite remarkable but comparatively small stands of redwoods.

It is interesting to note that in mentioning these redwoods, the *New Zealand Year Book* reads 'Austrian Pine was planted extensively in the earlier years and developed into very poor stands, much later similar results were obtained from extensive plantings of the *scopulorum* variety of *ponderosa* pine and even worse results were obtained from the wide-scale and indiscriminate attempts to establish Californian redwood.' Be this as it may, those of you who have seen the plantation at Whakarewarewa will agree that these trees are a joy to behold, and usefulness is not the only virtue of a tree, nor can failures always be so complete as they may seem to be. The forest has already produced some hundreds of millions of board feet of timber.

- (3) Kaingaroa Forest. Total area 350,000 acres with 250,000 acres planted in the following species:—

<i>P. radiata</i>	- - -	114,000	acres
<i>P. ponderosa</i>	- - -	50,000	„
<i>P. laricio</i>	- - -	28,000	„
<i>P. murrayana</i>			
(lodgepole pine)	-	13,000	„
European larch	- -	3,000	„
Douglas Fir	- -	32,000	„
Miscellaneous species		10,000	„

This is the area on which the activities of the Waipa Mill at Rotorua and the Tasman enterprise at Kawerau are based.

The volume of the forest is	-	1,250,000,000	cubic feet
Annual volume increment	-	40,000,000	cubic feet
Annual felling programme	-	3,500	acres yielding
		24,000,000	cubic feet
Annual thinning programme	-	1,000	acres yielding
		6,000,000	cubic feet
Annual planting programme	-	2,500	acres

Timber from these forests supplies the Forest Service Mill at Waipa where production is 24,000,000 board feet per annum, and where there is also a box factory with a peak throughput of 9,000,000 feet, dry kilns, a pressure timber treatment plant, and a pressure creosote plant. It also supplies, through the activities of the Kaingaroa Logging Co., the Tasman Pulp, Paper & Timber

Mill at Kawerau, where the output of sawn timber is 36,000,000 board feet per year, and of newsprint 75,000 tons.

North of Kaingaroa lies the Matahina forests of the Whakatane Board Mills. In the south eastern corner of Kaingaroa are the Matera forests, and north of Tauhara mountains at Taupo is another area of privately owned exotic forest land.

Finally, to make up the seven units which comprise the main exotic forests of this region, there are the New Zealand Forest Products forests based on Kinleith. The total area planted is 160,000 acres in the following species:—

<i>P. radiata</i>	-	-	-	145,000	acres
<i>P. ponderosa</i>	-	-	-	10,000	„
Others	-	-	-	5,000	„

This Company rates *P. radiata* as ten times more valuable than any other species. The daily growth rate is 3,000 tons, and annually 2,500 acres of forest is milled. The Company produces: timber, insulating board, underlay, accoustic tiles, panels, mouldings, peg board, hard board, various decorative boards, leather board, oil tempered hard-board, cases and shooks, pulp, paper, veneer, and multiwall paper bags to a value of around £7,500,000 in the past year. Future expansion includes the production of chlorine and raising timber production to 75,000,000 board feet and pulp to 90,000 tons per annum. The total work force is about 2,700, and total investment at a guess, perhaps £20,000,000.

The magnitude of this enterprise is further demonstrated by the fact that a nursery at Athol, three miles from Kinleith, aims to produce 1,000,000 seedlings a year. The natural regeneration of *P. radiata* generally, leaves nothing to be desired, except as to one point. In natural regeneration the strong and the weak, the good and the indifferent trees, all bear seeds that grow to seedlings. Where natural regeneration is not good, or is uneven, foresters have the opportunity to plant in seedlings from seed of the best types.

Cones are taken from these trees, baked in an oven for 8 - 12 hours at 130° F., the seed shaken out and planted in rows. It is estimated that a million seedlings a year will provide selected stock continually to increase the standard of the forests.

Now, perhaps you will understand why I said I hoped to demonstrate how our indigenous forests and the exotic forests are complementary. I think it can be shown, in fact has been shown, that the fears expressed a decade or two ago, that our timber resources were running out, were groundless, and that we can conserve for future generations our unique indigenous forests, while still maintaining our prodigal use of timber and timber products.

There are now nearly a million acres of exotic forests in New Zealand — half of them in this area. As with any new enterprise there have been problems, and forestry has had its share.

It was in 1896 that the Seddon Government called a Timber Conference to consider the question of providing future national timber supplies, a policy was formulated, a chief forester appointed in the Lands and Survey Department, nurseries were developed and areas selected for planting. By 1920 some 37,000 acres had been planted; by 1922 when the State Forest Service actually took over the forest control, 46,700 acres had been planted. During this period nursery work and planting were to a high standard with full attention to release cutting and blanking. The range of trees used was wide and many were unsuccessful, but it was good experience.

It is interesting to study the history of planting of exotics, and it is not generally realised that at some time or another, and in some place or another, most of the common timber trees of Europe, together with conifers of North America and *Eucalyptus* of Australia were tried. Most of the European hardwoods were failures, and only a few eucalypts proved suitable.

Scottish pines, the standard European softwood and many American firs and spruces, were also a failure. Norway spruce started well, but could not withstand insect attack, and finally *radiata* pine stood out in pride of place as leader in the field of exotics.

Strangely enough the next period in exotic forestry development included a boom and a depression (1924 - 1936). The boom saw the development of private afforestation companies selling mostly £25 bonds which represented an undivided acre of forest estimated to return £500 at the end of 20 years. It may have been part of the propaganda but the idea gained ground that our indigenous forests were doomed to disappear in the foreseeable future.

The Forest Service was not immune from the prevailing pressures and the sound work of previous years gave way to feverish planting without much regard to soil, climate, suitability of species, or the quality of the nursery stock. This was bad enough, but possibly the worst feature is the fact that something like 70% of our existing exotic forests were all planted during one brief period of years, and mature over a similarly brief period. This necessitates careful and sometimes expensive planning in the harvesting of the 'first crop' in an endeavour to even out in subsequent crops the maturity incidence of the forests as a whole.

Under the existing pressures the Forest Service nurseries entered the field of private enterprise, selling to farmers, local bodies and finally, the public generally. Private nurserymen, faced with state competition, produced 'forestry grade' of trees, and the whole situation was no advantage to the future of our exotic forests. Thus it is that you will

find in Forest Service reports, the words 'unthrifty,' 'to be replaced as soon as possible' and similar comment.

It will be of interest to horticulturists to discuss density per acre. It is interesting to note that prior to 1923 the number of trees per acre was 1,210. From 1924 to 1936 the density was 680 per acre and from 1937 onwards, it is again 1,210 per acre.

It is easy to be wise after the event, but it is apparent now that low stand density results in poor stand quality characterised by high taper and heavy branching. It also results in low timber quality, because of large and loose knots and uneven grain, which are a feature of low density trees. All this, too, in addition to a yield per acre nearly 40% lower, on the average, in the low density plantings. Once again 70% of our forests are in the low density category. It surely becomes evident that in forestry, as in every branch of horticulture, too, there is no alternative to quality in work and quality of materials.

And, finally, there is an aspect of our exotic forests which should be of great interest to us all. I wish now to refer to the soils of our area. It is recognised that in many cases trees were planted in unsuitable areas. We have seen the harvesting of the first crop. The second is growing vigorously, and seems assured of successful maturity, but from even a superficial examination, changes are evident in soil texture, and while actual podsolisation is not apparent, the effects of the third and fourth crops are matters of conjecture.

New Zealanders have come to appreciate the need for continued scientific research into problems affecting the dairy, the meat, or the wool industry. If we are wise we, the people, will see that all those engaged in forest research have the facilities and the encouragement to pursue their work with the maximum of efficiency.

Those who came first to this land found tremendous timber resources, and whereas in the lands from which they came building materials were more commonly of stone, brick or concrete, here they developed the use of timber at a rate which the indigenous forests could not maintain. The exotic forests have proved their ability to provide a substitute, and it is appropriate that, side by side with the conserved forest of the Urewera National Park, are the utility forests of this region. The trees of the past and the trees of the future. The trees which gladden our hearts and the trees which work for our physical benefit.

Here I list briefly, the main characteristics of the various species and their possible contribution to our timber resources:—

### *PINUS RADIATA*

In its natural state this tree is confined almost exclusively to the Monterey peninsula in California. With such limited range in its own home country its versatility in New Zealand is amazing. Equally outstanding is its rate of growth, up to 130 feet in 30 years, yielding 50,000 feet of sawn timber to the acre. It is

moderately resistant to pest and disease and establishes successfully almost anywhere, except on the high, frosty plateau country. Rotation about 30 years.

### *PINUS PONDEROSA*

Is at home in the drier mountain areas of Canada and U.S.A. It has a special use in that it can be grown on the more difficult sites climatically. Its growth is slow, and therefore the rotation period is long, but despite this, it ranks next to *radiata* in the area planted. Indications are that the timber will not be quite up to the standard of the best *radiata*. Too many somewhat indifferant varieties have been introduced to New Zealand.

### *PINUS LARICIO*

A native of Southern Europe, has succeeded in New Zealand from Waipoua to Southland, and from sea level to 2,500 feet. The rotation in New Zealand will probably be from 60 - 80 years though small logs have been sawn for use as weatherboard and flooring.

### *PINUS MURRAYANA* (lodgepole pine)

Is from the inland areas of Canada and U.S.A. It is hardy, and frost resistant, and can be grown at higher altitudes than any other exotic pine in New Zealand. The rotation period is not yet fully determined. The timber from small logs seems to be harder and denser than *radiata*. It is probable that this will prove to be a successful pulpwood tree.

### *LARIX EUROPAEUS* (European larch)

From Central Europe, gives colour to the forest with its reddish autumn tints before the leaves fall, and its pale apple green in spring. Grows to 70 feet in 30 years, and the probable rotation is 70 years. Present use of small diameter logs is for posts, poles, framing, gates and scaffold planks. It promises to be very useful timber, with high production per acre.

### *ABIES DOUGLASII* (Douglas fir)

From the Pacific Coast of Canada and U.S.A. In New Zealand it grows best on hill country seeming to prefer shady slopes. It does not tolerate severe frosts. On good sites it grows to 80 feet in 30 years with a volume of maybe 9,000 cub. feet per acre. To produce good timber it is likely that rotation will be anything up to 80 years and maybe more. Present uses of comparatively small logs is for framing and structural work and the timber compares very favourably with imported timber of similar type.

### LODER CUP AWARD

The Loder Cup for 1959 has been awarded to Mr. Charles Cameron, Sen., of Tauranga. The presentation was made on 17th February by the Hon. C. F. Skinner, Minister of Agriculture at the Indoor Sports Centre, Tauranga. Over 200 people were present including the Mayor of Tauranga, Mr. D. S. Mitchell, Mr. G. A. Walsh, M.P. for Tauranga, Mr. A. M. W. Greig, chairman of the Loder Cup committee, Mr. R. C. Nelson, Dominion President of the New Zealand Forest and Bird Protection Society and Mr. V. C. Davies, representing Duncan and Davies Ltd., who were the first winners of the Loder Cup in 1929 at Auckland. Mr. H. B. Capamagian, chairman of Tauranga County Council, presided.

Mr. Cameron was formerly Superintendent of Parks and Reserves for the Tauranga Borough Council and has had a lifetime of active interest in the growing and protection of the New Zealand flora. He is at present the local President of the Tauranga branch of the New Zealand Forest and Bird Protection Society and in this capacity he has been tireless in organising and leading its activities in guarding, restoring, signposting and bringing to the public notice the numerous splendid areas of native bush reserves in the western end of the Bay of Plenty, especially those for which the Society has assumed responsibility.

All speakers emphasised the importance of Mr. Cameron's work in encouraging the school children of the Bay of Plenty to take an interest and a pride in their native flora. He had also promoted a scheme for the beautification of the new access highway to Mount Maunganui and he had established several native tree plantations at various schools. Arbor Day celebrations had received his full support. In referring to Mr. Cameron's collection of New Zealand ferns, Mr. V. C. Davies said that it was probably the finest in the world. Tribute was also paid to Mrs. Cameron, who had ably assisted her husband.

Before presenting the Cup, Mr. Skinner stressed the importance of protecting our native flora by the continual planting of native trees and shrubs. Mr. A. M. W. Greig, chairman of the Loder Cup committee, stated that his committee, over the years, had placed greater emphasis on the work of individuals rather than of organisations and on voluntary rather than professional work.

Mr. Cameron, when acknowledging the tributes paid to him, said 'Tonight I feel humble when I see so many of my friends round me, prepared to show, in handsome manner, appreciation of my efforts.' Referring to his work Mr. Cameron dwelt upon the part that beauty played in the lives of all and that New Zealand possesses its greatest beauty in its native flora. 'If we are going to neglect this priceless heritage, then the sooner we hand the country back to the Maori, with our apologies, the better,' he remarked. He was sure, however, that the children of today would do more to promote the regeneration of the New Zealand flora than had the children of yesterday.



## NOTES FROM THE CHRISTCHURCH BOTANIC GARDENS

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

In Christchurch the rainfall for the past year has again been below average and January of this year is the eighth successive month with this low rainfall; however, with 0.39in. at the beginning of February the prospects seem a little better.

During the middle part of January temperatures were very warm and the 97° F. recorded on the 17th was the second highest for the city in nearly 100 years of recording. Most plants have withstood the heat remarkably well but some suffered to a greater or lesser degree. Some of the plants affected are *Magnolia wilsonii* and *M. campbellii* both of which suffered leaf scorch, some rhododendrons were also affected in this manner, and plants such as *Primula* and *Meconopsis* were in many cases scorched badly.

During this period the most colourful sights in the Gardens are the displays of annuals and the herbaceous border, the most impressive display being on the spacious front lawn with its numerous specimen trees. Here the lawn is bounded on two sides by formal beds of annuals which have this season been planted with varieties of *Begonia semperflorens* interplanted with standard fuchsias, and bush and standard zonal pelargonium, *Abutilon striatum* var. *thompsonii*, and *Senecio cineraria*. *Abutilon striatum* var. *thompsonii* has large leaves mottled and blotched with yellow and makes a most effective standard as does also the silvery-white *Senecio cineraria*. The varieties of *Pelargonium* used include the following, all of which are reliable. Starting with the reds there are 'Gustav Emich' locally known as 'Burwood,' "Soldier's Tunic," and 'Paul Crampel,' then there is the Dutch vermilion 'Maxime Kovalevski,' 'Queen of Whites' which during parts of the season assumes a pinkish tint, and in those classed as salmon coloured there is 'Regalis' and 'Ville de Poitiers.' 'Florence Haywood' is a good single pink and varieties with variegated or otherwise marked foliage which are mainly grown for edgings are, 'Madame Salleron' a small plant with grey green leaves edged pale cream, 'Caroline Schmidt,' 'Flower of Spring,' and 'Chelsea Gem' all of which have similar leaves, green edged white or cream, and differently coloured flowers. 'Marechal MacMahon' has a yellow-green leaf with a strong brown zone, and 'Mrs. Pollock' a tricoloured leaf, while 'Crystal Palace Gem' has a golden leaf with a green central blotch and 'Golden Harry Hiover' is too well known to need further description.

On the western side of the tropical house is a bed of *Cosmos* 'Orange Flare' interplanted with standards of dark blue heliotrope which is making a particularly good show and nearby *Browallia demissa*

is flowering very well. This latter annual is not familiar in Christchurch and deserves to be better known particularly as it is so well suited to a sunny border. Another annual which always attracts attention is *Euphorbia marginata* or 'Snow-on-the-mountain' as it is popularly known. The upper and floral leaves of this plant are edged with white or may be entirely white and in a border it is a most outstanding plant in the latter part of the summer.

From December onwards the majority of the plants in the herbaceous border commence flowering but space does not permit mention of more than one or two of these. One plant which at present is drawing numerous enquiries from visitors is *Lobelia fulgens* which comes from Mexico and does not always prove hardy in the winter. It is a tall growing plant from 2 - 4 feet and with bronze coloured stems and leaves. The flowers are a very bright cardinal red, which contrasts exceptionally well with the foliage, and they are borne in long racemose spikes which give the plant quite a long flowering season. It is a first class border plant in Europe but only rarely in this country has it been used as a bedding plant.

Another plant in flower at the moment which deserves to come before the attention of horticulturists and particularly those interested in floral decoration is *Astrantia carniolica*, a southern central European mountain plant found growing in damp places. *Astrantia carniolica* is a member of the *Umbelliferae*, has 5 - 7 lobed palmate leaves and grows 12 - 18 inches high. The flowers are blush coloured and borne in a rather close umbel which sits on top of an involucre of 12 to 18 bracts which are pink and delicately veined with green. The individual heads are about 1 inch across and vary from 3 to 7 in an umbel. It is an easy plant to grow and is suited to damp or semi shady parts of the garden.

This season the roses have been very good and many of the older varieties are still more popular with the public than some of the supposedly outstanding newer ones. One rose which is a champion of several shows throughout the country but is very disappointing under Christchurch conditions is 'Perfecta.' In the early and middle parts of the season the flowers burn very badly and may be regarded as anything but perfect, and it is only when the cooler weather comes in the latter part of the summer that the flowers show anything of their true form. 'Karl Herbst' is another that burns badly and must be considered unsuitable for Christchurch gardens. During January many of the roses fade quickly in the heat, however 'Kordes Sondermeldung,' or 'Independence' as it is more generally known, attracted much attention because of its ability to hold its flowers longer than most and because the bright orange-scarlet showed practically no signs of burning. Also it is very free flowering and quite a good grower.

**INSTITUTE PUBLICITY**

*J. A. HUNTER (Auckland).*

To assist our present drive for membership, District Councils should take every opportunity to bring the R.N.Z.I.H. with its various functions and activities before the public.

Such an opportunity presented itself at the Auckland Horticultural Council's Spring Show and Horticultural Exhibition held in the Town Hall and adjoining Concert Chamber.

The Auckland District Council acquired space at this exhibition and erected the stand shown in the accompanying illustration. Through the close co-operation of Mr. Lemmon, our Dominion Secretary, we were able to exhibit copies of diplomas, certificates, and an excellent photograph of the Loder Cup.

To show that the Institute was also willing to assist gardeners to solve horticultural problems we introduced a Query Corner. The success of this innovation was surprising — between 300 and 400 enquiries on a wide range of subjects were dealt with. The subjects on which the greatest number of people required assistance were pests and diseases, plant identification, pot plants, fruit culture, weed control. When the correct answer could not be given by the person in charge at the time, a written or telephone answer was communicated to the enquirer later.

We are pleased to report that 12 new members were enrolled.

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**ANNUAL REPORT OF THE DOMINION COUNCIL FOR THE  
YEAR ENDED 30th SEPTEMBER, 1959**

Ladies and Gentlemen,

The Dominion Council has much pleasure in presenting the 37th Annual Report for the year ended 30th September, 1959. The Council wishes to bring before members, and the public, a resume of matters dealt with during the period.

1. *Meetings:*

- (a) *Annual Conference:* The 36th Annual Meeting and Conference of Delegates was held in Timaru at the invitation of the South Canterbury District Council. As 1959 marked the Centennial of South Canterbury, it was a fitting occasion for the Institute to gather in Timaru to pay our respects to the people of that Province. The Institute was greatly honoured by the attendance of the Rt. Honourable Walter Nash, Prime Minister, to open the Conference. Mr. Nash very readily associated himself with the objectives of the Institute, and paid tribute to the influence of horticulture on a national level.

A very happy and friendly spirit permeated the whole proceedings of the Conference and the hospitality and kindness of our hosts left nothing to be desired.

The Conference attracted considerable publicity, including a report in the "Gardeners' Chronicle" (published in England) with a photograph of the Prime Minister addressing the meeting.

- (b) *Dominion Council*: During the year, the Dominion Council met on five occasions, and the average attendance at those meetings was eighteen. At all these meetings, the Dominion President presided. District Councils should be better represented at these meetings, for herein lies the opportunity for them to participate more directly in overall guidance and management of the affairs of the Institute. By their representation at these meetings, District Councils would be brought into closer relations with the Dominion Council and with one another. The benefit derived from this closer association would be mutual.
- (c) *Sub-Committees and Examining Board*: The Examining Board, Publications Committee, Finance Committee, and other special sub-committees appointed by the Dominion Council have met at various times throughout the year, giving detailed and careful attention to the affairs of the Institute. The work of each Committee is further reported on within this Annual Report.

## 2. *In Memoriam*:

It is with sincere and deep regret that the Dominion Council records the passing of several members during the year. Dominion Council feels their loss and extends sympathies to their relatives. Particular reference is made to the passing of the late Mr. Harry Hazelwood of Epping, N.S.W. (Life Member), the late Mr. H. R. Wright of Tauranga, an Associate of Honour elected in 1948, and Mr. G. H. Knowles, who was Secretary of the Oamaru District Council at the time of death. Memories of these, and others whose names are not mentioned, are sincerely revered.

## 3. *Membership*:

The membership of the Institute constitutes the financial backbone of the Institute, and it is encouraging to record a steady progress in its numerical strength. The total membership stands at 2157, including 36 Associates of Honour.

District Councils are urged to pursue every effort to increase the membership.

## 4. *Finance*:

- (a) *Annual Accounts*: The appended accounts reveal a further improvement in the state of the Institute's finances. It has been a successful year. Allocation from membership subscriptions to the Publications' Account has again been made on the basis of 8/- per member. Capitation payments to District Councils have been maintained, and it is now intended to recommend an increase from 2/6 to 5/- per individual member for the ensuing year. A retrospective additional Capitation payment of 2/6 per individual member (other than Fellows) was granted, and paid, to District Councils during the year.
- (b) *Trust Accounts*: These are clearly shown in the published accounts. All funds are properly invested.
- (c) *Publications Account and Loder Cup Account*: Separate statements covering both of these accounts are appended. Thanks are again expressed to the Internal Affairs Department for continued financial assistance for the Journal, and toward publishing the Loder Cup History. Revenue from advertising in the Journal is poor, and efforts must be made to improve this source of income, in keeping with the status of the Journal.

## 5. *Publications*:

The Publications Committee met regularly during the year. Members of the Institute are satisfied that "New Zealand Plants and Gardens," under the editorship of Mr. G. A. R. Phillips, is a very creditable publication, and that it holds a unique position in New Zealand horticultural literature.

Now that the Institute's own journal in its new form is established, it is considered that the journal can assist in increasing the membership of the Institute, and specimen copies have been sent to selected persons overseas inviting membership. The response has been satisfactory. It is intended to act on similar lines next year with the post-primary schools in New Zealand. The Council anticipates that this action will increase membership and interest many young people in horticulture and in the Institute.

Two special features of this year's issue are the publication of an index to articles and plant names for Vol. II of the Journal, and the provision of a special supplement for specialist societies affiliated to the Institute. The index will be published every two years, as a volume covers eight issues.

A publication such as "New Zealand Plants and Gardens" can develop only with the continued support of contributors. Members of the Institute may assist in three ways. Supply the Editor with subjects and authors of suitable articles; illustrations of all subjects should be of the highest quality. Ensure that District Council notes are regularly sent to the Editor, and — of greatest importance — prepare articles on parks and gardens of horticultural interest throughout the Dominion. New Zealand is a treasure house of rare and beautiful plants and gardens, but many are inadequately known. Articles on these places will assist members to make the most of their visits to other districts, and will foster a spirit of co-operation and friendliness.

Dominion Council also appeals to all members to obtain or sponsor advertisements, to ensure that the journal becomes financially more self-supporting, and thus absorbs less from the general funds of the Institute. It is essential that the journal continues to progress and maintain its high standard. The Council thanks the Editor and all members of the Publications Committee for another year's work for the Institute.

#### 6. *Arbor Day:*

Each year the observance of Arbor Day is fostered and encouraged by the Institute. This Annual function gives excellent opportunities for bringing before the people of our land, particularly the young people, the outstanding merit of tree-planting. Through the District Councils the Institute participated in Arbor Day ceremonies throughout the Dominion.

#### 7. *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." The Loder Cup Committee is appointed by the Minister of Agriculture. The Institute is represented thereon by Mr. W. K. Dallas, A.H.R.I.H.(N.Z.), N.D.H.(N.Z.). The 1959 Award was made to Mr. Charles Cameron of Tauranga, who was nominated by the Forest and Bird Protection Society of N.Z. Inc. The congratulations of the Dominion Council are extended to Mr. Cameron. The Loder Cup Committee expects very shortly to publish the History of the first 25 years of the Loder Cup Award.

#### 8. *Examining Board:*

This Board, appointed annually by the Dominion Council, bears the full responsibility for the conduct and supervision of the Institute's annual examinations which are a most vital and important aspect of the Institute's national functions. The Institute is vested, by Statute, with the responsibility of prescribing for and conducting examinations in Horticulture, Fruit Culture, Vegetable Culture, Apiculture, School Gardening and Seedsmen's

qualification. By Statute it is empowered to issue Diplomas and Certificates for these courses, and these have come to be recognised as the hallmark of experienced and practical horticulturists. The desirability of wider recognition of the Institute's Diplomas within the Public Service is a matter that has received much attention in past years, and is again being brought forward for renewed consideration.

Under the chairmanship of Professor H. D. Gordon, the Examining Board has given excellent service in the interests of the Institute and the examination students. The standard and the conduct of the examinations are maintained on a high plane befitting the Institute.

During the year, the Dominion Council was pleased to appoint Messrs. K. C. Hockey, N.D.H.(N.Z.), F.R.I.H.(N.Z.), and J. H. Glazebrook, B.Sc., N.D.H. (representing Massey and Lincoln College respectively) to the Examining Board. The representation of these Colleges adds greatly to the strength of this Board.

The congratulations of the Dominion Council are expressed to the successful candidates at the examinations, and particularly to those successful in gaining special awards.

The establishment of Christchurch as the sole centre for New Zealand for the holding of Oral and Practical examinations received the approval of the 1959 Annual Dominion Conference, and was instituted this year. In the opinion of the examiners, there were definite advantages in the staging of these examinations in Christchurch. The Dominion Council places on record its appreciation of the assistance and co-operation received in these examinations from the Christchurch City Council, the Director of Reserves at Christchurch, and his staff, the examiners, and all others who lent their assistance in these practical examinations. The thanks of the Dominion Council are also extended to the examiners, supervisors, and others who assisted in the conduct of the written examinations at various centres throughout the Dominion.

The Dominion Council gave very careful consideration to the matter of assisting financially with the travelling expenses of candidates attending the Oral and Practical examinations, but agreed that the finances of the Institute were not sufficiently buoyant to permit any such assistance. The continued Government aid, in the nature of an examinations' grant, is sincerely appreciated. Expenses relating to the conduct of the examinations are quite considerable, and a major portion of the Dominion Secretary's time is devoted to this important work of the Institute.

#### 9. *Historic Trees in New Zealand:*

The checking of Dr. Allan's original list of Historic Trees, and the addition of *notable* trees, has proved a longer task than was first anticipated. District Councils were invited to assist in this.

The N.Z. Forest Service indicated their willingness to assist and are engaged in recording all confirmed trees on punch cards which will permit of quick reference by species or by locality. When the list is as complete as possible it will be available for publication.

We appreciate this valuable assistance.

#### 10. *Urewera Country — Timber Milling:*

The Dominion Council continues to maintain a close watchfulness on these operations, and on the subsequent development of these areas. The Government continues to follow a wise plan for the development of some areas and the re-forestation of others, as previously reported to members.

#### 11. *Plant Raisers' Award:*

During the past year Dominion Council decided to establish a procedure governing the Plant Raisers Award. A committee was set up,

the members being Mr. A. M. W. Greig (Chairman), Mrs. A. J. Du Pont, Messrs. V. C. Davies, E. Hutt and J. P. Salinger.

This Committee recommended that there should be a constitution and procedure administered by a committee on similar lines to the Loder Cup Committee. This draft procedure was circulated to District Councils for comment and suggestions, and general approval has been expressed.

Dominion Council considers that the institution and presentation of a Plant Raisers Award to notable plant breeders in New Zealand will encourage plant breeding in this country, thus stimulating the introduction of new plants into New Zealand Gardens, and eventually overseas. Much depends however, on the active interest and support of members of the Institute in all parts of the Dominion, and District Councils are expected to take an interest in any plant breeding being done in the region, and in due course ensure that all worthy persons are nominated for the Plant Raisers Award.

12. *Nomenclature*: (International Registration Authority for the genera *Hebe* and *Leptospermum*).

The small Committee under the chairmanship of Mr. C. M. Smith, M.A., B.Sc. (For.), (Edin.), A.H.R.I.H.(N.Z.), is charged primarily with the task of preparing an international list of cultivated varieties (cultivars) of the two genera of shrubs — *Hebe* and *Leptospermum*. Authority for this was bestowed on the Institute at the XVth International Horticultural Congress, Nice, 1958.

To many New Zealand Horticulturalists this sounds a simple and peculiarly New Zealand task. It is, however, much less simple than it appears; and the collection of authoritative data, which will stand up to careful scrutiny, of all the wild plants which are involved in the original breeding of the known cultivated plants, is neither simple nor speedy.

The Committee has deferred consideration of the genus *Hebe* pending publication of the new revision of the *Manual of the New Zealand Flora* which is expected to appear during 1960. To attempt to list cultivars and their probable parentages before the publication of this up-to-date interpretation of the natural wild plants would have been folly, as it would certainly entail a very early revision and change of many cultivar parentages.

The genus *Leptospermum*, which, compared with *Hebe*, is comparatively small, has in itself other dilemmas which are time-consuming. It is predominantly an Australian genus, with far more species in eastern Australia than in New Zealand, and with only one species common to both, as far as is known. Information on these, and on the garden hybridisation of sundry members of them that is stated to have taken place in Australia and New Zealand, in California, Europe, Great Britain and in Ireland is being assembled, but is necessarily slow. The formation of an Institute of Horticulture in Australia could be of great assistance in this.

A further local development, which will be of value to the Institute in the field of nomenclature of cultivars, is the affiliation to the Institute of the N.Z. Camellia Society. Whilst this Committee will not be in any way responsible for International Registration of Camellias bred in New Zealand (that will be the function of horticultural organisations of U.S.A.), the N.Z. Camellia Society has undertaken to keep the Institute advised from time to time of names and descriptions of local *Camellia* cultivars as soon as they are accepted for International Registration by the American Authority. The Institute through this channel will be kept abreast of all new and authenticated developments in *Camellia* breeding in this country. The Nomenclature Committee is grateful to the N.Z. Camellia Society for agreeing to supply this information on this difficult and fast developing genus.

The Institute is acting as the National Registration Authority for New Zealand for the genus *Rhododendron*, in association with the N.Z. Rhododendron Association.

There have been certain enquiries from Australia which have been dealt with by the Committee. The most interesting news is to the effect that horticulturists in Australia are endeavouring to form an Institute of Horticulture there. Initial enquiries came from Canberra and concerned the constitution and the structure of our Institute. No recent advice has been received as to the success of these Australian efforts, but we would be encouraged to learn that the efforts have been successful and that there was now a sister Institute across the Tasman. There is, particularly in matters of world nomenclature of plants, a certain air of remoteness in being the only Institute of Horticulture in the Southern Hemisphere.

The Institute has been appointed official distributors of the *International Code of Nomenclature for Cultivated Plants* (Price 2/6).

### 13. *Agricultural Education:*

Following upon the previous Dominion Conference, the Dominion Council invited the Canterbury District Council to undertake a detailed study of the Report released by the Consultative Committee on Agricultural Education. The question was soon raised as to whether, in fact, Horticulture was intended to be covered by the Committee's enquiry, as it had not been very fully dealt with in the Report, and was not specifically mentioned in the Order of Reference. To clarify the position, a small deputation waited on the Minister of Education, and was very cordially received. Indeed, the Institute proved to be the first body to make any approach to the Minister following the release of the Report. The Minister was not slow to express his appreciation of the interest shown by the Institute, and also his disappointment at the apparent lack of interest by other organisations.

The Minister was asked whether he would receive a submission from the Institute on horticultural education, for consideration in conjunction with the Report, if, in fact, it was intended to be included therein, or separately, if that were considered more appropriate.

The Minister indicated that he would be convening a conference of interested organisations in the near future to consider Agricultural Education, and matters arising out of the Report, and stated he would include the Institute in the representations at that Conference. Furthermore, he would seek the advice of the Institute as to whether Horticultural Education should be included at that Conference. The issues involved are vital, and this Conference is anxiously awaited. The Dominion Council is of the opinion that Horticultural Education should be considered separately from Agricultural Education, and has set up a small Committee to watch the interests of the Institute in these matters.

### 14. *Fellowship:*

It has been the pleasure of the Dominion Council to bestow the distinction of Fellowship on no fewer than 32 members during the year. District Councils are to be congratulated on bringing these nominations forward, and the Dominion Council hopes that more will be proposed during the ensuing year. "Fellowship" is conferred upon persons in virtue of their distinct interest in and service to horticulture as expressed and revealed by their activities. After due consideration and on the recommendation of the Publications Committee, the Dominion Council decided against publishing the list of Fellows in the Journal.

### 15. *New Zealand Society of Professional Floral Artists Inc.:*

The close relationship of the Institute with this Society has been maintained throughout the year, and the Dominion Council extends congratulations



to the Society on their successful conduct of examinations in Floral Art. The Diplomas and Certificates issued by the Society are submitted for signature by the Institute's Dominion President and Examining Board Chairman, under Seal. The Institute's full blessing upon these examinations is readily and willingly granted. The presentation of these diplomas and certificates was fittingly made by a former President of the Institute, Sir Robert Macalister, A.H.R.I.H.(N.Z.), on a happy occasion arranged by the Wellington District Council.

16. *Kindred Specialist Societies — Affiliation:*

During the year, the affiliation of the Rhododendron Association and the newly formed N.Z. Camellia Society was welcomed. These two societies now have direct representation on the Dominion Council. Affiliation by other specialist Societies in a similar manner would be welcomed also. We believe that much mutual advantage may be gained by this allied association.

17. *Formation of new District Councils:*

Initial enquiries, leading to steps being taken, were instituted into the possibilities of commencing new district councils in at least three localities. In each case it appeared to be inopportune however, to press the establishment of a council; the few local members and other interested folk were already being well catered for by local horticultural and beautifying societies. The Institute does not enter into competition with such societies, but rather seeks to encourage them in every way. Nevertheless, the functions of the Institute are wider than those of horticultural societies, particularly in the field of horticultural education. The Institute needs the supporting strength of active District Councils in every centre, and the Dominion Council must keep the establishment of new District Councils ever before it as an objective.

Existing District Councils are well fitted to give assistance in this work, particularly within their own neighbouring localities.

18. *Oamaru District Council:*

The Dominion Council places on record the sincere appreciation of the work and interest of the late Mr. G. H. Knowles who was secretary of the Oamaru District Council at the time of his death, and express their sincere regret at the loss sustained by the members in that area. Following upon the death of Mr. Knowles, the South Canterbury District Council Executive paid a visit to Oamaru and the small Oamaru District Council now is merged into the South Canterbury District Council.

19. *Publication — "Trees of New Zealand":* Resulting from an approach by the Institute, this publication is again available from the Government Printer, Price 25/-.

20. *Judging Rules:*

The revision of Judging Rules has been taken in hand by the Auckland District Council.

21. *Exotic Trees in Catchment Areas:*

Representations were made to the Minister of Forests strongly urging the use of indigenous vegetation (in preference to exotics) when planting catchment areas. In reply, the Minister expressed his appreciation of the concern of the Institute and voiced his personal view in support of the recommendation. There were, at times, circumstances when the use of exotics had to be resorted to, but even then, their use was carefully supervised and controlled.

22. *Ninth N.Z. Science Congress:*

The Institute is represented by Mr. J. P. Salinger, B.Sc., N.D.H., on the co-ordinating Committee appointed by the Royal Society for the

Ninth Science Congress to be held in Wellington in May, 1960. The Congress will include a full section on Agriculture, and a sub-section on Horticulture. A syllabus of subjects and speakers for inclusion in the horticulture section is being drafted by the Dominion Council. Further particulars will be available in due course. In this, the Institute is playing an important role in keeping horticulture to the fore as an integral part of agricultural science, although distinct in itself.

23. *Chair of Horticultural Science:*

At the instigation of the N.Z. Vegetable and Produce Growers' Federation, the Dominion Council initiated enquiries into the requirements of establishing a chair of horticultural science at Massey and/or Lincoln College. The question of finance to endow such a chair is a vital issue, and the sponsoring bodies would, in all probability, be asked to raise the necessary funds.

It seemed inopportune at the present time to press the matter further, but it is felt that, at some future date, the establishment of such a chair would become necessary and desirable.

24. *Conservation of Scenic Resources:*

The Institute was represented at the recent Conference, which was called by the Minister-in-charge of the State Hydro Electric Department, Hon. H. Watt, as the result of public concern over the alleged despoilation of natural scenic resources (such as Aratiatia Rapids and Huka Falls) by the establishment of Hydro Electric Power Stations. The N.Z. Travel and Holidays Assn. had taken active lead in this matter stemming from an address by Dr. J. T. Salmon, and placed before the Conference the following resolution:—

“That this Conference approves in principle the setting up of a nature conservancy in New Zealand, and requests the Government to take such legislative steps as are necessary to this end without delay. This conservancy to be responsible to Parliament, and to have statutory powers sufficient to enable it to implement a conservation policy aimed at the protection and preservation of New Zealand scenery, wild life, natural and historic monuments.”

The Dominion Council having expressed its views earlier to the Minister by letter, had no further submission to make at the Conference. The Dominion Council and the Institute is very naturally concerned to see that the natural scenic resources and horticultural treasures of our Dominion are preserved against wanton despoilation and destruction, but these issues, as all others, must be viewed realistically in the light of present-day demands for expansion and development of the Dominion's whole economy and industry. It has been already demonstrated that State Hydro-Electric Power Stations elsewhere in the North Island have been made into very desirable scenic and pleasure resorts, for the lasting benefit of present and future generations. As for the Aratiatia Rapids area, it has been rightly pointed out by eminent horticulturists that the vegetation there is very poor indeed, and of no beauty value, the loss of which, through the proposed power scheme, will not be serious. On the contrary, the resultant beautification of the completed Station, which is in the hands of competent and respected men possessed of horticultural knowledge and experience, is fully expected to excel the present appearance of the locality.

It is very pleasing to note, and the Dominion Council congratulates the Government in taking this course of action, that one of the Dominion's foremost botanists and foresters has been seconded by the Minister of Works to formulate a plan for the re-beautification of the whole Taupo area in an attempt to restore something of its former natural beauty and character, horticulturally.



(New Zealand Forest Service photo).

*The Banks Lecture. Thinned Douglas fir in Compartment 1113, Kaingaroa Forest. This is the oldest and one of the best stands of Douglas fir in the Murupara Working Circle. It was planted in 1915 with 6ft. x 6ft. spacing and was first thinned in 1952/53, covering about 3000 acres. (see page 245).*



*The Banks Lecture. Rimu, height 124 ft., first limb 46 ft., merchantable bole 62 ft. (see page 238).*

(New Zealand Forest Service photo).



(New Zealand Forest Service photo).

*The Banks Lecture. Kaingaroa Forest, looking southwards from Murupara to Pekepeke fire look-out. Kaingaroa Logging Co. Ltd. offices in foreground, Mt. Tauhara on skyline. (see page 245).*

*The Banks Lecture.  
Logging road.  
(see page 238)*

(N.Z. Forest  
Service photo).



*Institute Publicity. (see page 253).*

## IN MEMORIAM



With sorrow we record the passing of Dame Elizabeth Gilmer, D.B.E., whose death occurred in Wellington on 29th February, 1960, aged 79 years.

A daughter of the late Richard John Seddon, Dame Elizabeth was a very distinguished person, whose influence extended far into the civic and public life of the Capital City and Dominion, having served on Local and Public bodies with considerable distinction for many years. An administrator of no mean ability she served in the wide fields of education, social welfare, Local Body Government, horticulture, and many other cultural activities.

An Associate of Honour of the Royal New Zealand Institute of Horticulture since 1952, Dame Elizabeth was a member of the Dominion Council of the Institute for several years taking an active and prominent part in the government of the affairs of the Institute up to the time of her death.

We mourn the passing of an esteemed friend, a wise counsellor, an honoured member, and distinguished horticulturist. The fragrant memory of a gracious and noble lady remains with us.

Our sincerest sympathies are extended to her family and relatives.

25. *Award of Merit:*

Auckland District Council submitted to Dominion Council a scheme for granting *Awards of Merit* and *Awards of Garden Merit* to plants. An Award of Merit would be given to any plant superior to others of the same species, and the Award of Garden Merit to any plant that was of outstanding value in the garden. These Awards would be separate from the Plant Raiser's Award which would be granted to Plant Breeders.

Dominion Council formed a sub-committee comprising Mr. J. P. Salinger (convenor), Messrs. M. J. Barnett, E. Hutt and G. A. R. Phillips to consider this matter.

This sub-committee studied the system under which such awards are granted by the Royal Horticultural Society. In nearly all instances only preliminary awards are made to plants when exhibited. Final awards are given only when the plants have been grown in carefully conducted trials, and regularly inspected by experienced members of the appropriate Plant Committees.

As trial grounds for the majority of plants are not at present established in New Zealand, this sub-committee considered that the time was not yet opportune to establish such awards.

Dominion Council approved this recommendation, and decided that the granting of awards to plants should be deferred until suitable trial grounds are available.

26. *Reference Library — Horticultural Publications:*

The Dominion Council has, for some time, been concerned about the establishment of a suitable library for the handling of horticultural publications. The Dominion Council has had discussions with the City Librarian, Wellington Public Library, and it now appears likely that suitable arrangements might be made with that Library for the handling of such publications. The National Library Service would then also have access to the publications.

27. *Publications of Historic Horticultural Value:*

While considering accommodation for a reference library of current publications, the Dominion Council realised that there are many publications in existence which are already, or shall soon derive historical interest. Suitable accommodation for these items also has been considered by the Dominion Council, and it is hoped that arrangements can be completed shortly for this.

28. *District Councils:*

(a) *Publicity for the Institute:* It was very pleasing to learn of the efforts of the Auckland District Council who arranged a very fine exhibit at the Auckland Horticultural Council's Spring Show. The Exhibit displayed much material depicting the activities of the Institute and bringing them before the public of Auckland. The Dominion Council congratulates the Auckland District Council on their enterprise and hopes that others will follow suit.

(b) *Enterprising Education Effort:* The Canterbury District Council is heartily congratulated on their initiative in organising a Conference recently on the subject of "Glasshouse Heating and Construction." This session was attended by approximately 120 persons and proved very profitable and worthwhile. It is no doubt the forerunner of more to follow later, and demonstrates the manner in which the Institute, through its District Councils, can take the lead in disseminating horticultural knowledge.

(c) *Reports on the activities of District Councils:* It is through the District Councils that the Institute is best able to show to the citizens of our Dominion the purpose and functions for which the Institute exists.

The Institute's front line lies in the District Councils, and thus the Dominion Council makes an earnest plea for a strong front to be presented by all District Councils.

29. *Personal:*

(a) *Mr. T. D. Lennie, M.B.E., A.H.R.I.H.(N.Z.):* The congratulations of the Institute were conveyed to Mr. T. D. Lennie of Christchurch upon the occasion of his retirement from business after 70 years of service in the horticultural trade. This is an outstanding achievement.

(b) *Mr. B. A. Norman, N.D.H.(N.Z.), F.R.I.H.(N.Z.):* The sincere thanks of the Dominion Council were conveyed to Mr. B. A. Norman when he retired from the office of Honorary Secretary of the North Taranaki District Council, after 13 years of service. His valuable contribution to the furtherance of horticulture and the wellbeing of the Institute throughout these years is deeply appreciated.

(c) *Mr. A. W. Green, A.H.R.I.H.(N.Z.), N.D.H.(N.Z.):* The good wishes of the Dominion Council were conveyed to Mr. and Mrs. A. W. Green of Hamilton on the occasion of their Golden Wedding. Mr. A. W. Green has been President of the Waikato District Council for a number of years, and his energies and enthusiasm in this field are largely responsible for the strong membership and flourishing state of that District Council.

(d) *Mr. J. R. Templin, A.H.R.I.H.(N.Z.):* The outstanding service and contribution to the advancement of horticulture in Canterbury by Mr. J. R. Templin of Christchurch was suitably recognised by the Institute at the last Dominion Conference, when the distinction of Associate of Honour was conferred upon him. Mr. Templin's failing health, which prevented his attendance at the Conference, is sincerely regretted, and the good wishes of the Institute were conveyed to him by letter.

(e) *Mr. M. R. Skipworth* of Dunedin was also honoured at the last Conference by his election as an Associate of Honour, in recognition of his long and praiseworthy service to horticulture in Otago.

(f) *Life Membership:* During the year, the following members were elected to life membership, by the Dominion Council.—

Mrs. John Houston, of Hawera.

Mr. Walter Hazelwood, of Epping, N.S.W.

Lt. Commander T. M. Dorrien-Simth, of England.

Miss D. D. Baker, of New Plymouth.

(g) *Overseas Members:* The Dominion Council was gratified, and indeed accept it as an honour, that the world renowned firm of Andrieux-Vilmorin of Paris should apply for membership, and that Dr. Vilmorin himself should offer to contribute articles to the Institute's Journal.

30. *Associates of Honour — Nominations 1959:*

The Dominion Council has pleasure in recommending to the forthcoming Dominion Conference that the distinction of Associate of Honour (A.H.R.I.H.(N.Z.)), be conferred on Messrs. J. Houston (Hawera), D. C. MacKenzie (Palmerston North), and R. Syme (Hawera). (Citations in support of these nominations will be presented at the Conference).

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 40.

31. *Thanks:*

The Dominion Council expresses appreciative thanks to all who have



contributed to the successful functioning of the Institute throughout the past year. In particular to:—

- (a) The Government of New Zealand, Ministers of the Crown, and Departmental Officers. Their courteous attention to the needs of the Institute whenever they have been brought to their notice, has been sincerely appreciated.
- (b) Local Bodies for their continued interest and support, and the Directors and Superintendents of Reserves.
- (c) Examiners, Supervisors, and others who have co-operated to facilitate the conduct of the examinations during the years.
- (d) District Council Presidents and Executives, who maintained an active front in their respective localities.

**32. Conclusion:**

Again I wish to pay tribute to the loyalty and devotion of members of the Dominion Council. They have served willingly and unstintingly, devoting a good deal of their time and energies to the affairs of the Institute. By their efforts, the Institute has been carried through another year of endeavour in the overall interests of horticulture. Our national life is so closely linked with horticulture, that, in serving horticulture the Institute serves the nation.

He who serves a nation must be characterised by humble dignity, unobtrusive firmness, tactful leadership, a deep conviction, and unwavering purpose. The Royal New Zealand Institute of Horticulture has endeavoured to serve throughout the past year in every sphere of its many activities with these very characteristics. The success or otherwise of that service can be judged only by the results achieved.

On behalf of the Dominion Council,

JOHN HOUSTON, LL.B., *Dominion President.*

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## ROYAL NEW ZEALAND INSTITUTE OF HORTICULTURE (INC.)

### Thirty-seventh Annual Conference

*Report on Proceedings:*

Mr. John Houston, LL.B., of Hawera, Dominion President, presided over the 37th Annual Meeting and Conference of Delegates, held in Rotorua on Thursday, 18th February, 1960. There was an attendance of over 90 delegates and visitors, amongst whom there was a good representation of the N.Z. Institute of Park Administration.

*Apologies:*

Personal apologies for non-attendance were received from several members and from affiliated organisations which were not able to arrange for representation. These apologies were announced to the meeting and sustained.

*Formal Notice of Meeting:*

This was read to the meeting by the Dominion Secretary.

*Welcome:*

The Dominion President extended a very cordial welcome to all delegates and visitors.

*In Memoriam:*

Since the holding of the previous Annual Dominion Conference some very

distinguished members of the Institute had passed away, and in the memory of these:—

Mr. H. Hazelwood (Australia) — Life Member.

Mr. H. R. Wright (Tauranga) — Associate of Honour.

Mr. G. H. Knowles (Oamaru) — Fellow.

and of other members also who had died during the year, all present stood for a moment in silence.

*Procedure Rules:*

These rules as defined on page 4 of the Conference Papers were formally adopted as the rules of procedure for the Conference. (Glazebrook/Boothby).

*Dominion President's Address:*

'We have every reason to be proud of our Institute. We have the satisfaction of knowing that we belong to a flourishing and growing concern. Our District Councils are active, as is evidenced by their Reports. At the end of 1959, our Examining Board and our Examiners coped with some 49 candidates for our diplomas and certificates. The candidates represented numerous districts which necessitated a considerable number of examination centres for the written papers. In accordance with the ruling of last Conference all oral and practical examinations were centred in Christchurch. A suggestion for review of this ruling will come before the Conference.

'It is desired to emphasise two matters. The first is the debt we owe to all those who put so much knowledge and experience, time and thought, into the annual examinations. We are very conscious of all they do so ungrudgingly.

'The second matter is characteristic of any growing or expanding business. To cope adequately with expansion, present and contemplated, any business needs more funds, and so do we.

'We operate throughout New Zealand by 16 District Councils, each of which has its own activities. Usually these comprise lectures and demonstrations on matters of horticultural interest, with seasonable visits by 'bus or car to outstanding gardens, both public and private, as well as civic or national parks and reserves. The members share the joy of horticulture, in a search for improvement of their own technique. They are rightly conscious of the fact that they are the life blood of the Institute. It is by their membership that the activities of the Institute are largely financed. But membership is essentially unselfish. Though advantages accrue in knowledge through association with the Institute, no one is a member for what he or she may get out of it. We are members to assist in carrying out the statutory duties entrusted to the Institute.

'Our diplomas are never lightly given. The examinations for them are conducted with a high standard on strict lines exactly parallel to University examinations, by men who are experts in their particular spheres. That is why our diplomas are eagerly sought after, and are valued by a growing number of horticultural students. These comprise parks and reserves trainees, nursery apprentices, seedsmen, market gardeners, orchardists, school teachers and bee-keepers. Our diplomas have become a recognised hallmark of qualification.

'To achieve the best results in our ever-growing activities, the understanding support of all District Councils is necessary. The volume of work involved at headquarters has very materially increased, and shows every healthy sign of still further increase. And this in the activities which by Statute are entrusted to our Institute. To cope with progress, a materially increased membership is vitally important.

'No review, however brief, would be complete without recognition of the great service we have had from a number of committees. The Institute is most fortunate in having the co-operation of so many in this regard. We

are extremely happy in our Finance Committee under the very capable chairmanship of Mr. J. Living. Their task is a responsible one, and their recommendations have invariably proved sound. The Publication Committee, under the chairmanship of Mr. A. M. v. Greig, has a responsible, somewhat anxious job. We are indeed happy in our Editor, Mr. G. A. R. Phillips. Our nomenclature Committee, with Mr. C. M. Smith, as Chairman, has a technical job involving much patience in research, and knowledge of the subject matter involved. Other committees are usually appointed to investigate and report on special matters, sometimes with power to act. To all concerned, our appreciative thanks are due. The Institute draws freely on their special knowledge and is well served.'

*Official Opening:*

The Deputy Prime Minister and Minister of Agriculture, Hon. C. F. Skinner was very cordially welcomed on his arrival at the Conference, accompanied by His Worship the Mayor of Rotorua, Mr. A. M. Linton. In greeting the Minister and the Mayor, the Dominion President expressed the pleasure of the assembled members at the acceptance by the Minister of the Dominion Council's invitation to attend and officially open the Conference.

On behalf of the Borough of Rotorua, the Mayor, Mr. Linton briefly spoke, and extended a cordial civic welcome to the Minister and to the delegates and visitors. In his remarks, Mr. Linton expressed the hope that a District Council might be commenced again in Rotorua.

The Minister, in reply thanked the Mayor and the Dominion President for their warm welcome and expressed pleasure at being present.

The honourable Mr. Skinner, referred back to the theme of his address at the opening of the 1958 Conference in Wanganui when he spoke of the responsibility resting on all owners of land to pass their great heritage on to their successors in a better condition than when it came to them, and now wished to reiterate the same point, as he felt that this was vital to the well-being of all.

He was impressed by the diversified interests of the Institute. He affirmed the confidence of the Government in the activities of the Institute and promised its continued financial support in the educational sphere of those activities. The Government fully appreciated the value of education in horticulture.

The Journal, *New Zealand Plants & Gardens*, was a real credit, stated the Minister, in congratulating the Institute on this publication.

The booklet *History of the First Twenty-five Years of the Loder Cup* had just been published by the Loder Cup Committee, and this, too, was a fine publication. The Minister had been very pleased to be able to present this coveted award to Mr. Charles Cameron in Tauranga on the previous evening.

Historic Trees was a subject near to the hearts of all, and he personally was very glad to know of the real concern of the Institute to preserve them and to keep the information on them up-to-date.

Mr. Skinner spoke of the great national parks of New Zealand and assured the Conference that much thought was given to all proposals before any steps were taken affecting these parks, the control of which was in the care of the National Parks Authority. He instanced the recent negotiations for the establishment of a big aluminium and zinc industry in Southland affecting the Lakes Manapouri and Te Anau. In negotiations for such big undertakings the Government could not confer with everyone but the Minister wished to assure the Institute that the Government did not lightly go into those matters and such agreements as had recently been announced. The preservation of these National Parks and scenic resources was very dear to the heart of the Government.

Many new areas had been added to the National Parks since the close of World War II. The Minister invited members of the Institute to inspect

the regeneration of native forest that had been encouraged and facilitated in the milled areas around Rotorua. He also spoke of the outstanding regeneration of Kauri forest in the Coromandel Peninsular and at Gt. Barrier Island.

The Institute could assist considerably by fostering a commonsense approach to these horticultural issues stated Mr. Skinner. The experimental areas of fast growing exotics to provide shelter and protection and the development of general forest management were proving their worth.

In declaring the Conference officially open, the Minister expressed his personal wish for a most successful and happy meeting.

Mr. A. W. Green replied to the address of the Minister, and, on behalf of all present, expressed sincere thanks to Mr. Skinner for his attendance and for his interesting and encouraging address. A vote of thanks was carried by hearty acclamation.

#### *Annual Report:*

The Annual Report for the year ended 30th September, 1959, had been previously circulated amongst District Councils and delegates. The Report was therefore taken as read.

Upon being put to the meeting the Report was duly adopted without discussion. (Houston/Barnett).

#### *Annual Accounts:*

The Financial Statement for the year ended 30th September, 1959, had also been circulated prior to the Conference.

Mr. J. F. Living, chairman of the Finance Committee, spoke briefly on the Accounts, in presenting them for adoption. The lack of income from advertising in the Journal was cause for some concern.

The Accounts were duly adopted, without discussion. (Living/Green.)

#### *District Council Reports:*

The reports of 13 District Councils were embodied into the Conference Papers.

The Dominion President congratulated the District Councils on the activities engaged upon during the year.

The Reports were duly received.

#### *PUBLICATION — New Zealand Plants & Gardens:*

The Editor, Mr. G. A. R. Phillips spoke briefly on the Journal which had now completed three years under his editorship. During this period there had been one striking change — at the commencement, 40% of the articles were by New Zealand authors, whereas now 90% were by New Zealand authors. This was giving the Journal a distinctly New Zealand character, and provided excellent material for overseas readers, as well as for local members. The articles covered a wide field. The Editor appealed for more contributions of articles and said he was anxious to receive them from all parts of New Zealand, so as to give a complete coverage of the Dominion.

Sir Robert Macalister stated that not all readers of the Journal were interested in the higher class of horticultural articles, and drew attention to the wide number of 'home gardeners' in our membership for whom there could well be a special section in the Journal. He also stressed the need for more advertising in the Journal.

Replying to Sir Robert's point, the Editor felt that, if the Institute attempted to produce a popular home gardening magazine, it would 'fall between two stools.' There were already several magazines of this type being published. He felt that good authors should be able to write interesting and very readable articles.

Scientific articles, when published, had to be written in an academic manner.

Mr. Phillips was accorded a cordial vote of appreciation for his interest and efforts in the Journal.

*Examining Board's Report:*

This report was printed and circulated with the Conference Papers prior to the meeting. It was duly adopted without discussion.

On behalf of the N.Z. Institute of Park Administration, Mr. E. Hutt announced that at their Conference they had agreed to donate a sum sufficient to make up the Junior Memorial Prize Fund to £100. This announcement was warmly received and the Institute sincerely thanked for their generous contribution.

*Loder Cup Booklet:*

*The History of the First Twenty Five Years of the Loder Cup.*

Mr. A. M. W. Greig, Chairman of the Loder Cup Committee, introduced this booklet which had only just been released (for sale at 5/- per copy).

*Remits:*

(a) *From Auckland District Council:*

(1) "That the sum of the capitation be further reviewed and returned to the figure set for 1958."

The demands of this remit were met by the following motion, moved by Mr. J. F. Living, seconded by Mr. M. R. Boothby, and duly carried.

"That for the financial year 1960, and until subsequently altered, the annual Capitation payment to District Councils be 5/- per member, whether individual or firm or society."

The Dominion President emphatically considered that District Councils should not regard capitation as their sole or main source of revenue. They should strive to make themselves self-supporting without it, and there were many ways in which this could be done.

(2) "That the question of the venue of the Oral & Practical Examination be reviewed and that consideration be given to having the exams alternating each year between Christchurch and Palmerston North. Many students from Auckland area find that the travel to Christchurch is beyond their means."

The Dominion President drew attention to the various references in the Conference Papers to the Oral and Practical examinations — on page 9 of the Annual Report (para. 8), and on page 28 of the Examining Board's Report (para. 7). The decision of the 1959 Conference had been carried out, the examination held in Christchurch satisfactory.

In speaking to the remit, Mr. W. H. Rice (Auckland) on behalf of the Auckland District Council, stated that, the North Island candidates were under a disadvantage — in having to travel to Christchurch each year — on account of the expense involved. This applied particularly in the case of candidates from Auckland and the northern part of the North Island. The Auckland District Council considered that, in view of this hardship, there should be a review of the arrangements. Mr. Rice quoted statistics pertaining to these examinations and emphasised the higher proportion of North Island candidates who failed to report at Christchurch for the 1959 Oral and Practical examination. He suggested an increase in the Government Grant to permit travelling assistance to students. The alternating of the examinations between the North and South Islands would help.

Mr. M. J. Barnett (Christchurch), chief examiner in the Oral and Practical examinations, stated that, since the inception of the examinations, the examiners had endeavoured to bring up the standard of the examinations as nearly as possible to that of the Royal Horticultural Society's examinations, which are held annually at Wisley for the whole of the United Kingdom.

Only by establishing one centre for all candidates can uniformity in standardised procedure be obtained. Where facilities are the same for all candidates, there is greater ease for the examiners, better advantage for the candidates, and improved standard of examination and greater uniformity therein became possible. In the past, where two or more centres have been used, this has not always been achieved. Often, there have been different examiners engaged as between the North and South Islands; weather has varied considerably affecting soil conditions, and facilities and equipment available as between the two centres have also varied.

In 1959, the same examiners had officiated for all candidates. The new system had proved very satisfactory, and much easier to assess the value of work done by the candidates. With an increasing number of candidates coming forward each year, every endeavour must be made to consolidate the procedure and establish acceptable and satisfactory facilities for examinations.

Since the decision to adopt Christchurch as the one centre, the Christchurch City Council has been most co-operative and has taken steps to provide all the facilities required, including an established model orchard under the approval of Officers of the Department of Agriculture. Mr. Barnett considered it would be against the best interests of candidates if they were encouraged to await the opportunity of sitting either at the North or the South Island centre, as would happen if the examinations alternated between the two Islands. Employers would contribute towards the cost of their employee's travelling expenses.

The Dominion President considered that uniformity is an essential to maintaining a high standard in examinations; while the possibility of help from employers was a thought.

Mr. J. H. Glazebrook (Christchurch), spoke in favour of one examination centre for all candidates, irrespective of its location. He felt that, at the 1959 Conference, delegates might have been under the impression that financial assistance for candidates might have been forthcoming, and that that, therefore might have influenced them in the decision reached at that Conference. He thought that the question of financial assistance to candidates should be reviewed.

The Dominion President said that if membership of the Institute were greater and considerably more revenue were forthcoming from advertising in the Journal, the position would be different — more of the members' subscription payments would be free for other purposes.

The Conference was bound to take cognisance of the examiners' opinions, and must be scrupulously fair to candidates who must travel to attend examinations.

Mr. P. Thomson (Stratford) wondered whether Local Bodies could be encouraged to give greater grants to assist students.

Mr. M. C. Gudex (Hamilton), favoured higher standards for the examinations but re-iterated that Hamilton candidates had difficulty in getting to Christchurch last year. He supported the idea of seeking greater assistance from local bodies.

Mr. D. D. Riach (Masterton), himself an examination candidate, questioned whether finance was in fact the vital issue. Apprentices received reasonable remuneration and many travelled to work on motor cycles and in cars, whereas in his experience they had to walk or push-bike. Furthermore, most Local Bodies did not withhold employees' wages for the time taken up by examinations. The Diploma was an ambition which all apprentices should have before them, and they should therefore be prepared to make some sacrifice for it.

Mr. A. White expressed himself in favour of one centre.

Mr. J. A. Hunter (Auckland) questioned the remarks of Mr. Riach and quoted instances where it was cheaper in the cities to use a motor bike or

scooter than to use public transport. If the matter of financial assistance became the real issue, it should receive the fullest consideration possible.

Mr. M. R. Boothby (Wanganui) expressed the desire to see a closer liaison between District Councils and the Examinations students. The Wanganui City Council assisted in the expenses of their apprentices attending courses at Massey College.

Mr. E. Hutt (Wellington), (co-examiner with Mr. Barnett), emphasised that the selection of Christchurch as the Centre did not originate in Christchurch, nor even with Christchurch members of the Examining Board. The soil conditions at Christchurch are eminently more suitable than at Palmerston North; the rainfall in Palmerston North is heavier and it is more frequently wet there than in Christchurch; wet weather upset the examinations considerably.

After two years, an apprentice was receiving approximately £6 per week, and when he reached the diploma stage, he was a journeyman receiving full rates of pay. On qualifying for the Diploma, an employee received a wage increase of £30 p.a., which is comparable with other professional qualifications. A horticultural career calls for many sacrifices indeed and it was as well to learn something of the meaning of this early in life.

If travelling allowances were paid to some, they would have to be paid to all.

The Dominion President again emphasised that nothing should be done to lessen the standard of the examinations.

Mrs. E. M. Sands (Whangarei) stated that it would be an expensive trip for candidates from Northland to Christchurch, and could deter them from taking up the Diploma courses.

Mr. J. H. Glazebrook (Christchurch) conveyed an offer from the Canterbury District Council to assist in any way possible by meeting candidates in Christchurch and providing billets if necessary.

Mr. W. H. Rice (Auckland) felt that a North Island candidate was having a heavy premium placed upon his Diploma by insisting upon him travelling to Christchurch for examination. Some financial assistance was necessary and could be financed by increased examination fees and additional Government Grants. He felt that, surely, facilities could be found in the North Island comparable with those at Christchurch. There was a preponderance of population in the North Island and therefore a greater number of candidates would be from the North Island. In Auckland, the examination students had a representative on the Executive of the Auckland District Council. He called upon the Dominion Council to find ways and means of equalising the expenses of North and South Island candidates, or alternatively to subsidise the travelling expenses.

Mr. M. J. Barnett (Christchurch) pointed out that in previous years there have always been defections and candidates have failed to report at Oral and Practical examinations.

The subject matter of the remit was very fully discussed and it was finally resolved:—

‘That the whole matter (the conduct of the Oral and Practical examinations in one Centre, at Christchurch) be referred back to the Dominion Council with particular consideration being given to providing financial assistance to candidates in necessitous cases.’ Carried unanimously.  
(Syme/Gudex.)

Furthermore, it was resolved:—

‘That this Conference re-affirms the principle of Oral and Practical examinations being held in one centre.’ Carried Unanimously.  
(Syme/Green.)

Mr. W. H. Rice expressed the thanks of the Auckland District Council for the very full and fair consideration given to the remit.

*(b) From Wellington District Council:*

(1) 'That the Dominion Council again approach the Public Service Commission for the recognition of the N.D.H., and N.D.F.C. as professional qualification.'

In moving this remit as a motion, Mr. J. F. Living pointed out that the National Diplomas of the Institute were not recognised by the Public Service Commission as "professional qualification" for the purpose of promotion and grading. The maximum salary attainable by University graduates was £2100, whereas the maximum for the holder of the Institute's Diplomas was £1210.

The motive of the motion was generally approved and motion carried.  
(Living/Macalister).

(2) 'That the Dominion Council arrange for an article to be published in the Journal dealing with Horticulture as a career for New Zealanders — for young people particularly.' Introduced by Mr. J. F. Living.

Mr. J. G. Short (Auckland) thought it might be better done in the Journal of Agriculture and other papers closer in touch with young people, who would not necessarily be touched by our own Journal.

The Editor (Mr. Phillips), thought it would be better dealt with in booklet form, and moved:—

'That the remit be referred back to the Publications Committee for their consideration and report to the Dominion Council.' Carried.

(Phillips/Living).

*(c) From Canterbury District Council:*

'In view of the increasing interest in the use of plastic materials as a substitute for glass for horticultural purposes the Canterbury District Council recommends that the Royal New Zealand Institute of Horticulture urge manufacturers in New Zealand to:—

- (1) Give purchasers some indication regarding potential life of the material in various parts of the country and/or under different light conditions.
- (2) Avoid the present method of distribution of sheet polythene in folded form which invariably splits along the fold after a relatively short period of use.'

The remit, amended by the addition of the words 'and importers' after the word 'manufacturers,' was put to the meeting and duly carried.

(Glazebrook/Boothby).

*Associates of Honour:*

On the recommendation of the Dominion Council, the nominations of:—

Mr. John Houston (Hawera), Dominion President,

Mr. R. Syme (Hawera).

Mr. D. C. MacKenzie (Palmerston North).

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.

The Citations in support of these nominations were read to the meeting and it was unanimously resolved that the distinction of Associate of Honour be conferred upon Messrs. John Houston, R. Syme, and D. C. MacKenzie.

Opportunity was taken to congratulate those honoured, and to present them with the inscribed certificates.

*1961 Conference:*

The choice of venue for the 1961 Conference was held over for the attention of the Dominion Council.

The Institute of Park Administration would be holding their Conference in Greymouth, seeing they had not been able to accept the invitation to hold the Conference there in their Centennial Year, 1960.

Mr. L. F. Sired announced that the Horticultural Trades Association Conference in 1961 would be held in Dunedin.



*General:*

(1) *Other Examinations:* Mr. J. H. Glazebrook had been informed of other examinations open to horticultural apprentices and asked for information concerning these.

In reply, Mr. L. F. Sired gave details of the Trade Certification Board Examinations for horticultural apprentices which had now been operating for several years. They did not conflict in any way with the Institute's examinations.

(2) *N.Z. Institute of Park Administration.* Resolved to place on record the sincere appreciation of the Conference of the generous gesture of the N.Z. Institute of Park Administration in donating the sum required to make up the Junior Memorial Prize Fund to £100.

(3) *Rumble Estate:* Mr. P. Thomson tabled a report and financial statement of the Rumble Estate which was specifically available for the advancement of the activities of the Institute in Taranaki. A very hearty vote of thanks to Mr. Thomson, and his partners, for the services given gratis in managing this Estate for another year.

*Address by Mr. and Mrs. H. C. Smith (Rotorua):*

To conclude the afternoon session of the Conference, a most interesting and delightfully informal address was given jointly by Mr. and Mrs. H. C. Smith of Rotorua on the subject:—

“Personal experiences in harnessing thermal heat for horticultural production.”

Following the address a cordial invitation was extended to all present to inspect the installations in their glasshouses. The invitation was readily accepted by several members who showed considerable enthusiasm and interest in the project.

A hearty vote of thanks to Mr. and Mrs. Smith moved by Mr. P. Thomson was carried by acclamation.

*Thanks:*

At a suitable opportunity during the session, the Dominion President expressed the grateful appreciation of delegates and visitors of the cordial hospitality and assistance from those who had worked and planned for the Conference in Rotorua — the Combined Committee (under the chairmanship of Mr. A. B. Figg) representing the Rotorua Horticultural Society and kindred Societies from surrounding districts, the Waikato District Council, the Rotorua Borough Council, the Rotorua Public Relations Officer, and all others who had helped.

The Mayor of Rotorua had expressed the hope that a District Council might be re-established in Rotorua and the Dominion President heartily endorsed the thought. Mr. A. B. Figg, President of the Rotorua Horticultural and Beautifying Society also endorsed the wish and stated that some local members had already been giving consideration to it.

The proposal was left for further consideration and possible development.

*Closing:*

In bringing the formal business of the Conference to a close, at 4 p.m. the Dominion President expressed his personal thanks to all who had joined to make the Conference such a happy occasion. The floral decorations provided by the Rotorua Borough Council and the use of the Concert Chamber had been much appreciated.

*Banks Lecture:*

The 1960 Conference was brought to a conclusion with the presentation of the Banks Lecture by Mr. A. M. Linton, F.R.I.H.(N.Z.), Mayor of Rotorua, on the subject:—

“The Urewera National Park and the Exotic Forests of the Rotorua District.”

at 8 p.m.

## VALEDICTORY

We may validly assert that human ability, impotent to create plant life, may, by diligent and informed care, promote the beauty and the charm of it. This is not least true in the vital matter of pruning, whereby may be achieved improvement for the eye of the spectator, as well as convenience for the hand of the gardener. The symmetrical shrub or fruit tree becomes a delight to the beholder, with its enhanced grace of shape as well as its attraction of blossoms, and the availability of fruits.

There is a precise parallel in human life itself, adequately expressed by Francis Bacon three and a-half centuries ago — 'Natural abilities are like natural plants, which need pruning by study, and studies themselves do give forth directions too much at large except they be bounded in by experience.'

The fruits of enriching wisdom are born of study, and of experience, in minds attentive to themselves.

JOHN HOUSTON, A.H.R.I.H.(N.Z.),

President.

Owing to limitation of space the report of the Examinations Board is held over until the June issue.

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## ASSOCIATES OF HONOUR

*Extract from Constitution:*

- (1) The title of Associate of Honour may be conferred only on persons who have rendered distinguished service to Horticulture.
- (2) The annual procedure for electing Associates of Honour shall be:—
  - (a) Nomination by District Council Executives or Dominion Council.
  - (b) Consideration of all nominations received by the Dominion Council.
  - (c) The recommendation by Dominion Council of not more than four names for consideration of election by Conference.
- (3) The number of Associates of Honour shall not exceed forty at any time.
- (4) Associates of Honour shall not be required to pay any annual fees or subscriptions to the Institute.
- (5) A suitably inscribed Certificate shall be prepared and presented to each person elected to be an Associate of Honour.
- (6) Associates of Honour shall be entitled to use after their name the words "Associate of Honour of the Royal New Zealand Institute of Horticulture, Inc." or the distinguishing letters "A.H.R.I.H.(N.Z.)" and shall have all the rights and privileges of a full member of the Institute.

**Citation in support of the Nomination of****MR. JOHN HOUSTON, LL.B.,****Nominated by the Dominion Council and the South Taranaki District Council for Election as an Associate of Honour of the Royal New Zealand Institute of Horticulture.**

Mr. John Houston, LL.B., of Hawera, has shown for many years a keen and deep interest in horticulture, especially in regard to the home gardeners of New Zealand, whose gardens generally are noted with considerable interest and enthusiasm by many overseas visitors.

Qualified in the legal profession, Mr. Houston has brought to the Institute his special legal gifts and background to place the Institute and its organisation on a firm foundation. The manner in which he has acted as Chairman of many Institute meetings have won him high regard and deep respect. He has combined firmness with tact and given a dignity to the proceedings of the Institute which has won high regard in the opinions of Ministers of the Crown, and of the Mayors of the cities and towns in which Dominion Conferences have been held under the presidency of Mr. Houston. If there is one aspect above others which has merited the award of this Associationship of Honour, it is the manner in which Mr. Houston has set up and encouraged co-operative enterprise and joint effort through the Institute's special committees which have been established each year, and which meet and report regularly to the Dominion Council. Co-operative administration is the keynote of Mr. Houston's enterprise.

The South Taranaki District Council was formed on 18th November, 1948, and for the first ten years, Mr. Houston was local President and exhibited his administrative ability in guiding this new Council.

In two years from its inception, the South Taranaki District Council made great strides under Mr. Houston's leadership and an enrolment of some 250 members made it at that time the strongest district numerically in New Zealand. The Council covered a district from Finnerty Road - Arawhata Road (the north-western boundary with North Taranaki District Council) to the Whenuakura River (the south-eastern boundary with the Wanganui District Council) and its programme of activities ranged from the taking of panels of speakers to meetings at Patea, Hawera, Mangatoki, Mania, and Opunake and the organising of trips to places of horticultural interest.

For many years, Mr. Houston has served on the Committee of the Hawera Horticultural Society and demonstrated how close to his heart were the interests of the home gardener.

In 1952 under Mr. Houston's chairmanship, all the horticultural Societies of Taranaki combined in promoting a national horticultural show which was a memorable and unqualified success due in no small measure to Mr. Houston's organising and co-ordinating leadership. This show has led to the Taranaki Floral Festival with Mr. Houston still at the helm.

Mr. Houston has also played an active part in several organisations associated with the Maori race and the preservation of the country's flora and fauna. Through the Archaeological Society of New Zealand, the National Historic Places Trust and the New Zealand Forest & Bird Protection Society, Mr. Houston has won recognition for his wide knowledge and interest in the Maori race and he is the author of several articles. He played an active part in the restoration of the ancient walled pa of Turuturu Mokai near Hawera.

Since he was elected Dominion President of the Institute, Mr. Houston has continued to show the qualities which won him local recognition.

**Citation in support of the Nomination of****MR. RODERICK SYME, M.B.E., F.R.I.H.(N.Z.),****Nominated by the South Taranaki District Council for Election as an  
Associate of Honour of the Royal New Zealand Institute of Horticulture.**

Mr. Roderick Syme, M.B.E., of Hawera, is Senior Instructor in Agriculture for the Taranaki Education Board, and has been actively associated with agricultural and horticultural education for the whole of his teaching career. Most of his work has been with the schools of South and Central Taranaki where the splendidly laid out and maintained school grounds, with their extensive plantings of trees and shrubs, reflect the interest he has stimulated among children, teachers and school committees in establishing pleasing surroundings for their schools.

He was one of a small group responsible for the introduction of the Boys' and Girls' Agricultural Club organisation from its commencement in South Taranaki in 1920. It is largely through his efforts that this important phase of agricultural education has prospered in Taranaki ever since that time. During the intervening years thousands of children of Taranaki have had their early interests in home gardening and the care of live-stock fostered by his encouragement and instruction.

Early in 1921 he initiated a forestry project for Taranaki schools which centred round the raising of seedling trees, both indigenous and exotic, in school nurseries. This work was taken up with enthusiasm in most of the schools. Its value was soon recognised by the State Forest Service and with their support it was brought to the notice of the Education Department, and in due course was taken up in all Education Board Districts. Many of the thousands of trees grown in the school nurseries were established in school plantations, with areas of from one quarter to five acres, but most of the trees were taken home by the children for planting small wood-lots on farms.

One of Mr. Syme's greatest spheres of influence on the children passing through the schools in his district has been encouraging the collection, propagation and study of our native flora. His own long interest in and knowledge of this subject has been passed on to hundreds of others. Many schools have featured native trees in their tree nursery work and have established small arboretums. As a New Zealand centennial effort this native tree propagation was stepped up and special areas were secured from local bodies for planting. In all, about six acres were planted with native trees at Kaponga Town Board reserve, Te Ngutu Domain and Turuturu Mokai Historic Reserve. Over 8,000 native trees were planted and tended for a number of years by children from over thirty schools. Mr. Syme's sustained interest in Turuturu Mokai is well known locally. For a number of years he served on the Hawera Borough committee in charge of the reserve and for 25 years has given freely of his own time working for its preservation and beautification.

Mr. Syme took a leading part in the formation of the Hawera Horticultural Society in 1944 and has been either committeeman or vice-president ever since. He was associated with the formation of the South Taranaki Branch of the Royal New Zealand Institute of Horticulture in 1949, has served on the committee continuously and now holds office as vice-president. He is also a vice-president of the Taranaki Horticultural Association and has held the position for many years. He is a regular lecturer on horticultural subjects at meetings of these bodies, and of branches of the Women's Division, Women's Institute and similar organisations. He has been a regular judge of flowers and vegetables at shows for 30 years. He was granted a Fellowship of the Royal New Zealand Institute of Horticulture in 1948.

Mr. Syme's horticultural interests as mentioned above, and his establishment of a fine garden at his home, take second place in his hobbies to an outstanding career in mountaineering in which field he has established a reputation extending beyond this country. His climbing activities in many parts of New Zealand soon led to an interest in the development and preservation of our National Parks. He has been a member of the South Committee of the Egmont National Park Board since 1929. After serving for nine years as a member of the Egmont National Park Board and six years as a member of the Tongariro Park Board, he resigned these positions when appointed a member of the N.Z. National Parks Authority in 1954. He has been appointed for a further term of three years.

In 1955 he was awarded the M.B.E., in recognition of his services to Agricultural Education and Mountaineering.

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**Citation in support of the Nomination of**

**MR. DUGOLD C. MACKENZIE, N.D.H.(N.Z.), F.R.I.H.(N.Z.).**

**Nominated by the Manawatu District Council for Election as an Associate of Honour of the Royal New Zealand Institute of Horticulture.**

Born at Oamaru in 1915, Mr. MacKenzie moved to Wellington in 1918 when his father was appointed Director of Parks and Reserves there. After attending in turn the Kelburn School and Wellington College, he spent the four years 1934-1938 as a trainee under Mr. J. A. McPherson, of the Christchurch Botanic Gardens, passing in that time the Junior and Intermediate Examinations for the N.D.H.(N.Z.).

From Christchurch he was accepted as a trainee at the Royal Botanic Gardens, at Kew, but while in training there, the war broke out. He at once enlisted in the N.Z. Anti-Tank Battery, which was formed and trained in England. With the rank of Sergeant, he fought in Greece and then in the Western Desert until he was severely wounded and sent back to New Zealand. He spent a period working with the Napier Parks Department while convalescing, and later was an instructor at the Artillery School.

After discharge from the Army he was appointed Lecturer in Horticulture at Massey College, when the college started horticultural courses in 1943. While he was at the college he came to know the late Peter Black, who was so impressed that Mr. MacKenzie was appointed his assistant, and later his successor in 1945, as Superintendent of Parks and Reserves.

Mr. MacKenzie has long been an active worker in Institute affairs. When the Manawatu District Council was formed in 1945 he was a foundation member and Secretary. Since that time he has filled the position of President for three periods, including the current one. He has been a member of the Executive Committee of the Council since 1953, and a member of the Examining Board since 1957.

In local horticultural affairs he has taken a very active part. He is a vice-president of the Palmerston North Horticultural Society, and was Secretary of the Palmerston North Beautifying Society from its initiation in 1951 until it went into recess.

This bare record of Mr. MacKenzie's horticultural career might not in itself justify this nomination, what is far more important is the manner and personality which he has brought to his tasks.

Behind an unassuming manner, Mr. MacKenzie has a personality of a type, which befits the administrative side of horticulture with which he is concerned. A very sound knowledge of his subject is combined with a judgment of a maturity commonly found only in older men. He inspires confidence in others,

and this aspect of his character shows to great advantage in dealing with juniors.

In his work as Superintendent he has been most successful. Though a great admirer of his predecessor, he has not hesitated to make a considerable number of changes to the advantage of the city's reserves.

Quite apart from his official work he has been a tower of strength to horticulture in the City. He is not only called in to assist all the committees dealing with horticultural matters, but usually takes the lion's share of the work. Of all horticulturists in the City he is most called on for advice to private gardeners and public organisations.

All this he does in a characteristically willing and able manner, sparing no pains to do the job thoroughly.

All in all, he is a most worthy and popular member of our Institute whose personality and work have greatly enhanced the prestige of the Institute, and create respect and admiration for his profession.

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## IMPRESSIONS OF THE 1960 CONFERENCE, ROTORUA

*M. C. GUDEX (Hamilton).*

At the beginning of a conference it is as important to start off with the right note as it is to exclude discords from the subsequent proceedings. This desirable object was achieved perfectly by the social evening held on the Wednesday evening in the Blue Baths Tearooms. It was natural that this little function should be late in starting, because all of the members of the Institute found it hard to leave the outer gallery from which they had watched the animated scene in the sparkling waters of the swimming pools.

As chairman of the sponsors of the Conference, Mr. A. W. Green welcomed the delegates in a characteristically happy speech. With him at the main table were Mr. and Mrs. J. Houston, Mr. and Mrs. A. B. Figg, Mrs. R. W. Green (deputising for Mrs. A. W. Green, who was prevented by illness from attending), Mrs. R. Briggs and Mr. M. C. Gudex. Brief speeches by Mr. John Houston, Sir Robert Macalister, Mr. A. B. Figg and Mr. M. Gudex explained the circumstances under which the Conference was being held and it was soon evident that the Rotorua Horticultural and Beautifying Society and the Waikato Council of the Royal New Zealand Institute of Horticulture were co-operating wholeheartedly to make the Floral Festival and all the other activities a great success. When delegates were invited to speak, Mr. C. M. Smith (formerly in charge of the Botany Division of the D.S.I.R.) took the opportunity to point out that members of R.N.Z.I.H. were given wonderful facilities in Britain by the Royal Horticultural Society and other bodies there — they had only to show their New Zealand membership cards and a letter of introduction.

After this short prelude, members moved around freely before and during supper. On the way out of the Sanatorium Grounds it

was a delight to all to see the Bath Buildings transformed by the beautiful illuminations.

### The Floral Festival

The Floral Festival planned and conducted by the Rotorua Horticultural and Beautifying Society and the Waikato District Council of the R.N.Z.I.H. exceeded all expectations. The Ritz Hall and the adjoining Agricultural Hall were filled with all kinds of flowers and foliage arranged artistically and effectively. Though the weather was both hot and humid, the temperature in the halls was reduced by water sprayed continuously and freely upon the roof.

For the lover of native plants there was much to please and to educate in at least four displays. One, staged by the Ohinemutu branch of the Maori Health League, included about thirty plants used by the early Maoris for medicinal purposes. Much of the information had been supplied by Dr. North of Te Whaiti, and could be read easily from the large print on the labels. Another court, staged by the Rerewhakaitu Garden Circle, showed the beauty of our filmy ferns, mosses, rock plants and shrubs. Some of the specimens had been brought by energetic climbers from Mount Tarawera and Rainbow Mountain. Then there was an exhibit of over fifty native plants staged by the Taupo C.W.I.; most of these, too, being from the high country, showed unusual features.

Finally, the usefulness of native plants for floral decoration was demonstrated by a series of very attractive arrangements staged by Mrs. Alys Davys of Cambridge and her Putaruru pupils.

The staff of the Tauranga Borough Council staged a very interesting exhibit of fruits grown in their neighbourhood. If their purpose was to make visitors from other parts very envious, they succeeded perfectly. Bananas, pineapples, *Monstera deliciosa* (often called the 'fruit-salad plant'), sugar cane, ginger, oranges, grapefruit, lemons, pawpaws, passion-fruit, giant Chinese gooseberries, tree tomatoes and a tea plant were just some of the features that had as a background a black marlin that weighed 904 lbs.

Specimens and photographs of palms staged by the Department of Agriculture filled a large court and showed the wide variety of species that can be grown in this province.

Cacti were shown in bewildering variety in two separate courts staged by the Rotorua and Hamilton branches of the New Zealand Cactus and Succulent Society. There were the long and the short, the round, the flat and the branching, the prickly and the smooth, with colours ranging from white to red, and round to light brown and stone grey. For a lover of plants in general the most pleasing feature of the cacti and succulents was their perfect health.

Hamiltonians were proud of the floral work of Mrs. M. G. McCoskrie, Mrs. R. Fear and Mrs. M. A. Vowles. The chief purpose of

this court was to show how great a part is played by posture in floral decorations. In one instance the same flowers and the same treatment were displayed in three sizes, and, in another, in two sizes. The other arrangements were very large, with different flowers and foliage, and in different containers.

The title 'A Gardener's Nightmare' was justified by the exhibits in one court. There was a cornucopia pouring out a wealth of fruits and vegetables, but all that protected them from devastation was an array of spraying equipment and sprays and dusts. Almost every known pest was represented by a giant but life-like imitation made from plant material. Looper caterpillars, green shield bugs, grasshoppers, aphides, large white butterflies, brown beetles, mice, snails, mealy-bugs — all were there, flourishing in spite of ladybirds, praying mantis and other enemies.

Mention must be made of the collections of gerberas grown by Mr. H. C. Wallace and Mr. H. M. Hammond of Hamilton, and Mr. Fletcher of Papakura. These showed how greatly the colours and the shapes of the double varieties have been improved and their size has been increased as a result of careful breeding and selection.

In these days of space travel (anticipated if not actual), it is fitting that travellers should know at least their planets. The Sun, Mars, Venus, Saturn, Jupiter, Earth and all the others were represented by flowers, but oh how tiny the Moon was!

A wedding group, Irish Rose, a well and windless, Moses in the bullrushes, a Royal cradle and crown, a floral carpet, a piece of floral tapestry and a display of pot plants were other features of the first hall.

The Agricultural Hall was filled with a massed display of flowers staged by the combined schools of the district, and with bold collections of hydrangeas, zinnias, dahlias, phloxes, French and African marigolds, house plants, gladioli and lilies.

The finest display in the whole Festival portrayed the Hamilton traffic bridge. Great credit goes both to those who planned and to those who carried out the design so faithfully and so skilfully.

### **Geothermal Heating**

After the formal business of the Conference, a large number of delegates accepted the invitation of Mr. and Mrs. H. C. Smith to inspect their hothouse which is heated by geothermal steam. The use of pumice soil as a rooting medium instead of ordinary composts has solved the problem of keeping the plants healthy. The most numerous were orchids, chiefly *Cymbidium*, *Dendrobium* and *Cattleya*, but others were ferns, *Gloxinia*, *Maranta*, *Croton*, *Begonia*, *Dracaena* and *Saintpaulia*.

### **The Forest Trip**

One of the highlights of Conference Week was a trip through the Whakarewarewa Forest. This was a rare privilege granted by



the Forestry Department in spite of the fire hazard. The first part visited under the guidance of a forestry officer, Mr. Robert Irvine, was the splendid stand of Oregon pines, rising to a height of well over 100ft. Then there was the grove of majestic redwoods, worthy descendants of their Californian ancestors.

From these plantations the road spiralled up to the Kakapiko Lookout. A vast panorama stretched before our eyes, from Horohoro Bluff to the Paeroa Range, then over the Green Lake and on to the lofty table-top of Mount Tarawera, and far away to the south was that great landmark, Titirapenga.

### Conclusion

A very welcome feature of the Conference was the morning and afternoon teas provided and dispensed by the ladies of the Rotorua Horticultural and Beautifying Society. It was hard for the delegates to tear themselves away from the choice food and the pleasant chat and to answer the call of duty sounded by that soul of punctuality and punctilio, our worthy chairman.

Delegates also spoke appreciatively of the decorations of the lecture hall. This may be a press-button age, but it is fortunate that no way has been found yet to select flowers and foliage and to group them artistically, paying due attention to form, colour and quantity, except by individual handling.

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## DISTRICT COUNCIL REPORTS

### WHANGAREI

November, 1959—

#### QUESTIONS AND ANSWERS:

Mrs. E. M. Sands presented these.

*Question:* At what depth should tuberose be planted?

*Answer:* Mrs. Sands — On top, just slightly in the ground. She gives a mulch of sawdust and lifts every two years. Mr. Webster plants his slightly deeper, gives a mulch, and no animal manure or lime.

NOTE: Mrs. Sands has clay, Mr. Webster volcanic soil.

*Question:* A Robertson's Navel Orange is withering off at the tips of branches. What would cause this?

*Answer:* Mr. Arcus — This is characteristic of the Robertson's Navel. It flowers so profusely that the tree cannot support the effort. Mr. Arcus also comments on the 'New' fruit disease written up in the *Advocate* on Saturday, October 31st. He says he saw this disease in his orchard 10-12 years ago, and that it may have been in Northland before then. He thinks that exceptional seasonal conditions may encourage it, but that, in his opinion, there is no cause for alarm.

*Question:* There is a white mite on the roots of plants. What is this mite and does it do any harm?

*Answer:* There was considerable discussion during which some were of the opinion that this mite attacks already dead vegetation, converting it back

to soil. Mr. Arcus has supplied the following information. The mite is the lava of the Springtail insect, and will not harm vigorous sturdy growth, but may attack tender shoots. The springtail has some bad relatives, e.g. the very serious pest the lucerne flea.

*Question:* How to prevent wilt in Asters.

*Answer:* Fertilise with basic slag and water ground with Condys (potassium permanganate). Give potash.

*Question:* Identification of a native plant.

*Answer:* Toro. *Sultonia salicina*.

*Question:* Mrs. Kennedy had seen the hospital gardener using, on the roses, a liquid manure made from lawn clippings. Is this usual?

*Answers:* While none had actually made a liquid manure of clippings the following suggestions came forward:—

Mr. Fyfe: Use lawn clippings but not during heat of summer.

Mr. Christiansen. Lawn clippings and blood and bone.

Mr. Cates contributed the information that sorrel had been killed by a thick dressing of lawn clippings.

Mr. Cameron thoroughly advocates the use of lawn clippings, but adds that they must not be left in a tight choking thatch on the ground, but spread to a depth of 3in. and lightly forked in.

All agreed that lawn clip liquid manure would be satisfactory.

Mr. Cates, with contributions from several members, presented the very interesting specimen table. Mrs. Reynolds showed two 'Rogues Gallery' characters, 'Salvation Jane,' alias 'Patterson's Curse' (*Echium plantagineum*) and horsebane (*Oenanthe*). Both are becoming very prevalent in Northland, the former as a garden plant. Mr. Davey disagreed that *Oenanthe* is poisonous, and said that his cows browse on it. However, it is listed on the Botany Division's *Bulletin of Poisonous Plants*, with the remarks that it is more poisonous to horses than to cows. In any case it is usurping far too much pasture land. Many of the wild carrots (notably hemlock — *Conium maculatum*) are poisonous and should be avoided, or where possible, eradicated. Children and animals do not always discriminate between poisonous and non-poisonous plants.

Native plants in flower now:—

Akatea *Metrosideros albiflora*.

Mairehau *Phebalium nudum*.

Wai-u-atua *Rhabdothermus solandri*.

Ti-Ngahere *Cordyline banksii* (and other 'Cabbage' Trees).

Renga Renga *Arthropodium cirrhatum*, *Pomaderris edgerleyi* (Dargaville).

Toru *Persoonia toru*.

*Oxalis lactea* (cool damp places).

Many ground orchids.

Manuka *Leptospermum scoparium* (very beautiful this year).

## DISTRICT COUNCIL MEETINGS

February, 1960

The speaker for the evening was Mr. Lionel Phillpot of Whangarei, a member of our Institute, and a well known grower of fuchsias and dahlias.

Mr. Phillpot opened his lecture by giving some information on the native habitats of fuchsias, namely Mexico, Central and South America with a few in our own country. These last, with the exception of *F. procumbens* were not

grown as ornamentals. However *procumbens*, our little prostrate creeper with upright flowers and large cerise berries, is an excellent basket plant.

Many hybrids between Mexican and South American species have been raised and these constitute the greater number of varieties seen in our gardens. A large number of blooms were exhibited by the lecturer, and as these were affixed to a stand and clearly labelled members were able to identify those in their own gardens. Mrs. U. May, another well known grower supplied many lovely specimens in pots and baskets for the decoration of the stage.

Mr. Phillpot gave clear and concise directions for the propagation planting and general culture of fuchsias. Very short tip cuttings were recommended for spring planting in a John Innes No. 3 Mixture, potting up when rooting was established. In early summer half ripe wood could be used, and in autumn hard wood cuttings were best.

Fuchsias do best in shade or semi-shade but will tolerate some sun, but dislike wind. When planting out put the stake in first, fill the hole with water, plant firmly, and as growth begins tie to the stake, continuing to tie as necessary. If it is a standard type allow growth to proceed to some height before beginning to remove the lower branches. Other types such as basket or bush should have the laterals pinched out regularly to obtain the desired shape and to promote flowering.

Feed with well rotted cow manure, compost, leaf mould and a general fertiliser, but above all keep the plants well watered.

Mr. Phillpot's second subject was dahlias and of equal interest, especially as they are heat and moisture lovers hailing from Mexico and so are particularly well suited to Northland's climate.

A good average soil suits these plants provided there is good drainage. If you can grow good potatoes you can grow good dahlias. Put them in full sun, and give the same manure as potatoes. Stake and label and spray against insects, especially aphides which carry virus diseases from other plants upon which they have fed. Diseased plants should be dug up and destroyed. If show blooms are required disbudding must be practised.

Propagation is by cuttings or root division, the latter the usual and easier method for amateurs. Cuttings should be placed in a frame or cool house till established.

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### PUBLICATIONS RECEIVED

REVIEW OF PROCEEDINGS OF CONFERENCE ON GLASSHOUSE CONSTRUCTION AND HEATING (published by the Canterbury District Council, R.N.Z.I.H.).

On September 3rd, 1959, the Canterbury District Council of the Royal N.Z. Institute of Horticulture held a conference on Glasshouse Heating and Construction, in Christchurch.

The first section on construction consisted of two papers, one an illustrated review of siting and methods of construction which have become recommended practise in Canterbury for conventional type glass houses. This paper was given by Mr. J. Coombe, Senior Horticultural Instructor, Department of Agriculture, Christchurch.

The second paper, given by Mr. S. Challenger of the Horticulture Department, Lincoln Agricultural College, deals with the use of plastic films in place of glass. This paper is a good critical review of the present position indicating that plastic films do have a place in temporary or portable structures but so far cannot be recommended as a substitute for glass in permanent houses.

A growers' forum, after these lectures, discussed metal houses, the use of mobile houses, experience with plastics and the economics of various structures. It appears that on a long term basis the most economical structure is still a wooden house glazed with glass, possibly using steel frames to carry the structural weight and provide a post-free interior.

The second session on Glasshouse Heating dealt mainly with the possible uses of electricity.

Mr. C. B. Phillips of the M.E.D. Christchurch, gave a general address on the position as far as the Electrical Supply Authorities are concerned, which set out the reasons why special rates could not be given for space heating of glasshouses.

A paper by Mr. C. J. Bramley of Giles and Elliott, Christchurch, discussed the use of electric power to provide heat for soil warming and general space heating.

For soil heating larger areas the most satisfactory method appears to be the transformer and galvanised wire grids. For small benches the G.E.C. plastic covered cable with careful handling is useful. The action of fertilisers and possibly soil salts and acids make the copper sheathed pyrotenax cable a rather dubious proposition.

For space heating however pyrotenax on a supporting grid of wire netting or perforated metal appears the cheapest and most satisfactory method of convective space heating of a glasshouse, using electricity. Mr. J. H. Glazebrook of Lincoln College gave a paper on comparative heating costs using electricity, oil and coal.

To compete, on running costs, electricity would need to be available at about  $\frac{1}{2}$ d. per unit.

However the cheaper capital cost of installation of electric heating, compared to oil fired or coal fired plants, make it worth considering on small holdings or where heating is for relatively short periods.

Mr. Glazebrook then described the heating arrangements in the College glasshouses and presented tables of their costs.

A Growers' forum then discussed their own arrangements using oil, electricity, and an installation consisting of an oil burning furnace heating air, which was distributed throughout the house in perforated polythene ducts.

M.G.B.

**THE HISTORY OF THE LODER CUP, a Review of the First Twenty-Five Years** (Published by the Loder Cup Committee).

The Loder Cup Committee has compiled a detailed history of the Cup, covering the first twenty-five years from 1928 to 1954. Considerable interest is added to the letterpress by illustrations, which include a study of the donor, Lord Wakehurst, in his library, native bush at Morere and the Cup itself. The narrative opens with the inception of the idea, and the negotiations between Mr. Gerald W. Loder, as the donor was then, and Mr. G. W. Wright. Thereafter the story very properly proceeds with events year by year.

The basic object of the donor was that the award be offered to lovers of nature in New Zealand to encourage the protection and cultivation of the incomparable flora of the Dominion. This object has been faithfully maintained, but in 1934 and again in 1942 it was very desirable to modify the conditions. The result is that the award is now made to the person, or body, excelling all others in forwarding the object of the donor.

The Committee has performed good service in recording so much before the passing years bring difficulty in obtaining authentic material. The twenty-five photographs of past winners alone justify the publication, and they are certainly interesting.

—J.H.

**THE DAFFODIL AND TULIP YEAR BOOK 1960** (Published by the Royal Horticultural Society, London).

This is a particularly interesting issue for its wide appeal. A survey of the best exhibition varieties of the past year by Mr. David Lloyd and an account of the daffodil trials at Wisley will bring back memories to those New Zealanders who visited the spring shows in England. A particularly

useful section is devoted to the use of pre-emergence herbicides for daffodils and tulips. The illustration in colour of *Narcissus* 'Debutante' whets one's appetite and is Mr. Lionel Richardson's best new pink trumpet. The American daffodil and tulip growers are particularly well represented and this section covers a wide field of activity.

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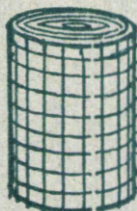
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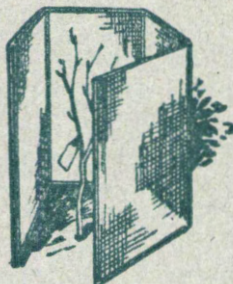
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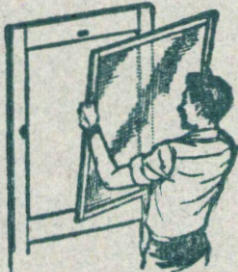
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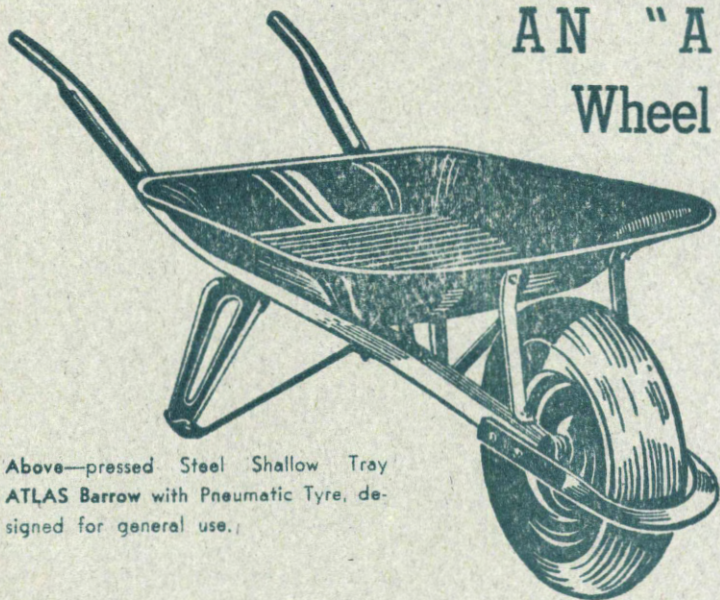
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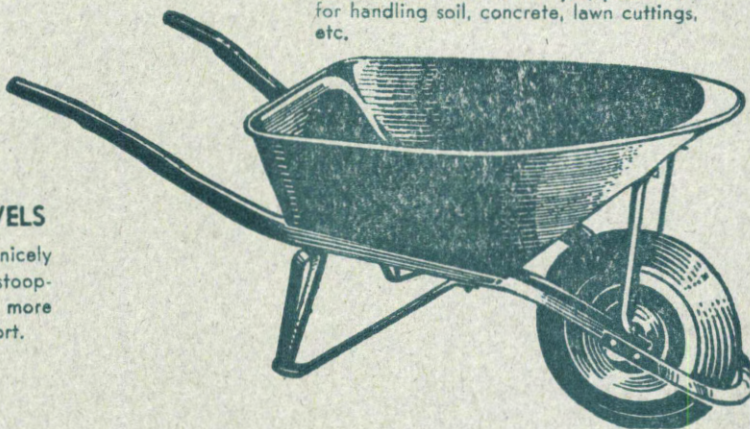
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