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NEW ZEALAND PLANTS AND GARDENS

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OVERCROWDING

One of the greatest faults of long standing one sees in many gardens is a failure on the part of the original planter to allow sufficient space for the full development of shrubs and trees.

It is of little moment if perennials are overcrowded for, in any case, they will be due for periodical lifting, splitting and replanting when more space for development can be allowed if this is necessary. But it is quite another matter where shrubs and trees are concerned. These are planted with a view to permanency and they should be planted right at the start with sufficient space between to make it possible in say, 15 or 20 years' time, to be able to walk round each without having to push away limbs from neighbouring trees or shrubs. In order to do this it is neecssary to study the ultimate height and circumference each is likely to attain in that time and this is not always easy, especially in the case of recent introductions. Yet, even when a new species is being raised from seed collected in the course of a plant collecting expedition, this could be avoided. Some of the specimens from which the seed is collected will have reached at least moderate development and it should be possible for the collector to include the height, width and also give some idea of its age in his field notes made at the time. The age is important for that will give some indication of the speed of growth.

Rate of growth can vary according to climate. For instance, Liriodendron tulipifera, in the Midland Counties of England, has about half the rate of growth it has in Taranaki province and the same applies to many another hardy tree and shrub. It is wisest to be generous in estimating ultimate size and, in the years between the planting and the later phase of development, it is not difficult to furnish the bare ground with colourful but more common species that may be removed as the permanent subjects develop.

One of the great charms of a garden is the proportion and balance of planting. There are few more miserable sights than a shrubbery where a choice collection of conifers, evergreen and deciduous shrubs and small trees has been planted far too closely and no attempt has been made to thin out. The result is a mass of plant life, each struggling for possession of the soil and the growths reaching desperately skywards in search of the air and space that has been denied them through lack of forethought in the initial planting.

G. A. R. Phillips, Editor.

THE BANKS LECTURE - 1959

The Botanical Exploration of Canterbury A. W. ANDERSON, A.H., R.I.H.(N.Z.), Timaru.

Introductory Remarks:

When I was invited to give the Banks Lecture I chose the 'Botanical Exploration of Canterbury' because it seemed to offer a very appropriate field and one that I knew very little about. With the help of friends and various libraries I soon accumulated a considerable quantity of notes and when I came to arrange them I soon found that I had much more material than could possibly be dealt with in the time. It was with some reluctance that I decided to stop at the end of last century, but that seemed better than skimming over the surface which would be little more than a repetition of the work already done so well in the Natural History of Canterbury by R. M. Laing and others.

There is little doubt that many more species grow among the mountains of Canterbury, waiting to be found. When we remember that about half-a-dozen plants that weren't known to grow in Britain have been found on the Scottish hills during the past 20 years or so, hills that have been botanised for nearly 200 years, we can look forward to seeing new plants from the thousands of eminences over 4,000 feet, that have never been visited by any botanist in Canterbury.

The First Plant Hunter:

Dr. Raoul of the French ship 'L'Aube' was, so far as present records show, the first to take any interest in the vegetation of Canterbury from a scientific point of view. Before his arrival at Akaroa in August 1840 he had spent nearly three weeks at the Bay of Islands and, with the exception of a brief return visit at the end of 1842, spent the rest of his time in Canterbury until his return to France at the end of 1843. Thus it was that, except for a small collection from the Bay of Islands, Raoul's knowledge of New Zealand plants was confined to those growing on Banks Peninsula.

Raoul's collection was placed in the Natural History Museum in Paris and was placed at Hooker's disposal when he visited France in 1845 and he notes in the introduction to his Flora Novai Zealandiae that a complete set, given to his father, Sir William Hooker, was of great value to him. In the meantime Raoul and Decaisne had described a number of species in the Annales des Sciences Naturelles in 1844. These included Hebe lavaudiana, an attractive little 2ft. bush with redmargined leaves and broad corymbs of white flowers, rosy in the bud; the climbing Senecio sciadophyllus notable for its clusters of golden starry flowers, and Hoheria angustifolia a fine tree with pale foliage and masses of white blossom in late summer.

In 1846 Raoul and Decaisne published their sumptuous work *Choix De Plantes de la Nouvelle Zelande*, illustrated by thirty beautiful plates. In it they reprinted the descriptions previously published in the *Annales*

and also an enumeration of the known species in the flora totalling 950 species, of which more than half were flowering plants. This must have been a very useful work in its day although many synonyms and doubtful species were included. The beautiful plates include some very attractive species, such as Arthropodium candidum, the dainty little Rock Lily, Corokia cotoneaster well known for its yellow flowers followed by orange-red fruits, and the fragrant Clematis foetida, and give a very pleasing impression of the flora.

Hooker recognised Raoul's work by dedicating the genus Raoulia to him. This is the genus that includes the Vegetable Sheep, R. eximea, but there is no truth in the statement that Raoul discovered the plant. It is confined to the mountains of the South Island between 4,000 and about 7,000 feet and does not extend to Banks Peninsula. The plant was discovered by von Haast on Mt. Torlesse and there is no evidence that Raoul ever knew of its existence. The plant named for him was R. australis, a moss-like creeping plant that forms large silvery patches on stony ground. Raoul found it at Akaroa.

Sinclair and von Haast

Nearly 20 years were to pass before anyone else began collecting and nothing was known about the vegetation of inland Canterbury until the beginning of 1861. On February 20th three men left Christchurch with the intention of exploring the upper reaches of the Rangitata River, making their headquarters at Mesopotamia, the lonely station belonging to Samuel Butler.

They were Dr. Andrew Sinclair, Julius von Haast (later to become Sir Julius), and Richard Stringer who had charge of the horses. Von Haast had recently been appointed Provincial Geologist for Canterbury and Sinclair was a retired Colonial Secretary who was second only to Colenso as a collector of New Zealand plants.

Sinclair was born at Paisley, in Scotland, in 1796 and after his initial medical training was appointed assistant-surgeon in the Royal Navy in 1822. The following year he was stationed at Cape Town and it was there that he began botanising, a hobby that became one of the ruling features of his life. He sent home some specimens to the British Museum and got so much encouragement that he spent all his spare time plant hunting for the next 38 years, from the Mediterranean region, Mexico, Central America, California and Brazil. While at the Bay of Islands in 1841 he accompanied Hooker in some of his botanical ramblings over northern New Zealand.

He happened to be in Sydney, and somewhat at a loose end, when in September 1843 he meet Captain Fitzroy who was on his way to assume the Governorship of New Zealand. After some discussion he agreed to come to this country to do some exploring without pay, but it happened that the officer whom Fitzroy had intended to make Colonial Secretary was so ill from wounds received while exploring in Australia that Sinclair was appointed instead.

When he resigned 12 years later he had laid the foundations of an efficient civil service. He returned to Scotland but didn't remain there long and on his return was able to give full time to the hobby his official duties had prevented his enjoying to any great extent. Hooker had a very high opinion of his ability and references in the *Handbook* show that he sent specimens from all over the country from the far north to the mountains of Nelson.

Von Haast could not have found a better companion in his first serious expedition into the high mountains of Canterbury. It ended in disaster when Sinclair was drowned trying to cross the river on 28th March, but by that time they had climbed the 7022 feet peak that bears his name and found many interesting plants which were duly sent on to Kew. Perhaps the most interesting of all were the flowers of Ranunculus lyalli, the Mount Cook Lily, and thus solved the mystery of the large circular leaves that had been found by Dr. Lyall at Milford Sound so long ago as 1841. No one had the least idea of what sort of plant they belonged to and some botanists believed they might prove to belong to some giant Hydrocotyle.

Von Haast buried his friend 'near the banks of the river, just where it emerges from the Alps with their eternal snow glistening in the sun, amidst veronicas and senecios, and covered with celmisias and gentians, there lies his lonely grave.'

Sir Julius von Haast:

Von Haast was the first white man to explore the rivers, lakes and mountains of inland Canterbury, in his capacity as Provincial Geologist. He has a very high reputation as a collector of plants, but all the evidence goes to show that he knew little botany; his only published remarks on the subject being a brief introduction to Armstrong's paper on the Vegetation of Christchurch, etc. in 1869.

Von Haast was born in Bonn in 1824 and after going through the local University seems to have a roving sort of life for many years. He had not yet found a permanent niche when in 1857 he was appointed agent for an English ship-owning firm interested in the prospects of sending German immigrants to New Zealand.

The story is told that the day after his arrival in Auckland, at the end of the following year, he was wandering disconsolately round Auckland when he heard German voices. When he went to investigate he found himself in the garden belonging to Dr. Karl Fischer who was entertaining the officers and scientists from the Austrian ship 'Novara,' then in the course of a world tour of exploration and research. From boyhood von Haast had been a keen collector of minerals and this common interest lead to an early association with the geologist of the expedition Dr. von Hochstetter. Before very long von Haast came to the conclusion that the state of unrest at that time prevailing among the Maoris made the Colony an unsuitable place for settling migrants.

This proved to be the turning point in his career. He joined von Hochstetter as an assistant in his geological survey of the North Island and the association rapidly ripened into a life-long friendship.

The association wasn't without its benefits to von Haast. After von Hochstetter's departure von Haast was able to continue the exploration of Nelson and in 1860 he was asked to give an opinion about a Lyttelton Tunnel. Next year he blossomed forth as Provincial Geologist for Canterbury.

As we have seen his first major expedition to the upper reaches of the Rangitata ended in disaster, but the exploration of the province had to go on. Sinclair had taught him the technique of collecting and drying botanical specimens and henceforth very complete collections were made in most of his expeditions.

Cheeseman, in his historical introduction to the Manual remarks at some length on the botanical results of von Haast's expeditions which 'proved to be most important, and cast a flood of light on the nature and distribution of the alpine flora of the Colony. I quite concur with Sir J. D. Hooker's opinion that it is difficult to imagine how Sir Julius Haast, with so many and such arduous duties as surveyor and geologist could have personally effected so much for botany as he has done. Most of his botanical work was performed between the years 1860 and 1870, but his interest in the subject remained undiminished until his death in 1887. His name is appropriately commemorated in the genus Haastia, (and nearly 20 other species), the three or four species of which rank amongst the most curious and remarkable in the flora. His collections were either forwarded to Kew or distributed among European museums, but few being retained in this country.'

It certainly seems rather odd that von Haast, who had such a lively knowledge of what would interest scientists overseas, failed so completely to keep sets of his botanical specimens for his own museum. Probably the main reason was that he failed to appreciate the value of original type specimens.

As both Hooker and Cheeseman pointed out, it seems incredible that von Haast who had so many calls upon his time, could have himself collected, pressed and dried all those botanical specimens sent to Kew It now seems obvious that he had a knowledgable and elsewhere. assistant and evidence may still come to light to show that this assistant was J. B. Armstrong, son of the Government Gardener in charge of the Botanic Gardens. At present I know of no way of proving this, but the thesis does account for several things. The Armstrongs' grievance that their botanical knowledge and ability were not acknowledged; the lack of specimens in the museum and the rather muddled state of the Armstrong Herbarium where many specimens were unnamed and the localities in which they were found rather vague. Both these are explained if the specimens were collected during exploring expeditions when the only names were still on the von Haast maps and the specimens still undescribed.

This conjecture also throws a new light on the statement made by von Haast when introducing Armstrong's paper on the 'Vegetation of Christchurch, etc.' that for four years the Armstrongs, father and son had helped him to collect specimens for the museum. Von Haast wasn't one to acknowledge and appreciate the work of underlings, as his row with Alexander Mackay shows. Mackay had been employed as a labourer digging up the floor of the Moa Bone Cave at Sumner, and, having his own ideas as to what the findings revealed, wrote, with some assistance from Sir James Hector, a paper on the subject. Von Haast gave a fine example of Olympian wrath, castigating Mackay as a labourer who didn't know the difference between avian and mammal bones. Mackav's reply was a silencer. He pointed out that he had frequently made up sets of moa bones for despatch to overseas museums, that sometimes the fields were littered with ox bones, and, for the sake of von Haast's reputation it was to be hoped that no ox bones had been included in the sets. So we see that so far as von Haast was concerned, while prepared to take advantage of underlings to do things he couldn't possibly find time to do himself, he wasn't prepared to give them the credit of having any brains.

The Armstrongs:

The Armstrongs, father and son, are among the least known botanists who explored Canterbury in the early days and the references to them in *The Natural History of Canterbury* do less than justice.

John Francis Armstrong, as might be expected by his name, came from the Border Country, having been born at Longtown, on the English side, in 1820. After some initial training as a gardener he had charge of several large estate gardens before going to Australia in 1853, where he spent a few years gold mining and plant hunting in Victoria. He returned to Cumberland in 1857 and when next we hear of him he had landed accompanied by his wife and two children at Lyttelton in 1862.

Armstrong soon took his place as one of the leading gardeners in Christchurch and in September, 1867, he was appointed Government Gardener in charge of the Domain, when Enoch Barker was dismissed after holding the position for about a year. The Domain was under the all-embracing control of von Haast, and it is not difficult to dis-entangle the course of events and to ascertain just who was responsible for the fine collection of trees that were planted in the Botanic Gardens during the 22 years Armstrong had charge of the Gardens.

Von Haast certainly claimed the credit, but I think we are quite safe in saying that the gardens as they are today are largely the work of Armstrong. By the time he came to the gardens he had already gained a very considerable knowledge of New Zealand plants and was soon afterwards elected a member of the Philosophical Institute of Canterbury. In November, 1869, he read the first paper on the local vegetation and at the same time showed a collection of 300 plants found

within ten miles of Christchurch. His paper On the Vegetation in the Neighbourhood of Christchurch was introduced by von Haast, and there he listed 95 specimens from Riccarton Bush; 85 species from the dry bush on the Christchurch side of the Port Hills; 59 from Mt. Pleasant and 121 from the Port Hills generally. Later botanists have come to question some of his identifications, but he had his specimens there, and when we remember that Hooker's Handbook was published in 1867 and the difficulties of transport in those days, his effort is worthy of respect.

The general plan of the Christchurch Botanic Gardens as they are today is undoubtedly the work of J. F. Armstrong and few could wish All the same I think the Canterbury District for a better memorial. Council might well consider the question of doing something to bring Armstrong's work to the notice of the general public. It was Armstrong who planted the old 'Native Section' 1872 in the hope that it might be a living museum of New Zealand plants. Most of them were collected by the son who must have surmounted great difficulties in this work. For instance, in May 1883 he made an expedition to Arthur's Pass and brought back 2,000 specimens for the gardens. A full description of this collection is to be found in the Lyttelton Times of May 10th, 1883. It is very unfortunate that partly on account of climatic conditions and partly through the neglect so obvious at the end of the 1920's this native section became such a travesty of a New Zealand plant garden that it had to be done away with.

J. F. Armstrong carried on against great odds and found the lack of funds so disheartening that he sometimes bought plants himself. But he did manage to build up a very satisfactory collection and exchanged seeds and botanical specimens with botanical institutions in all parts of the world so that the Christchurch Botanic Garden became world famous at a time when there was no other garden in the country that made any attempt to undertake botanical work.

I have been unable to find out precisely why the elder Armstrong severed his connection with the Botanic Gardens within two years of the death of Sir Julius von Haast. There is a rumour that he left in a huff because his botanical knowledge wasn't recognised. That was in 1899 and by that time he was a man of 69 years of age, so he may have been getting old and difficult, and unable to adapt himself to a change of control. Be that as it may, we are told that he removed all the labels, and that can only be described as a spiteful act. They were later found hidden in the corner of a shed. He is said to have gone round nursing a grievance until the day of his death in 1902.

Joseph Beattie Armstrong:

The son, Joseph Beattie Armstrong, was born in England in 1850 and arrived at Lyttelton with his father in 1862. His early interest in plant life is shown by the existence of a specimen of *Hebe elliptica*, the Shore Veronica, collected at Lyttelton the following year when he was only 13 years of age. It has long since disappeared from the east

coast between Kaikoura and Oamaru and the fact that it was collected at Lyttelton increases the possibility of its having grown near Timaru in the early days.

The younger Armstrong read a paper to the Philosophical Institute A Short Sketch of the Flora of Canterbury, with a Catalogue of Species which is the only comprehensive report that had ever been compiled on the vegetation of the province. In it he tells something of the beauty of Banks Peninsula and deplores the 'senseless system of burning' that was already doing much injury to the northern slopes of the hills. In this paper he listed 750 species of flowering plants; 107 species of ferns and their allies; 537 species of mosses, liverworts and fungi, and over a hundred species of seaweeds.

This was a prodigious effort when we consider the slow methods of transport in those days — it took the greater part of a week to go from Timaru to Christchurch. Later botanists, especially R. M. Laing have criticised this paper without, I think, considering the conditions under which it must have been prepared. A moment ago I was wondering how von Haast managed to find time to do all his collecting in the midst of his multifarious duties, and one may also wonder how Armstrong, a working gardener, managed to find time to explore the far recesses of Canterbury. A quick check through his herbarium shows that he collected in the following places during the years when Hooker pointed out that von Haast had been most active. Banks Peninsula 1864-5-6; Poulter River 1867; Rangitata 1869; Rakaia region 1865, 67; Arrowsmith 1869; Arthur's Pass 1867.

So far as I know nowhere does von Haast say he was accompanied by Armstrong but we do know that in March-April 1867 Armstrong went with von Haast on his geological survey of the Poulter River. I believe that a very thorough examination of the Armstrong Herbarium would show that the two were together in the same parts of the country in the same years.

His Controversial Plants:

As I have said, several later botanists have accused Armstrong of being secretive and unreliable. It would appear that, in fact he became discouraged after his father left the Botanic Gardens. At that time he had helped his father in the administration and botanical work but afterwards he was kept on as a labourer. He never married and is said to have had some kind of affliction, or skin disease of the face that made him shy and retiring.

He described a number of plants and some of these are somewhat difficult to place. But I think R. M. Laing went too far in his disparagement of Armstrong's work, on the Banks Peninsula plants for example.

Dr. Raoul, in his early explorations found a plant he called Veronica lavaudiana and when Hooker was examining his herbarium in 1845 he found some specimens that were so different that he named them Veronica raouli. Armstrong found the species all right, but by the

time Laing came to look for it about 1919, it had disappeared, and he came to the conclusion that it never grew there. He even went so far as to say that he was sure Raoul had mistaken his location and that Armstrong had merely followed Hooker's *Handbook* in listing it among his plants found on the Peninsula.

This must have made bitter reading for Armstrong and one finds it very difficult to understand why Laing, when writing his paper didn't consult Armstrong who was living in the same City, and had botanised the ground so thoroughly 40 years earlier. But I suppose Armstrong, was 'only a labourer,' as one Canterbury botanist called him in my hearing, and Mr. Laing was a master at the Boy's High School. Armstrong has the last laugh, however, because there is a specimen of this plant from the Peninsula preserved in his herbarium in the Canterbury Museum for all to see. Armstrong was specially interested in hebes, or veronicas as they were then, and one of his most interesting plants is what might be called the Timaru Veronica. This is Hebe lewisi which was described in Transactions in 1881 where it is said to grow 'on the Downs near the sea in the south of Canterbury.' Cheeseman in his manual cites Armstrong and Buchanan as having found it there. near Timaru. I haven't been able to find out with any certainty whose name the plant bears, but it may be that of Lewis who had a nursery on the sunny hillside on the southern side of what is now Virtue Avenue. At one time a small creek ran down that gully, and is said to have been one of the never-failing supplies of water in the district. appear that the plant was found somewhere in the neighbourhood.

There can be no doubt that the plant grew near Timaru, Buchanan's evidence confirms that, although Cockayne and Allan in their paper on the *Taxonomic Status of Hebe* in the *Transactions* of 1927, say 'most probably it was either a cultiger or came from a different locality than those cited.' They were convinced this plant is a hybrid, an opinion now generally accepted.

Armstrong himself, evidently considered the possibility because he points out in the description that it comes between $H.\ elliptica$ and $H.\ speciosa$ which is not found within 200 miles. The specimens in the Armstrong Herbarium are rather smaller and sturdier than most of our cultivated plants today and Armstrong noted that while hybrids usually have some variation, this plant is 'one of the most constant species in the Colony.' There is a possibility, I suppose, that $H.\ elliptica$ grew in sheltered places near Caroline Bay in the early days and that the Timaru Veronica arose as a natural hybrid somewhere in the vicinity of Lewis's nursery. But I am afraid it is a question that is never likely to be cleared up.

Another Mystery

Then there is the odd story about *Veronica armstrongi*, Johnson. A species from the headwaters of the Rangitata. The question arises, 'Who was Johnson, the authority for the name?' The *Manual* tells us

that the plant was originally described by Johnson in the N.Z. Country Journal, Vol. 3, No. 1 1879, but that doesn't get us very far forward. Miss L. B. Moore of the Botany Division looked up the reference for me and noted that the words 'Veronica armstrongi, Johnson' are the heading of a paragraph dealing with the 'twelfth and last species description in the article, the others being all Veronicas except Senecio buchanani and Aciphylla crenulata.' Each of the other headings has 'J.B.A.' after the Latin name. There is no introduction or other explanation at the beginning of the article, but the paragraph on V. armstrongi is prefaced by the statement; 'The following plant was named eight years ago, but has never been previously published.' Very remarkable. It does look as if Armstrong wrote the description himself. Botanists are not allowed to dedicate plants to themselves and so Johnson has to do the job.

I checked through all the members of the Philosophical Society between the years 1871 and 1879 but there isn't a Johnson among them, so if he was a Canterbury man capable of naming a plant, he wasn't a member of the only Society to which one would expect him to belong. I did find out, however, that there was one man of that name living in Christchurch who was very friendly with Armstrong. We should never guess, but there is a possibility that A. M. Johnson, was was Curator of the Acclimatisation Society's Garden, across the river from the Botanic Gardens was the man. They were friendly and explored together. I do not know whether this is the same man, or any connection of W. J. Johnson, a passenger on the 'British Empire' from England, who, in July 1864, brought out English fish to New Zealand, including salmon, trout and lobsters. Reports on his work, appearing in the newspapers do not have initials, so they may have been father and son. Much later, after resigning from the Acclimatisation Society's gardens Johnson conducted private fish ponds, showing fish, various animals, etc., in a sort of menagerie. So we have to leave it at that,

Senecio pottsi

This is a strange plant found by the elder Armstrong in 1869, but very little is known about it and it hasn't been seen since. There is a small twig bearing a solitary flower in the Armstrong Herbarium, the only specimen known, but it doesn't help much. It is labelled 'Mt. Potts' in the father's handwriting, but in the younger man's description in the *Transactions* of 1874 the location is given as Mt. Jollie, which is on the opposite side of the Lawrence River from Mt. Potts.

Anisotome patula

I came upon the Anisotome patula muddle by accident. I know but little about the Umbelliferae and one day, while leafing through the Manual, came across this plant, 'an imperfectly known species' that is said to have been found by Armstrong from 'limestone cliffs near Burke's Pass' in 1876 and never found since. It occurred to me that, in a very superficial reading, the description might fit a grey leaved

little plant not uncommon in Limestone country throughout South Canterbury. I had known it by sight for many years but hadn't made any attempt to find out its name.

Specimens sent to the Botany Division were found difficult to identify and at first there seemed to be some possibility that I was right. I let it go at that until I came to see the plant in the Armstrong Herbarium when I found out (1) that my plant was very different and (2) that the specimen there labelled 'Ligusticum (the plant was transferred to Anisotome by Cockayne in 1921) patulum Kirk, Limestone rocks, Cant. 1876' was in fact no different from the next specimen which was A. filifolia.

Both Professor Wall and Dr. Allan had examined the specimens and concluded that without any doubt whatever they are indeed A. filifolia. The location has the initials 'J.B.A.' with 'F' superimposed and the words 'original specimens' in J.B.A.'s handwriting. I subsequently found out that my own specimens, when identified by Dr. J. Dawson,

of Victoria University were A. enysi.

But where in the world did Anisotome patula come from? Checking over I found that it had been named and described by Kirk in his Students' Flora as a new species in 1899. According to Cheeseman this was based on 'a fragmentary specimen in Mr. Kirk's herbarium and another (without locality) in Mr. Buchanan's 'and he goes on to say, 'The material is far too incomplete to form the basis of a satisfactory diagnosis.'

Anisotome patula has been held up as one of Armstrong's blunders and it is said that he claimed to have found a plant that no one else was able to find. But the fact of the matter is that the blunder was Kirk's; as the naming of the specimen in the Armstrong collection shows.

But, all un-knowingly, Armstrong had the last laugh when he left his collection to the Christchurch Domains Board when he died in 1926 at the age of 75. It is most unfortunate that Cockayne and Allan knew nothing of this collection when they were studying 'The Taxonomic Status of Hebe' about that time. The paper was published the following year.

But it so happened that at that time the Christchurch Botanic Garden had reached what must have been its lowest ebb. So the specimens were quietly stored away and forgotten until towards the end of 1933 when James Gray, who described himself as 'an old friend of 50 years' standing' wrote from Stratford enquiring what was being done.

So the collection was handed over to the Canterbury Museum and at long last began to assume the importance it deserved. In December of that year, Professor Wall, who was Honorary Curator of the Botanical Section of the Museum reported on the Armstrong Herbarium. Many specimens were un-named, but a 'complete M.S. Catalogue of the specimens has been prepared, the total number of plants included being 2607.' The arrangement of the Catalogue follows that of the Herbarium itself.

The name of each specimen with its authority, date of collection (when given by Mr. Armstrong), the name of initials of the collector, and the locality, are entered in every case.

'The great majority of the specimens were collected by Mr. J. B. Armstrong, comparatively few by Mr. J. F. Armstrong. A number were given by various correspondents and friends . . . ' (who are here enumerated).

'Needless to say, this collection is of very great historical interest and value. Mr. J. B. Armstrong began to collect as early as 1862, and a few specimens are of as late a date as 1923, so that it represents the activities of over 60 years. The value to botanists in New Zealand (and elsewhere) is that it contains so many of the types of species described and published by either J.F.A. or J.B.A. It is specially important in respect of Veronica (now mostly Hebe) upon which genus Mr. J. F. (this should be J.B.) Armstrong published a monograph, with several new species of his own. There has been doubt in the minds of authorities as regards some of Mr. Armstrong's new species, which with difficulty could be found, or not at all, in the wild state. Here we have the type which he had before him in making his description, and the locality where each was gathered. This applies particularly to Veronica (Hebe) armstrongi, loganoides and V. (Hebe) anomala.'

'In the second place the collection is most valuable to the local botanist and historian in that it represents so many of the species (some quite beautiful things) which grew in the neighbourhood of Christchurch and on Banks Peninsula in the early days. Some of these were known only by repute or by Mr. J. B. Armstrong's publications, though in a few cases J.B.A. was mistaken in his identifications.

. . . Certainly the most amazing of the finds by either collector is that of the subtropical fern Schizaea dichotoma, a very widely spread species in tropical and warm temperate climates, which is recorded in New Zealand only in the kauri forests of the north, and near the hot springs at Orakeikorako in the Waikato region. Neither Laing in his list nor Cheeseman in his manual even mentions Armstrong's claim, both of them, I suppose, thinking the occurrence quite impossible, though it had been published in J. B. Armstrong's paper just mentioned. Yet it is perfectly correct. The fern was found by J. B. Armstrong in 1867 on the track between Purau and Akaroa, and there is a brief note with the specimen to the effect that he found only one plant, which was growing under a totara. I conjecture that the most likely spot for this find would be the saddle between Port Levy and Little River, where the track passed through fine totara forest which has only been destroyed within my own memory. The specimen is a beautiful one and the name is quite unmistakably correct. The discovery did not merely add one more plant to the interesting list of those which find their southernmost limit on Banks Peninsula. It is far more important than that and raises questions to which I, for one, can only think of fantastic and incredible answers.

'The finding of the Dwarf Cabbage Tree, Cordyline pumilio on Banks Peninsula is not so wonderful as the last case, but it is surprising enough. Again neither Laing nor Cheeseman mentions it. The plant is recorded in the Manual only in the North Island. It is a small thing, often only a foot high, and quite unmistakable. J. B. Armstrong collected it on Banks Peninsula, in 1865, but he did not specify the exact locality. This is another 'farthest South' occurrence.

'The discovery of the liliaceous plant, Rengarenga, Anthropodium cirrhatum, here is less surprising again, for it is recorded from two or three localities in Nelson and Marlborough. Laing and Cheeseman again ignore Armstrong's record. This is one of the most beautiful plants in the flora of New Zealand, and Armstrong's specimens are lovely still. It was collected by J.B.A. at or near Little River, in 1868 and 1869. This plant may well have been exterminated by thoughtless persons who desired it as a garden plant. It has been tried in Christchurch, but it usually grows near the sea and cannot stand hard frost. Yet I saw one plant living and flowering well in a Sussex garden where frosts of 26 degrees are not uncommon; it was only protected by a wall.

'The occurence of 'Malings' Fern' — Hymenophyllum malingi on Banks Peninsula was long known because of its discovery by T. H. Potts, and both Laing and Cheeseman mention this, while ignoring its discovery by Armstrong. This curious pendent, greyish-brown Filmy Fern nearly always grows in the trunks of Cedar, more rarely on Totara and other trees, and it is very abundant in Westland. Pott's specimen grew on Totara. I have hunted for it often in vain on Cedars on the Peninsula. It was collected by J. B. Armstrong in what seems a most unlikely locality, Church Bay, or 'Church Gully,' in 1868 and again in 1873, I have revisited Church Bay since I saw the specimens, and examined the whole gully but there are now no large trees on which such a fern could well grow.

'The Green Lindsaya, Lindsaya viridis, has not often been recorded in the South Island, but occurs in Nelson Province, Westland, and the Otago Sounds. It is not mentioned by either Laing or Cheeseman as a Peninsula fern, but was collected by J. B. Armstrong at Pigeon Bay, in 1868. It is a beautiful little thing with long narrow, and very delicate fronds, 'usually found.' says Cheeseman 'on dripping rocks by waterfalls, or on the mossy banks of streams.'

'The lovely yellow Mistletoe, Elytranthe flavida, a fairly common plant in both islands, was collected at or near Akaroa by J. F. Armstrong; no date is given. This is not mentioned by Laing in his list, and Cheeseman does not give particular localities for it. It is so conspicuous and beautiful that it could hardly escape notice if it still grew anywhere on the Peninsula.

'An interesting subtropical grass, now called *Oplisemenus*, formerly *Panicum*, was collected at Purau by J. F. Armstrong, in 1865, and by J. B. Armstrong on Banks Peninsula, possibly in the same locality, in

1877. Laing does not mention this, and Cheeseman only gives Nelson (Travers) and Canterbury (Lyall) as its localities in the South Island. It is very abundant in the North Island and in all warm climates of the world.

'The Bush Willow, Melicytus lanceolatus, a shrub of the violet family, might well have been expected here, yet it evidently was not common. Laing mentions its occurrence as recorded by J.B.A., but neither he nor I could ever find it. J. B. Armstrong collected it at 'Rhodes Bay' (Purau), in 1864, and in some unspecified locality on Banks Peninsula at some unspecified date. It is a handsome shrub, sometimes as much as 15 feet high, with long, narrow willow-like leaves and very small inconspicuous flowers. It is very abundant in parts of South Canterbury.

Sceptics Convinced

'With regard to Veronica (Hebe) raouli, about which R. M. Laing and I were very sceptical, I need only say that we have in the Museum Herbarium a Banks Peninsula specimen collected by J. B. Armstrong, and that we now know its precise locality, for J. F. Armstrong collected it at Purau in 1866. The specimens are large, well preserved, and unmistakable.

'Without going into detail I also note the following records as interesting or important. Adiantum hispidulum (Hairy Maidenhair Fern is quoted by Anderson as its popular name — what a name!) was collected at Governor's Bay by Robinson and at Akaroa by J.B.A., no dates given; the great Sedge, Carex trifida, first noted at Akaroa by Raoul, was found there by J.F.A. as late as 1886; Veronica (now Hebe) elliptica, not mentioned in Laing's list, was collected at Lyttelton by J.B.A., 1867, and elsewhere on Banks Peninsula; Hebe angustifolia, also ignored by Laing, was found somewhere on the Peninsula by J.B.A., in 1868, a very important record; Climbing Rata, Metrosideros scandens, was collected at Akaroa in 1863 by J.B.A. Both Cheeseman and Laing mention this record as almost certainly erroneous, but the identification of the specimen is undoubtedly correct; the lovely fern Davallia, fairly recently recorded, was gathered at Governor's Bay by J.B.A. in 1867; and the curious Clubmoss, Lycopodium selago, a common alpine and subalpine plant throughout the world, was collected on Banks Peninsula by J.B.A. — no date or specified locality.

'While I trust that I have done justice to the memory of the Armstrongs in respect of the records here mentioned, I must add that Cheeseman, Laing, Dr. Cockayne and myself have been quite justified in accepting them with great caution for there are a number of occurrences recorded in J. B. Armstrong's paper which remain unsupported by any evidence in the Herbarium, such as, e.g., the Filmy Ferns, Hymenophyllum scabrum, H. pulcherrimum, and H. subtilissimum, and after all Mr. Armstrong has only himself to thank if we have had our doubts, for he could easily, at any time, have sent his specimens to T. F. Cheeseman,

or submitted them to other workers in Christchurch, and then the doubts would never have arisen.'

Enough has been said to show that J. B. Armstrong was no mean botanist in his own right and one cannot blame him if he felt slighted by later workers in the field. The fact that he did not leave botanical specimens to cover all his plant findings should not be held against him. Many accidents can happen in the course of 60 years. He may have made some wrong identifications, but he knew what he was doing.

In his Synopsis of the N.Z. Species of Veronica published in 1881, he examined and discarded the contention that there were swarms of natural hybrids among these and other species of New Zealand plants. He noted, the great variety of forms and explained them away by saying, 'sometimes, however, sports appear, and when this happens there seems to be a strong tendency on the part of the sport to reproduce itself and it appears to be that this is just the manner that the greater number of our native forms have been produced.'

As Cockayne pointed out in the Lyttelton Times of 12/6/1911 — 'Mr. J. B. Armstrong sprang into the front rank of New Zealand botanists by his bold and excellent paper on the New Zealand Veronicas, in which he foreshadowed De Vries's mutation theory.'

J. D. G. Enys:

I have already mentioned Anisotome enysi as a common plant of limestone country in Canterbury. It is one of several bearing the name of J. D. G. Enys who, with his much younger brother, Charles, took up Castle Hill Station in the middle Waimakiriri Valley, in 1864. He was a keen amateur naturalist whose special interests were butterflies and ferns. He is usually credited with giving a paper on the Nomenclature of N.Z. Ferns in the Transactions, but when we go to see what he had to say all we can find is a note from the Editor to the effect that the paper was so imperfect that some revision was necessary and that it would be included in a more complete list to be issued later. Whether such a list was indeed issued I have been unable to find out.

One of the most interesting things about Enys was his discovery on Mt. Torlesse of the remarkable little Moonwort, *Botrychium lunaria*, a fern of only 3 or 4 inches in height that is widespread in the temperate parts of the northern hemisphere. It has been reported from South America and from Tasmania and Australia, but that is the only time it has been seen in this country.

It got the name Moonwort because of the crescent-shaped segments of the fronds, and was one of the fabulous plants of old, said to be able to change quicksilver into real silver, break locks and, most annoying of all, draw the nails from horses' feet causing them to lose their shoes.

Enys found it in 1883 and the story goes that he came across it while resting, during a fencing job on Mt. Torlesse. Professor Wall told me that he took the trouble to look up an old musterer who was

on the job at the time and found out just which fence it was that Enys worked on. He then searched its whole length on both sides, very thoroughly, but failed to find any trace of the Moonwort. This is not very surprising because it is so small and at a casual glance is very similar to one of the small anisotomes growing there in quantity. It is very seasonal, spending only a few months at a time above ground, so it would be very hard to find. No doubt other botanists will come across it in other parts of the country.

Ranunculus paucifolius

This is one of the most interesting little plants in the country. Enys is generally credited with finding it, but, as Professor Wall pointed out in his paper published in the Transactions, Vol. L11, pp 90-105—there can be no doubt that it was discovered during one of von Haast's geological expeditions, because Hooker, who included it in his Ranunculus chordorhizos, notes in the Handbook that it grows in limestone debris in the middle Waimakariri basin. Kirk raised it to specific rank in the Students' Flora of 1899 and I think all who know the plant will agree that paucifolius is a misnomer. It differs but little from the more widespread R. chorodorhizos which has been found from Mid-Canterbury to the borders of Otago. The main difference is in the sepals, but Professor Wall thought the plant worthy of being considered a species in its own right.

It is confined to some four acres of limestone debris and has been preserved by the site being declared a reserve. This preservation was mainly the work of the Canterbury District Council of the Institute, led in the later stages at least by Professor MacCaskill without whose energy and determination it is very doubtful if the Department of Lands and Survey would have been brought into action.

Robert Brown:

I shall conclude this rapid survey of the botanical survey of Canterbury during the nineteenth century with a brief reference to Robert Brown a great friend of Dr. L. Cockayne who declared that he 'occupies not only a foremost place, but one truly unique' among the naturalists of Canterbury.

A shoemaker by trade, he was a man in the tradition of Hugh Miller of Old Red Sandstone fame. Like Miller he held but a humble position in life, but in his chosen field he was a world authority. He was born in the south of Scotland in the early 1820's and the first 50 or so years of his life were spent in Glasgow. There he attended the University and gained a thorough knowledge of mosses and during the summer he made long excursions into the highlands in search of material.

So it was that when he arrived in Christchurch in 1876 he had the knowledge and ability to take up a study of the New Zealand mosses. He lived at Merivale where he had a garden full of rare and out of the way native and exotic plants. It was in Robert Brown's garden that Cockayne observed that a xerophytic plant such as *Hebe lycopodioides* will grow true leaves as a result of some weeks' cultivation in air saturated with moisture. Gardeners had been familiar with this for a very long time, of course, but it required a Cockayne to recognise the significance of what he saw.

Brown ranged far and wide in his search for mosses until he had a very thorough knowledge of the moss flora in its various altitudinal belts from Taihape in the North Island to the south of Stewart Island. He was elected a member of the Philosophical Society in 1887 but it wasn't until 1891 that he produced any papers; between then and 1904 he published 21 papers in all. They were devoted to mosses, a subject no-one else in Christchurch knew anything about and at first were something of an embarrassment to the Editor of the *Transactions*. No one in New Zealand could tell whether the man, a shoemaker, knew anything at all, and while they hesitated to refrain, they disliked the idea that they might be publishing rubbish.

They needn't have worried, Brown came to be recognised as a world authority. As Cockayne said 'He increased enormously the knowledge of moss distribution, and this largely from the ecological aspect . . . published many valid new species, made cogent critical remarks about others, and even defined certain new genera or sub-genera, dealing with

plants of extreme minutness.'

Brown was also interested in ferns and for long was the only man who knew where to find the rare Gymnogramme rutaefolia on the Port Hills. It grows only in a few places in this country and has a singular beauty with its clothing of silvery hairs that help to conserve moisture in the dry places where it loves to grow. Brown, when asked for a specimen would go off in the early morning, so as not to be followed, and bring back one frond. When Professor Wall came to investigate the flora of Canterbury in the early 1920's he made a determined effort to find it. Cockayne had never found it himself but was sure it would grow on warm, sunny rocks, facing north, and later it was there that Professor Wall discovered it.

Cockayne had a very high opinion of Robert Brown and quotes his words in the beginning of his New Zealand Plants and Their Story.

'Heed not what books or authority teaches, but, in order to really learn, go to the plants themselves.'

THE FIFTEENTH INTERNATIONAL HORTICULTURAL CONGRESS

J. P. SALINGER (Horticulturist, Department of Agriculture, Wellington.)

The fifteenth International Horticultural Congress was held at Nice on the French Riviera, from 11th to 18th April, 1958.

I had the honour of representing New Zealand as the Official Delegate and it was a great experience to attend a Congress of this significance and importance.

This was the third International Horticultural Congress held since the war, the previous ones being the thirteenth Congress in London in 1952 and the fourteenth at Scheveningen, Holland, in 1955.

The main purpose of the Congress was the presentation of papers on all aspects of Horticulture, but in addition, meetings of various International Committees were also held, as the Congress provided an excellent opportunity for the delegates from various countries to meet and discuss matters.

The City of Nice is a large and important horticultural centre, and the Congress was based on the Centre Universitaire Mediterraneen. Plenary sessions however were held at the Municipal Opera House, as over 600 delegates attended from 41 countries.

One of the most heartening features of the Congress was the large attendance of delegates from Eastern European countries; we all mixed freely and could discuss technical matters without reserve. In fact, at one general meeting, the first paper was given by Professor Tsitsine of U.S.S.R. on 'Plant Breeding Aims' in Russia, and the next paper was given on behalf of Professor Tukey of the U.S.A. on the American Horticultural Council. This possibly indicates the difference in horticultural emphasis in various parts of the world; on the one hand, plant breeding will assist in increasing food production; while in the more favoured areas, horticulture is the hobby of every home owner.

There was little difficulty with languages, as the official languages were French, English and German, and interpreters were present at the main meetings. It is evident that English is becoming the most important international language in horticulture. Many of the research workers from Europe speak excellent English.

The lectures themselves were divided into plenary sessions when general topics such as plant growth substances, virus diseases and plastics were discussed and specialised sections on many aspects of the cultivation of fruit, flowers, vegetables and tropical crops.

The paper which, in my opinion, has not received sufficient attention was that by Professor Work, now in the Phillipines, who stressed the need for simple basic experiments in growing vegetables in the tropics, to help solve the food problems there. In general, however, no outstanding discoveries were announced; rather there was a consolidation of existing knowledge. All papers will subsequently be published in a report on the Congress.

As important as the presentation of papers were the meetings of the various international committees and working groups. Especially the International Committee for Horticultural Congresses and the International Committee for Horticultural Nomenclature.

The International Committee for Horticultural Congresses discussed in great detail the formation of the proposed International Society of Horticultural Science. This organisation would be a permanent, world-wide body encouraging the exchange of horticultural information in all its aspects. It would be composed of official members, nominated by countries, affiliated members from universities and horticultural organisations, and individual members. (I understand that the Royal New Zealand Institute of Horticulture Inc. has agreed in principle to join this Society, when it is founded.)

The committee also decided that the sixteenth Congress would be held in Belgium in 1962, and it is provisionally intended to hold the seventeenth Congress in the United States of America in 1966.

The International Committee of Horticultural Nomenclature discussed and approved the revised Code of Nomenclature for Cultivated Plants. The Committee also decided on further International Registration Authorities for various genera of plants and confirmed that the Royal New Zealand Institute of Horticulture Inc. should be the International Registration Authority for the genera Hebe and Leptospermum.

In addition to the lectures and committee meetings, visits were paid to places of horticultural interest in the area. To nurseries such as Etablissement Meilland, where rose breeding is carried out, to the cut flower and market garden areas along the Riviera, and to various gardens, such as the Jardins Exotiques at Monte Carlo.

If I may close on a personal note, I would like to say that I greatly appreciated the honour of attending such a Congress as an Official Representative. New Zealand horticulture has a high reputation among horticulturists overseas. At the same time New Zealand representatives can offer much in the way of information and experiences in horticultural production. Attendance at such a Congress is, I am sure, mutually beneficial, for horticultural information should overcome all barriers and be exchanged on a world-wide basis.

LODER CUP AWARD

The Loder Cup for 1958 has been awarded to Mr. E. B. Corbett, the former Minister of Lands, Forests and Maori Affairs. The presentation was made by Mr. A. M. W. Greig, N.D.H.(N.Z.), A.H., R.I.H. (N.Z.), Director of Horticulture, before a large and representative gathering on 20th January, at St. Andrew's Hall, New Plymouth, over 200 being present.

When presenting the Cup, Mr. Greig stated 'This cup is the most valued treasure awarded to New Zealand naturalists and horticulturists.' Normally this award is not made to anyone for work performed in connection with his vocation and this is the first time it has been awarded for services as a member of the legislature. But Mr. Corbett had given services far in excess of his duties. Born in Taranaki 60 years ago, he grew to manhood with a deeply rooted affection for the

natural beauty of his native land. He realised that, in the course of the advance of progress, the destruction of a portion of this beauty was inevitable and that therefore it was of vital importance to form parks and reserves throughout the Dominion to preserve the natural charm of its native flora. In the course of his legislative career, Mr. Corbett was instrumental in adding to the national parks of New Zealand no less than 1,200,000 acres as well as 147 scenic reserves totalling 44,000 acres.

In connection with these developments, Mr. Corbett had been responsible for the creation of the national parks at Urewera, Nelson Lakes and Mount Cook, the setting aside of 22,500 acres of Waipoua forest as a sanctuary and the creation of the Tararua Forest Park comprising 220,000 acres. He had also been responsible for work in connection with the Pukeiti Rhododendron Trust, Egmont National Park and Awakino Valley.

The nomination was made by the North Taranaki District Council, supported by the South Taranaki District Council, and by the Forest and Bird Society of New Zealand. Mr. Corbett had very adequately fulfilled the conditions designed by the trophy's donor, Gerald W. Loder (later Lord Wakehurst) to encourage the protection and cultivation of the Dominion's native flora.

NOTES FROM THE CHRISTCHURCH BOTANIC GARDENS.

L. J. METCALF (Assistant Curator, Christchurch Botanic Gardens).

In the last issue of the Journal it was mentioned how unusually dry the weather in Christchurch had been, and now that the figures for the year have been assessed it is possible to see just how dry the season has been and is continuing to be. This past year was the second driest on record and compared with the average of 25.15 inches, last year's total rainfall of 17.51 inches is particularly low. For ten of the previous 12 months rainfall was below average while between June and December only 7 inches of rain were recorded. The winter was the driest on record with only 3 inches of rain falling in June, July and August, and in March, May and September, periods of absolute drought were recorded.

However, in spite of the hard conditions most of the local gardens are in very good order and at present particularly colourful. In the Botanic Gardens the effects of the drought are most in evidence in the lawns, particularly those where the underlying shingle is close to the surface. Most of the large trees were standing up to it quite well as their roots go deep down into the shingle which underlies most of the Gardens and where moisture is always available; however, some of the deciduous trees are getting a tired look about them. Newly planted trees have in one or two instances, been defoliated by the heat and

during January when temperatures soared up over 90°F, some plants such as Magnolia and Azalea had their leaves burnt with heat scorch.

On December 12th a very strong Nor'west gale with gusts up to 72 miles per hour hit Christchurch and did considerable damage throughout the city. Many trees and large branches were smashed and cleaning up is still in progress and will be for some time. The greatest loss in the Gardens was a large specimen of the Golden Willow, Salix alba var. tristis, which grew just south of the rose garden and was such a prominent feature during the winter months. This tree was so badly battered that it has had to be removed.

During the summer months the most refreshing part of the Gardens is the bog garden and there until January numerous waterside plants flower in the borders around the waterlily ponds. The tall Inula helenium is perhaps one of the most striking plants to be seen there. It is a native of Europe and from the woody rootstock are produced the large oblong leaves which may be up to 30 inches long. The flower stems grow 6-7 feet high and at the top the large yellow flowers are produced. It comes into flower round about Christmas time. Senecio clivorum which comes from China and Japan is another outstanding plant from a moist situation. It grows 3-4 feet high with big reniform leaves and large heads of orange-vellow flowers. A purple leaved form is even more handsome. Agapanthus pendulus is a very attractive plant which comes into flower about the end of February. The leaves are up to 16 inches long and at the top of a 3 feet high scape the drooping indigo-coloured flowers are borne. Eastern Transvaal is the home of Another easily grown plant from South Africa which should be seen in more gardens is Melianthus major, sometimes called the Cape Honey flower. It is a shrubby plant growing up to 10 feet or so high and although it grows well in other situations it appreciates a moist position and looks most effective by water. The bold glaucous foliage topped by reddish-brown flower spikes make it a most effective plant. Other plants of interest are Eryngium aquaticum with long Yucca-like leaves, Mimulus cardinalis, and Euphorbia sikkimensis. The latter a perennial herb growing up to 4 feet in height and grown for the bright red colouring of its young growths.

Over the past few months several interesting New Zealand alpine plants have flowered and the most beautiful of these have been several species of Myosotis. The one which has the best claim to being the most beautiful is Myosotis concinna which was collected from the type locality of Mt. Owen in Southern Nelson. It is a large species growing up to one foot high and has lanceolate-spathulate leaves which are clothed with closely appressed silky hairs. The large flowers are up to 2-3in. long and are bright yellow with a sweet scent. The petals are reflexed and the anthers are exserted well beyond the corolla which gives the flower an appearance quite unlike any other specis. Myosotis concinna grows in a variety of situations on the limestone rocks of Mt. Owen and has so far proved an easy species to cultivate. The next

species is *M. macrantha* which in foliage is hardly distinguishable from *M. concinna*, but the flowers are of a peculiar yet beautiful golden bronze colour. Also the flowers of *M. macrantha* do not have the short tube and reflexed petals of the previous species, but the flowers are also deliciously scented. It is an easy species to grow, prefering some shade, and flowers quite freely. The specimens in cultivation in the Gardens were collected on Mt. Peel in N. W. Nelson. The third species is *M. explanata* which when in foliage is also hardly distinguishable from the two previous species. The flowers are produced in a capitate inflorescence and are about a half inch long, the colour is white with a yellow eye. Unlike the other species there is no pronounced scent. This species is confined to the Arthur's Pass region and the specimen under discussion was collected at the head of the Waimakariri River in stony ground at about 3,500 feet.

CORRESPONDENCE

The Editor, N.Z. Plants and Gardens.

Epiphytic Orchids

Dear Sir,

In reply to Mr. C. M. Smith's letter on this subject in the December issue, I have pleasure in congratulating him for drawing attention to a statement which he considers contrary to fact and also for soliciting information for the benefit of students of our indigenous vegetation.

The establishment of our native epiphytic orchids on Pinus radiata having been observed some years ago, it was accepted as a perfectly natural phenomenon when old volunteer pine trees were present among the indigenous forest. The original statement on page 344 of Vol. 11, No. VIII, September, 1958, was made in support of the use of pine bark in orchid culture As native epiphytic orchids had found on pine trees a 'soil' suitable for their vegetative welfare it was concluded that there could be nothing detrimental in pine bark which would make this material unsuitable, when properly used by an orchid grower. deduction found support in a statement made by the late Dr. W. R. B. Oliver in the summary to his paper on N.Z. epiphytes in the Journal of Ecology, Vol. XVIII, No. 1. February, 1930. 'The soil in which epiphytes grow was found to be composed entirely of the products of the leaves and bark of the trees on which they were found, and of the epiphytes themselves. No extraneous mineral matter was detected except in low stations where obviously it was brought by flood waters. Mineral motter brought by air appears to be absent or negligible.'

To substantiate my statement and conclusions and to obtain the evidence necessary in answering the specific questions asked by Mr.

Smith, a search was carried out in the Waitakere Ranges around Auckland and the following observations made.

(1) The Species of Orchid Concerned.

Species from the four genera of New Zealand epiphytic orchids were found: Dendrobium cunninghami, Bulbophyllum pygmaeum and Earina mucronata on Pinus radiata. Sarcochilus adversus was found on Cupressus macrocarpa nearby.

(2) Size and Abundance.

Size varied from young plants just established in the case of Dendrobium to large clumps of Earina and extensive carpets of Bulbophyllum. One carpet of Bulbophyllum stretched for 8ft, along a reclining pine branch. With respect to abundance ten trees of Pinus radiata were examined from the ground. On eight of them counts revealed 66 separate groups of Dendrobium, 18 clumps of Earina, and many square feet of Bulbophyllum. Two trees did not show evidence of orchid growth from this ground inspection, although climbing would undoubtedly have revealed its presence.

(3) Height Above Ground.

This ranged from a convenient height which could be reached, up to 30-40ft., necessitating the use of telescopic lens equipment for some of the photographic work.

(4) Size and Apparent Age of Host (supporting tree).

The pines could be classed as old trees, a cautious estimate being that they were over 50 years, with heights ranging up to 60ft.

(5) Location and Date.

The trees on which the orchids mentioned above were established are situated at an altitude of approximately 1,100ft. in the Waitakere Ranges, about 15 miles from the centre of Auckland. The date when visited was 30th December, 1958, and on that occasion photographs were taken so that pictorial evidence could accompany this reply. Four of these photographs are being forwarded in the hope that space will be available for some of them to be published. The shots of Dendrobium on P. radiata and Sarcochilus on C. macrocarpa necessitated the use of telescopic equipment on the camera. Those of Bulbophyllum and Earina on P. radiata were taken as close-ups using a flash unit. Many of the epiphytic ferns were well established in the association, a small piece of Hymenophyllum demissum can be seen on the lower right of the illustration depicting Bulbophyllum.

Although in this instance the record of Sarcochilus adversus is on C. macrocarpa, Mr. E. D. Hatch, the well-known authority on N.Z. orchids, records this species on P. radiata at Murimutu just south of Waiouru in January, 1943.

P. radiata is now well established as a member of our adventive flora from the North Cape to the Bluff, often entering into competition with our indigenous flora, and Mr. Cheeseman records the presence of

the four species of orchids discussed here in both North and South Islands. Consideration of these facts indicates the possibility that the epiphytism of our native orchids on introduced pines is more common than Mr. Smith's letter infers.

-Jas. A. Hunter (Auckland.)

P.S.—I am indebted to Mr. A. Farnell, Honorary Inspector of National Parks and Reserves, for locating the pine trees, and to Mr. Steve Rumsey for skilful photography under difficult conditions.

ANNUAL REPORT OF THE DOMINION COUNCIL FOR THE YEAR ENDED 30th SEPTEMBER, 1958

Ladies and Gentlemen,

The Dominion Council has pleasure in submitting its 36th Annual Report for the year ended 30th September, 1958.

1. Meetings:

(i) Annual Conference: The 35th Annual Meeting and Conference of Delegates was held in Wanganui on 13th February, 1958. The Conference was very well attended and most District Councils were represented; in addition there was a strong representation from the N.Z. Institute of Park Administration and other organisations affiliated with the Institute.

The Conference was most fittingly opened by the Hon. C. F. Skinner, Deputy Prime Minister and Minister of Agriculture. It proved a very happy and enjoyable occasion and a cordial and friendly spirit prevailed throughout the business proceedings.

(ii) Dominion Council: During the year the Dominion Council met on six occasions and the average attendance at those meetings was 16. Each

meeting was presided over by the Dominion President.

(iii) Sub-Committees and Examining Board: The Examining Board, Publications Committee, Finance Committee, and other special sub-committees met at various times throughout the year and have given detailed and close attention to the affairs of the Institute. During the year an important Standing Committee was appointed to deal with matters relating to International Nomenclature and Registration, and this Committee has already given very careful attention to this highly specialised work.

2. In Memoriam:

It is with deep regret that the Dominion Council records the passing of several members during the year. Their loss is sadly felt and our sympathies are expressed to their relatives.

Particular reference is made to the passing of Mr. T. Horton, of New Plymouth, an Associate of Honour; Mr. Percy Collins Browne, of Christchurch, who during his lifetime made such a valuable contribution to Horticulture in Canterbury.

The memories of these and others whose names have not been mentioned, are sincerely revered.

3. Membership:

The active membership of the Institute has been reasonably well maintained and the names of some long outstanding and unfinancial members have been removed from the register during the year. The present active membership stands at 1996 including 35 Associates of Honour.



Fig. 1—
Dendrobium
cunninghami on
Pinus radiata,
Waitakere ranges,
Auckland, 30/12/58.
Single flower
blooming.
Plant between
30 and 40 feet from
ground.
(See p. 71.)



Fig. 2—Bulbophyllum pygmaeum on limb of Pinus radiata, Waitakere ranges, Auckland, 30/12/58. Young Dendrobium cunninghami also shown. (See p. 71.)



Fig. 3—
Earina mucronata on
Pinus radiata, Waitakere ranges, Auckland, 30/12/58. Seed
pods showing.
(See p. 71.)

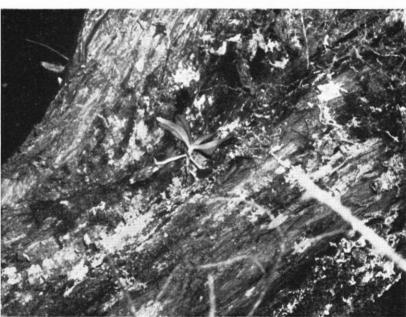
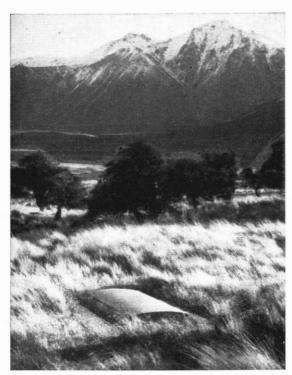
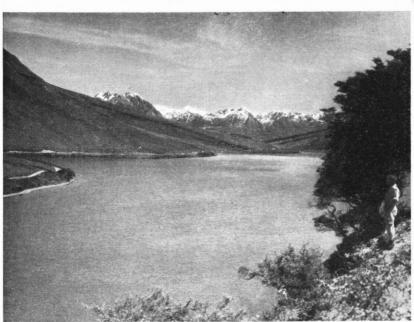


Fig. 4—Sarcochilus adversus on Cupressus macrocarpa, Waitakere ranges, Auckland, 30/12/58. (See p. 71.)



The Banks Lecture (see p. 52).

Dr. Andrew Sinclair's grave with Mount Sinclair in the background.



The Banks Lecture (see p. 50-65). Lake Self, between Waimakariri and Rakaia rivers. Note Nothofagus on right.



The Banks Lecture (see p. 50-65). Rakaia river (in foreground), Mount Hutt (in background).



The Banks Lecture (see p. 50-65). Limestone country, Castle Hill, Canterbury.

It is the earnest desire of the Dominion Council to see the membership of the Institute consolidated and built up to a much stronger force than it is at present. Some efforts have been made to quicken interest in new localities with a view to establishing new District Councils. Existing District Councils can help considerably by increasing their present membership.

4. Finance:

(i) Annual Accounts: The appended accounts reveal an improvement in the state of the Institute's finances. The year has been successful financially. Allocation from membership subscriptions to the Publication Account has again been made on the basis of 8/- per member, and the Publications Account itself reveals a satisfactory position.

It has been possible to recommend an increase in capitation fees for the year ended 30th September, 1958, and provision for this recommendation has been made in the accounts for the year. At present, this increase is recommended for one year only and is not regarded as a permanent increase.

- (ii) Trust Accounts: These are clearly shown in the published Accounts. All funds are properly invested.
- (iii) Publications Account and Loder Cup Account: Separate statements covering both these accounts are appended. We are indebted again to the Internal Affairs Department for continued financial assistance for the Journal.
- (iv) Local Body Donations: Our thanks for continued support are recorded.

5. Publications:

The Dominion Council expresses its sincere thanks to the members of the Publications Committee for the faithful and diligent attention given to the publication of the Institute's Official Journal 'New Zealand Plants and Gardens.' This Committee has given excellent service, as also has the Editor, Mr. G. A. R. Phillips, and the result of their combined efforts, as expressed in the Quarterly Journal, which is now so familiar to all members, is very praiseworthy. The official organ of the Institute must be maintained at the highest possible level for its literary and authoritative qualities. This objective is ever before the Dominion Council, and with the excellent cooperation of all concerned with the publication, we are being enabled to reach that goal. There is a separate report on the Publications, appended hereto.

6. Arbor Day:

Observance of Arbor Day focuses valuable attention upon the tremendous importance that tree planting bears to the well-being of our Dominion and the citizens who occupy our land.

The Institute proudly takes a leading part in this annual observance and will ever continue to encourage the growing of trees. At the official ceremony held in Wellington, at which Their Excellencies the Governor-General and Lady Cobham attended, the Dominion President was one of the official guest speakers.

7. Loder Cup Award:

This award, 'offered to lovers of Nature in New Zealand to encourage the Protection and cultivation of the incomparable flora of the Dominion,' is made annually by the Loder Cup Committee appointed by the Minister of Agriculture. The Institute is represented on this committee by Mr. W. K. Dallas. The 1958 award was very appropriately made to the Honourable E. B. Corbett, of Okato (near New Plymouth), who was nominated by the Forest and Bird Protection Society, and the North Taranaki District Council of the Institute. The South Taranaki District Council endorsed the nomination also. The congratulations of the Dominion Council were suitably conveyed to Mr. Corbett.

8. Examining Board:

The Examining Board is appointed each year by the Dominion Council, and responsibility for one of the most vital and important functions of the Institute falls upon this Board. The Dominion Council here expresses its sincere appreciation to members of this Board, under the chairmanship of Professor H. D. Gordon, who have given valuable time, without stint, in the interests of the examination students and the conduct of these examinations. The Board has submitted a separate report for the year and that report is appended hereto.

The congratulations of the Institute are extended to the successful candidates at the 1958 examinations and particularly to those to whom special awards were made. The Dominion Council here seeks to express also a word of encouragement to those who were not successful, that they might not "faint by the way," but press on until the fruit of success is their happy lot.

The Dominion Council endorsed the proposal for the institution of a special award for Junior candidates in the N.D.H. Oral and Practical examination. It is expected that this new award will be introduced at the 1959 examinations.

The continued financial support of the Government in the form of an annual grant is sincerely appreciated. Expenses of conducting the examinations are kept under review, and quite a considerable amount of the Dominion Secretary's time is taken up with this important work.

9. Todea Fibre and Orchid Culture:

This subject was carefully examined into, following upon the resolution of the previous Annual Conference, and discussions were held with the Orchid Society. It was also the subject of an excellent article by Mr. J. A. Hunter, F.R.I.H.(N.Z.), appearing in the Journal.

10. Use of Pungas at Wairakei Hotel:

The use of pungas for decorative purposes at the Hotel at Wairakei was followed up and enquiries from various sources revealed that they had not been cut alive for the purpose, but that they had been brought from Rotorua where they had been previously discarded as of no value.

11. Historic Trees in New Zealand:

The Dominion Council has taken positive steps to have republished the list of *Historic Trees in New Zealand*, originally compiled by the late Dr. H. Allan and published in the Institute's Journal in 1940-41. Up-to-date data is being assembled, and it is expected that the information will appear in the Journal during 1959.

12. Aratiatia Rapids and Huka Falls — Electric Power Scheme:

Considerable detailed attention has been given to the Government's announced intention of building a Hydro-Electric Scheme near the Aratiatia Rapids, on the Waikato River, which will have a major effect upon the flow of water through this natural and renowned scenic reserve. sentations have been made to the Minister in charge of the State Hydro Electric Department, to the Minister of Lands, and an inspection was made of a working model of the scheme. The Dominion Council was naturally concerned with the possible destruction of scenic beauty and plant life by the encroachment of such a scheme upon this renowned reserve, but after extensive enquiries and an examination of the model scheme, with full explanations from the engineers, the Dominion Council is satisfied that the scenic attraction is more likely, ultimately, to be enhanced by the re-planning of the roading and surrounding areas as part of the scheme Furthermore, the plant life existing in that area is very poor and the resulting damage and loss will not be serious. The Dominion Council has expressed to the Minister-in-Charge, however, their concern at the relative ease with which land, previously dedicated by legislation as national reserves, is being passed over for another purpose altogether, without appropriate legislative measures

being passed. This concern has been clearly and forcibly conveyed to the Minister.

13. Urewera Country — Timber Milling:

The Dominion Council had kept up its close watchfulness on these operations and has every confidence in the plans being followed by the Government in these issues.

14. 'Vandalism in Public Gardens:

Concern has been expressed from time to time at the amount of wanton destruction of newly-planted flower beds and shrubs in public gardens. The experience of some Directors of Reserves had been, however, that too much publicity to such vandalism was not good, and probably stimulated further outbreaks. It had been observed, too, over a period of years, that such damage was inflicted on newly planted beds and once they had suffered the first onslaught, those same beds were seldom touched again.

15. Plant Raiser's Award:

It has been agreed to re-institute this award and a small sub-committee has been appointed to examine into the conditions.

16. Native Bush at Paraparaumu:

The Dominion Council has made representations to the owner to have a small piece of valuable native bush near Paraparaumu set aside as a reserve.

17. XVth International Horticultural Congress, 1958:

This Congress was attended by Mr. J. P. Salinger of the Horticultural Division officially to represent the New Zealand Government. On his return, Mr. Salinger reported, and, it has since been officially confirmed, that the Institute has been appointed International Registration Authority for the genera Hebe and Leptospermum. This honour has not been lightly accepted by the Dominion Council and a standing Committee consisting of Messrs. C. M. Smith, A.H.R.I.H.(N.Z.) (Convenor), M. J. Barnett, A.H.R.I.H.(N.Z.) and J. P. Salinger, B.Sc., N.D.H., was elected, with power to co-opt two non-voting junior members, to handle all matters relating to this appointment. This is an important and exacting duty and one in which progress cannot be hasty. The Institute is fortunate indeed in having such experienced and qualified men who are able to take up this responsibility for the Dominion Council.

Already, the New Zealand Rhododendron Association has requested the Institute to act as National Registration Authority in New Zealand for Rhododendrons. The extent of the service of the Institute in these fields can very rapidly expand, as other national specialist societies possibly follow suit. The close liaison that will thus build up between the Institute and these specialist societies will be to mutual advantage.

18. Agricultural Education:

Your Council noted the appointment by the Minister of Education in June, 1956, of a Consultative Committee on Agricultural Education under the chairmanship of Dr. L. J. Wild, and made no recommendations to the Committee, as it was unaware that the Committee intended to cover horticulture as well as agriculture.

The Committee's report has now been released. It contains 25 specific recommendations, the only one of which is of direct interest to horticulture is No. 21 where the Committee recommends consideration by all concerned of the wide range of opportunities offered for careers of useful and remunerative service in fields related to agriculture, as described in Chapter VI. Section 2 of this chapter refers to careers in horticulture and para. 301 is worthy of attention, coming as it does from a non-horticultural committee—"Not only are there opportunities in horticulture, but even more important, there is great personal satisfaction in all work relating to the horticultural industry."

Your Council considers that the report of this Consultative Committee should be carefully reviewed by the Institute, and recommends that the incoming Dominion Council should appoint a special Committee during 1959 to study the report, whether horticulture is fairly and adequately covered and to what extent the Institute can give further support for horticultural education and publicise the opportunities of careers in horticulture.

19. Fellowships:

During the year, 'Fellowship' has been bestowed upon 24 members. The Dominion Council would encourage the election of more 'Fellows,' and District Councils are invited to submit nominations of worthy members for this distinction. Three members were elected to life-membership upon payment of the prescribed fee.

20. Thanks:

The Dominion Council expresses their appreciative thanks to all who have contributed to the successful functioning of the Institute throughout the past year. In particular to:—

- (1) 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.
- (2) Local Bodies for their continued inferest and support, and the Directors and Superintendent of Reserves.
- (3) Examiners, Supervisors, and others who have co-operated to facilitate the conduct of the examinations during the year.
- (4) District Council Presidents and Executives, who maintained an active front in their respective localities.

21 Conclusion:

At the close of this report I must pay tribute to the loyalty and willingness of members of the Dominion Council who have devoted a good deal of time and energy to the affairs of the Institute throughout the year. With the goodwill of so many men and women working in harmony with one common aim, the Institute is enabled, and can continue, to fulfil its mission for the advancement and strengthening of national horticulture within our Dominion.

There is a proverb which reads 'the spider taketh hold with her hands and is in kings' palaces,' and it is true of the Institute that, throughout the year, we have "taken hold" in every opportunity that has presented itself to foster and advance the interests of, and to exercise watchful care over, our precious national horticultural heritage, and to play an increasing and expanding influential part in the horticultural education of our people. This has indeed brought the Institute into greater prominence and has accorded it a wider recognition, even in international circles. There are many more 'kings' palaces' to be entered and only by unselfish and concerted effort, with unity, can we hope to achieve our purpose. Horticulture speaks only one tongue and all national and social barriers are levelled before her as she exercises her influence amongst the peoples of the world today. as a Royal New Zealand Institute, are justly proud of having served her in the past and, as we face the future, we see that there is still a vital role which even Horticulture can play in the betterment of our lives and in maintaining peace and harmony, not only within ourselves, but amongst the peoples of the world also.

In the name of the Institute let us, therefore, keep on 'taking hold' for we shall then surely find ourselves reaching into more and more 'kings' palaces.'

JOHN HOUSTON, LL.B. Dominion President.

ROYAL NEW ZEALAND INSTITUTE OF HORTICULTURE INC.

THIRTY-SIXTH ANNUAL CONFERENCE

Report on Proceedings

Mr. John Houston, LL.B., of Hawera, Dominion President, presided over the 36th Annual Meeting and Conference of Delegates, held in Timaru on Thursday, 12th February, 1959. There was an attendance of over 70 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 many members and also from affiliated organisations which were not able to arrange for representation. These apologies were read to the meeting and duly sustained. Resolved that the good wishes of the Conference be conveyed to Mr. A. W. Green, of Hamilton.

Welcome:

A welcome to delegates and visitors was extended very cordially by the Dominion President who expressed his hopes for a successful Conference.

Official Opening:

In greeting the Prime Minister, the Rt. Hon. Walter Nash, P.C., on his arrival at the Conference, the Dominion President expressed the appreciation of the Institute of his acceptance of the invitation to open the Conference, and spoke of the untiring energy which characterised the Prime Minister.

This being the occasion of Mr. Nash's 77th birthday, the felicitations of the assembly were conveyed to him, with the wish that he be granted many more years of active service. His Worship, the Mayor of Timaru, Mr. White, extended a cordial welcome to the Prime Minister and to delegates.

In his official address, the Prime Minister thanked the Dominion President for the warmth of the reception, and said he was pleased to be present, even although it had meant an early departure from home on this his birthday.

He wished to pay a tribute to Horticulture (although no horticulturist himself, he admitted), and to the Institute for its work in this sphere. He had derived considerable pleasure from reading the Journal and the Conference Papers (which had been supplied to him beforehand).

He was gratified to see that some monetary assistance was being given by the Government to the Journal. He referred to the writings of Nancy Steen on Roses, which he considered very enlightening.

He complimented the Institute on its enquiry into and the expression of its opinion on the question of Aratiatia Rapids Power Scheme. On the commercial side of horticulture, Mr. Nash quoted the statistics covering commercial gardens, orchards, glasshouse culture, and the rehabilitation of servicemen into horticultural careers, 90% of whom had made a real success of them.

Horticulture was a unit — common to all nations — that, when developed, can play a tremendous part in the peace of the world. He spoke of the wonders of creation as expressed and revealed in the colour, form, and art of flowers, which resulted from the work of man in co-operation with the Creator.

There was pleasure in doing for and strength to be derived from giving to others.

In declaring the Conference officially open, Mr. Nash, expressed the wish for a profitable, helpful and constructive meeting. In replying to the official address, Mr. M. C. Gudex told the Prime Minister that the Institute had been

singularly honoured by his attendance; it had been apparent to all that he had seen a good deal of norticulare, and by his vigour and energy he had taken

away the feeling of peril in old age.

Following the morning tea adjournment, during which the Prime Minister engaged in friendly chats with many, Mr. Nash took his departure to the refrains of "Happy Birthday." All present felt that his visit had been a very cordial and stimulating experience.

In Memoriam:

Since the holding of the previous Dominion Conference, two very prominent and esteemed horticulturists had passed away and in memory of these —

Mr. Percy C. Browne, Christchurch;

Mr. T. Horton, A.H.R.I.H.(N.Z.), New Plymouth, and other members also who had died during the year, all present stood for a moment in silence.

Dominion President's Address:

The Dominion President, Mr. John Houston, in his address to the Conference, stated that the past year had been successful and the result satisfactory. During the year the Institute had become recognised and vested with certain responsibilities as an International Authority for the registration of the genera *Hebe* and *Leptospermum*. These responsibilities were not being taken lightly.

The official Journal "New Zealand Plants and Gardens" continues as an authoritative production — we would not be content with less than that — but it is desirable that more reports and notes be received for publication from District Councils. The incorporation of written reports from District Councils into the Conference Papers was both wise and advantageous. The Examination work of the Institute continues. A high standard is exacted and the Diplomas and Certificates are the hall-mark of advancement and attainment. A lot of activity was involved with the examinations, but it was all worthwhile. The Institute was indebted to the Examining Board, the examiners, and all others concerned with the examinations.

The finances of the Institute are healthy and satisfactory and an increased capitation could be recommended.

As regards membership, it is most desirable that it be increased to 3000, which would give the Institute a solid financial backing. As Dominion President, he hoped many of the more affluent members would remember the Institute at the appropriate time with bequests. This would give a much needed fillip to the finances of the Institute and help considerably to get them on to a solid basis. Any such gifts would be wisely and carefully handled by the Finance Committee, under the Dominion Council.

He would like to see stronger representation from District Councils at Dominion Council meetings.

He realised that more and more is falling to the Committees set up by the Dominion Council, and paid tribute to each — the Examining Board, the Executive, the Finance Committee, the Publications Committee, the Nomenclature Committee.

In conclusion, Mr. Houston considered the year had altogether been most satisfactory, and was proud of the fact.

Annual Report:

The Annual Report for the year ended 30th September, 1958 had been previously circulated amongst District Councils and delegates. The Report was therefore taken as read and adopted. There was no discussion.

Annual Accounts:

The financial statements for the year ended 30th September, 1958, had also been previously circulated. Mr. J. F. Living, chairman of the Finance Committee, spoke briefly on the accounts, in presenting them for adoption. There was no discussion, and the Annual Accounts were thereupon duly adopted.

Capitation:

On behalf of the Dominion Council, Mr. J. F. Living introduced a recommendation for an increase in capitation for the year ended 30th September, 1958. The following motion was duly carried:—

"That for the year ended 30th September, 1958, the capitation fee payable to District Councils be increased from 2/6 to 5/- for individual members, thus making an all-over rate of 5/- per member whether Fellow, Individual, Society or Firm."

The Dominion President announced that this resolution was in accordance with Rule 10(i) of the Constitution.

Mr. M. R. Boothby complimented the Dominion Council on this recommendation, and pointed out that 13/- out of each £1 subscription was being returned to members, in the form of 5/- Capitation, 8/- for the Journal. This, he thought, was most satisfactory. Mr. Living enquired whether the Capitation rate for the year ending 30th September, 1959, could be increased now in a similar amount, but it was agreed to let that stand over meanwhile, for the Dominion Council's consideration.

District Council Reports:

Written Reports from 12 District Councils had been incorporated into the Conference Papers. These had proved a most interesting addition to the Papers.

The Reports were adopted, on the motion of Mr. M. R. Boothby, seconded by Mr. A. W. Anderson.

Report on the Journal:

This Report, included in the Conference Papers, was introduced by Mr. A. M. W. Greig, Chairman of the Publications Committee. In speaking on the Report, Mr. Greig emphasised that it is not wise to depend permanently upon the financial assistance received in recent years from the Government. It is essential that membership be increased to give the backing required, should the Government grant be terminated. It is the aim of the Journal to bring about a closer liaison, to our mutual benefit, with specialist societies. Authority for the printing of an index covering Volume II, Nos. 1 - 8, was left in the hands of the Publications Committee, at the cost of approximately £30.

Tribute was paid to the work of the Committee and the Editor.

Mr. J. H. Glazebrook considered it better, and cheaper possibly, to include future indexes in the final Number of each Volume. The filing of a loose index could present a problem. The Report on the Journal was duly adopted.

Report on Cultivar Names and Registration Authority: (Published elsewhere in this issue)—

This report was presented by Mr. C. M. Smith, as chairman of the special Nomenclature Committee. It was printed and circulated amongst those present. Mr. Smith pointed out that the Institute could not become a large scale consultant on plant names, for members or organisations. The Institute was now the distributing agent in New Zealand for the International Code of Nomenclature for Cultivated Plants (Cost 2/6). The Dominion President stated that cultivated plants are basic to civilisation and an established international code of nomenclature is essential. Mr. Houston read the resolutions that had been passed by the Dominion Council at their meeting on 10th December, 1958, with reference to the subject, and which laid the foundations for the Institute to carry out its functions as an International Registration Authority for the genera Hebe and Leptospermum, and as a national Authority for other genera in consultation with specialist societies The Rhododendron Association of New Zealand had in New Zealand. already requested the Institute to act as national authority for the registering of rhododendrons, for which a small committee consisting of Mr. C. M. Smith, Dr. J. S. Yeates and Mr. J. P. Salinger had been appointed.

In reply to an enquiry regarding affiliation fees for these specialist societies, the President stated that these would be fixed by the Dominion Council, as each case presented itself. The Report was adopted on the motion of Mr. Smith, seconded by Mr. McPherson.

The thanks of the Institute were expressed to Mr. Salinger who represented the Dominion at the Horticulture Congress at Nice in 1958.

Report of Examining Board (Published elsewhere in this issue):

Written Report, included in the Conference Papers, was presented by Mr. E. Hutt, in the absence of Professor H. D. Gordon, chairman of the Board.

During discussion, Mr. Glazebrook hoped the "Guide to Students" would be called rather "Guide for Students," and that it would be published soon, to get the maximum benefit from it for the 1959 examinations. Mr. Boothby hoped that it would give adequate details on the Oral and Practical Examination requirements. The Report was adopted, on the motion of Mr. Hutt, seconded by Mr. MacKenzie.

Recommendation re Oral and Practical Examinations:

The Dominion Council, at the request of the Examining Board, and itself approving the principle of the recommendation, placed before the Conference the following recommendation:—

"That all Oral and Practical Examinations be held in one centre for all Candidates each year."

It was felt by the Examining Board that, in comparison with the Royal Horticultural Society's standard of examination, there was much room for improvement in the Institutes' Oral and Practical examinations. At present, where two separate centres are used, one for North Island and one for South Island Candidates, there was a disparity between the facilities and conditions under which the respective candidates were examined. This was detrimental to the examinations, and the standard thereof. The proposal, if adopted, would place candidates and examiners at a better advantage.

In presenting the recommendation and moving its adoption, Mr. J. A. McPherson said there was no parochial feeling in the conduct of examinations and that the Board had considered the issue very carefully. He personally considered it very desirable that candidates be examined under uniform conditions. This proposal would mean that students would have to travel, some a long distance, but this was required of them overseas. He thought the proposal was a forward step.

The Dominion President considered it desirable to seek uniformity under the best possible conditions. It was made clear that one permanent centre would be established, under the proposal, and there would not be rotation amongst various districts.

- Mr. M. J. Barnett, Senior Examiner for Oral and Practical examinations, stated that, ever since the inception of the examinations, he had examined in this subject at Auckland, Palmerston North and Christchurch. It was most essential to maintain uniformity throughout each Examination. With changing centres, it had been necessary to engage different assistant examiners from place to place. The conditions and facilities varied from place to place. All this had not been conducive to uniform examining. He referred also to Dr. Hudson's advice, when the examinations were commenced, that only one examination centre for Oral and Practical examinations be established.
- Mr. J. A. Hunter said his sympathies were with the students who must receive encouragement. They were going to be involved in heavy travelling expenses, and some thought must be given by the Institute to rendering assistance to young candidates. He thought also that conditions obtaining throughout New Zealand varied far more than in Great Britain.
- Mr. McPherson said that it was a distinct encouragement to have the recommendation so well received.

Seconded by Mr. Barnett, the motion was duly carried unanimously. On the question of financial assistance to candidates, the Examining Board was asked to consider this and make an appropriate recommendation to the Dominion Council.

Associates of Honour:

On the recommendation of the Dominion Council, the nominations of Mr. M. R. Skipworth (Dunedin) and Mr. J. R. Templin (Christchurch) for election to the high 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 the nominations were read to the meeting and it was unanimously resolved that the distinction of Associate of Honour be conferred upon Messrs, M. R. Skipworth and J. R. Templin.

Opportunity was taken to congratulate Mr. Skipworth and to present him with the inscribed certificate. The absence, through ill-health, of Mr. J. R. Templin was sincerely regretted, and it was resolved to convey our greetings, and grief at his illness, to Mr. Templin. (The two citations supporting these nominations appear elsewhere in this issue).

Remits:

(1) From Canterbury District Council:

"The Canterbury District Council recommends that the Dominion Council of the Royal New Zealand Institute of Horticulture supports the New Zealand Institute of Park Administration in its representations to the Government asking it to provide sufficient import licences whereby it will be possible to procure adequate mowing equipment together with the necessary spare parts required for the general maintenance of all public parks, playgrounds and recreational areas. While it is admitted that motor mowers manufactured in this country are suitable for the private garden they are not of sufficient size or durability to cope with the amount of work that is necessary for the maintenance of extensive areas which are required for sport throughout the year. With the interests of physical fitness and public recreation both active and passive it is of national importance that public parks and recreation areas should be maintained at the highest possible standard."

Remit approved, the support asked for was granted.

- (2) From Auckland District Council:
 - (a) That consideration be given to the revision and expansion of the official judging rules and that preparation and publication of a revised edition be undertaken incorporating rules for specialist subjects such as roses gladioli, etc., which are not at present included. Remit approved and adopted.
 - (b) That the matter of the amount of capitation from fees, paid to District Councils, be discussed.
 - Remit withdrawn, in view of earlier decision of the Conference re capitation.
 - (c) That Dominion Council of the Royal New Zealand Institute of Horticulture give consideration to the advisability of holding annually a Royal Horticultural Show, not necessarily held in conjunction with Dominion Conference.

In presenting this remit, Mr. Hunter regretted the absence of the original mover of the motion, as he would have been able to bring the matter forward in a more vigorous manner than he. However, Mr. Hunter enquired what was the ultimate objective of the Institute and felt that it should surely be to become the "R.H.S." of New Zealand, and who could imagine the Royal Horticultural Society without its shows. The R.H.S. is the premier horticultural society of the world,

and through its shows is very closely associated with every aspect of horticulture. If the Institute is to bring its name before the people, a royal show will have to come into being, and would bring about an even closer tie with the Horticultural Trades Association. In seconding the motion, Mr. J. A. McPherson considered that a move should be made now to have the control of the word "Royal," in relation to horticultural shows, vested in the Institute. Whether the Institute itself ever stepped forward ino holding "Royal" Shows would be something for future consideration.

Mr. M. J. Barnett agreed that horticultural shows are good and necessary but he did not envy the Dominion Council trying to organise a "royal" show. Many shows now styled "National Shows" were not worthy of being called such. Mr. J. Passmore asked whether it would be held always in one place, or whether it would rotate amongst various centres. It could only be domiciled in a centre large enough to handle it.

To implement the remit the Constitution would require amending. It has not been the policy of the Institute in the past to run horticulture shows in New Zealand. The existing horticultural societies are doing this quite well.

Upon being put to the meeting, the motion was declared lost, on voices.

N.Z. Rhododendron Assn.:

Resolved to invite the N.Z. Rhododendron Association to nominate a member who could be co-opted on to the Dominion Council.

1960 Conference:

The N.Z. Institute of Park Administration would be holding their 1960 Conference in Rotorua. There was no District Council of the Institute there. On behalf of the Waikato District Council, who had extended a verbal invitation at the 1958 Conference, Mr. M. C. Gudex explained that it would be difficult for Waikato to sponsor a Conference and Flower Exhibition at Rotorua. The Waikato District Council would renew their invitation if the members of the Park Administration Institute would travel from Rotorua to attend at Hamilton. Mr. E. Hutt considered the flower show was a secondary issue, and that the Conference could well be held at Rotorua without a flower show. Final decision on the venue for the 1960 Conference was left in the hands of the Dominion Council.

General:

(a) Examining Board: (Mr. C. M. Smith)

At present neither Massey College nor Lincoln College was represented on the Examining Board, and both now have authority to issue degrees in horticulture and agriculture.

Matter referred to the Dominion Council.

(b) Publication of list of names of Fellows: (Mr. D. Combridge)

Such list was once published in the Official Conference Proceedings — can it be repeated? Matter referred to the Dominion Council.

Address by Mr. A. M. W. Greig, B.Sc., A.H.R.I.H.(N.Z.), N.D.H.(N.Z.)

At the conclusion of the formal business of the Conference, Mr. Greig delivered ε short but most informative address on the subject of:—

'Review of Advances in Horticulture in New Zealand between the years 1952 and 1957'

Mr. V. C. Davies moved a vote of thanks to Mr. Greig and expressed the hope that addresses, such as this, might become a regular feature of each Conference.

(This address will appear in full in the June issue).

Closing:

In bringing the formal business of the Conference to a close, at 3.15 p.m., the President expressed thanks to the South Canterbury District Council, the Timaru City Council, and all others who had joined in making the Conference such a happy occasion. The floral decorations and the refreshments provided, had been very much appreciated and enjoyed.

Banks Lecture:

The 1959 Conference was brought to a close with the presentation of the Banks Lecture at 8 p.m. by Mr. A. W. Anderson, A.H.R.I.H.(N.Z.), of Timaru, on the subject:—

'The Botanical Exploration of Canterbury.'

(This lecture is published elsewhere in this issue.)

At the conclusion of the lecture, which was illustrated by coloured photographic slides, Mr. C. M. Smith moved a warm vote of thanks to Mr. Anderson.

VALEDICTORY

What a delight it is to see the tools of a keen gardener! The spade, the hoe and the others are bright and shining. Therein surely lies the essence of efficiency, for the only really effective garden work is accomplished with clean tools.

So it is in all human life, as it was long ago when the bright armour of Virgil's hero was laid out in the shade to glitter.

When life's cycle is completed, and the past, the present and the unknown future are pinioned together in the flight of time, and our work, refined in the crucible of experience, has come to an end — for there must be a period and an end to all temporal things — no strength or joy rivals the knowledge of a life's work well done, with a conscience as clear as the noonday sun. We may have a humble awareness of our faults and our mistakes, coupled with regrets as personal to us individualy as are our own finger-prints, but there is a glorious freedom from the shackles of remorse. Only by the use of clean tools may this be achieved.

JOHN HOUSTON,

Dominion President.

REPORT OF COMMITTEE ON PLANT NOMENCLATURE FOR YEAR 1958.

The Committee completed its initial organisation during the year. The Council approved an organisation consisting of a Chairman and two Members appointed as a permanent Committee of Council, with a provision that the Committee itself co-opt not more than two non-voting junior members from members of the Institute. The reason for this latter unusual provision was that the Council felt that, as the Committee would be a permanent and continuing body with functions which would be of international importance, some younger Institute members should be trained, so that continuity of thought and procedure would be ensured after original members ceased to be available.

The formation of this Committee by the Council was a step that has been welcomed in many quarters, both in New Zealand and abroad. The prime occasion of its formation was the appointment of the Institute Council as the International Registration Authority for cultivated varieties (cultivars) of plants of the two genera *Leptospermum* and *Hebe*. Such an authority is responsible to the International Commission for the Nomenclature of Cultivated Plants of

the International Union of Biological Sciences. Such an appointment was a distinct honour to the Institute. It moreover involved, by implication at least, an undertaking on the part of the Institute to abide by the International Code of Nomenclature for Cultivated Plants. The Institute in consequence trusts, and strongly urges on all members, that they will individually, when publishing horticultural material, whether as books, articles, pamphlets or catalogues, conform punctiliously to the Code of Nomenclature, as published and as amended periodically by the International Congresses of Horticulture.

The Committee, in making a recommendation to this effect to the Council, was well aware that the practical difficulties that would be encountered before such improved naming practice could be put into operation were many and various. The first and far from the least of these difficulties was that few members knew the Code, or had an opportunity to see a copy. Copies were not on sale from any bookseller in New Zealand; and few were available even to consult for reference. The Council therefore accepted the Committee's next recommendation that it should write to the International Commission and ask to be appointed as the Distributor for New Zealand of the text of the Code. The Commission very readily and promptly acceded to the application, and the Council has been appointed the approved distributing agent for New Zealand, so that copies are now available for immediate purchase from the Secretary of The old reason for non-compliance with the Code owing to its non-availability has therefore disappeared. It is hoped that members will make use of this opportunity and will both purchase and assiduously study the Code and apply it as necessary. Neither the Committee nor the Council claims that it can be quickly studied and applied, but the Committee is prepared to do its best to furnish interpretations of difficult provisions to Institute members.

In making this offer, the Committee regrets that it must make the reservation that it is unable to act as a large-scale consultant on the Code. It will attempt to interepret clauses or to give advice on usage of doubtful names; but its members cannot find time (nor perhaps are they yet competent in any case) to check whole floral lists, to proof-read articles, or perform similar lengthy and time-consuming duties for Institute members. Although the Committee has been in operation for less than a year, it has already had requests of this nature, which it has had regretfully to decline. Its prime purpose as explained above, is to act as an International Registration Authority for two genera of plants. Beyond that, it will assist all Institute members to the best of its ability in endeavours to interpret the text of the Horticultural Code; and even if enquirers so desire, of the Botanical Code.

The mere fact that it has already found it necessary to decline many requests outside of these prime mandates, it regrets extremely; and proffers apologies to rejected enquirers. It ventures, however, to interpret the fact that many requests have been made, as proof of the genuine interest Institute members and other horticulturists have in matters of floral nomenclature and as justification of the preliminary steps that the Institute has taken to carry out its accepted task on behalf of the International Union of Biological Sciences. It hopes in the near future to be able through the courtesy of the Editor of 'New Zealand Plants and Gardens' to publish occasional notes in that Journal in explanation and interpretation of matters in both the Botanical and the Horticultural Codes of Nomenclature.

C. M. SMITH,

Committee Chairman.

REPORT ON 'NEW ZEALAND PLANTS AND GARDENS' THE OFFICIAL JOURNAL OF THE INSTITUTE FOR THE YEAR 1958.

The Dominion Council at its meeting on 15th April, 1958, re-appointed as the Publications Committee for the year 1958-59 the following Committee: Mr. A. M. W. Greig (Chairman), Mrs. A. J. du Pont, Messrs. W. K. Dallas,

E. Hutt, J. F. Living, L. F. Sired and J. P. Salinger with, as ex officio members, K. J. Lemmon (Dominion Secretary) and G. A. R. Phillips (Editor). This Committee met three times during the year and tabled its report and recommendations to Dominion Council. This report is therefore confined to a general review of subjects which have been endorsed by Dominion Council and are presented to this Conference for the information and opinions of members.

1. Contract with Printers:

Messrs. Stylex Print Ltd., of Palmerston North has been given a contract for the printing of 'New Zealand Plants and Gardens' quarterly for the year 1959.

In relation to the printing charges, this means a financial saving to the Institute of approximately £40 per issue and a forward contract has enabled the printer to make a bulk purchase of suitable paper.

2. Date of Publication:

Publication dates have been determined as the middle of the months of June, September and December with distribution by the 20th of the same months. The March issue, however, will be a little later than these dates as this issue is to cover a report of the Dominion Conference held in February each year.

Articles for publication must therefore be in the hands of the Editor by the 10th of February, May, August and November, and advertisements in the hands of the Dominion Secretary by the last day of the same four months.

3. Finance:

A separate Publications account is being tabled to Conference. Income is derived from an allocation from members' subscriptions (8/- for the past year), from an annual grant by the Internal Affairs Department and from advertising. The Institute should not be dependent on the annual grant for the issue of its official journal; an increase of 1,000 in membership is necessary and the Institute is urged to launch a drive for membership so as to place its Journal on a sound financial footing. To stimulate overseas membership, 20 persons outside New Zealand with known interest in horticulture have been supplied with specimen copies and invited to join the Institute. Advertising rates have been reduced from £10 to £7/10/- per page with provision also for small advertisements at the rate of £1/5/- per inch. Regular advertisers are desired and each District Council is requested to make one person responsible for obtaining advertisements from local firms with Dominion coverage — such nominee to keep in direct touch with the Dominion Secretary. Expenditure from the Publications account consists of payments of an honorarium to the Editor of £200 and fees to authors of articles at the rate of £2/2/- per 1,000 words to New Zealand authors and £3/3/- for overseas authors; the cost of printing and despatch of a 48 page journal with illustrations and cover which amounts approximately to £200 per quarter.

As the Journal is one of the main benefits of membership, the sale of the Journal on bookstalls has not been recommended.

4. Relationship with Specialist Societies:

A closer liaison with certain specialist societies is being developed through the medium of 'New Zealand Plants and Gardens,' by the Institute granting permission for reprinting of articles or by a special section being set aside in the Journal for articles sponsored by the Society. This innovation on behalf of the Auckland Lily Society commences in June 1959. The Institute is adopting the principle of consulting the National Organisation, should any district specialist society, such as the Auckland Lily Society, initiate action on the above lines.

5. Reprints:

Many authors of articles published in the Institute's Journal seek reprints of their articles. The basis on which reprints are available is that the author

must make a request for reprints a month before the article is printed. If no fee is payable — 15 copies of the Journal will be supplied free. Normally the minimum quantity will be 100 reprints chargeable at printer's cost plus 50% where articles are published on behalf of societies. Additional Journals may be obtained at 2/6 per copy per member of Society and any further reprints will be on a basis of cost plus 50%.

6. Index for Journal:

An offer by the Editor to prepare free of charge a list of contents and full index including plant names for Volume 2 has been accepted, provided the index is restricted to 8 pages and a satisfactory quotation from the printers is received.

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 suitabily 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.

LIST OF ASSOCIATES OF HONOUR

As at 30th September, 1958.

Name		Town			
Mr. A. W. Anderson	 	Timaru			 1956
Mr. M. J. Barnett	 	Christchurch			 1948
Mr. A. H. Cockayne	 	Wellington			 1948
Mr. C. W. Corner	 	Napier			 1953
Dr. G. H. Cunningham	 	Auckland			 1958
Mr. W. K. Dallas	 	Wellington			 1950
Mr. V. C. Davies	 	New Plymout	h		 1952
Mr. C. E. Foweraker	 	Christchurch			 1951
Dame Elizabeth Gilmer	 	Wellington			 1952
Mrs. E. Gower	 	Wanganui			 1955
Mr. A. W. Green	 	Hamilton			 1955
Mr. A. M. W. Greig	 	Wellington			 1958
Mr. M. Gudex	 	Hamilton			 1950
Mr. H. M. Hammond	 	Hamilton			 1957
Mr. W. J. Humm	 	Christchurch			 1951
Mr. J. P. Hudson	 	Loughborougl	, Eng	gland	 1949
Mr. E. Hutt	 	Wellington			 1953
Mr. G. E. Knowles	 	Timaru			 1948
Mr. T. D. Lennie	 	Christchurch			 1948
Mrs. E. I. Lovell	 	Hawera			 1951

Sir Robert Macalister	 Wellington .			 1951
Professor L. W. McCaskill	 Chuiatabunah			 1954
Mr. J. A. McPherson	 Auckland .			 1953
Mr. R. McC. Miller	 Whangarei .			 1952
Mr. J. Passmore	 Dunadia			 1957
Mr. F. Penn	 Auckland			 1950
Mr. W. H. Rice	Auckland			 1948
Mr. A. H. Shrubshall	 Classiat alamak			 1948
Mr. L. F. Sired	Wallington			 1954
Mr. C. M. Smith	Wallington			 1955
Mr. E. Taylor	Chaistabunah			 1953
Mr. P. Thomson	Ctuatford			 1952
Mr. G. W. Wright	A al-lamd			 1948
Mr. H. R. Wright	T			 1948
Dr. J. S. Yeates	Palmerston No			 1956
	 TOTAL	_	35	

CITATION IN SUPPORT OF THE NOMINATION OF Mr. M. R. SKIPWORTH, B.Sc. (Forestry), N.D.H. (N.Z.), F.R.I.H. (N.Z.).

Nominated by the Otago District Council for election as an Associate of Honour of the Royal New Zealand Institute of Horticulture (Inc.).

Mr. Skipworth has been a member of the Royal N.Z. Institute of Horticulture for many years, a Fellow for the past 10 years and a member of the Executive Committee, Otago District Council, for some considerable time.

His Horticultural qualifications include:-

Batchelor of Science (Forestry);

National Diploma of Horticulture (N.Z.);

Superintendent of Reserves, Dunedin, since 1939.

Some of his horticultural interests are:-

A member of the Executive Committee N.Z.

Institute of Park Administration.

Past-President of N.Z. Institute of Foresters.

Vice-Patron Dunedin Horticultural Society.

Member of Rhododendron Association of N.Z.

Member Dunedin Naturalists Field Club.

Member N.Z. Fuchsia Society.

Member Dahlia Society of New Zealand.

Among his horticultural activities are:-

- He had given a large number of lectures on horticultural and silvicultural subjects to various interested Societies and Bodies.
- 2. He has judged at Horticultural Shows for many years.
- In 1939 he was sent overseas by the Dunedin City Corporation to gain further information on horticulture and Park Administration, visiting Australia, Great Britain and the United States of America.
- He is always willing to give information on horticultural matters to interested persons.
- 5. He assists young people interested in horticulture as a career.
- He played a most important part as Secretary of the Committee which staged such a successful Otago Centennial Show in 1948.

Under Mr. Skipworth's direction, as Superintendent of Reserves in Dunedin, the Department has been re-organised and modernised to a marked extent, especially in respect to administration, mechanisation, office accommodation and workshop equipment, and flower bedding displays.

CITATION IN SUPPORT OF THE NOMINATION OF Mr. JOHN R. TEMPLIN, F.R.I.H.(N.Z.),

Nominated by the Canterbury District Council for election as an Associate of Honour of the Royal New Zealand Institute of Horticulture (Inc.).

Over the past 30 years Mr. John Templin, President of the Canterbury Horticultural Society has rendered outstanding service to Horticulture.

In 1937 he was elected as a member of the Management Committee of the Society and in 1942 he became its Chairman, a position which he held until 1956 when on the death of Sir Heaton Rhodes, he was unanimously elected its President.

It was John Templin who introduced the scheme of Women's Garden Clubs, and after addressing meetings and explaining the scheme, four such clubs were formed in Christchurch. The idea rapidly grew in popularity and today there are over 20 clubs with an average membership of 40 or more affiliated to the Canterbury Horticultural Society. In addition to these and as a result of their activities, a large number of similar clubs, not only in Christchurch, but in the country districts of Canterbury have been formed. Today the scheme initiated by John Templin has spread to many parts of New Zealand.

When Mr. Templin joined the Society it was financially weak, but today mainly due to his enthusiasm, organising ability, and management, it is in a flourishing condition with a membership of over 2000.

It was not long before Mr. Templin, as Chairman of the Management Committee, realised that the activities of the Society were considerably hampered through the lack of a suitable hall in which to stage their exhibitions. He immediately put forward a scheme for raising funds for the construction of a Horticultural Hall for Christchurch. In due course a valuable property near the centre of the city was purchased. Today the plans for a hall estimated to cost approximately £200,000 are completed and the Society has in hand assets to the value of over £50,000 towards the project. It is anticipated that building operations will commence during 1959.

The success of the venture is to a large extent due to the foresight and zeal of Mr. Templin who, as Chairman of the Society's Building Board of Control, has managed its affairs. By his example he has inspired many others to take an active interest in the project. In all he has donated some £11,000 to the Building Fund. In addition he has donated several trophies and prizes not only to the Canterbury Horticultural Society, but to other horticultural organisations.

Mr. Templin is a member of the Christchurch Beautifying Association, Civic Beautification Committee, the New Zealand Lily Society, the New Zealand Rose Society, and many other similar organisations. He is a Fellow of the Royal N.Z. Institute of Horticulture and for many years has served on the Executive of the Canterbury District Council.

He has been a most successful exhibitor at many of the Horticultural Society's Shows and his garden has repeatedly been adjudged the best in its class in the home garden competition conducted by the Society and on occasions it has been pronounced the best garden in Christchurch.

It would be safe to say that no worthy horticultural project would not receive the sympathy and support of Mr. John Templin. He is also genuinely interested in horticultural training and has the welfare of horticulture in New Zealand very much at heart. Few men have done more for horticulture in Canterbury than he has, and it has all been done in a most unassuming manner, without any suspicion of personal gain or self aggrandizement.

SOME IMPRESSIONS OF THE 1959 CONFERENCE

This Annual Meeting and Conference of Delegates was held in Timaru on Thursday, 12th February, 1959, under the Chairmanship of the Dominion President, Mr. John Houston.

The Conference was officially opened by the Prime Minister, the Rt. Hon. Walter Nash, who visited Timaru specially for this purpose on this, his 77th birthday. He congratulated the Institute on its wide range of interests and activities and especially commended the Institute's Journal, 'New Zealand Plants and Gardens' which he had studied with interest prior to the Conference. He gave figures on horticultural production in New Zealand stating that there were 3000 commercial gardens producing vegetables for market or processing on 25,000 acres. There were 430 registered nurseries and 1,990 orchards covering 14,580 acres.

In the field of rehabilitation of ex-servicemen in horticulture over 90% of the 356 ex-servicemen had established themselves successfully on their own holdings.

Mr. Nash stayed for morning tea and was given vocal birthday greetings prior to his departure.

Mr. Houston then proceeded to conduct the Conference expeditiously but with ample time for discussion.

The annual reports of Dominion Council, District Councils and sub-committees were received and in speaking to the report of the Committee on Plant Nomenclature, the convenor, Mr. C. M. Smith emphasised three matters:—

Firstly, that Junior members would be co-opted to provide continuity to what would be a permanent committee.

Secondly, that the Institute had a dual capacity as a Registration Authority, being the International Registration Authority for the genera *Hebe* and *Leptospermum*, and that it could act as a National Registration Authority for other genera, on request from the New Zealand organisations and after approval from the International Registration Authority.

Finally, he stressed that neither this Committee nor its members could act as consultants to individuals on matters of Nomenclature; much could in fact be learnt and queries solved by studying the *International Code of Nomenclature for Cultivated Plants*. The Institute had the honour of being the sole official distributor of the Code in Australasia.

At the election of officers, Mr. Houston was again unanimously elected Dominion President with acclamation.

The meeting proceeded until the afternoon when the official proceedings were concluded by the most interesting address by Mr. A. M. W. Greig.

The Banks Lecture presented by Mr. A. W. Anderson was somewhat abbreviated, due to a floral fashion display organised for later in the evening. Mr. Anderson showed outstanding coloured slides of South Canterbury countryside and native plants. The hall was filled to capacity, in fact it was 'standing room only' for late comers.

In the evening prior to the Conference visiting delegates were informally received and entertained by local District Members under the aegis of Mr. K. B. Burns.

On Friday, they were taken for two most interesting coach visits, firstly for a drive round Timaru to view home gardens in general and then to Mr. Burns' property of 'Otiritri.' Those of us from other parts were surprised and delighted at the great range of plants that were grown and their obvious health and vigour; we also saw the famous golden *Pinus radiata* tree in an adjoining property.

In the afternoon further areas of Timaru were visited and the day finished at Timaru Public Gardens where the fine vistas of grass, trees and lagoon were

admired. After afternoon tea, thanks were expressed to our hosts, the Mayor of Timaru (Mr. R. E. White), Councillor Shacklock, Mr. R. Scott and the many other people who had contributed so much to making this another successful and enjoyable Annual Conference of the Royal New Zealand Institute of Horticulture.

TIMARU CENTENNIAL FLORAL WEEK

The Institute's Conference was held appropriately during the Timaru Centennial Floral Week; two other organisations, the New Zealand Institute of Park Administration and Interflora Pacific Unit Ltd., held their conferences during the same week.

South Canterbury had set out to make a success of this week, and from a visitor's viewpoint, this aim was certainly achieved. The main feature was the Centennial Floral and Horticultural Exhibition at Caroline Bay which was presided over by the doyen of South Canterbury horticulturists, Mr. G. E. Knowles, an Associate of Honour of the Institute. Besides the local horticultural show, there were outstanding displays set up by neighbouring organisations. Among these were noted Christchurch City Council which displayed a most interesting collection of tropical plants, the Canterbury Horticultural Society which exhibited cut flowers, fruit and vegetables and the Waimate Horticultural Society had a similar exhibit mainly of flowers. In the Show itself, the children's classes were very well supported and showed great ingenuity and imagination, especially in the use of vegetables. The Floral Courts arranged by Women's Organisations were all delightful.

Of particular interest was the special display of local products provided by the Counties of Geraldine, Levels, Mackenzie and Waimate. These truly brought the country to the city displaying products ranging from wool to domestic preserves.

In addition there was a good representation from trade firms and other organisations.

On the Saturday, there was a floral procession. It is a matter of regret that the writer was not present to see this procession, but some of the floats were seen in preparation and there is no doubt that they showed much forethought and beauty in arrangement. From inference, it is more than likely that this procession also was a great success.

REPORT OF THE EXAMINING BOARD

Report:

MEETINGS of the Examining Board have been held on 5 occasions throughout the year. Set out hereunder is a brief report on the matters dealt with by the Board:—

SYLLABUS OF EXAMINATIONS: The Examinations Syllabus of the Institute includes the following Diplomas and Certificates:—

(a) National Diploma in Horticulture — N.D.H. (N.Z.).

(b) National Diploma in Fruit Culture — N.D.F.C. (N.Z.).
(c) Certificate in Vegetable Culture — C.V.C. (N.Z.).

(d) Certificate in School Gardening — C.S.G.(N.Z.).

(e) Seedsman's Certificate — S.C. (N.Z.).

Statutory authority has been granted for the issuing of Diplomas and/or Certificates in Beekeeping, but the prescriptions for this examination are still under review with the National Beekeepers' Association, and should soon be ready for adoption. The prescriptions for "Principles of Botanical Classification" have been modified.

'GUIDE TO STUDENTS': The revision of this booklet which contains valuable guides and suggestions to examination students, has now been almost

completed and will shortly be in circulation. The assistance of Mr. J. H. Glazebrook of Lincoln College in this revision is acknowledged with sincere

APPLICATION FOR REGISTRATION FOR EXAMINATIONS: During the year applications were received from new students for the following examinations :-

National Diploma in Horticulture	-	-	-	-	-	21
National Diploma in Fruit Culture	-	-	-	-	-	2
Certificate in Vegetable Culture	-	-	-	-	-	1
Certificate in School Gardening	-	-	-	-	-	3

SPECIAL EXAMINATION PRIZE AWARDS: The three special Prize Awards offered annually at examinations were this year awarded as follows:

- (a) Cockayne Gold Medal (to the most successful Candidate completing the National Diploma in Horticulture)-To L. J. Metcalf of Christchurch.
- (b) J. A. Campbell Memorial Prize (to the most successful Candidate completing the Intermediate Section of the National Diploma in Horticulture Examination)-To R. Boggust, of Palmerston North.
- (c) David Tannock Memorial Prize (to the Candidate gaining the highest marks in the Oral and Practical Stage III Examination for the National Diploma in Horticulture)-To A. C. Morgan, of Christchurch.

During the year, consideration has been given to the inauguration of a special award for the Junior Section of the National Diploma in Horticulture and the approval of the Dominion Council has been granted for such an award to the Candidate gaining the highest marks in the Oral and Practical Stage I Examination. This award will be known as a Memorial Prize, in memory of horticultural apprentices and young journeymen who gave their lives in World War II. It is expected that this new award will be inaugurated at the 1959 examinations. The setting up of an endowment Fund for this prize is under consideration at present.

1958 EXAMINATIONS:

N.D.H. Examination:

(1) Results — these are appended hereto.
(2) Statistics — the following tables will be of interest (1957 figures will appear in parenthesis for comparative purposes):—

Junior Intermediate Diploma

I. D. III. Bicementeron.	D core	001	I week in	Culture	Pepe	Linere
Number of Entries Number of Passes Percentage of Passes Average marks (passes only)	(35) (15) (42.8) (65.5)	43 21 48.8 59.7	(26) (23) (88.4) (61.6)	27 22 81.5 63	(9) (8) (88.8) (66.2)	$\begin{array}{c} 24 \\ 16 \\ 66.6 \\ 62 \end{array}$
N.D.F.C. Examination:						
Number of Entries Number of Passes Percentage of Passes Average marks (passes only)	(3) (3) (100) (59)	$ \begin{array}{r} 7 \\ 6 \\ 85.7 \\ 64.1 \end{array} $	(-)	_	(6) (5) (83.3) (68.6)	8 6 75 68
C.V.C. Examination: Number of Entries Number of Passes Percentage of Passes Average marks (passes only)	(4) (2) (50) (56.5)	$\frac{4}{2}$ 50 57.5				
				-		

FORM OF CERTIFICATES: During the year new Junior and Intermediate forms of certificate were designed and printed.

An appropriate certificate to accompany the Cockayne Gold Medal has also been designed.

ORAL & PRACTICAL EXAMINATIONS: While on visit to England during 1957, Mr. E. Hutt, formerly chairman of the Examining Board, attended to observe the conduct of examinations by the Royal Horticultural Society. On his return to New Zealand, Mr. Hutt has made available to the Board his experience of these examinations and the methods adopted, particularly in the Oral and Practical examinations, the standard of which was very high. There was only one centre in the United Kingdom for the conduct of these oral and practical examinations; all candidates having to make their own travel arrangements to attend at this one centre. There was a distinct advantge to all candidates, and it greatly facilitated the efficient conduct by examiners, to have them all present at the one time, performing the examination under identical conditions as regards weather, soil conditions, equipment, material, working specimens, and There was thus no room for disparities, as often occurs general facilities. where these examinations are held in two or more different localities. standard of our examinations suffer considerably thereby, and it is most desirable that this standard be maintained at the highest possible level. Bearing this in mind, and with the benefit of Mr. Hutt's experience, not only while in England, but also as one of the Board's examiners in our own Oral and Practical examinations, supported also by the opinions of other members of the Board experienced in these matters, the Examining Board has recommended to the Dominion Council that the 1959 Dominion Conference be asked to consider the following proposal:-

"That all Oral and Practical Examinations be held in one Centre for all

candidates each year."

ACKNOWLEDGMENTS: The Examining Board expresses its thanks to all who have assisted them throughout the year in the successful conduct of the examinations:-

(a) The panel of examiners.

(b) The panel of examiners responsible for oral and practical examinations.

(c) The Christchurch Parks and Reserves Department and Massey Agricultural College (Palmerston North), for facilities and assistance with oral and practical examinations.

(d) The honorary supervisors at the 13 centres for written examinations.

(e) The Director and Officers of the Horticulture Division.

EXAMINATION RESULTS

LIST OF SUCCESSFUL CANDIDATES.

The subjects in which passes were gained are shown against each candidate's name in parenthesis in code numbers as follows:-

$NATIONAL \ DIPLOMA \ IN \ HORTICULTURE - N.D.H.(N.Z.)$ Junior Examination:

Bookkeeping.

(2) Horticultural Botany.

(3) Plant Protection Stage I.

(4) Oral and Practical Stage I.

Intermediate Examination:

(5) Principles of Botanical Classifiication.

(6) Horticulture Stage I.

(7) Special Subject.

(8) Oral and Practical Stage II.

Diploma Examination:

(9) Horticulture Stage II.

(10) Plant Protection Stage II. (11) Oral and Practical Stage III.

(12) Thesis.

$NATIONAL\ DIPLOMA\ IN\ FRUIT\ CULTURE\ --\ N.D.F.C.(N.Z.)-$

Junior Examination:

(1) Bookkeeping.

(3) Plant Protection Stage I.

(4) Oral and Practical Stage I.

Diploma Examination: (10) Plant Protection Stage II.

(14) Fruit Culture Stage II.

(11) Oral and Practical Stage III.

(13) Horticultural Economics.

CERTIFICATE IN VEGETABLE CULTURE — C.V.C.(N.Z.)—

(16) The Plant and Plant Breeding.

(17) Vegetable Production.

Auckland:

Barber, E. M. (N.D.H.) 5, 7. Otto, J. W. S. (N.D.H.), 4, 5, 6. Parr, J. Miss (N.D.H.) 3. Robinson, J. A. (N.D.H.) 4, 7. Rogers, W. M. (N.D.H.) 9, 11. Say, J. S. (N.D.H.), 12. Walker, C. M. (N.D.H.), 5, 6, 7. Wood, G. A. (N.D.H.), 10. Young, C. C. (N.D.H.), 2, 3, 4.

Bulls:

Eales, M. R. (C.V.C.), 17.

Christchurch:

Aitken, N. A. (N.D.H.), 2. Cadigan, P. J. (N.D.H.), 5, 6. Gunn, G. S. (N.D.H.), 2. Jeffrey, J. (N.D.H.), 10. Macfarlane, G. L. (N.D.H.), 7, 8. Metcalf, L. J. (N.D.H.), 12. Morgan, A. C. (N.D.H.), 9, 10, 11. Nanson, R. J. (N.D.H.), 9, 10, 11. Nicholls, B. L. (N.D.H.), 3. Van den Bosch, W. (N.D.H.), 9, 10, 11.

Hamilton:

MacArthur, A. D. (N.D.H.), 6. Martin, E. J. (N.D.H.), 1, 4, 6. Nelson:

Van Geldermalsen, M. (N.D.F.C.), 11, 13, 14.

New Plymouth:

Hansen, J. R. (N.D.H.), 2. Jellyman, A. D. (N.D.H.), 1, 2, 3.

Palmerston North:

Boggust, R. (N.D.H.), 5, 6, 7, 8. Jackson, G. C. (N.D.H.), 5, 7. Laurenson, J. B. (N.D.H.), 4, 6, 7.

Roxburgh:

Davy, R. G. C. (N.D.F.C.), 10, 11, 14.

Te Awamutu:

Broadbent, N. P. (C.V.C.), 16.

Wellington:

McGregor, I. A. (N.D.H.), 10. Robinson, W. D. (N.D.H.), 2. Troy, T. P. (N.D.F.C.), 1, 3, 4. Walker, R. W. (N.D.H.), 2.

Dallenger J. (N.D.H.), 2, 3, 4. Van der Mespel, G. J. (N.D.F.C.), 1, 3, 4.

The following candidates have completed sections:

Junior N.D.H .:

J. B. Laurenson.

E. J. Martin.

J. W. S. Otto. J. A. Robinson. J. Dallenger.

Intermediate N.D.H .:

R. Boggust.

P. J. Cadigan.

Final N.D.H .:

L. J. Metcalf. J. S. Say.

DISTRICT COUNCIL MEETINGS

NORTHERN WAIROA

November, 1958

The November meeting of the Northern Wairoa District Council of the New Zealand Institute of Horticulture was held in the Band Room. The chairman, Mr. P. Walden, presided over a good attendance and extended a welcome to visitors and new members.

Visitors to the meeting were members of the Aoroa W.D.F.F. garden circle, who were welcomed on becoming affiliated with the Northern Wairoa District Council.

A committee was set up to arrange the schedule for the dahlia display to be held in Dargaville during February or March.

It was announced that the visit to the Parnell Rose Gardens would be made, providing sufficient interest was shown. The general public as well as members would be welcome to join the party, which would be leaving at 8 a.m.

A letter of thanks was to be forwarded to Mr. R. Finch, Whangarei, for opening his gardens to members and for entertaining them at morning tea. A party of 14 had made the journey to Whangarei on this occasion.

Mr. H. W. Gaukrodger, who is an orchid enthusiast, displayed three spikes of cymbidiums which he had grown.

Guest speaker at the meeting was Mr. O. Blumhardt, Pakaraka, Bay of Islands. Mr. Blumhardt, who is a nurseryman, spoke on shrubs suitable for growing in Northland and also displayed an outstanding collection of blooms such as rhododendrons, azaleas, brooms, camelias, daphne, etc.

The president thanked Mr. Blumhardt for his instructive address and for the lovely display.

December, 1958

The final meeting for the year of the Northern Wairoa District Council of the New Zealand Institute of Horticulture was held in the Band room. In the absence of the chairman, Mr. P. Walden, Mr. H. W. Gaukrodger presided and extended a welcome to visitors and new members.

A feature of the meeting was the presentation to Mr. C. C. McKavanagh of a certificate marking his election as a Fellow of the Royal New Zealand Institute of Horticulture. Mr. Gaukrodger congratulated him on the honour and referred to the valuable work Mr. McKavanagh had done towards the formation of the Northern Wairoa District Council.

Guest speaker was the rose specialist, Mr. Cutler, New Lynn. He spoke on miniature roses, florabunda, hybrid teas and all wellknown types of roses. The speaker said he had noticed a lack of brilliance in the colour of roses grown in Northland and thought it might be caused by a lack of iron in the soil.

Mr. Cutler said he would like to see established in the North a public rose garden for the testing of new roses. Each year 250 to 300 new varieties were imported into New Zealand and these were test grown for three years in various localities before they were put on the market.

Mr. Cutler was thanked by Mr. R. G. Sills on behalf of the meeting and a bouquet was presented to Mrs. Cutler.

February, 1959

Horticulturists commenced their year's activities with the February meeting which was held in the Bandroom, Mr. P. R. Walden presiding. There was an excellent attendance of 64 members.

It was announced that Mr. and Mrs. Walden would attend the conference of the New Zealand Institute of Horticulture, Mr. Walden to act as delegate in the absence of the secretary, Mrs. J. L. Russell, who was unable to attend because of illness in the family. The second delegate, Mrs. S. J. Newby, accompanied them to the conference which was held in Timaru.

At the conclusion of business, Mr. H. W. Gaukrodger presented a certificate of membership to Mr. Walden marking his election as a Fellow of the Royal New Zealand Institute of Horticulture. Mr. Walden thanked members for nominating him for this honour.

Mr. J. A. Robinson, of Devonport, was the guest speaker at the meeting, giving an in tructive address on gerberas. He recommended October to February as the planting time and that liberal amounts of compost and farm manure should be well worked into the soil before planting. A well-drained, open position was accessary and the fertiliser Mr. Robinson recommended was four pounds of bonedust to four pounds of dried blood and two pounds of sulphate of potash. This should be worked into the soil for a fortnight before planting and broadcast round the plants at intervals during growth. In very light soils the top of the crown should be level with the ground, while in heavy soils it should be above ground level. Mr. Robinson also gave some advice for the picking and treatment

of gerbera blooms. It was important to see that the stalk just behind the flower head was firm and the blooms should be soaked in deep water overnight. Mr. Robinson also demonstrated hybridising and was accorded a vote of thanks for his informative address.

WHANGAREI DISTRICT COUNCIL

Chairman: Mr. C. R. Ensor, 38 Cairnfield Road, Whangarei. Secretary: Mrs. E. M. Sands, 6 Dundas Road, Whangarei. Editor: Mr. T. B. Lendrum, 40 Mains Avenue, Whangarei.

Mr. Oswald Blumhardt of Pakaraka talked on 'Shrubs suitable for Northland' at the last meeting. Amongst the highlights of his talk was a display of hybrid rhododendrons, that he had grown from seed of his own crossing. These seedlings are flowering now and show some great carmine heads of vigorous flowers.

Mr. Blumhardt used coloured slides and specimens from his nursery to demonstrate the talk, during which he stressed that Northland had many local climates and soils so that before planting, careful consideration should be given to the individual requirements for the many varied plants available to gardeners.

He divided plants into those from cold climates which would do better in inland areas, such as rhododendrons, camellias, Malus, Prunus and Clematis, those for poorly drained areas such as Callistemon, Cotoneaster, brooms, Viburnum and Photinia, and those for drier coastal soils such as Adenandra, Adonis, Grevillea and Protea.

Specimens of Cape Tulip from a Whangarei garden were displayed — and members told that it was a most undesirable garden plant because of its toxic nature and because of its habit of reproducing by multiplying bulbs. It is very easy to spread the bulbs among garden soil adhering to other plants being moved.

Two other garden escapes have received attention lately — Crow garlic — which is responsible for tainting both milk products and meat after being ingested by animals.

Patterson's Curse (*Echium plantagineum*) a blue flowered annual has been flowering in many Whangarei gardens lately. Seed of this plant has been introduced to New Zealand in Australian wheat in the past.

PUBLICATIONS RECEIVED

THE RHODODENDRON, edited by Beryl Leslie Urquhart; with 18 colour plates from paintings by Carles Reifel. (Published by the Leslie Urquhart Press, Sharpthorne, Sussex, England, 1958.)

Those who have seen 'The Camellia' published by the same press in 1956 will have some idea of the standard set by the present volume. It is a large volume (page size $11\frac{3}{4}$ in. x $15\frac{9}{4}$ in.) produced to the very highest standards and one that all rhododendron lovers, and many others, will covet even if they cannot afford to buy it. The colour plates are magnificent. They are drawn from the best forms of the eighteen species which could be found in England, although that of R. lindleyi appears less attractive than the species as we see it in New Zealand. The plates alone are more than worth the price of the book, and many volumes will be bought by 'art' dealers who will sell the framed pictures at guineas apiece.

The colour plates are the major attraction of the book, but by no means the only one. Keen rhododendron growers will find the first forty of the large pages contain a great deal of interesting reading, presented very well indeed. There are on the end pages of both covers large topographical maps showing the main rhododendron hunting areas of S.E. Asia, and overprinted are the

names of the great explorers of each particular area. Brief reviews of the work of these collectors are also given, and a concise history of the introduction of the rhododendrons into England and their early hybridising there. Fifteen pages are taken up with very informative notes on the eighteen species shown in the colour plates.

A five-page 'Commentary' by Captain Frank Kingdon-Ward is interesting not only for the account of his experience in exploring for and collecting these plants, but also for the melancholy reason that it is dated January, 1958, just three months before his sudden death. Captain Kingdon-Ward was the greatest plant hunter of our time and the New Zealand Rhododendron Association has grown and distributed many of the species sent direct to it from his expeditions—his first was in 1911 and his last in 1956.

'The Rhododendron' is a memorable publication and can be highly recommended both to those who grow these plants, and to those who collect fine books. — J. S. Y.

THE DAFFODIL AND TULIP YEAR BOOK, 1959. (Published by the Royal Horticultural Society, London.)

I am very pleased to see this issue dedicated to Mr. A. Simmonds, O.B.E. V.M.H., who has given such valuable service over the years to the Narcissus and Tulip Committee of the R.H.S. Miniature daffodils have an ever growing host of admirers and Mr. Alec Gray's article on the hybridisation of these charming flowers will stimulate still deeper interest. New daffodils from Tasmania I can remember were attractive features at the English daffodil shows twelve or more years ago and Mr. W. Jackson contributes an interesting article on the breeding of pink daffodils in that country. One of the most interesting articles is that by Mr. Th. Hoog where he describes the tulip collectors that were employed by Messrs. C. G. Van Tubergen in the early days. A book no daffodil enthusiast can afford to be without.

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