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# JOURNAL OF THE ROYAL NEW ZEALAND INSTITUTE OF HORTICULTURE

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EDITORIAL

## AN AWARD OF MERIT

Two unrelated events occurred during the last twelve months. Our Award of Garden Excellence Sub-Committee was asked to report on the possibility of an Award of Merit and the first Trial Ground Awards were made by the National Rose Society of New Zealand at their Palmerston North Trial Grounds.

The Sub-Committee reported that at present it was not feasible to promote an Award of Merit as the Institute has no Trial Grounds and at the moment there appears to be little hope of the Institute being able to provide Trial Grounds. We say "at the moment" advisedly for while there are no grounds for casting doubts on the correctness of the Sub-Committee's report the situation could change more rapidly than we anticipate. There are other specialist societies beside the Rose Society interested in Trial Grounds notably the Rhododendron Society.

Greatly increasing interest is being taken in hybridisation in New Zealand and this in itself will provide a great stimulus for the provision of Trial Grounds for many different genera. The proposed Plant Selectors' Rights Act could prove difficult to administer and police without Trial Grounds. Certainly we may be assured that the efforts of the Rose Society and other specialist groups in initiating Trial Grounds will be watched with the greatest interest by our Institute for if successful in fulfilling their purpose they must lead to the formation of trial grounds in other directions. At the same time there are many plants that whilst of great economic and aesthetic value are not sponsored by any specialist society and it could well become the lot of the Institute to test new introductions in these uncultivated fields.

Another intriguing thought could be the provision of Special Awards to be made by the R.N.Z.I.H. in association with specialist societies conducting their own trials grounds. Horticulture like every other phase of life is currently in a state of flux and at the moment research is being made into the changing role of our Institute. It is the watchdog of horticulture and it will not be surprising if within

the next decade an Award of Merit is instituted in fulfilling that role. It will not be a task entered lightly and we may be sure that any such horticultural project will be examined carefully by the best horticultural brains in the country. The co-operation of all organisations interested in horticulture could be required.

The Award of Garden Excellence Sub-Committee has done good work in drawing the attention of the gardening public and the horticultural trade to "good garden plants" and Trial Grounds testing new introductions would be complementary to this. Many new plants enter New Zealand every year and though many have received the highest awards overseas, overseas conditions are not New Zealand conditions and our gardeners are being asked to buy a "pig in a poke".

JOHN GOVER



### NEWS FROM DOMINION COUNCIL

**Loder Cup Committee:** Mr John P. Salinger has been appointed by the Minister of Agriculture to fill the vacancy caused by the death of Dr. L. J. Wild.

**Mr and Mrs Frank Knight** extend an open invitation to members visiting England to contact them at their home address, 88 Lower Guildford Road, Knaphill, Woking, Surrey (not thirty miles from London), telephone Brookwood 5388. They would be happy to assist visitors to see some of the better gardens. Mr Knight was formerly Director of the R.H.S. Wisley Gardens and delivered the Banks Lecture in Wellington, March, 1968.

**Plants Act:** This incorporates the new Plant Quarantine Regulations and having been passed by Parliament is expected to come into force about May, 1971. It does not concern itself with Plant Patents. The institute was represented by Mr H. Poole at a meeting of interested bodies and it seems that the Act will be satisfactory to all parties concerned.

**Award of Merit:** Miss Dingley, convener of the Award of Garden Excellence Sub-committee, reported that at present we have not suitable facilities in New Zealand to institute an Award of Merit.

**Role of the Institute:** Professor T. M. Morrison reported that a general feeling had emerged from discussions by the committee that a special committee to foster the strengthening and extending of District Councils and to cater for the horticultural interests of affiliated groups and individual members would be very desirable. The discussions included a meeting with the executive of the Waikato District Council which endorsed the above feeling. Accordingly the Committee intends to submit a resolution at the forthcoming Dominion Conference to appoint a sub-committee to further the above. Further details may be found in the relevant minutes supplied to your local District Council.

**Fourth International Rock Garden Conference:** The attention of members is directed to this event that will take place at Harrogate, N. England, 21st to 25th April next. Correspondence should be directed to the Secretary, Mr E. M. Upward, 58 Denison House, 296 Vauxhall Bridge Road, London, S.W.1.

**Fellowship:** F.R.I.H.(N.Z.). Mr H. V. George, nominated by the North Taranaki District Council, was elected.



## CITATIONS FOR THE AWARD OF ASSOCIATE OF HONOUR

### CARL A. TESCHNER

*(It is with deep regret we advise that Mr Teschner passed away before the award was conferred upon him.)*

**Carl A. Teschner** has had a long and successful experience in the practice of horticulture extending over some sixty years and has rendered distinguished service to this pursuit. From his activities interests as an "average" gardener he progressed to the stage when his practical experience and knowledge were readily and freely made available to his fellow horticulturists.

Over the years his services as a lecturer were given on many occasions to horticultural societies, gardening clubs and circles, agricultural clubs and related bodies throughout Otago and Southland, taking much time in preparation, delivery and travelling, with no thought of remuneration. For some years he was a popular lecturer on the Gardening Session of 4YZ. He has contributed numerous articles to New Zealand and overseas horticultural journals.

Mr Teschner's Honorary Life Memberships include those of: The Alpine Garden Society (England) (for 25 years), American Rock Garden Club, N.Z., Iris Society-Dunedin Horticultural Society Club, N.Z., and Iris Society. In addition to these, he has been a very active member of other numerous horticultural organisations, notably as Secretary of the Alpine Garden Society (England)—N.Z. Section, the Dunedin Gardening Club, President of the Dunedin Gardening Club, the Dunedin Horticulture Society (1963-64-65-66) and the Otago District Council (R.N.Z.I.H.).

Whilst keen on general gardening Mr Teschner has specialised in the growing of Alpines and plants indigenous to N.Z., giving freely of his service and highly specialised knowledge to those who followed these particular hobbies. Exhibiting and judging at shows were additional activities undertaken.

The Otago District Council recommends that Dominion Council

give favourable consideration to its nomination of Mr Carl A. Teschner as an Associate of Honour R.N.Z.I.H.

### MRS KATIE REYNOLDS

**Mrs Katie Reynolds** has lived in Whangarei all her life and has inherited from her parents a deep love of plants and all nature. For nearly forty years she has been prominent in Northland horticultural circles. It is on record that she joined the Whangarei Ladies' Gardening Club in 1934 and soon Mrs Reynolds was in demand as one of the most versatile horticultural speakers in the area. A lover of all plants her great and most intimate interest has been our native flora.

Perhaps the greatest highlight of an extended career as a speaker was her three years (1963-66) giving the Garden Talk of the Air from Station IZN. Our nominee has also written extensively on Native Plants and other horticultural subjects for local and national publications. A noted grower, exhibitor and judge of many flowers, Mrs Reynolds is well known as a horticultural organiser and administrator, holding the highest office in many fields.

Among the organisations she has been connected with are the Whangarei Ladies' Gardening Club, Whangarei Daffodil Society, Whangarei Junior Gardening Club, Whangarei Native Wildflower Circle (founder and organiser), Whangarei Branch of the Cactus and Succulent Society (President two years), Whangarei Native Forest and Bird Society, Whangarei Rose Society, Whangarei District Council R.N.Z.I.H. (Chairman since 1967), Whangarei Junior Naturalists' Club, President of the Northland Horticultural Society.

Mrs Reynolds has always been concerned to inculcate a love of plant life in the young and has been active in School Sweet Pea Clubs and the Girl Guide and Ranger movement.

She was prominent in the organisation of the Cheeseman Memorial Show of Native Plants held at the Auckland War Memorial Museum for many years and held the position of Asst. Botanist at the Dominion Museum for two years.

Not this only, Mrs Reynolds found time to be a most active home gardener and established a comprehensive selection of native and exotic trees, shrubs and cut flowers on a half acre property following 1946. Since 1959 with her husband she has been developing two acres of a wet, windswept, clayey hillside into a most interesting garden, including a vegetable garden that is a showpiece, a productive orchard, and an outstanding collection of native plants, including several specimens of *Xeronema callistemon*, the remarkable liliaceous plant discovered on the Poor Knight's Islands in 1924, and first flowered on the mainland by Mrs Reynolds' mother.

Over the years Mrs Reynolds has become noted as an authority on

horticulture, botany and conservation and visiting experts have been grateful for her local knowledge and her willingness to help.

The Whangarei District Council places on record that Mrs Katie Reynolds has assisted horticulture faithfully and nobly and is honoured to nominate her for the Award of Associate of Honour of the Royal New Zealand Institute of Horticulture. (Abridged from original nomination.)

### **RALPH THOMAS FEAR**

**Ralph Thomas Fear**, born in Auckland in 1912, has lived most of his life in the Waikato and his active interest in horticulture commenced in 1938. As a member of various horticultural organisations in the Waikato he has at all times given his wholehearted support to their shows and other activities. As a member of the R.N.Z.I.H since 1951 he became a Committee member in 1954 and President in 1961. Since then he has been unanimously re-elected President every year and during this period the size and influence of the Institute has increased markedly.

As President, one of his first tasks was to organise the Memorial in memory of the previous President, the late A. W. Green, then as a member of the Maungakawa Scenic Reserve Board, he was a prime mover in the establishment of the Gudex Memorial Park, in memory of the late M. C. Gudex. During his period as President of the Hamilton Rotary Club, he co-ordinated the work of that body, the Institute and other organisations which resulted in the Memorial Monolith being erected in the park.

His long association with commercial horticulture has made him well known and respected by a large number of orchardists, market gardeners, nurserymen and others throughout New Zealand.

The personal interest of both Mr Fear and his wife in their own garden is proven in their winning on two occasions the Hamilton Garden Competition. At Whale Bay near Raglan they have established a small but unique coastal garden which demonstrates what can be done in such an unlikely situation.

During overseas visits he has visited many centres of horticulture and has willingly disseminated the knowledge acquired by giving talks.

When he became President of the Waikato District Council he reorganised it on a basis that has caused it to grow from strength to strength until it is the largest District Council in New Zealand and the present success of the R.N.Z.I.H. in this district is largely due to his enthusiasm and efforts.

The Waikato District Council unreservedly recommends Mr Fear for the Award of Associate of Honour of the Royal New Zealand Institute of Horticulture.

## PRUNUS GLANDULOSA AS A SHRUB AND ROOTSTOCK

By A. FARMER, N.D.H.(N.Z.), F.R.I.H.(N.Z.)

The pink and white forms of *Prunus glandulosa* commonly known as pink May or dwarf flowering almonds are very popular spring flowering shrubs in many countries. Readers may not realise that besides their ornamental value these dwarf bushes have been used experimentally as rootstocks for other *Prunus* species. This article gives the history of *P. glandulosa*, a description of the plant and results of rootstock tests in Auckland.

*P. glandulosa* came originally from central and northern China. In its wild state it is said to have borne only single flowers but during the course of its cultivation much improved double-flowered forms have appeared. Rehder claims that the double pink form was in cultivation by 1687, and that it was one of the first plants from China to reach the western world. D. Hay, Montpellier Nursery, Auckland, in 1872, listed double white and double pink forms under *P. sinensis* which was one of the earlier names for *P. glandulosa*. It seems that plants may have been introduced into New Zealand much earlier than 1872.

Most present day nurseries list *P. glandulosa* under flowering almonds or dwarf flowering almonds. Older publications refer to it as Chinese bush cherry, dwarf flowering cherry, bush almond, double bush almond, double white flowering plum and even double pink May.

There are several different forms of *P. glandulosa* growing in New Zealand. These include bushes with single white flowers *P. glandulosa* var. *alba*; double white var. *alba-plena* (Fig. 1); single pink var. *rosea* and double pink var. *rosea-plena*. There are also odd bushes which produce flowers intermediate in appearance.

### Description

All forms grow to a height of three to five feet and spread naturally by suckering to make clumps two to three feet wide. The slender, much branched bushes are deciduous becoming a mass of flowers during September or early October. The single flowered forms have blooms about one-half inch across whereas the double flowered forms have small, many-petalled, rose-like flowers about one and a quarter inches across. As the flowers fade the leaves appear. Young foliage is tinted reddish while the older lanceolate leaves are an attractive light green. Bushes with single pink flowers often produce fruits, which add to their attractiveness. The fruits are a dark purplish red, about three-eighths of an inch in diameter, roundish, with a small nipple at the apex. In autumn the leaves of pink-flowering bushes turn yellow with a red tinge. The bushes are attractive at most times of the year.



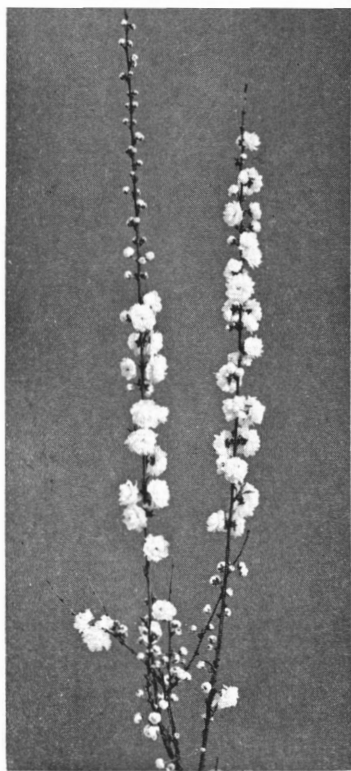


Fig. 1. The double white form of *Prunus glandulosa* (var. *alba-plena*).

Photos—J. W. Endt

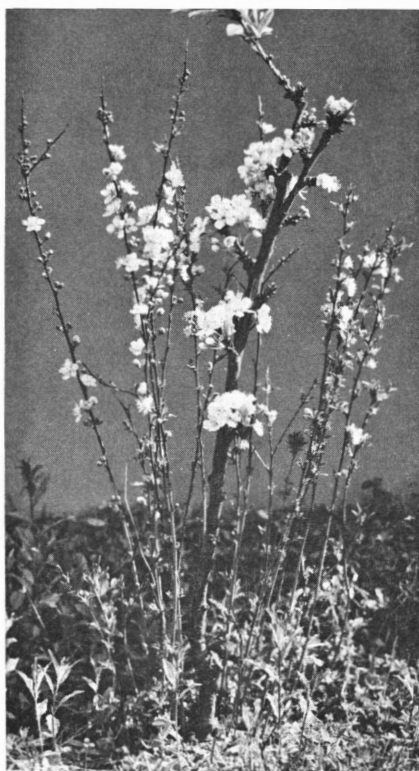


Fig. 2. Sultan plum on *P. glandulosa* rootstock. The scion variety and rootstock (suckering) both in flower: Planted 3 years.



Fig. 3. Sultan plum tree double worked using *P. glandulosa* as the intermediate (arrow) worked on Myrobalan rootstock: Planted 5 years.

### Improving the Show of Flowers

The beauty of the bushes can be marred during flowering by brown rot which attacks and kills the blossoms. This is particularly noticeable during moist, humid weather. Although it is not usual to spray ornamental plants as protection against brown rot, the application of Captan or lime sulphur could prove worthwhile. *P. glandulosa* flowers at the same time as many peach and nectarine trees, so the application of brown rot blossom sprays may coincide with those due on tree fruits.

The show of blossom can also be improved by pruning the bushes hard, almost to the older wood immediately after flowering. This will promote the growth of new wood on which next season's flowers are carried. To lessen the risk of silver leaf infection through pruning cuts it is preferable to prune the bushes on fine sunny days.

### Use of the Shrub

Because of their compact, neat habit, the bushes are suitable for planting in many parts of the garden or in containers. They are sufficiently hardy to be grown in all areas of New Zealand. *P. glandulosa* will thrive in average garden soil with normal drainage but it must have an open sunny situation. It is very suitable for planting in the shrub border in front of taller growing shrubs, or against a north wall. In England the double-flowered forms are often forced in glasshouses.

### Propagation

*P. glandulosa* when grown on its own roots suckers profusely. It can be propagated readily by unearthing suckers and dividing clumps. It is also comparatively easy to strike from cuttings. Plants can be worked on Myrobalan (Cherry plum) *P. cerasifera* stock but the dwarf scion variety often induces the vigorous plum stock to sucker. The single-flowered forms can be reproduced very true to type from seed.

### Affinity with Plum

Rootstock tests in Auckland have shown that a close relationship exists between *P. glandulosa* and plum. This species is one of a series of dwarf growing *Prunuses* being tried as a possible dwarfing rootstock for stone fruit. Trials using the beach plum (*P. Maritima* March.) were described in *N.Z. Plants and Gardens*, Vol. 5; 1964, and those with the Nanking cherry (*P. tomentosa*) in the *Journal of the Royal N.Z. Institute of Horticulture* Vol. 1, No. 1, 1968.

In the course of these trials seedlings of *P. glandulosa* budded with the Japanese plum (*P. salicina*) variety Sultan in 1955 readily took the bud and are still alive fifteen years later although only four feet tall. Even though bud unions have been mechanically strong, the combination produced stunted trees very prone to suckering (Fig. 2).

The Sultan plums produced on such unthrifty trees were rather small and lacking in flavour.

To overcome suckering, *P. glandulosa* was used as an interstock or intermediate stem piece in later tests. *P. glandulosa* was first budded to Myrobalan which served as the rootstock. The following year Sultan was budded to the intermediate stem piece (see Fig. 3). Double working prevented suckering but the resulting trees were extremely stunted and short lived.

Flowering almond has proved disappointing as a stock for plum but there is no doubting its merit as a spring flowering shrub. Its popularity may well increase as better fungicides become available for controlling brown rot blossom blight.



### PLANT RAISERS' AWARD

Nominations for the above Award for 1971 are invited and may be submitted to the Dominion Secretary of the Institute, P.O. Box 450, Wellington, by June 30th (closing date).

The Award is granted to individuals or organisations duly nominated, who have raised in New Zealand a cultivar considered to be sufficiently meritorious.

A cultivar is an assemblage of cultivated plants which are distinguished by any character significant for the purposes of horticulture and which, when reproduced sexually or asexually, retain their distinguishing features. The terms cultivar and variety are exact equivalents.

Any District Council of the Institute, or any horticultural organisation affiliated, or any incorporated horticultural society, may submit nominations.

Conditions of the Award may be obtained from the Dominion Secretary of the Institute.



### BOOK REVIEWS

Publishing houses may submit horticultural books by New Zealand authors for review and the Institute will endeavour to have such books reviewed by a suitable authority.

The Editor may also accept reviews of suitable books submitted by the reviewer over his own name.

There is no undertaking to review every book submitted.

## A GREEN FLOWERED NARCISSUS

by E. E. TOLEMAN, Hamilton

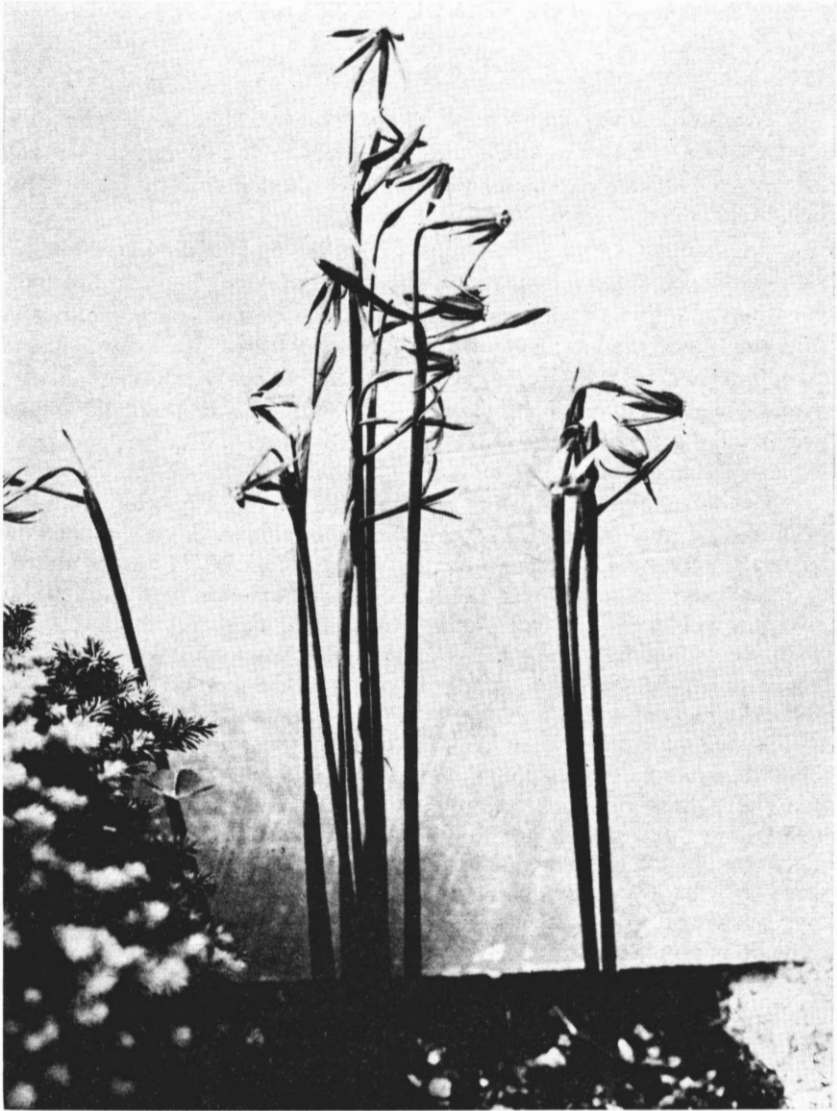
*Narcissus viridiflorus* SCHOUSB, was apparently first recorded by John Parkinson in the 16th century, but it is likely that it is known much earlier as it is regarded as one of the oldest species of narcissus.

It is one of the autumn flowering species, and in its native habitat starts to grow as soon as the first autumn rains fall after the rainless period of summer. A comparatively rare plant it is found only in a limited area of Southern Spain, around, and including Gibraltar, and parts of the coastal areas of Morocco. Bulbs of a size large enough to flower produce a flower scape but no leaves, those not large enough to flower grow a single leaf. The flower scape after producing flowers when about six to ten inches tall continues to grow to function as a leaf and can reach a length of up to twenty inches or even more.

The flowers, from one up to seven, but usually four or five, on each scape are small, and have a star like perianth of dull olive green segments, with an insignificant corona of six green lobes. Individual flowers are about one inch across, and despite their unusual colouring are not particularly attractive. However, when they first open they are strongly and sweetly scented, rather like the jonquil, but as the flowers age the scent becomes less pronounced and somewhat less pleasant.

This species has never been easy to grow in Europe away from its native habitat, where it is regrettably becoming less common. Because of the conditions there of a hot, dry summer, with rain only in the winter and spring it is rather surprising that in the climatic conditions of Hamilton, New Zealand it is growing well. Here in Hamilton, rain normally falls every month of the year, and the atmosphere is frequently fairly humid, but high temperatures and sun in the summer could result in a similar baking of the soil as in its native area. It would appear that growth commences as the result of the correct season arriving rather than because of the falling rain.

The group illustrated has grown from one bulb planted seven seasons ago, and produced eleven flower scapes. It is on a rock garden facing north and the soil is sandy loam, but is very well drained. Growth normally starts in April, with flowering in May and the scapes or foliage do not die down until December. Viable seed has not been produced, even with hand pollination, neither from its own pollen nor that of *N. serotinus*, another autumn flowering species. Whilst *N. viridiflorus* is likely to be of interest to only a few gardeners it is one of those species which will probably soon be difficult to find in its native habitat, and it is interesting to note the apparent, but surprising, ease with which it is growing here in New Zealand, where it is hoped the species will be preserved.



*Narcissus viridiflorus*

Photo—E. E. Toleman.

## ARRANGING FLOWER AND FOLIAGE PLANTS FOR GARDEN DISPLAY

by *H. T. HALL, Wellington*

Arranging flower and foliage plants in garden beds, and commonly referred to as "Bedding", is a method of displaying colourful plants in mass, to create an effect and pleasing environment for the joy of the beholder.

As in other phases of the art of gardening, bedding has had its vicissitudes, and from a professional point of view the craft of propagating and the art of displaying such plants has deteriorated considerably since the last war. In Britain, there are still a few isolated exceptions where bedding is carried out to pre-war perfection; in the main however, due to propagating difficulties and lack of skilled personnel the art of bedding is slowly, but surely, disappearing from the garden scene.

The interest which flowers have excited in the minds of mankind from the earliest ages to the present day has never been confined to any particular class of society or quarter of the globe. Flowers appear to have been scattered over the world as a medicine to the mind, to give cheerfulness to the earth, and furnish enjoyment to the inhabitants. With these thoughts in mind, it seems a great pity, and no doubt a loss, that such an art should disappear from the realms of gardening. It is said that the city of New York no longer practices bedding out. This is to my mind, a sad reflection on man's behaviour and his self enslavement to concrete and asphalt.

The pattern of modern gardening is changing to maintenance-free landscaping; the search for suitable ground-cover plants to take the place of "Twice a Year Bedding" goes on and is now the subject of many articles in our gardening journals. However, be as it may, bedding out is still practiced in many of our parks and public places; if this form of gardening is to survive or even maintain its present standards the younger generation must be taught, not only the basic fundamentals of plant propagation and displaying, but the art of planning and arranging of colours and a sure knowledge of the many plants which are available.

If I may be permitted to voice a criticism of the New Zealand bedding displays seen generally throughout the North Island, the standards from a European point of view, could be much higher considering the obliging climate and the wealth of flora to choose from. Many of the displays appear to stretch their canvas over too wide an area, consequently, instead of a really concentrated effort, one sees a

monotony of stereotype, prostrate planting with very little originality of design, choice of plants and colour.

"Bedding out" twice per year can be an expensive business. It must be pointed out therefore, that many gardeners tend to measure their skills in terms of the results of their displays, and not in terms of monetary costs. Before embarking on any form of bedding displays, plan and decide how many plants are required and kinds to be grown, the labour and necessary skills available, amount of greenhouse space required and total cost of propagation, etc. One must be practical about this, bearing in mind that similar results can be achieved with plants and methods other than those classed as bedding, for example, sowing annuals and the now very popular use of ground cover plants. Having stated that, I must say in all honesty, with many years experience behind me in public and private gardening, there is nothing more satisfying than planning and executing bedding and floral displays for the benefit of others to enjoy.

Aspect plays an important role in determining whether or not the bedding feature will be a success. Many flower beds placed on traffic islands and road-side verges are usually the product of an after-thought by an engineer and should not be bedded out merely to fill in a space. This does not mean that road-sides and traffic islands should not be laid out; on the contrary, they should be landscaped from the initial planning and all points such as irrigation, depth of soil and access must be considered in the design. Moreover, it is cheaper in the long run, for the authority to do this.

How often do we see flat square beds cut out in brown-burnt grass? In the domestic lawn this is excusable, but not in public places. Beds cut into lawns can look very attractive providing the grass is kept to a high standard and the design of the beds and the colour scheme is in keeping with the whole area. So often the beds are cut out too small in relation to the area of lawn surrounding. I have never been in favour of bedding-out in front of and between shrubs, underneath trees or in odd corners. Bedding should always be in full sun and have complementary colours as a backcloth. Underplanting roses is uncomplimentary to that genus and not considered good gardening, as well as being an extravagant means of providing colour.

In the larger gardens and parks it is essential that planning of all flower beds within that organisation should be checked through the central administration. This ensures that repetition does not occur too often, and most important, the nursery manager will know at least six months ahead what his commitments are likely to be.

Except for three dimensional bedding the cultivation details of the beds are the same, highly nitrogenous additives must be avoided at all costs. Copious amounts of humus are needed to keep up moisture

retention, a dusting with superphosphate and potash will help before planting. If the ground is inclined to be clayey and you like wall-flowers then four ounces of hydrated lime per square yard may be a useful addition. Cultivation and propagation methods are very important, the bigger check a plant suffers the longer it takes to recover. If the early summer is dry at the time of planting this can be a time of concern for the person responsible. Plants are always better grown in pots, this gives a larger plant, better quality, it suffers less on planting out and requires less spacing in the beds. However, it is realised where thousands are required boxes are the only alternative and largely dependent upon the organisation concerned. I have found for propagating carpet bedding plants and where thousands are needed, the plastic McPenny's multi-pots are ideal.

### **Summer Land Spring Bedding**

Spring bedding is not perhaps so important here as in the Northern Hemisphere. In England, for example, the sight of tulips, daffodils and other spring flowers heralded the coming of warmer days, and quite often the emergence from a rather long, cold, wet, gloomy winter. Here, we have a greater choice and continuity of plants and according to your location in New Zealand the selection can be varied a great deal when planning. Those persons responsible for bedding displays are cautious of change, especially if the displays are in the public eye. They obviously keep to the plants that succeed in that particular location. It is only by trial and error that new ideas are born, different plants and colour soon attracts the eye and certainly stimulates public interest.

Spring bulbs must be planted in mass to look their best. This can also be a costly means of providing colour for what could be only a few days' display. If you do plant bulbs on their own, avoid regimentation, tulips always look attractive when under-planted with *Myosotis* or *Cheiranthus*, etc. The main thing to watch out for is to order the right type of tulip, because some varieties are much earlier than others. The domestic gardener would do well to confine his bedding to displaying his plants and bulbs from tubs or some other form of containers. This method reduces considerably the numbers required.

There is a tremendous number of variations which can be used in bedding. The writer, however, is more concerned with the techniques and not so much with the actual combinations of plants suitable for use in bedding displays.

Generally, the beds are made up of ground cover or carpet, an edging and a "dot" or sometimes called a "spot" plant. The latter are more commonplace in summer bedding, although tulips are used



as dots in spring. The summer dot plants must be carefully grown as standards. They take up to two years before being suitable for bedding; fuchsia, lantana, helichrysum, calceolaria, all make excellent standards providing you have the right varieties. Many other plants are suitable for dots and need not necessarily be standards, such plants as tall stock, antirrhinums, kochia, etc.; all these kinds of annuals can be used.

In the more prominent beds, such as municipal centres, and to ensure a continuity of colour, it is worth the cost, and indeed the effort, to adapt the "Plunge Bedding" technique. This requires the plants to be grown into flower in the nursery, whence they are taken to the beds and plunged in the container and left until the flowers fade, when they are again changed to something different. Anyone visiting the famous Princes Street in the City of Edinburgh will have noticed how this method of bedding is carried out to perfection. One word of warning regarding this method; that is, the plants must be well hardened off and be sturdy. It is also advisable to stake everything before it leaves the nursery. In the Wellington area this would be an absolute must.

It must be realised that today with social changes and new-style architecture emerging, the character of floral displays must inevitably change also. The development of F1 hybrids and their exciting colours are assisting the horticulturist to create new ideas in garden embellishment. In the modern home, bedding can still play an important role. If you decide that the purely natural medium is best for your house, then avoid bedding at all costs. On the other hand, if it is your intention to make a formal approach carrying what may be severe lines into the garden landscaping, then, indeed you may have a perfect setting for artistically arranged colour. Even in New Zealand bedding has to be ephemeral and it is inevitable that the beds will be without colour for a period of time. It is essential, therefore, that the surrounding landscaping makes up or compensates for this lack of colour.

### **Carpet Bedding**

Carpet bedding is the art of producing a pattern in a variety of colours, by using very dwarf, slow growing, compact colourful flowering and foliage plants. The bed is usually tilted at an angle to give the viewer maximum advantage and the design of a geometrical pattern. Today the art is alas dying out, mainly because of the lack of skilled gardeners familiar with this kind of bedding.

I have found in planning and designing a pattern, a useful scale is one inch to a foot; this is ideal to work, especially so if the inch graph paper is used. If the design has to be submitted for approval,

colouring the various plants with appropriate paints will give a more convincing picture as to how it will eventually look. Alternatively, a key will suffice.

Before actual planting, the ground must be prepared by adding or digging in sifted humus; in fact, if this is a new bed, such as a floral clock, the whole of the planting media should be prepared beforehand as you would mix a compost for potting. It is essential that all stones and rough pieces be removed; raking over frequently will bring about the desired effect. The area must then be gently firmed, but not compacted, a scattering of superphosphate and bone-flour will help to nourish the plants. If the compost has not been sterilised then it is advisable to use a soil sterilant such as Mylone; ensure the bed is left for two to three weeks before planting.

The design can be traced out on the bed by using silver-sand or lime. This must be done with great care, and if the design is complicated, with precision. By using a thick plank to stand on the markings are retained and the bed stays unmarked; begin planting at the apex and work downwards. Keep the bed watered at all times and an occasional feed with liquid seaweed will assist in bringing out the colours, especially the foliage plants. It cannot be emphasised enough that a bed of this nature must be immaculate at all times, consequently maintenance must be carried out very frequently. A thick plank raised about 6in., stretched across the feature, will assist the gardener to reach all parts of the design.

Carpet bedding can, if well executed, create an enormous amount of public interest. Do not be tempted to use such plants as blue lobelia and white alyssum, carpet bedding plants are more of the foliage kinds, i.e. *Alternanthera* in var. *Arenaria*, *Mesembryanthmum*, *Echveria* in var. *Crassula*, *Sedum*, *Pachyphytum*, *Pyrethrum*, *Raoulia*, *Lysimachia*, etc., etc.

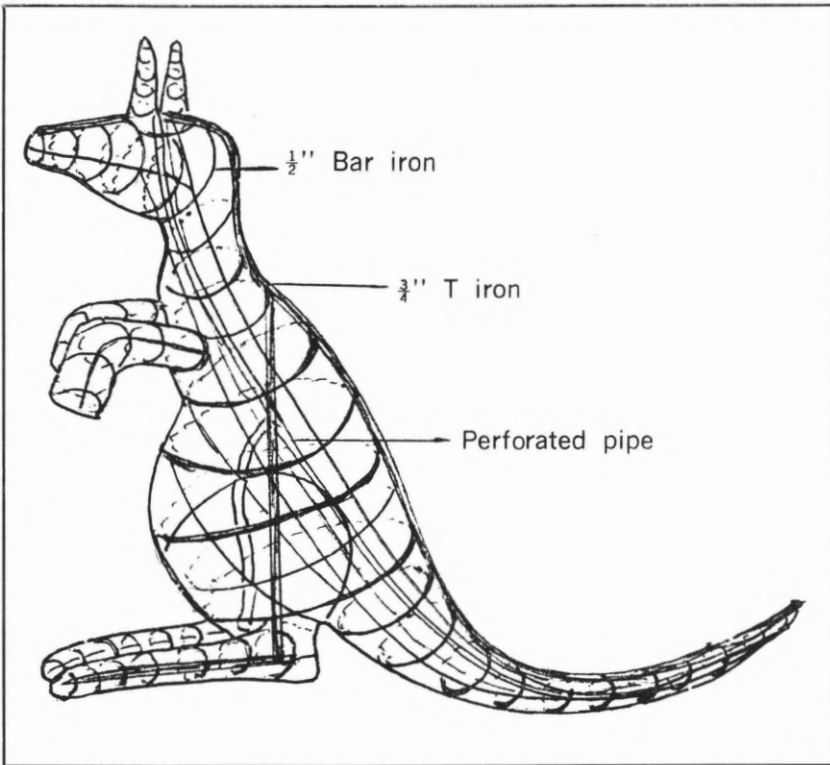
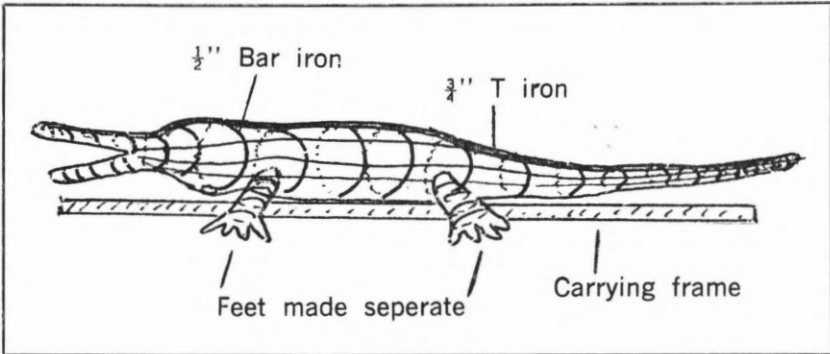
### Three Dimensional Bedding

For want of a better description three dimensional bedding is the making of figures and objects and covered in growing plants. The whole thing is in itself artificial, but if done well, can be the most attractive feature in any public park. I can personally guarantee if it is an animal, that it will create a great interest to the children and be constantly photographed by everyone.

Two of my best, and most successful, features were a 4ft. high kangaroo and an 8ft. crocodile.

First draw the shape of the feature on paper and the approximate size and dimensions. This will help the welder as more of a guide, because the success of the whole thing depends upon the skill and judgment of this artisan. For strength use  $\frac{3}{4}$ in. "T" iron and for the

### THREE DIMENSION BEDDING



Animals are always popular with the public. Preparation of the framework is very important.

frame work  $\frac{1}{2}$  in. bar iron; this is welded together to form the shape of the feature. Mix a compost of sphagnum moss, peat, sterilised soil and blood and bone flour. This mixture is then stuffed inside the centre and held in with wire netting and strong string. To overcome the watering problem a perforated pipe is passed through the centre of the feature. Limbs are best constructed separately from the main body and added when the animal is placed in its final setting. The whole must be saturated before planting. The latter is best done with a pointed dibbler; it is a slow job and requires patience. An 8ft. crocodile will take well over one thousand *Echeverias* and many hundreds of *Altermanthera*. Finally, it is essential to keep the plants moist at all times and this will necessitate many visits during dry windy days. Wherever possible the feature should stand in a well sheltered position from the wind and must also be protected from the children. Periodical waterings with liquid seaweed will help to keep the plants fresh looking.

### **Sub-Tropical Bedding**

This kind of bedding should really do well, especially in the North Island. There is such a wide choice of exotics to use from tuberous *Begonias* to *Cannas* and *Bananas*. Many of these subjects may be plunged but are best planted; this avoids drying out and starvation in the containers.

Many of these subjects are of a tender nature. Not only will they require a sheltered aspect during the summer, but they must be removed under cover during the winter and protected from the frosts. The actual arranging of the plants in the beds must be left to the skill of the artist concerned, and not forgetting the propagator who, after all, is the main person involved in producing the picture.

### **A Word About Colour Arrangement**

The various colours which distinguish the foliage of different plants constitute some of the most striking phenomena of the vegetable kingdom. No variation of plants is more common than those of colour, and it is by this characteristic that cultivars are readily recognised.

Colour is scattered through all the classes of nature, animate and inanimate, rocks, birds, beasts and the clouds which attend upon the rising and setting sun, as well as in the leaves and flowers, and with no apparent use but that of delighting and cheering mankind with a perpetual display of beauty.

As green is the predominating colour in nature, enlivening, subduing and refreshing, we must have it for a groundwork in all our arrangements, but there is nothing more agreeable than the first flush of colour in flowers.

Colour, apart from its aids to beauty, helps us to determine distance and space and also enables the eye to separate objects. Most people

are aware of the artists' three primary colours, red, yellow and blue with the three compound colours of purple, green and orange; these are also known as secondary colours. Those interested in colour arranging should consult the back page of the booklet "Flowers for Shows" issued by the Royal New Zealand Institute of Horticulture. The wheel demonstrates the colour spectrum admirably.

Red is the most exciting and possibly the most popular in floriculture, in fact, a little too popular as can be seen in many of our public flower beds today. Green is a complementary colour to red and a colour that soothes and is restful to the eye, probably a good reason why so many people appreciate this lovely country.

Some of the worst mistakes seen in flower beds are having a profusion of one colour, or its different shades placed next to or near to one another. These are considered errors of taste and should, if at all possible, be avoided.

I suppose the grand principle in the employment of colour in floral displays is never to place a secondary shade between the two colours which compose it. For example, orange should not be put in juxtaposition with yellow and red, purple with red and blue, etc. Violet or purple can be placed next to yellow, or orange next to blue. There are also deviations such as red or scarlet mixing with a grey or white.

Some colours are warmer to the senses than others. Blue, for example, is cold on its own, so is white and grey, but mix the latter two with a fiery red and the senses are immediately changed to a much warmer feeling.

Here are a few colours which, when mixed together, do not in any way clash: violet and rose, deep blue and gold, amber and lavender, pink and blue, magenta and apricot, etc., etc.

The good colourist has not only to study harmony of combinations, but suitability and local fitness, and he will require to vary his scale of colours in depth and tone. For some aspects, such as near the house or building, he must use cold and soft colours. For distant effect, warm, deep, and rich colours are necessary.

In the harmonies of the tertiary hues, some of the most refined and beautiful arrangements will be found. Thus primrose, which is a tint of yellow blends with lilac, which is a tint itself of purple. These intermediate shades and tints are very pleasing to the eye, and when harmony is attained from the use of these colours the results are far more satisfying than by merely using the more obvious kinds of contrasts.

"Be bold," and original, break away from the traditional and try the many different plants and colours, other than the "Union Jack", it is only by experimenting will we see a change from this present stereotype way of "bedding out".

**PLANTS—SHRUBS, TREES, VEGETABLES**

*By H. A. T. BARNETT, Tokoroa*

**General:** Below are some essentials not normally stressed in the ever-growing list of gardening publications.

**A Maxim:** If you have not time, are not going to make time to "prepare, plant and look after" just forget the whole thing and buy your vegetables and admire the display of your neighbours', nurserymen, council and Government gardens as that will be much better for your ulcers, bad liver or whatever. But, there is always a "but", do not envy others as this adds grist to the mill as concerning ulcers, bad livers and/or whatever, a normal psychological response.

There is a solution: make friends with the green fingers type up or down the street. However, should you still persevere on your own because of status problems and not know anything about plants, that is, how they are handled in the nursery and whether the label "names" what it is supposed to name or whether the roots should be straight, coarse, fine, curled, knotted, bobbed or long (the wife could be helpful here) then just take the salesman's talk as sales-patter and trust to luck.

When buying a plant (this angle does not apply to those items which are dormant and with all roots bare to the elements but one should know a little more about what to look for in the root part) one actually buys a "pig in a poke" in that the root system in the main is hidden. It is not like the top which is very prominent. Our nurseryman would add to the respect that is actually due to his efforts should he admit this peculiarity is a normal problem associated with nursery or man-raised plants, for like humans plants all are different. Some have bigger roots (feet) bigger branches (limbs), bigger or smaller everything whether it is in growing, taking, carelessness, sulking and especially in their response to casual or off-handed treatment. However, plants never come in wolves' clothing though they may have reached a stage we describe in ourselves as sick, depressed or on top of the world.

**Plants do die:** Well this is natural enough but do not be in a hurry to pull it up; one may destroy evidence of the cause. Let a nurseryman examine it. He is concerned, even if only to right a wrong. But the mere fact of planting in a hole too deep, too shallow, too loosely or too anything, is just right for some plants. As in humans, one man's medicine gives acute discomfort to others and we should not be dogmatic as man often takes credit or gives blame for additions supplied by nature in the way of element or inclement weather.

**Hungriness:** Yes, we all suffer this at times but do remember that "moderation" in refuelling is the maxim here. A plant's food has to be in dilution. Raw concentrated fertilisers must at no time come into contact with newly formed roots. Inorganic fertilisers are often called "salts". (We know the effect of applying common salt to our

food, in too great a quantity.) The resultant burning is minimised or annulled should the inorganic fertiliser be placed two or three inches beyond the root spread.

The following maxims will show the continuity.

**The hole:** Here it should be remembered that a plant has been man-handled perhaps several times for bigger plants, perhaps not at all for some small garden items, before it reaches the plant shop. Roots grow very fast, many times faster than the top length initially. In the case of the latter small garden item it is best that the planter remove by shortening the curled up mass of root where it is prevented from going straight down by "make of container". In the case of the bigger plant, the nurseryman has done the trimming and cutting at various stages in the handling. This results in a root length and spread **very much reduced** than would be the case in a plant untouched by man. This latter stage is the roots' role; that is, one of feeding and stability, and the plant's urge, an inbuilt feature, is to "make up" the root quantity as quickly as possible and so "balance" the top structure. Hence all effort should be, when transplanting at its new home, to allow of cultivated soil around the root ball of double the length from stem to root tip. Digging the hole much wider and deeper and not refirming the soil to "concrete" density enables the plant to recover the "balance" as between top and root. This requires that the "energy" which is a facet of optimum root growth, be reduced and freer soils are conducive to quick formation of long roots. A must if the plant is to live healthily.

**The Stake or Support:** Small plants need little support, possibly a stick, but it must be strong enough to stop all wind strong enough to move the root mass. This movement must be an "absolute nil" or the newly forming root tips will be broken and another taboo, drying out, is facilitated.

The small or large stake should be driven in until it is firm and before the plant or large tree is planted. The roots are not in contact with the bottom of the hole (this method is an off-shoot of the old-time one of an assistant holding the tree while it is being planted) because the plant is tied lightly but securely to the support preparatory to man-handling side roots and tap root (one only) into their normal spacing and plane (or direction). The finely worked soil, not clods, is filtered through and around the roots and gloved hands firm the soil and space the roots as necessary. Soil firming should be light. Watering may be done as the work proceeds.

**The Taproot:** Most plants have a single taproot but man-handling and the plant's natural urge to regain balance as between top and root often result in a number of competing downward-growing roots. The chore here is to plant with the longest and strongest root pointing downwards. The other roots need not be cut off but should be guided into a horizontal plane. This applies particularly to very large and long-

lived trees or shrubs. That is those that grow very tall or have a long bearing life and of course it aids vitality and root health. Finally, to emphasise the stake is most important, it has a major job to do and should be obtained at the same time as the plant. We should remember that the deeper the soil the deeper the taproot will penetrate and the tree will not rely for its substance on surface soil only. Soil depth, of course, is seldom one the planter has provided and is where is and as is. Nature, however, has provided most plants with a taproot which will make the best job of descending into whatever soil structure happens to be below.



### CREATING A BLUE GARDEN ITS JOYS AND TRIALS

By NANCY STEEN, A.H.R.I.H.(N.Z.), Auckland

Colour grouping has always provided us with a fascinating garden exercise. For this reason, though size imposes certain limitations in planning, each fresh idea provides a challenge. No garden need be static. There is always room for trial and error; and the courage to make changes adds spice and interest. In the course of time this enlarges a gardener's knowledge of plants—their habits, likes and possibilities—for plants, like people, thrive under happy conditions. To observe is to learn, and this stimulation of the mind is essential as one grows older.

One thing we have learnt is that a small garden can create a feeling of spaciousness if it is divided into a series of intimate areas within the garden proper. By doing this it also helps out the idea of colour grouping. Near our house, one small part was set aside for a formal garden of pleasing proportions but relatively simple style. It was sunken to a depth of four feet, shallow curved steps allowing access on the wide side of a rectangle, a pair of conifers—*Chamaecyparis pisifera squarrosa*—being planted at the top of these steps. A shallow pool, with a bog garden at either end is surrounded by a paved path and lawn—a wider paved pathway outlining the whole. Beyond this, are mixed borders with a pergola and seat on the side farthest from the house.

When these borders were first planned, it was decided that blue tones would highlight one end and pink the other. This was excellent, but our enthusiasm many years ago outran our practical knowledge; and little did we realise then what a westerly aspect combined with a heavy pug-clay subsoil could do to plants in a really wet winter. We had to import volcanic soil and sand, as bulldozers, in our absence, had done their worst with any available top soil. Well, the ground was dug and



manured so we were eager to commence planting—in a hurry, as are most people who have just built their own home. Here are some of the trials and tribulations—and a few successes too—that beset us in our first attempts.

Let us commence with early plantings for a quick show, and it was a quick one because, although a blue effect, and a good one, was created, it had no lasting quality. The royal blue of *Cynoglossum amabile*, the fine Love-in-the-Mist 'Miss Jekyll', echiums, borage, and several shades of Forget-me-not gave us a pleasing sense of achievement, though a fleeting one. As edging plants the common catmint, *Nepeta mussinii*, *Viola* 'Maggie Mott', *Myosotis* 'Ruth Fisher', *Tradescantia* 'J. C. Weguelin', and *Veronica spicata* proved useful and enduring, though all are now lifted yearly and re-planted in fresh, loose soil, for, if left too long, this ground reverts to its original heaviness. Some plants will not tolerate such conditions in cold, wet weather.

About this time we realised that a more permanent scheme should be introduced, and also that these blues, though very attractive, needed some contrasting material to give life to the whole. It was decided to introduce some clear yellow and grey at intervals in this border—a decision we have not regretted. At the pergola end, the large-flowered, single yellow climbing rose 'Mermaid' was planted with 'Solfaterre', the old Tea Rose of 1843, nearby. At the opposite end, 'Agnes', an unusual Canadian-bred, yellow *Rugosa* rose grows, with the sulphur-toned rose 'Harison's Yellow' above it. Between these roses, further along the border, a pair of *Teucrium fruticans azureum* was planted—the grey foliage and rich blue flowers of this shrub proving valuable and permanent.

At the rear in either corner, below a raised bank planted with deep blue agapanthus, are two taller blue shrubs. These add substance and, if pruned suitably, carry on year by year. One is *Clerodendron ugandense*, the 'Blue-butterfly Bush', and the other is *Plumbago capensis*. Other back border plants are *Salvia uliginosa* *S. azurea* and *S. ambigens*. They are inclined to rampage in this climate and need to be checked yearly; but their vivid blue flowers appear over a long period. The metallic colouring of the 'Globe Thistle', *Echinops ritro*, makes a distinctive note. In between, yellow decorative dahlias and *Achillea* 'Gold Plate' add late summer colour. Then come *Aster* 'Barr's Blue', *Veronica longifolia*, *Trachelium caeruleum*, *Campanula lactiflora*, *Phlox* 'C van der Berg', *Salvia x superba*, a tall growing ageratum, and Jackman's Blue Rue. Because of the heavy soil, and a prevailing wind that sweeps up from the tennis court, we have given up all the worry of growing tall blue delphiniums and now concentrate on lower types such as 'Blue Sensation' and the *Belladonna formosum*. A little nearer the front we have placed *Lobelia vedrarenensis*, *Catananche caerulea major*, *Aquilegia*

*alpina* 'Hensol Harebell', *Tweedia caerulea*, *Platycodon* 'Mariesii', and *Penstemon caeruleus*—all tried plants. Some use is made of hardy annuals such as the grey-green *Cerinthe major* or 'Honeywort', the true blue *Cynoglossum amabile*, *Browallia elata*, and a deep blue form of Love-in-the-mist. All seed freely, so we are never short of fresh plants each year. In the spring clear yellow Tecolote *Ranunculus* make a gay splash of colour.

Behind the raised edge of the border, catmint, violas, several tradescantias, *Veronica spicata*, *Nierembergia caerulea*, *Stokesia* 'Blue Danube,' *Centaurea montana caerulea*—a perennial cornflower with grey foliage—and the fine *Felecia* 'Santa Anita' have proved their worth through the seasons. As a contrast, clipped plants of the yellow-leaved *Chrysanthemum parthenium aureum* are included now, as well as the low-growing *Potentilla arbuscula*.

Naturally, the flowering of these plants is spaced, giving some bloom throughout the year. Also, early in the season, many are cut back hard. This bare effect is well camouflaged by the use of annuals and bulbs; and these add the variety which helps to create interest and make gardening more enjoyable. Other blue flowered plants and good ones too, are available in New Zealand, so with such a wide choice, all tastes can be catered for. There is no doubt that colouring grouping does add beauty to a garden.



#### NEW SCHEMES FOR HORTICULTURAL DIPLOMAS AND CERTIFICATES

The Royal New Zealand Institute of Horticulture has announced the adoption of entirely new schemes of examination for National Diplomas and Certificates in Horticulture, Nursery Management, Fruit Culture and Vegetable Culture, with effect from the Official Gazetting of Examination Approval Notices. This Gazetting is expected early this year.

Employers and students alike will applaud the new schemes of examination recently announced by the Royal New Zealand Institute of Horticulture. After more than three years of close study and investigation, there are many changes which now bring the qualifications more in line with the needs of the horticultural industry.

Three years secondary education is required before a course of study can commence.

The new schemes will eventually replace the present National Diplomas in Horticulture and Fruit Culture and the Certificate in Vegetable Culture. However, no changes are being imposed immediately upon present registered candidates, and they will continue under the old syllabuses for 1971 examinations.

But they may elect to transfer now to the new, if they wish, upon application to the Institute's Examining Board. The Board hopes they will complete their present stage of examination (i.e. Junior, Intermediate and Final) as quickly as possible (in 1971 and 1972) for they intend to review the question of compulsory transfer after the 1971 Examinations next November.

A table for cross-crediting has been adopted by the Board for the benefit of candidates. Holders of Massey and Lincoln Diplomas in Horticulture are eligible for quite a number of exemptions towards these new Diplomas.

A new feature introduced is the issuing of a National Certificate after the passing of the subjects set for the first three years. This is in place of the former Junior and Intermediate Certificates. Candidates completing this National Certificate may then go on to complete the full Diploma within two years, making a five year course altogether. This National Certificate, however, should be attractive to many who are looking for a worthwhile qualification within three years and find it difficult to obtain the full Diploma. It is designed to meet the needs of qualified technicians.

Present candidates, who have not passed General Science/Chemistry and Bookkeeping under the old syllabuses for Horticulture and Fruit Culture, will be interested to learn that they are now granted exemption from these by the Examining Board, in view of the overall changes being effected. Any present candidates affected by this exemption should immediately write to the Examining Board. Some may thereby have become eligible to continue into the Intermediate and Final stages of the old examination courses this year.

The four new Schemes have been prepared with the Horticultural Industry's needs in mind and provide for suitable specialisation, as their titles imply—

- National Diploma in Horticulture,
- National Diploma in Horticulture (Fruit),
- National Diploma in Horticulture (Nursery Management),
- National Diploma in Horticulture (Vegetable).

Candidates who are at present taking the National Diploma in Horticulture may transfer to the new Diploma in Nursery Management. The Dominion Secretary of the Royal New Zealand Institute of Horticulture (P.O. Box 450, Wellington) will be pleased to supply information, with copies of the syllabuses on these new diplomas if you write to him.

For several years the New Zealand Technical Correspondence Institute has given excellent help to students by providing tuition in many of the subjects. They will be continuing this study service and increasing their range of subjects, especially designed to meet the needs of these new Diplomas, as quickly as they can. Those interested in studying for these Diplomas should write to the New Zealand Technical Correspondence Institute (P.O. Box 30-335, Lower Hutt) about their Correspondence Courses. At present, however, the N.Z.T.C.I. requires more candidates for the Vegetable and Fruit Diplomas before proceeding beyond the first year's course of instruction.

These new Diploma Courses are fully recommended by the New Zealand Nurserymen's Association, the New Zealand Vegetable and Produce Growers' Federation, the New Zealand Fruitgrowers' Federation, and the New Zealand Institute of Park Administration. They are recognised as the hallmark of a qualified horticulturist.

**REGAL FARE**  
**DOMINION CONFERENCE, 1971**

The Cosmopolitan City of Auckland will always provide much to interest the visitor and the visiting horticulturist is no exception to this for the metropolitan area is rich in fine and history-steeped gardens. At the same time, as is inevitable with a rapidly expanding city, the scars of progress are only too evident in such historic areas as Grafton Gully. Perhaps reassurance may come from the concern of all responsible citizens and local administrators and with them hope that curative measures and time will heal these open wounds. Certainly this type of activity makes it all too evident that the establishment of the School of Landscape Architecture at Lincoln College has come none too early. Incompletely planned progress can be all too costly. Nevertheless there was much that was really good on the reverse of the coin and those who visited Auckland for our conference departed enriched in many ways.

Mr John Living, our Dominion President, in opening the proceedings, remarked that during 1970 a sub-committee had made a thorough study of the future roll of the Institute and drew attention to original objectives drawn up by Dr Leonard Cockayne nearly fifty years ago.

(1) **Education:** There was an ever-increasing demand for highly trained horticulturists and courses were to be designed for this purpose. The ultimate objective was a university degree in horticulture with considerable emphasis on the practical side. Horticulture should be taught to all and opportunities should be provided for research. (2) Accurate labelling of plants. (3) Increased use of our native plants. (4) Nomenclature.

Implementation of the first aim alone would more than have justified the existence of the R.N.Z.I.H. and it was noteworthy that two University Chairs of Horticulture had been established as well as our own examinations for the less academically minded. Attention had been given to the other objectives too. Mr Livingstone and others then spoke to his report which is given in full elsewhere.

Mr A. D. Dick, Under-Secretary for Agriculture, was then introduced and proceeded to officially open the conference. He explained that though under the Minister of Agriculture horticulture had been allocated to him and he was the Government spokesman for horticulture.

A particular concern of his was Conservation. Our environment was becoming increasingly important and horticulture had a great part to play in the improvement of our civilised surroundings. At the same time its activities were fragmented, complex and diverse.

Mr Dick had been chairman of the Plants Act Parliamentary

Committee and the Act had been passed in the dying stages of the 1970 session and the new regulations were to be promulgated shortly. The original legislation passed just before 1900 on account of the need to control plant pests and diseases had a limited field but the new Act covers a much wider field and is an agricultural act, not being limited to horticulture. For instance all land is covered whilst the definition of plant material includes all living vegetation. The quality of both imports and exports are dealt with and the new regulations are designed to give greater flexibility; certain plant material may be totally prohibited or re-shipped. Whilst it is not possible to list all plant diseases and pests in schedules as those already in New Zealand run into many hundreds, there are three very broad categories. (1) Normal; (2) Those requiring constant surveillance, and (3) Really serious diseases or pests.

There is the right to prohibit plant material from certain countries whilst the importation of prohibited material may be permitted in certain circumstances, e.g. Experimental stations may require prohibited material for research purposes. New Zealand is free of many serious pests and diseases such as various fruit flies and the legislation is designed to keep it so.

At the same time the rights of John Citizen have not been overlooked in such matters as the right of entry and compensation at fair market value for plant material destroyed where it provided the growers' income.

**Plant Selectors' Rights:** It appears doubtful if this legislation is justified as an economic proposition but an effort was being made to draft suitable legislation and the Institute could help with assistance and advice.

We hope to be able to publish Mr Dick's address in full at a later date.

Dr J. S. Yeates, in moving a vote of thanks to the speaker, said horticulture was as to agriculture as cabinet making to carpentry, and observed that if no encouragement was given to the plant breeder the quality of cultivars will deteriorate. Hybridising had considerable export potential and it was impossible to place a value on amenity horticulture. A vote of thanks was carried by acclamation.

Following the tea break the various sub-committees made their reports and the remits were then discussed. These will be given in detail in the official report in our June issue.

Following this Awards of Associate of Honour were conferred on Mrs Katie Reynolds, Whangarei, and Mr Ralph Thomas Fear, Hamilton, amid acclamation. The Award had also been made to Mr Carl A. Teschner, Dunedin, since deceased, and the conference stood in silence in memory of this devoted servant of horticulture.

The late afternoon session was given up to an illustrated address by Dr E. E. Chamberlain, president of the Auckland District Council, "Outwitting the Virus". Dr Chamberlain, formerly head of the Plant Diseases Division, D.S.I.R., gave an informative talk that was all too short and his address is to be published in this Journal later and we hope to reproduce some of his wonderful illustrations. Points of interest were that masked, viruses though not visually obvious, reduced vigour and production. Heat treatment, tip propagation, and meristem culture have given a certain amount of success in providing virus-free propagation material for distribution through the Department of Agriculture Experimental Station, Levin, and the Fruitgrowers' Federation. Though some viruses were relatively ineffective on their own, when combined with other mild viruses they could be most damaging. Some viruses could be transmitted with the pollen and in occasional genera through the seed.

### **BANKS LECTURE**

As customary the evening session was devoted to Banks Lecture and this time Dr Robert Cooper, from the Auckland War Memorial Museum spoke on "Early Auckland Gardens". This was illustrated by many slides of photographs and pictures of the early years and in many cases comparative slides made in recent years; these evoked great interest. This was a most valuable talk not only horticulturally but from the historians' and archivists' point of view and we are deeply grateful to Dr Cooper for the privilege of placing this on record for posterity. It will be published in full in the June issue, with illustrations.

### **TOUR OF AUCKLAND AND ENVIRONS**

Many of the more fortunate were able to stay over to the Saturday to enjoy to the full the hospitality of the Auckland District Council, a day-long tour of many points of horticultural interest in their area. The bus left the bus terminal by way of the Tamaki Drive, crossing over the railway at Gladstone Road to pass the Parnell Rose Gardens with their 5000 bushes and to view the homes and gardens of the Judges Bay area. Parnell Park was the home of Judge Swainson, Auckland's first judge, and Sir John Logan Campbell, notable early benefactor also lived there. We returned back to the waterfront road by the same route and proceeded across Hobson Bay to Paritai Drive, passing many points of interest en route. This is a very warm, equable area of Auckland with many fine views of Waitemata Harbour and the Hauraki Gulf and many sub-tropical to tropical plants flourish here. Prominent were many of the more tender hibiscus cultivars, while temperate zone hardy plants lived happily alongside the more tender genera. Descending again to Tamaki Drive we passed Okahu Boat Harbour with fine views of Hauraki

Maritime Park which is comprised of the many islands in the gulf and then past the Maori marae at Okahu Bay, passing Takaparawha Regional Park to climb up Bastion Point where is the burial place of and the memorial to a former prime minister, Michael Joseph Savage. The memorial is approached through a large formal garden, including many trees, shrubs, bedding schemes and a water feature. An interesting neighbourhood feature was the fine weeping willows at Okahu Bay. These were characteristic of early Auckland and could be guaranteed to raise nostalgic feelings in any Christchurch heart.

Thence back to Tamaki Drive to pass through Mission Bay with its golden sand, Museum, colourful fountain, and mighty Norfolk pines planted by Bishops Selwyn and Patteson and on to the Auckland Domain by Patteson Avenue, Kepa Road, passing one of the earliest of New Zealand's State housing areas. Gone was the raw, bleak look of the late thirties now replaced by an atmosphere of surprising maturity with many fine trees and well-grown shrubs. If those who planted the tiny trees and shrubs in those early days could see them now they would be well pleased. Across the Orakei Basin to Orakei Road and then Remuera Road where we stopped to admire two fine *Michelia doltsopa* in Dr Coverdale's garden, then through Newmarket and Parnell Road to the Domain ponds, Auckland's original water supply, but better known to visitors as the scene of the Domain Kiosk, a popular social venue, and for the Winter Gardens in the vicinity. Here we inspected the Auckland City Council propagating houses, the Winter Gardens and notable trees and plants in the vicinity. The latter include *Tecomanthe speciosa* (Mr Jas. Hunter, who was concerned in the early propagation of this rare species, was in our party), a fine Queensland Kauri, Devil's Bush, variegated agapanthus, *Phaseolus caracala* (Snail vine), *Pittosporum obcordatum* var. *Kaitaiaensis*, poinciana lotus, *Victoria regia* in flower in the Winter Gardens, plumeria, and *Coccoloba univera*. Only a single specimen or so remains of the grove of fine old kanuka, *Leptospermum ericoides*, ranging up to forty feet, and formerly located between the Cenotaph and the propagating houses. This is a pity for this was typical of much of the plant cover on the isthmus when the Europeans arrived. Strangely the genial volcanic slopes were not covered in rain forest as one might expect and it is presumed that the area had been modified by earlier inhabitants.

There was much of interest here but it was nearing lunch and we were in due course transported to the Auckland Horticultural headquarters in lower Symonds Street. These premises are inadequate for the needs of the various affiliated groups and plans are afoot to build modern premises on this valuable site. Full credit must go to those dedicated horticulturists who saw the need and raised the funds to acquire this central location for Auckland horticultural societies.



Eden Garden, Auckland.

The repast was followed by yet another treat, another example of great foresight this time exercised by Mr Jack Clark, a former Auckland nurseryman. (See *R.N.Z.I.H. Journal*, March, 1970, p. 265.) The writer was pleased to see Eden Garden again for on a former occasion the weather had been cold, bleak and wet. This time it was the reverse. This garden was formerly a worked out quarry on the eastern slopes of Mt Eden and is reached via Mountain Road and Omana Avenue. It is hard to believe that it is barely a decade since planting began but plants flourish in the friendly micro-climates and a wide spectrum of plant life is grown here. The garden is noted for its camellias and ericaceous plants, but tropical hibiscus flourish here, too, and the cyclads and large tree ferns enhance its tropical appearance. Many native plants are to be found here. This is a fine example of what may be done with what would only be an eyesore, a derlict waste, and suggests that there



is hope for the man-made scars of Grafton Gully. One would imagine that there would still be stone enough there but in a triangular patch at the junction of two paths is a little rock garden obviously not of local stone and a plaque signifies that this was a gift from the Borough of Queenstown. Such gestures do much to minimise the disastrous divisions occasioned by Cook Strait. It was a pleasure to be guided around the delightful dells, nooks and crannies of Eden Gardens by Mr Jack Clark himself.

Thence via Owens Road noting on the way a fine Queensland Kauri in a private garden, down Gilies Avenue to Manukau Road, passing a mighty Norfolk Pine on the Epsom Avenue corner, to Campbell Crescent and the Logan Campbell Memorial, along Puriri Drive with the trotting grounds and show grounds on the right, to Cornwall Park proper and its Pohutukawa Drive. To the right is a grove of olives and to the left we see a fine stand of young New Zealand Kauri. Near the kiosk is the original tiny cottage home of Sir John Logan Campbell, Acacia Cottage, which was shifted from Shortland Street in downtown Auckland and restored for the benefit of posterity. It is not unlike the Dean's Cottage at Riccarton Bush, Christchurch. Here we enter the One Tree Hill Domain with its Maori earthworks, the trees on its summit and the obelisk reaching to the heavens. We do not go to the summit but enjoy fine vistas across Epsom to Mt Eden for we are high on the shoulder of Maungakiekie.

From the park gates we proceeded via Royal Oak, Mt Albert Road, Hillsborough Road, Waikowhai, and Ridge Road to Blockhouse Bay, then by Green Bay, Godley Road and Titirangi Road to the Waitakerere Scenic Drive, which starts at the site of the former Titirangi Hotel. This is still a heavily forested area and though most of the large kauris have long since gone there are many young kauris prominent and we understand much of the area on the left is waterworks reserves. The late Arnold Wall and Miss Lucy M. Cranwell refer to this area in "The Botany of Auckland" as follows: "It (the kauri) may be seen at its best in the Cascades Reserves, and thence southwards as far as Titirangi. Almost pure kauri forest occupied a great part of the range, and though vast quantities have been felled many noble specimens survive, especially in this reserve, which by the foresight of the city authorities, preserves a certain area 'for all time'. The properties which now constitute the reserve were purchased by the city in 1925-6 and it includes about 1,850 acres. It is understood a further large area was acquired about 1940 on the occasion of the centenary. Most of the land to the east of the drive is outside these reserves and in one or two places commercial encroachment is all too obvious. On the whole this



Queenstown stone in the Queen City, at Eden Garden.

is a pleasant bush drive handy to Auckland city where the city dweller may get away from it all for a few hours at the week-end."

Some of the more enthusiastic have built their homes in the bush but these are not obvious from the roadway except for the inevitable rural mail box. We proceeded as far as the TV Transmitter at Waiatarua Lookout where fine views are to be obtained over Auckland city and environs, the Waitemata Harbour and the Hauraki Gulf. This area whose extensive reserves are now administered by the Auckland Regional Authority is one of the scenic gems of New Zealand and is notable in being so handy to our largest centre of population. We trust that every Aucklander will respect the trust placed in their hands by their forbears and not encroach on this pleasant oasis but will keep it "for all time" and indeed add to it.

Exotic intruders noted on the Scenic Drive included *Hedychium spp.*, cannas, buddleia, blackberry, montbretia, hydrangea, pampas and the inevitable *Pinus radiata* and *Cupressus macrocarpa*.

From Waiatarua we returned to town via Henderson, first calling at Corbans' Vineyards where we were served afternoon tea, saw a film on wine making, inspected the winery and as the programme neatly expressed it, partook of light refreshments.

From the vineyard we travelled to the city via the Northern Motorway, Western Springs, where Auckland's second water supply was situated, and Surrey Crescent.

Full credit must go to the Auckland District Council for organising this fine trip on the members' behalf and it must have been a revelation to many southerners, and even the writer who lived in Auckland for eighteen years was astounded in the changes that a few short years can produce horticulturally in this fast-growing clime.

Especial thanks must go to Mr Blumhardt, who capably acted as courier and host on this never-to-be-forgotten tour.



## ALONG THE AVON

by The Editor.

Although shown on the map as the Avon River this is rather a courtesy title for in any other environment it would only be an insignificant stream or creek. Perhaps environment is the clue for the Avon does play a most important part in the life of metropolitan Christchurch. The whole Avon system could be dropped into and lost in the estuary of the Amazon or even in Lake Taupo. Yet this tiny river and its tributaries all lie within the metropolitan area and have endeared themselves to the local citizenry as few other rivers have elsewhere. They are entirely ours; we do not share them with anyone as would be the case with larger rivers. Their waters would make no measurable difference to those of the mighty Clutha, New Zealand's largest river, to the swirling Buller or add significantly to the kilowatts from the dam-strewn Waitaki and Waikato Rivers.

Yet the banks of the Avon continuously echo New Zealand's history probably more so than any other river. On its banks we find many of New Zealand's most noted institutions particularly educational. Famous people have played, worked and courted on its banks, notorious criminals have been locked up, tried and sentenced there.

Northerners may deride the reverence with which Christchurch folk

regard their Avon but if they stay a year or so they too come to love it for what one hundred and twenty years ago was a sluggish swamp-bordered creek is now a many-bridged pleasant stream whose banks and islands are a veritable horticultural treasury, one of New Zealand's Garden City's greatest assets. Would Christchurch be the same horticultural paradise without the Port Hills and the pleasant tree-lined stream that bisects the city as it meanders towards the Estuary and the sea?

Inevitably the Avon is polluted but this has far from reached the levels of London's Thames, Melbourne's Yarra, the Waikato, or even our other stream, the Heathcote River. Trout may be seen from the many bridges and wild ducks abound especially around the month of May. Generally the waters are clear and no outsider would dare the remarks of Sydneysiders to Melburians, "The Yarra is too thick to swim in and too thin to plough".

The source of the Avon is a spring near Avonhead School, not far from State Highway 73 to Arthur's Pass and the West Coast and about ten miles from the sea as the crow flies. Its course could be nearer twenty miles in length for its way is tortuous indeed. Legend has it as an ancient bed of the mighty snow-fed Waimakariri but little credence should be given to this though in the great 1860 flood waters from the Waimakariri River found their way into the Avon to flood Market Square (now Victoria Square), adjacent to Cathedral Square, and in those days the commercial centre of Christchurch.

#### LET US FOLLOW ITS COURSE

Shortly after passing the Avonhead Primary School it crosses Avonhead Road to enter the Ilam Campus of the University of Canterbury with the new Teachers' College slightly to the north. Under Waimairi Road and we are now on the original Ilam property and here the river passes Christchurch College, an Anglican Hall of Residence and Theological College, before coming to the *pièce de resistance*, Ilam homestead with its woodland garden. This name goes back to the 1850s when the first house was built for the Hon. F. C. Watts-Russell who named it after his family home, Ilam Hall, Staffordshire. The original homestead was burnt down and in 1914 Edgar Stead rebuilt the house in much the same style. Mr Stead was greatly interested in fauna as well as flora and was a noted ornithologist and a prominent member of the North Canterbury Acclimatisation Society, being primarily concerned with the preservation of wildlife. However, it is for his interest in horticulture that we remember him here particularly his experimentation with and hybridisation of rhododendrons and azaleas. Ilam Hybrids, a noted strain of azaleas, are sought the world over.

*(To be continued)*

**ANNUAL REPORT OF THE DOMINION COUNCIL R.N.Z.I.H. Inc.**  
**For the Year Ended 30th September, 1970.**

The Dominion Council has much pleasure in presenting the Annual Report for the year ended 30th September, 1970, our forty-eighth Annual Report.

**MEETINGS:**

- (a) **Annual Conference 1970:** The 47th Annual General Meeting and Conference of Delegates held in Napier on 20th February, 1970, was officially opened by the Hon. Duncan MacIntyre, Minister of Lands. The Banks lecture was delivered by Mr M. Grainer, of Hastings, on the subject of "Just Food". Appreciation is expressed to Mr A. W. Miller who so wonderfully handled arrangements and hospitality; also to the local horticultural societies for their co-operation and assistance.
- (b) **Dominion Council:** The Dominion Council met on four occasions during the year and the average attendance being 20.
- (c) **Sub-Committees and Examining Board:** The Dominion Council again acknowledges with gratitude the co-operation and help received from the various sub-committees and the Examining Board. They met regularly throughout the year, attending to the specialized business delegated to them.

**In Memoriam:** With sincere regret the Dominion Council records the passing of some esteemed members during the year, and extends sympathy to their relatives.

**Membership:** The total membership stands at 1550 (1615) including 47 Associates of Honour. We welcome all new members who joined during the year. The following shows membership of the various districts, overseas, and those unattached to any District Council. 1969 figures are shown in parentheses: Auckland (149) 159, Canterbury (149) 149, Hawke's Bay (31) 32, Manawatu (47), 42, Nelson (18) 21, North Taranaki (226) 242, Northern Wairoa (54) 58, Oamaru (3) 3, Otago (46) 43, Poverty Bay (14) 13, Rotorua (9) 10, South Canterbury (33) 32, South Taranaki (137) 131, Southland (16) 14, Taupo (42) 25, Waikato (329) 291, Wanganui (32) 29, Wellington (156) 147, Whangarei (71) 50, Unattached (38) 39, Overseas (15) 20.

**Fellowship and Honorary Life Membership:** During the year the Dominion Council conferred Fellowship upon 6 and Honorary Life Membership upon 8 members.

**District Councils:** The Dominion Council expresses sincere thanks to the executives and members of District Councils who have maintained the work of the Institute at the local level. It is through District Councils that the Institute is known, by and large, in district areas. District Councils are stronger in some localities than in others, but all can and do play a part, for which the Dominion Council expresses its appreciation and solicits strong loyalty and support throughout the ensuing year. New members are being enrolled in some District Councils, but overall membership is not increasing.

The well-being of District Councils and general membership (including affiliated groups) has been under consideration during the year. A remit is being proposed for the 1971 Conference whereby their position should be strengthened and interests more fully catered for. **Membership is offered to students registered for the Institute's examinations, at half rates while they are under the age of 21 years.** Family subscription rates for husbands and wives at a reduction are also offered.

**Examining Board:** The Examining Board is appointed by the Dominion

Council annually and bears the full responsibility for the conduct and administration of the Institute's examinations. The Institute has full statutory authority to issue diplomas and certificates as follows: **National Diploma in Horticulture (N.D.H. (N.Z.))**; **National Diploma in Fruit Culture (N.D.F.C. (N.Z.))**, **National Diploma in Apiculture (N.D.Ap. (N.Z.))**; **Certificate in Vegetable Culture (C.V.C. (N.Z.))**; **Certificate in School Gardening (C.S.G. (N.Z.))**; **Horticultural Salesman's Certificate (H.S.C. (N.Z.))**.

Revised syllabuses in Horticulture, Fruit Culture, Vegetable Culture and Nursery Management have now finally been submitted to the Minister of Agriculture for approval and validating by Gazette Notice (See report of the Examining Board.)

Under the chairmanship of Professor H. D. Gordon of Victoria University, Wellington, the Examining Board has given meticulous attention to the examinations conducted by the Institute. The Board's separate report is appended. Again the Dominion Council places on record its sincere appreciation of the valued assistance received from the **District Councils, the City Councils, the Directors of Parks and their staffs at Christchurch and Palmerston North, also officers of Massey University, and the Department of Agriculture**, as well as others for their excellent help in the conduct of the Oral and Practical examinations. Warmest thanks are expressed to the Examining Board for their devotion to this important phase of the Institute's work.

We pay tribute to the part played by the N.Z. Technical Correspondence Institute in providing tuition for our examinations. The assistance given in this important sphere of the candidates' studies is real and greatly valued by the candidates and ourselves. Our thanks are extended to the Principal and his staff for this and the considerable help given to the Institute in examination matters.

#### FINANCE:

- (a) **Annual Accounts:** These are appended to this report. Profit from sales of the publication, "Flowers for Shows", continue to accrue. Our financial strength, however, rests upon our membership and present members are still urged to help by enrolling new members.
- (b) **Trust Accounts:** These are clearly set out in the Annual Accounts. Trust funds are properly invested.
- (c) **Publication Account, Books Account and Loder Cup Account:** These, too, are clearly set forth. The financial assistance received from the Internal Affairs Department for the Journal is sincerely acknowledged with thanks.
- (d) **Examination Grant:** The Dominion Council acknowledges also with thanks the capitation received from the Department of Agriculture for examination purposes.

**Nomenclature:** Members of the Nomenclature Committee have not met as a group during the year, but have been in frequent correspondence.

The main development has been the decision to compile Registers of cultivars of **Coprosma** and **Phormium**, both of which are becoming of greater importance in New Zealand horticulture due to their growth and foliage characteristics, as well as their adaptability. The collections of **Hebe** are increasing and descriptions being compiled. The Committee has been strengthened by the addition of Mr H. B. Redgrove of Auckland, a member who is not only in touch with trends in the nursery trade, but also in an increasingly important locality, where no member of the committee previously resided. To all members of the Committee we express our thanks for their co-operation and assistance.

The Institute acts as the distributor in New Zealand for the International Code of Nomenclature of Cultivated Plants (Price \$1.20).

**Historic and Notable Trees:** Mr S. W. Burstall has now retired from the Forest Research Institute, Rotorua, but has continued to do excellent work on this exercise which has now been before the Dominion Council for several years. Our very sincere appreciation is expressed to Mr Burstall for his outstanding efforts and painstaking interest and to the Forest Research Institute and Forest Service for enabling and assisting him to undertake this work.

Eight regional reports group territories as follows: Northland-Auckland, Waikato-Bay of Plenty, Poverty Bay-Hawke's Bay, Taranaki-Wanganui-Rangitikei, Manawatu-Wairarapa-Wellington, Marlborough-Nelson-Westland, North and South Canterbury-Chatham Islands, Otago-Southland. The national report would be restricted to trees of national importance.

The compilation of this series of N.Z. For. Res. Inst. Forest Products Reports is nearing completion. Some Reports have already been released. It is fully expected that all will be available during the next year. Publication will be undertaken as soon as possible.

**Journal:** The efforts of the Editor, Mr John Gover, in maintaining the literary standard of the Journal are sincerely appreciated, as is the assistance given to him by contributors. Consideration is being given to greater variety of articles, and an increase in fees paid to contributors. The Journal continues to be an important organ of the Institute, disseminating authoritative horticultural information.

**Award of Garden Excellence (A.G.E.):** This annual award is operating well and the sub-committee has again done excellent work during the year. Eighteen plants have been granted the Award for 1970. This list of plants, with descriptive notes, was published in the Journal, December, 1970.

**Plant Raisers' Award:** We are disappointed there were no nominations this year.

**REMITTS BEFORE THE 1970 DOMINION CONFERENCE:** Details of these remits and the discussion thereon have already been published in the report of the 1970 Conference in the June, 1970, issue of the Journal. The matters arising have been dealt with as follows:

- (a) **Selection and Registration of Judges**—the minimum practical experience in judging, after passing an appropriate examination, set as a pre-requisite to registration, has been amended to: 4 shows as an associate judge plus 4 minor shows as the principal judge plus 4 major shows as the principal judge. An appropriate certificate will be issued to those successful in an approved examination on judging but not yet eligible for full registration. These persons can be entered into a supplementary register.
- (b) **Horticultural Education in Schools** and organized visits to establishments for educational purposes—The Canterbury District Council was asked to formulate a Pilot Scheme. They have experienced difficulties in formulating a scheme for universal adoption; they recommend that District Councils endeavour to formulate their own; it is easier to arrange with schools individually than in a group. The objectives are worth while.
- (c) **Preservation of Historic and Notable Trees**—There has been correspondence with the Nature Conservation Council and with the Minister of Lands. No satisfactory conclusion has been reached; the Dominion Council still has this before it.

**ASSOCIATES OF HONOUR:** The following nominations have been endorsed by the Dominion Council for submission to the 1971 Conference,

recommending their election as Associates of Honour of the Royal New Zealand Institute of Horticulture (A.H.R.I.H. (N.Z.)). They are:

Mr R. T. Fear, of Hamilton.

Mrs E. K. Reynolds, of Whangarei.

Mr C. A. Teschner, of Dunedin (since deceased).

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

**Eastwoodhill Property at Gisborne.** Following the 1970 Conference there have been further discussions on the future of Eastwoodhill; it seems now almost certain that a local trust will be incorporated in Gisborne. The Dominion Council will give as much support to any such local trust as it is able, with the overall view to preserving this valuable national asset.

**A. M. L. Rumble Estate (Stratford):** The submission of a suitable scheme to the Supreme Court has been prepared and is in the hands of the Solicitors.

**Plant Quarantine Regulations and the Plants Act 1970:** The Institute was represented at meetings of interested parties called to consider the above Regulations and Act in the Bill stage. The Plants Act (since passed by Parliament) appears to be generally accepted.

**Judges' Register and Certificates:** This register continues to be maintained and appropriate certificates issued.

**Careers Booklet:** An insert on careers in horticulture and related occupations was placed in the "Careers Reference Manual" published by **Vocational Research Ltd.** during the year. A supply of our own publication still remains on hand for distribution to definite enquirers.

**"Flowers for Shows"—Horticultural Handbook:** Sales have continued during the year. A few copies remain on hand for sale. District Councils and other groups are urged to publicise the book. It is still meeting a real need.

**Arbor Day:** Full support was accorded throughout the Dominion by the Institute taking an active and leading part. The booklet, "Planting of Trees and Shrubs" was reprinted during the year, 10,000 copies being issued. This was generously sponsored by Mr P. J. Skellerup.

**Loder Cup Award:** This Annual Award is to "Lovers of Nature in New Zealand to encourage the protection and cultivation of the incomparable flora of the Dominion". Mr R. Syme, A.H.R.I.H. (N.Z.), serves on the Loder Cup Committee, nominated by the Institute. The 1970 award was made to Mr and Mrs W. E. Fisher, of Birkenhead, and our congratulations are extended to them.

**National Parks Boards:** The Dominion Council continues to make nominations for election to these boards. District Councils may put forward suitable nominees.

**Our Jubilee Dominion Conference 1973:** The suitable observance of this Jubilee is being kept in mind.

**Embassy of Japan:** Assistance was given in arranging meetings for Mr Ken Nakajima, landscape architect, who visited New Zealand during the year under the auspices of the Japanese Ministry of Foreign Affairs.

**Australian Institute of Horticulture:** Reciprocal affiliation has been entered into with this newly established sister body.

**Visit of Her Majesty the Queen:** Flowers were sent to Her Majesty on her



arrival in Wellington, on behalf of all members of the Institute. Her appreciation was expressed in a personal letter received.

**Future Role of the Institute:** Following the 1970 Conference a sub-committee was appointed to consider the papers that had been delivered at that Conference and particularly the points arising from them. The sub-committee has had several meetings during the year, including one in Hamilton, and has sponsored two remits for submission to the 1971 Conference. The object of the remits is to strengthen the position of District Councils and the interests of general members of the Institute. The sub-committee will continue to deal with this question, having clearly in mind the strengthening and widening of the influence and status of the Institute in New Zealand horticulture.

**Horticultural Producers' Council:** Under the Chairmanship of Mr J. O. Taylor this Council met twice during the year. Being representative of the horticultural industry in New Zealand, it has considered several matters of distinct importance to commercial horticulture, including education, the advisory services of the Horticulture Division, the deliberations of the Agricultural Chemicals Board pertinent to horticulture and of the Horticultural Committee of the National Development Conference, Nuffield and Churchill Fellowship awards for horticultural candidates, the prompt publication of useful articles emanating from horticultural research centres, taxation incentives to employers of horticultural apprentices, the Plants Act and Plant Quarantine Regulations, and publicity for careers in horticulture. The Institute is pleased to be providing the atmosphere for such a Council to meet together and deliberate on these questions which concern national commercial horticulture.

**THANKS:**

The Dominion Council extends its sincere thanks again to all who have contributed to the successful running of the Institute throughout the past year and in particular to:

- (a) The Government, Ministers of the Crown, and Departmental Officers for their courteous attention to the needs of the Institute whenever they have been brought to their notice.
- (b) Local bodies for their continued interest and financial support, and the Directors and Superintendents of Reserves.
- (c) Examiners, supervisors, the New Zealand Technical Correspondence Institute, and all others who have co-operated to facilitate the conduct of the examinations during the year. Special reference is made again to the fine assistance received from the Directors of Reserves and their staffs, and officers of the Horticulture Division of the Department of Agriculture and City Councils in the holding of the Oral and Practical Examinations at Christchurch and Palmerston North.
- (d) District Council Presidents and Executives who have continued to maintain an active front in their respective localities.
- (e) The New Zealand Forest Research Institute and Mr S. W. Burstall in matters relating to Historic and Notable Trees in New Zealand.
- (f) Mr M. Grainer for his presentation of the Banks Lecture at the 1970 Dominion Conference.

**CONCLUSION:**

As Dominion President I once again express my sincere thanks to all members of the Dominion Council and of District Councils, the Dominion Secretary and all others who have worked throughout the year in the interests of the Institute and of Horticulture.

The past year has been a particularly heavy one for the Examining Board. The syllabuses for the new Diplomas were finalised after much careful and prolonged consideration and debate. I believe these new Diplomas will now serve their particular fields of horticulture very acceptably for several years, ensuring excellent qualifications for the increasing number of young men and young women who are taking up careers in horticulture. I pay tribute to the members of the Examining Board who have given a great deal of time and thought to these new Courses and also express appreciation to the Institute of Park Administration, the Fruitgrowers' Federation, the Vegetable and Produce Growers' Federation and the Nurserymen's Association for their help and advice in formulating these syllabuses to meet the needs of their respective industries. Coupled with the expanding opportunities for diplomas and degrees in our two national universities, Massey and Lincoln, we may look forward to a new era in formal horticultural education in New Zealand.

Horticulture can never be reduced purely to a science; it will always have many practical applications. Therefore, in providing practical diploma qualifications, involving courses of study and examination tied to practical experience, the Institute will continue to play an important part in this aspect of our national life.

I would like to think that the review of the future role of the Institute, which commenced during the year, will bring forward some sound and purposeful objectives for the Institute to pursue, in which its influence towards the protection and advancement of national horticulture may be noticeable and effective. The Institute has enjoyed the status of a "Royal" charter for several years. We must preserve this honoured status in all that is undertaken, but care must be taken to ensure also that it is fully justified by unmistakable evidence of inherent life and endeavour. The review may bring forward some changes in the format of administration. I am confident that such changes, if introduced, will only be made in the best interests of the Institute and that, in consequence, they will retain and attract into its leadership men and women who are themselves leaders in their own fields of horticultural outlook and endeavour.

I look forward to 1971 with confidence.

J. F. LIVING, Dominion President.

#### **REPORT OF THE EXAMINING BOARD, R.N.Z.I.H. (Inc.)**

On behalf of the Examining Board I have pleasure in submitting the following report for 1970.

#### **MEETINGS:**

The Board met on four occasions during the year with an average attendance of 13 members.

#### **SYLLABUS OF EXAMINATIONS:**

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

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

## APPLICATION FOR REGISTRATION FOR EXAMINATIONS:

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

	1969	1970
National Diploma in Horticulture ... ..	36	46
National Diploma in Fruit Culture ... ..	5	11
National Diploma in Apiculture ... ..	2	2
Certificate in Vegetable Culture ... ..	1	5
Horticultural Salesman's Certificate ... ..	2	3

## EXAMINATIONS:

Results: These are published separately.

Statistics: The following tables will be of interest; 1969 corresponding figures are shown in parentheses:

N.D.H. Examination	Junior	Intermediate	Diploma
Number of Subject Entries ... ..	(77) 96	(53) 48	(19) 34
Number of Passes ... ..	(57) 55	(32) 19	(11) 27
Percentage of Passes ... ..	(74) 57	(60) 39	(58) 79
Average marks—Passes only ... ..	(63) 59	(64) 66	(64) 66

## N.D.F.C. Examination

Number of Subject Entries ... ..	(9) 10	(1) 3	(3) 1
Number of Passes ... ..	(6) 5	(1) 3	(2) 1
Percentage of Passes ... ..	(66) 50	(100) 100	(66) 100
Average marks—Passes only ... ..	(65) 67	(77) 60	(69)

## N.D.Ap. Examination

Number of Subject Entries ... ..	(-) 3	(3) -	(-) 3
Number of Passes ... ..	(-) 2	(3) -	(-) 3
Percentage of Passes ... ..	(-) 66	(100) -	(-) 100
Average marks—Passes only ... ..	(-) 75	(65) -	(-) 78

## C.V.C. Examination

Number of Subject Entries ... ..	(5) 18
Number of Passes ... ..	(4) 15
Percentage of Passes ... ..	(80) 83
Average marks—Passes only ... ..	(60) 69

## Conduct of Examinations

There were 107 candidates, 222 entries, sitting at 19 different centres.

Every endeavour is made to enable candidates to sit in the town where they are working. In all 14 examiners were appointed by the Examining Board for written examinations. Their co-operation and prompt marking of papers permitted an early release of the examination results.

## ORAL AND PRACTICAL EXAMINATIONS:

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

The examinations for the Junior candidates were conducted in Palmerston North. The ready co-operation and assistance of Mr J. Bolton (Director of Parks) and staff, Mr J. E. Hume and other officers of his Department, Mr J. P.

Salinger and assistants from Massey University, ensured the complete success of these examinations.

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

Appreciation is expressed to Messrs E. Hutt, H. G. Gilpin and J. E. Hume under whose overall supervision the Oral and Practical Examinations are conducted. Likewise to Messrs R. P. Walsh (Auckland) and J. D. Lorimer (Hamilton) for examining in the Beekeeping Examination and to Mr Lorimer for the use of his apiary also.

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

	C.V.C.	N.D.H.			N.D.F.C.			N.D.Ap.		
		I	II	III	I	II	III	I	II	III
Number of Entries ... ..	1	30	7	8	4	1	-	1	-	1
Number of Passes ... ..	1	20	1	5	2	1	-	1	-	1

The following completed sections of the whole examination:

#### NATIONAL DIPLOMA IN HORTICULTURE

##### Junior Certificate:

Bradshaw, C. C., Auckland.  
 Cook, N. E., Whangarei.  
 Cronin, F. D., Christchurch.  
 Hills, R. E. (Miss), Hamilton.  
 Hooper, K. T., Tauranga.  
 Hutson, B. R., Wanaka.  
 Jollands, P. R. S., Auckland.  
 Lucas, R., Wellington.

MacFarlane, R. C., Dunedin.  
 Matthews, J. J., Waikanae.  
 McLeod, I. G., New Plymouth.  
 Mills, J., Auckland.  
 Moyle, E. D., Christchurch.  
 Rice, D. R., Wellington.  
 Smurthwaite, A. R., Wellington.  
 Watson, A. S., Ashburton.

##### Intermediate Certificate:

Oliver, C. A., New Plymouth.

Stemmer, L. R. (Miss), Christchurch.

##### Diploma—Final:

Cowan, J. (Miss), New Plymouth.  
 Paterson, G., Dunedin.

Woodley, J., Christchurch.

#### NATIONAL DIPLOMA IN FRUIT CULTURE

##### Junior Certificate:

Hutchinson, W. H., Whangarei.  
 S. K. Mansill, Auckland.

##### Intermediate Certificate:

Jensen, G. V., Auckland.

##### Diploma—Final:

Gay, D. S., New Plymouth.  
 T. P. Troy, Auckland.

#### CERTIFICATE IN VEGETABLE CULTURE

##### Final:

Hayes, J. A., Christchurch.

The Board regrets the somewhat larger number of entrants who failed to report at examinations this year. This seems to indicate that they found themselves not sufficiently prepared in time. In the Oral and Practical examinations for the National Diploma in Horticulture the examiners reported a general lack of preparation and knowledge of the subject, leading to a higher failure rate.

**HORTICULTURAL SALESMAN'S CERTIFICATE (without examination)**

Under the provisions of the Royal New Zealand Institute of Horticulture Act 1953 and on the introduction of this new Certificate Examination, the Board invited applications for the Certificate without examination from persons engaged in that section of the horticultural trade for which the Certificate has been provided. Such persons must be not less than forty years of age and have been so engaged for not less than twenty years as at 11th July, 1970. Applications received are being considered in consultation with the N.Z. Nurserymen's Association.

**Government Grant for Examinations:** The Examining Board acknowledges with appreciation the capitation granted by the Minister of Agriculture for assistance to the Institute in the conduct of the examinations.

**Assistance to Students:** Some District Councils are continuing to make special efforts to assist examination candidates with coaching and regular educational lectures especially designed for them. This is appreciated.

**Review of Syllabuses:** New schemes have been adopted for National Diplomas as under:

**National Diploma in Horticulture (N.D.H.).**

**National Diploma in Horticulture (Fruit) (N.D.H. (Fruit)).**

**National Diploma in Horticulture (Vegetable) (N.D.H. (Vegetable)).**

**National Diploma in Horticulture (Nursery Management) (N.D.H. (Nursery Management)).**

National Certificates in these courses will be issued at the passing of all units set for the first three years of each course. Successful students may then proceed to the completion of the National Diploma, which is a 5-year course altogether.

Detailed schemes for these four National Diplomas, including prescriptions, have been submitted to the Minister of Agriculture for approval and official gazetting. These new Diploma Courses will become operative immediately upon gazetting in 1971.

The present schemes and syllabuses for National Diplomas in Horticulture and Fruit Culture and for the Certificate in Vegetable Culture will eventually be superseded by these new schemes. The interests of students at present registered and sitting under the existing schemes will be fully protected. They will continue under the existing schemes for 1971 and then possibly until the completion of the present stage of their course. The Examining Board will review the position after the 1971 Examinations. They may apply to the Examining Board for earlier transfer to the new schemes. A system of cross-crediting in units passed under the existing schemes has been adopted by the Examining Board. New candidates will be registered under the new schemes with effect from the gazetting of the schemes in 1971. Candidates may apply to the Board for transfer from one Diploma Course to another; each application will be considered on its merits.

**N.Z. TECHNICAL CORRESPONDENCE INSTITUTE**

The Board led a deputation to the Assistant Director of Technical Education on tuition courses for candidates under the new Diploma schemes. The opportunity to discuss this question and present the needs of the horticultural industries was appreciated.

The guidance and tuition given to candidates for the Institute's examinations by the N.Z.T.C.I. is readily acknowledged and appreciated. Without this many young horticulturists would find it difficult to study for the examinations

and consequently fall by the way. It is hoped that increasing interest and growth taking place in the horticultural industry will enable the N.Z.T.C.I. to offer courses of tuition in more subjects as time passes. The work of the Examining Board is greatly facilitated by the close liaison enjoyed with the N.Z.T.C.I. Our warmest thanks and good wishes are expressed to Mr B. B. Teviotdale upon his retirement.

**Rumble Bequest:** The Examining Board, acting on behalf of the Dominion Council has submitted to the Trustees of the A. M. L. Rumble Estate a suitable scheme to provide amongst other things, financial assistance for students and holders of the Institute's National Diploma in Horticulture. The Board awaits the outcome of its submissions.

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

- (a) The panel of examiners; also advisers of theses;
- (b) The Christchurch and Palmerston North City Councils' Parks and Reserves Departments, officers of the Department of Agriculture and Massey University;
- (c) Honorary supervisors at centres for written examinations;
- (d) The Canterbury and Manawatu District Councils for assistance and hospitality with Oral and Practical Examinations;
- (e) The Director of Horticulture and Officers of the Horticulture Division;
- (f) The N.Z. Fruitgrowers' Federation and N.Z. Nurserymen's Association for their co-operation and representation on the Examining Board;
- (g) The sub-committees appointed to deal with special business arising throughout the year;
- (h) Mr A. J. Healy, of Christchurch, who retired this year after many years as one of our examiners.

The Peter Skellerup Prize for the best junior candidate was awarded to I. G. McLeod, of New Plymouth. The Junior Memorial Prize for the candidate gaining the highest marks in Oral and Practical I examination was awarded to K. T. Hooper, of Tauranga.

The Cockayne Memorial Medal for the candidate completing the Diploma of Horticulture and gaining the highest average marks in the final stage of the examination, also The Dugald MacKenzie Memorial Prize for the best Thesis, were awarded to G. Paterson, of Dunedin.

H. D. GORDON, Chairman.



### **LODER CUP COMPETITION**

Nominations for this coveted Award for 1971 will close with the Secretary of the Loder Cup Committee, P.O. Box 450, Wellington, on June 30th. The conditions of the Award may be obtained from the Secretary.

The Award is made to encourage the protection and cultivation of New Zealand's native flora.

Nominating bodies are urged to submit nominations to the Committee, who would welcome enquiries from all interested persons.

## DISTRICT COUNCIL NOTES

### WAIKATO

Roses, always a popular flower, are very much in the limelight in the Waikato now because of the World Rose Convention to be held in Hamilton in 1971. Apart from the large numbers which have been planted in municipal gardens it is obvious that many home gardeners have made a special effort to beautify their gardens this coming year with these flowers. It was appropriate then that at the October meeting we had the pleasure of hearing Mrs R. Garland of Pukekura, Cambridge, talk on the "Cultivation and growing of Roses."

Mrs Garland is a Consulting Rosarian and a member of the National Council of the Rose Society, and her most informative talk was illustrated with superb specimens of flowers of many of the varieties about which she spoke. In November the Rose Society held its annual show in the Claudelands Showgrounds, the site of the shows to be held during the Convention. Despite the problems of an unusually early flowering season the flowers exhibited, especially in the competitive classes, were of the high standard associated with these shows.

Whale Bay is a delightful area near Raglan, and possesses some lovely gardens in which many tender plants grow well in the mild coastal climate. In November these were visited by members one afternoon and afterwards a dinner was served in Raglan. The Annual General Meeting was held immediately before a social evening in November, and was the final meeting for the year. Despite the fact that an additional contribution of one dollar was received from each member the increased costs of running the district council absorbed much of this, but during the year certain equipment was purchased which will be in use in future years.

The Committee of the Waikato District Council were honoured by a visit in November from the Dominion President and other members of the Council. Views were exchanged on how the work of the Institute can be enhanced and expanded, and some of these will no doubt be discussed at the Annual Conference in Auckland in 1971. One of the problems of organisation of the Institute is that its district councils and members are scattered over the whole country, and realising this the Waikato Council are most grateful to Mr Living and the other members for coming so far to visit us.

It was with considerable gratification that members learnt that the award of Associate of Honour of the Institute was being made to our President, Mr R. T. Fear. The continued success of this council is to a large extent due to his enthusiasm over the many years he has been President, and he has our sincere congratulations on the recognition of this by the Dominion Council.

### WHANGAREI

*SEPTEMBER LECTURE.*—The lecture for September was given by Mr E. Butcher, N.D.H. Director of Parks and Reserves of the City of Whangarei.

His subject "Selection of Plants for the Home Garden" was a timely one, as new homes and gardens are being so rapidly developed in our area.

With his experience in the Housing Division, as well as with the State Highways Board in a very extensive area of the North Island, Mr Butcher encountered a great variety of climatic and soil conditions, as well as a great diversity of reactions among the people he served. Of people, some were helpful,

but others more hostile and did not wish for a single tree to be planted. Great tact was needed to get them to accept any attempt at beautification. In the main, therefore, it was essential to keep to "bread and butter" lines, partly for economy's sake and also with a view to their care or possible destruction in the future.

After a house is built the first requirements are for privacy and shelter. Fences and hedges are both means of obtaining these. To secure protection from wind an open type of hedge is to be preferred to a wall or a very dense type of plant.

*Abelia*, *Escallonia* and *Lonicera* were all suitable hedge plants and not very difficult to prune. *Phebalium* was excellent as a wind filter, but unless drainage was very good it was liable to attack by root fungus. Infected plants should be burnt and the soil drenched with copper oxychloride. Lawn clippings should never be used with *Phebalium*.

Both *Casuarina cunninghamii* and *C. glauca* were effective wind barriers and could be kept to 5ft by trimming. There is a wide selection of hedgings available here. Pruning is better done several times a year lightly, rather than once or twice heavily.

Informal hedges should be carefully chosen and could be used to divide long sections, and add interest by variety of form, leaf and colour. Trees and shrubs were permanent and thought should be given before choosing, and though trees should be planted in preference to other things, height and spread should be known. Size of section would influence choice, but most gardens had room for at least one tree. If it were deciduous, it would allow sun in winter and shade in summer. Whatever was chosen, foliage and form should be considered and not flowers only.

The nature of the soil would also dictate choice and should be known—whether alkaline or acid, dry, wet or salty. When form was important Conifers were useful. Colour could be provided by the variegated forms of *Aneuba* and *Phebalium*, the *Rhus* species and Ginkgo in autumn and the white trunks of *Betula papyrifera* not to be confused with its sister species *B. pendula*, the Silver Birch.

Perennials were useful for the mixed border and could be used as fillers between shrubs. Plants were now usually sold in pots, but if balled in scrim with roots showing through, should be planted scrim and all. Polythene must be removed before planting. If in pots, lift out, remove crocks and gently tease out roots. Among subjects difficult to transplant were gums and the Pepper-tree.

Success in transplants was more likely with smaller specimens. Both Australians and South Africans disliked deep planting. Bare rooted plants such as fruit trees and roses should never be allowed to dry out, and if planting were to be delayed, they should be heeled in and kept moist.

In choosing annuals, both flower and vegetable, it was essential to buy in season, choosing fresh, healthy, sturdy specimens, and avoiding those yellowing and drawn up. Finally, never buy bulbs, especially Liliiums, that are dry and have been kept exposed to sunlight.

#### DISPLAY TABLE

So that members may appreciate the extraordinary range of habitats from which the specimens came they are listed under the names of their native countries.

NEW ZEALAND was not as lavishly represented as might have been, but



provided Hebes (3), *Clianthus puniceus*, Kaka Beak, *Plagianthus betulinus*, our only truly deciduous tree, three Pittosporums and the Golden Tainui.

AUSTRALIA was well represented with plants of Western as well as Eastern states. Kangaroo Paws, Anicozanthos, and Macropidia, Calythrinx from the West, Callitris a pine from Tasmania as well as *Olearia guniana*, 'Blue Gem' and the best of the Mint bushes, *Prostanthera ovalifolia*, from the East, and the scarlet blooms of the Queensland Fire Wheel tree *Stenocarpus sinuatus*. What is more remarkable is that the specimen came from a tree barely eight years old which bloomed for the first time in May and still holds its flowers almost six months later, whereas it usually blooms in February. It was grown in Mrs Karwoski's garden at Kara and is about 20ft high.

SOUTH AFRICA provides us with a wealth of plants which often do better here than in their homeland. Leucospermum and Leucodendron in variety are especially valuable, also the large flowered Sweet Pea bush, *Podalyria calyptata*, a must for any garden. Lesser known was the Natal Plum, *Carissa edulis*, and the purple leaved poisonous plant with masses of fragrant white flowers *Acokanthera spectabilis*.

JAPAN provided Camellias in great variety.

HIMALAYAS gave us Rhododendrons and Magnolias.

CHINA and JAPAN gave some of these as well as Bamboo and the *Spiraea prunifolia*, also of Japan.

UNITED STATES were represented by flowering Apples, Leucothoe and a lovely specimen of *Acer negundo elegantissima*.

MEDITERRANEAN and SOUTHERN EUROPE area gave us the beautiful Candytuft, *Iberis gibraltaria*, and several brooms, white and yellow. The yellow one common in many gardens now, very leafy and varying in both quantity and quality and length of flower is correctly known as *Cytisus racemosus*, a hybrid of uncertain parentage and NOT *C. maderensis* as often noted.

MEXICO is the home country of many showy garden plants and gave us Streptosofen, commonly called Marmalade plant and *Rondeletia amoena* now in full and fragrant bloom.

PERU, BOLIVIA and CHILE were represented in *Cantua buxifolia*.

Though ARABIA may not seem a likely country from which we might enrich our gardens, it gave us a rare specimen, *Catha edulis*, a plant used in that country to brew tea, and the leaves of which are also chewed for their recuperative properties.

#### OCTOBER DISPLAY TABLE

The October table was a flower show in miniature. Among the natives seen were specimens of *Xeronema callistemon*, the Poor Knights Lily, which may truly be called a Northland special, with its long scarlet racemes and bright green sword-like leaves, quite smooth and without any mid-rib, standing stiffly between the flowering stems. Very dry conditions are needed for this plant and for success it is best grown in a pot with stony grit and little soil beneath it, and when really pot bound it flowers, a sight to remember.

Other natives were an attractive clematis, *C. parviflora*, *Libertia ixiodides*, the New Zealand iris and a good garden plant, *Olearia cheesemani*, a useful and attractive species blooming while quite small, one of the best of the hybrid tea trees, 'Pompom', and a specimen of the sand *Pimelea arenaria*. This last is a plant of the Daphne family, not very showy, though its sister *P. longifolia* is far more attractive with larger flushed pink flowers. An Australian species,

*P. ferruginea*, was also present and is a good garden plant for a well drained sunny spot.

Azaleas and rhododendrons were well represented. Several Mollis and Kurume types were admired and names noted were 'Rosebud', 'Kirin' and the 'Koster' forms. Rhododendron 'Mrs Chamberlain' was the undoubted favourite. Brooms were in quantity, as well as roses, sweet peas, flowering cherry, fuchsias, a very good seedling diervilla grown by Mrs Kennedy. *Bougainvillea* 'Killie Campbell' from Mrs Finlay, the beautiful orchid *Dendrobium nobile*, from Mr Blumhardt and the lovely violet racemes of *Petrea* which comes from Mexico. This climbing plant, which does so well in Northland, should be grown more frequently. It is a very strong, rather woody plant, and quickly reaches flowering stage, blooms twice in the year, spring and autumn, a really spectacular plant. Plant in a sheltered position facing east or north-east, keep the long tendrils shortened back to flower buds and it will produce masses of beautiful blooms.

**NOVEMBER:** We were entertained and pleasantly instructed in the possibilities of Floral Art by Mrs Olga Corbett and her team of artists, Mrs Christie, Mrs Philips, Mrs Reynolds and Mrs Crawford. We were fascinated to see them constructing mountain ranges and peaks with diverse forms of flower and foliage. The Remarkables, near Queenstown, were depicted with their dark gorges snow streaked and tops snow crowned. Then Ngaruhoe in eruption with fiery craters Egmont, Mitre Peak and Mt. Hikurangi, East Coast, the first part of New Zealand to receive the sun's rays. Mrs Corbett added interest by relating the various Maori legends associated with the peaks.

**DISPLAY TABLE:** There was a good display of plant material, native and exotic. A very handsome leaf of the mountain Cabbage Tree (*Cordyline indivisa*) came from New Plymouth. This is plentiful all around the Volcanic plateau, on the foothills of Ruapehu, Tongariro and Ngaruhoe, as well as in more Southern parts. An unusual *Cassinia* collected locally exacted some speculation. *Pomaderris oraria* var *Novea Zelandiae* from Mt. Manaia, Whangarei, was another newcomer. A sundew in flower, *Drosera binata*, was of special attraction.

Among exotics all seasonal flowers were represented. These included some Old Roses, Gladioli, Gerberas and a splendid Delphinium, though it has been said that it is not possible to grow really good ones in our climate. Much depends on the skill and care of the grower and staking is essential. A good specimen of *Lotus bertholetii* was shown. This plant with trailing stems, silvery hairy leaves and scarlet pea flowers, is a good one for a dry sunny position in light soil or sand. It resents over-shading by other plants and does not like wet winters.

*Pieris formosa* var. *forrestii*, a three-foot shrub with lily-of-the-valley like flowers, needs good soil, and a cool, rather shady place. A South African herbaceous perennial and a striking background plant for a moist position is *Wachendorfia thyrsoiflora* with handsome "pleated" leaves and yellow flowered stems up to 8ft. high. Roots are thick, rhizomes covered with a mass of coarse rootlets, and said to yield a red colour, useful perhaps to home dyers. An Australian low climber *Hibbertia* with attractive yellow flowers was another seldom seen plant and is not difficult to grow. Showing a glorious note of colour were three Epiphyllums in shades of red, purple and magenta. These were grown by Mrs Bradley, who seems to know just the right conditions for these tropical epiphytes, rich leafmould, shade and warm, well-drained positions.

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