

JOURNAL
of the
ROYAL NEW ZEALAND
INSTITUTE OF HORTICULTURE
(INCORPORATED)



N.S. Vol. 1

MARCH 1970

No. 6

Dominion Secretary:

K. J. Lemmon, A.C.A., A.C.I.S., First Floor, British Sailors' Building,
10 Brandon Street, Wellington. (P.O. Box 450.)

Please forward correspondence re this Journal and articles for publication to the Editor. All enquiries concerning advertisements are to be addressed to the Editor.

Editor: J. F. Gover, B.Com., F.R.I.H. (N.Z.)
74 Southampton St., Christchurch 2. (Telephone 39-325.)



C O N T E N T S

EDITORIAL — Into the Seventies	241
PLANT RAISERS' AWARD — Notice	242
NATIVE FLORA IN FLORAL ART — Margaret Watling, Halswell	243
ERRATA	247
THE AWARD OF GARDEN EXCELLENCE, 1969	248
HARDY FUCHSIAS IN THE GARDEN SCHEME — Nancy Steen, A.H.R.I.H. (N.Z.), Auckland	256
A TALE OF TWO CITIES — Conference Activities	259
PLANT RAISERS' AWARD, 1969 <i>Gladanthera</i> 'Lucky Star'	264
ASSOCIATES OF HONOUR — Citations for New Awards	
Mr H. Jack Clark, Auckland	265
Mr Bernard Hollard, Kaponga	266
Mr Stuart Peterson, Wellington	267
Mr James C. Stirling, Wellington	267
FLOWERS FOR SHOWS	269
GROUND COVER IN THE CHRISTCHURCH AREA (Cont'd) N. W. Drain, N.D.H. (N.Z.), Christchurch	270
ANNUAL REPORT OF THE DOMINION COUNCIL	274
REPORT OF THE EXAMINING BOARD	282
DISTRICT COUNCIL NOTES	286
INTERNATIONAL CODE OF NOMENCLATURE, 1969	288



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EDITORIAL

INTO THE SEVENTIES

What does the next decade hold? There is little doubt that there will be vast changes in our daily lives, at home, at our occupation, and in our leisure activities. Horticulture will inevitably be caught up in these changes just as it has been during the last decade and during the fifties. The last ten years has seen more change than any preceding ten years and we know that there are others as vast in the offing. There has been much progress but not all is on the credit side. Commercial horticulture is a business and as in every other business there has been a great loss on the personal side. All business has become impersonal; the close intimate warmth has gone from the businessman-customer relationship and it has been replaced by a cold, aloof efficiency.

Many of us remember the old family grocer and how pleasant it was to chat whilst he weighed out this and that. Nowadays nearly everything is packaged in the factory, in the warehouse, or in a back room. Doubtless this is more efficient and hygienic but something has been lost. This seems to apply in every walk of life, even in the very personal relationship of the G.P. and his patient and horticulture has been no exception. Imagine a middle-aged nurseryman of forty or fifty years ago finding himself suddenly back in a nursery of the seventies. What would be his feelings? They would be very mixed and by no means all complimentary. What would he think of the policy of selling more and more of less and less that prevails in some businesses? Doubtless this is more efficient in cutting down costs and ensuring an immediate profit, but has not some of the service rendered by our old-time nurseryman departed. First and foremost he was a genuine plantsman, a plant lover, and it did not always matter to him if he sold a choice plant at a loss if he knew it was to have a good home. He knew the meaning of a "baker's dozen" and many a fine plant was entered on the invoice as "gratis". This does not happen often nowadays and when it does it is most likely the gimmick of a supermarket.

This is not to say there are not good nurserymen to-day, men to whom service is second nature, men who love each and every one of their plants, men who know the true meaning of goodwill. We just mean that a structure has grown up that attracts many who have not been brought up in the true nursery tradition and to whom immediate gain is more important than lasting goodwill.

Our old-time nurseryman would also see much to admire; new and better methods of propagation, mechanisation that takes much of the drudgery away from his work, more efficient sprays and equipment, improved working conditions, computers to take care of his stock records, to do his costing and even telling him when to sow seed, take cuttings, etc. What would he think of the many fine plants that have been found and brought into the trade during the last fifty years, of the multiplicity of new hybrids that are distributed every year?

Without a doubt there will be even greater progress during the next ten years but we must be careful that it is true gain, that in our hurry to declare a dividend we do not lose something valuable. We must look well ahead and plot our course carefully. Otherwise our progress may be progress only in name. Life becomes increasingly complex and no longer is it possible to play it by ear.

The current furore over Lake Manapouri has a deep and abiding lesson for all; the best things in life cannot be valued in dollars and cents and are best left unchanged even if not in the name of progress.

JOHN GOVER

PLANT RAISERS' AWARD

Nominations for the above Award for 1970 are now invited and may be submitted to the Dominion Secretary of the Institute, P.O. Box 450, Wellington, by June 30 (closing date).

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

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.

NATIVE FLORA IN FLORAL ART

By MARGARET WATLING, *Halswell*

Flower arrangers are becoming increasingly aware of the valuable qualities of interesting textures and subtle colouring inherent in the native flora of New Zealand. Here may be found a selection of contrasting forms with infinite character, many flowers and leaves possessing good lasting qualities as well. All native flora possesses an indefinable quality which links the various kinds together in complete unity, but it is also versatile blending well in designs with exotic plant materials.

Many native plants can be grown in the home garden and thus are readily available for floral work. However, when contemplating gathering material from plants in their natural habitat, it first should be ascertained if this is permissible, and if so, care should be taken that flowers, foliage or seed-pods so removed will not in any way inflict injury to the plant. Discipline in gathering only the amount essential to achieve the planned arrangement also helps to preserve the plants.

In the past, this heritage of native plants has too often been regarded as a 'poor relation' when compared with the brilliant colours of exotic subjects, and was not therefore given the opportunity to show its potential in decorative work. A native flora arrangement class in a show or garden club competition reveals artistic qualities not always appreciated before by the casual observer, as well as bringing to the fore less well known species, or differing forms of a popular plant.

The shape, line, texture and colour of the material should be studied when planning a design, to place it to the best advantage while still retaining some degree of its natural growth habit. Where the beauty of flowers or berries is veiled by dominating foliage, some or all this foliage can be neatly trimmed off. Awkward thorns, too, are best removed so they do not become entangled with other material in the arrangement.

To ensure a fresh, crisp appearance, all material used should be well **conditioned** beforehand. Woody stem-ends are split to allow a better absorption of water, and some flowers respond to their stems being placed in several inches of warm water, and left till the water is cold. Most foliage is best immersed completely in cold water for several hours, although this is not necessary for tougher subjects such as flax, cabbage tree and astelia.

With a relative wealth of materials at hand, it is all too easy to accumulate a too large and varied collection of flowers and foliage in an arrangement. A few well chosen pieces are always more effective,

selected according to size, form and colour to make a clear-cut design, within which **spikes**, **flats**, and **rounds** all play their part. It is wise to avoid giving the impression that the competition is for the largest number of kinds it is possible to put in a vase!

Containers made from native woods naturally have a kinship with our native flora, as do small pongas hollowed out, or bases incorporating lichen-covered rocks, mossy bark or driftwood. Pieces gleaned from a high country riverbed or lake shore have special significance. Dull-surfaced or unglazed pottery also blends in well, while metal or china containers may be effective in more sophisticated designs.

Contrasting foliage forms abound in native material. Popular outline subjects are the spiky astelias, green and bronze cabbage tree, and the juvenile leaves of pseudopanax (Lancewood), including the species *P. discolor*. The flax is highly valued by overseas floral artists too, with the incredible designs into which it can be manipulated. *Phormium colensoi* 'Tricolor' has green and white leaves edged with red, while *P. tenax* 'Rubrum' and *P. tenax* 'Purpurea' provide copper and purple shades. Flax flowers and seed-heads are also invaluable, especially for large foyer type decorations. Just-unfurling bracken fern fronds yield another texture, while the mature fronds can be dried or coloured, and may also provide good 'filling-in' material to support other material in church flower arrangements.

There are several variegated pittosporums (Matipo), prominent being the variety *P. tenuifolium* 'Garnettii', with its silvery white leaves edged with pink. Bolder leaf forms are the variegated varieties of griselinia (Broadleaf) and hoheria (Ribbonwood), and the leathery laurel-like leaves of *Corynocarpus laevigatus* (Karaka) with its yellow and silver-margined leaf varieties. Russet tones are found in the foliage and winged seeds of *Dodonaea viscosa* 'Purpurea' (Ake Ake), while bronze tones in finer foliage include myrtles and *Nothofagus fusca* (Red Beech). For variation in colour and texture, the silvery *Senecio greyii* foliage and furry reverse of pachystegia and celmisia leaves may be utilized.

Any allegation of lack of colour in our New Zealand flora probably had its origin in the abundance of white to cream flowers available, but these have other delightful attributes to compensate for paleness. The starry flowers of *Clematis paniculata* (*C. indivisa*) and Ribbonwood have simple beauty, as have *Celmisia spectabilis* and *Pachystegia insignis* (Marlborough Rock Daisy). Rich creamy tints are found in the scented heads of *Cordyline banksii* (Cabbage Tree) and the saucer-shaped flowers of *Elaeocarpus dentatus* (Hinau), while *Clianthus puniceus alba* has faint greenish tones. The mauve-tinged florets of *Arthropodium cirratum* (Rengarenga) have a fragile beauty all their own.



NATIVE FLORA IN FLORAL ART

Toe toe plumes, cabbage tree and lancewood 'spikes' establish the height of this mass arrangement in a pottery bowl. Two placements of kowhai and a grouping of *Clianthus puniceus alba* add colour value, while the reverse of *pachystegia* and *senecio* leaves give texture interest. The focal area is formed by cabbage tree 'bows' surrounding wineberries, flanked by the glossy leaves of *Myositidium hortensia*.

Photograph—D. Hearn, A.R.P.S.

Pinky-mauve tones are widely represented, especially in the various hebes, including *H. hulkeana* with its long sprays of lilac-coloured flowers. The pink broom, *Notospartium carmichaeliae* is very graceful, while more peach-pink is provided by the hybrids of *Leptospermum scoparium* (Manuka),—the single pink 'Keatleyii' and double frilly 'Fiesta'.

The sophora (Kowhai) is an accepted symbol of spring throughout the country, with its sulphur-yellow flowers. The range of yellows also includes the kniphofia-like flowers of *Bulbinella hookeri* (Maori Onion); the clusters of *Senecio greyii* (Cook Strait Groundsel) and the golden heads of pomaderris (Golden Tainui), while the scented flowers of the toru are in yellow-brown tones.

Red is a prominent colour, appearing in the deep crimson flowers of *Metrosideros excelsa* (Pohutukawa) which are symbolic of the New Zealand Christmas season, while its relatives, the ratas, are also well-known. *Knightia excelsa* (N.Z. Honeysuckle Tree) has banksia-like reddish flowers, and the manukas *L.* 'Nichollsii' and 'Red Damask' are vivid indeed. The strong-charactered, muted red flowers of the Nikau Palm and the bright red *Clianthus puniceus* (Kaka Beak) give other forms in this colour range.

One of the most beautiful flowers is the 'heavenly blue' *Myosotidium hortensia* (Chatham Is. Forgetmenot), set off by its glossy leaves. Less dominating, but still attractive, are the trailing orange, green and purple flowers of *Fuchsia procumbens*, which are followed by shining red berries.

The number of berry, fruit and seed-producing plants with artistic potential is bewildering in extent, ranging from bold and conspicuous to delicately glaucous. Both the corokias and the coprosmas give a range from yellow to red, and most dramatic of all are the red and black berries of *Alectryon excelsum* (Titoki). These berries may be dried to extend their usefulness into the winter months. *Vitex lucens* (Puriri) berries are also red, and the 'currants' of *Aristotelia serrata* (Wineberry) are effective if the leaves are removed. Other bluish to black fruits are supplied by *Carpodetus serratus* (Putaputawheta) and melicytus (Mahoe or "Whitey Wood"). The karaka and *Tetrapathaea tetrandra* (N.Z. Passionfruit) both have attractive orange fruits, but care should be taken with the fruit of the karaka, as it is poisonous if eaten raw. A commonly found fruit is the green to yellow berry of *Solanum aviculare* (Poroporo or Bulli-bull). The brown spiny fruits of *Entelea arborescens* (Whau) resemble chestnut burrs.

Other subjects with a prickly character are the often lichen-covered branches of *Discaria toumatou* (Matagouri) and the rather fearsome *Aciphylla colensoi* (Spaniard). Dry summer conditions turn the leaves and seed-heads of acaena (Bidi-bidi) to brownish red, while other useful

seed-heads are those of *Bulbinella hookeri*, *Libertia ixioides* and *Clematis paniculata*. *Pittosporum ralphii* and *P. crassifolium* seed-pods last for winter decorations if picked before the pods open, and then gradually dried off with the stems in a little water. The pods gradually open to reveal the glossy black seeds.

Among examples from the large collection of grasses, rushes and sedges are the brown seed-heads of *Mariscus ustulatus* (Coastal Cutty Grass), the feathery plumes of Snow-Grass and Toe Toe, and the richly coloured Red Tussock.

The use of native plants in decorative work awakens the interest of both the arranger and all who view the completed design. At the time of a convention to which overseas visitors are coming, the inclusion of native flora in a hotel foyer arrangement and in the conference halls has a magnetic effect, giving an essentially New Zealand touch,—the well-known fern leaf is quickly recognized, and colour is given by seasonal native flowers and fruits.

In this era of the space age, modern trends in architecture often require a modern foyer design in keeping with the lines of the building. A cleverly sculptured piece of driftwood or salvaged root with the contortions of the supple-jack vine, could set the scene for a free-style design, to be completed with bold leaf and flower forms of New Zealand flora.



ERRATA:

N.S. VOL. 1, No. 4, SEPTEMBER 1969: page 175. Caption of the picture at bottom left should be altered to *Metrosideros kermadecensis* 'Variegata'.

N.S. VOL. 1, No. 5, DECEMBER 1969: page 215. The Title of Miss Joan M. Dingley's Book should read: "Records of Plant Diseases in New Zealand", N.Z. D.S.I.R. Bulletin 192.

THE AWARD OF GARDEN EXCELLENCE 1969

This year twenty more plants have been selected as suitable for the Award of Garden Excellence bringing the number that has received the award up to eighty. Among the plants chosen seven are native to New Zealand; of these seven, two are selected cultivars of indigenous species, i.e. *Griselinia littoralis* 'Variegata' and *Pseudopanax lessonii* 'Purpurea'. It is hoped that more cultivars of our native shrubs and trees will be selected and described as they now play a prominent part in garden plants in our country.

SHRUBS AND SMALL TREES

Acer palmatum 'Dissectum'

A. palmatum 'Dissectum Atropurpureum'

These varieties of Japanese maple are low growing, rarely reaching more than 6ft, weeping with deeply cut fernlike foliage. In the variety 'Atropurpureum' the leaves are deep crimson which change to scarlet in autumn. Both varieties are hardy shrubs suitable for planting in sheltered, sunny positions in most parts of New Zealand. Their low-growing graceful habit makes them suitable for planting as features in larger rock gardens.

Azalea (Kurume) 'Kirin' (syn 'Coral Bells,' 'Pink Beauty')

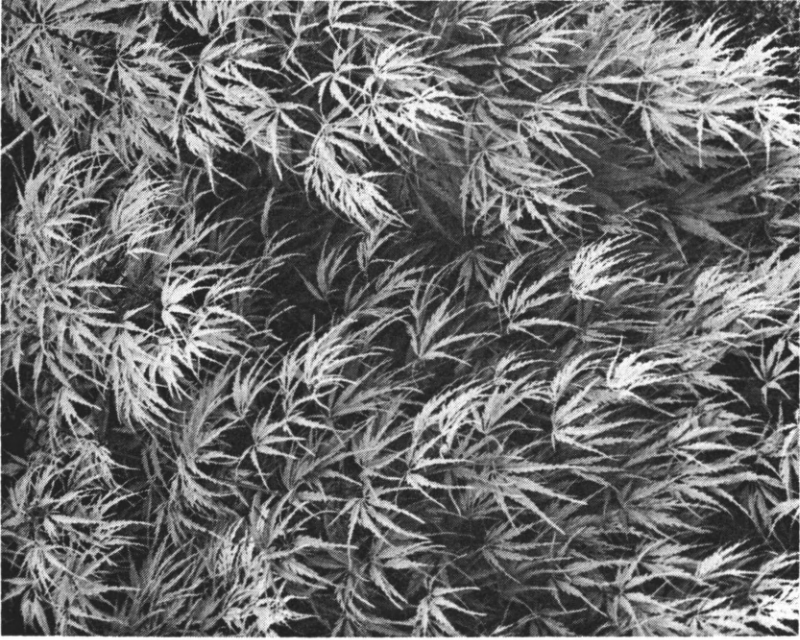
Introduced from Japan to North America in the first collections of 'kurume' hybrids in about 1920. This variety has maintained its popularity. It has a low growing spreading form, free flowering, blooming over a long period from late winter till spring. The flowers are single, hose-in-hose type, conspicuously tubular 1½in long and of pleasing satin pink colour. It is an excellent variety for bedding and shows some resistance to attacks of red spider mites.

Beaufortia sparsa

A native of West Australia, and a member of the Protea family. It is locally known as swamp bush myrtle, therefore unlike most Proteaceae it needs some moisture even in the summer and of course an open sunny position. Its brushes of brilliant orange-scarlet flowers are freely produced from January to March. It needs regular annual light pruning to prevent it from forming a straggly bush. It is excellent as a cut flower.

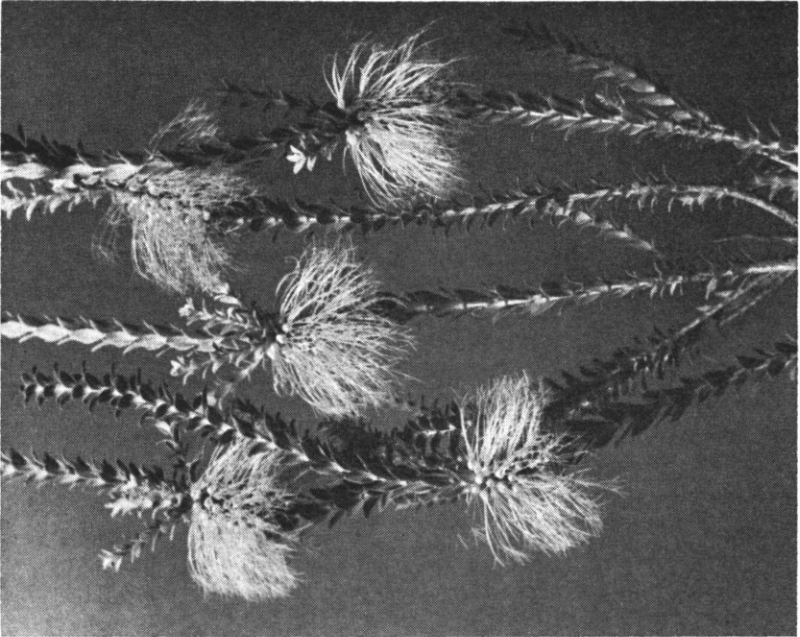
Chamaecyparis obtusa 'Nana Gracilis'

When young this conifer is neat and compact in growth for its bright dark green foliage of fan-shaped branches are stiffly held flat at random and in every direction. This unusual form makes it an attractive shrub for rock or pebble gardens. It is slow growing but old plants will form pyramids 10-12ft high and then this variety makes an attrac-



Acer palmatum 'Dissectum'

Photograph—Douglas Elliott



Beaufortia sparsa

Photograph—Douglas Elliott

tive specimen tree for lawn planting. It is hardy throughout New Zealand and appears to be resistant to stem canker and root troubles.

Corylopsia spicata

Winter hazel, the name under which this deciduous shrub is commonly known, is a native of Japan. Like the witch hazel (*Hamamelis*) to which it is closely related it is grown for its fragrant flowers produced in early spring. It forms a wide-spreading shrub up to six feet high. In early spring bright yellow flower tassels are freely produced on its graceful twiggy branches.

Erica carnea 'Springwood'

A low spreading heath that forms bushes rarely more than 10in high. In winter long spikes of white urn-shaped flowers are freely produced. This variety of this hardy European species was found growing wild in Monte Carragio in Italy by Mrs Ralph Walker of 'Springwood', Stirling, Scotland, after which it is named. Provided soil conditions are suitable it can be grown successfully in any part of New Zealand—even in the Auckland Province. There is also a pink form 'Springwood Pink'.

Fraxieus excelsior 'Aurea'

This cultivar of the European ash is outstanding for the beauty of its yellow bark especially in winter months—it will stand out in marked contrast to sombre evergreen trees. In autumn its foliage turns an intense golden yellow. It will stand hard pruning and therefore can be contained in a suburban garden. Care should be taken to ensure that plants are grafted on a suitable rootstock. In the spring after planting, the lower stem buds or shoots should be removed to improve the ultimate shape.

Griselinia littoralis 'Variegata'

Of all variegated shrubs indigenous to New Zealand this is the hardiest. It is tolerant to various soils and will stand up to almost any conditions including frost, wind and salt spray. It is extremely useful for planting as an evergreen screen. Because of its bold and attractive leaf form it makes a hardy tub plant.

Hamamelis mollis (Witch Hazel)

This Chinese species was introduced into Western horticulture at the end of the nineteenth century. It is a deciduous shrub growing up to 10-15ft high. Not only does it produce attractive fragrant flowers in winter but it is useful for its yellow autumn colours. It prefers a lime-free soil and although hardy in most parts of New Zealand is not especially recommended for the warmer parts of the Auckland Province.

Juniperus sabina var. *tamariscifolia*

As this juniper grows wild in southern Europe it has been known in cultivation for more than 200 years. Its low growing natural hori-



Corylopsis spicata

Photograph—Douglas Elliott



Fraxinus excelsior 'Aurea'

Photograph—Douglas Elliott

zontal branches make it a useful foil for stone work, and for ground cover it is excellent. Its regular branching habit allows for quite heavy pruning. It is hardy throughout New Zealand.

Libocedrus plumosa (kawaka)

In its young stages this indigenous conifer maintains an attractive columnar form with flattened fern like branches of light yellowish green. Once over its juvenile stage it will stand exposure and will maintain this attractive form for 30 or more years. It is hardy in most lowland parts of New Zealand.

Olearia cheesemanii

For a floral effect *O. cheesemanii* is perhaps the most showy of all the New Zealand species of this genus. It flowers best in a sunny situation but will grow in most places including those exposed to a high wind. It is long lived and will stand up to heavy pruning. The green leaves are lanceolate with pale buff beneath. It is hardy throughout New Zealand.

Prunus serrulata 'Shirotae' (syn. 'Mount Fuji')

This is one of the most attractive flowering cherries grown in New Zealand. In spring this large spreading tree produces abundant clusters of white single or semi-double flowers often with new bronze coloured foliage. The spreading habit makes it an excellent variety to use as a standard.

Pseudopanax lessonii 'Purpurea'

A distinct bronze form of the indigenous *P. lessonii* selected and propagated vegetatively by the New Plymouth nurserymen, Duncan and Davies. Its attractive leaf colour and form makes it a useful plant to use for contrast in a shrub planting. Like the species it will withstand wind and salt spray. It is also suitable as a hardy tub plant.

Pseudowintera colorata (Horopito)

As in the South Island and in the colder parts of the North Island this native shrub forms thickets after the destruction of podocarp forest it will stand up to most rigorous conditions including wind, snow and heavy frosts. It forms a dense bush about 8ft high with attractive highly coloured foliage. In the colder parts of New Zealand, especially in the south of the South Island, it is recommended as an evergreen screen. It is not recommended for growing in the warmer parts of New Zealand.

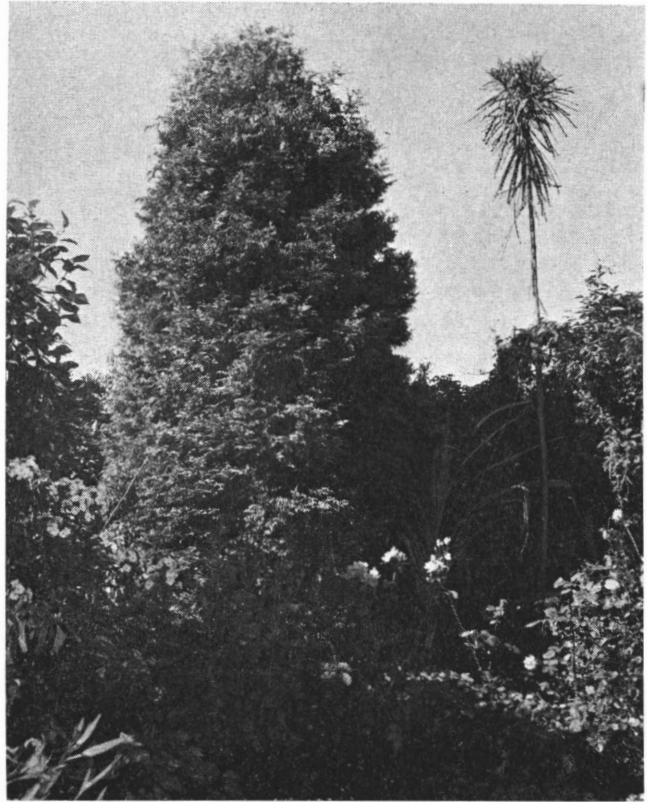
Senecio greyi

As this plant is an indigenous shrub growing in rocky coastal areas around Wellington, it is excellent for growing in exposed dry situations. Its thick silver grey leaves and its yellow daisy-like flowers make it an attractive shrub. It must be pruned hard in order to keep a compact shape. It is best propagated by layering or from cuttings. It is hardy throughout New Zealand.

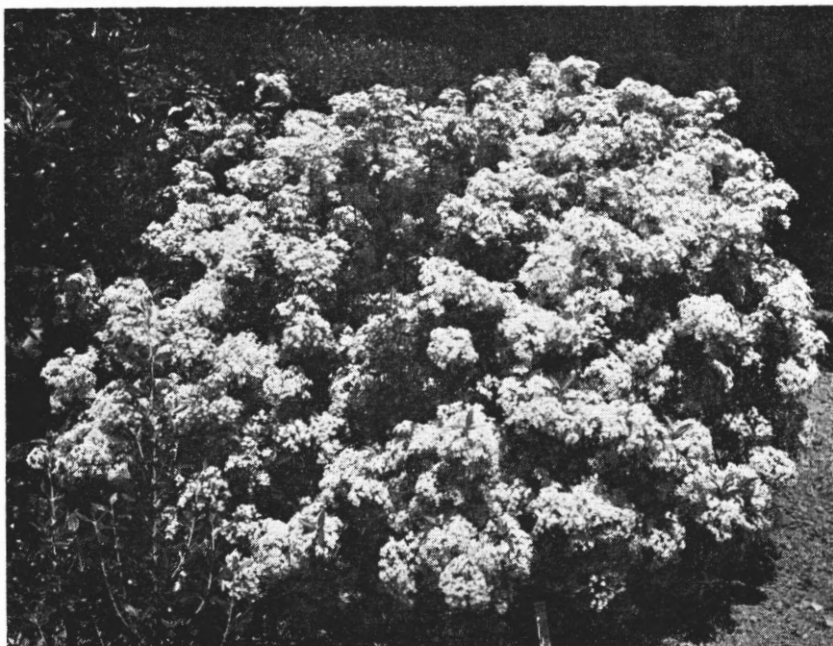


Metrosideros carminea

Photograph—Douglas Elliott



Libocedrus plumosa. This specimen was tilted in the 'Wahine' storm but seems none the worse for the experience.

*Olearia cheesemanii*

Photograph—R. H. Mole

CLIMBERS

Metrosideros carminea

A close relative of the Rata tree but a much smaller plant, it is a useful climber for, like the ivy, it clings with its roots and therefore can be used to cover concrete walls, brickwork and the like. Its carmine flowers are borne in terminal clusters in the spring. Unfortunately it is frost tender. If propagated from adult material small bushes will flower within one or two years of becoming established.

HERBACEOUS PLANTS

Scabiosa caucasica 'Blue Mountain'

This New Zealand selected cultivar of this well known perennial was raised in Tapanui, in Otago. It has well formed nicely frilled, sky blue flowers which are freely produced throughout the summer.

If propagated in the spring into light alkaline soils with adequate light and moisture it will give an attractive display throughout the summer. It is not suitable for growing in Auckland and North Auckland.



Schizocentron elegans

Photograph—H. B. Redgrove

Schizocentron elegans

In frost-free areas this small trailing herb makes an excellent cover for clay banks and rock work in any position except one that is very hot and sunny. It is a native of Mexico belonging to the same family as *Tibouchina*—it has attractive red stems which root as they spread and the rosy crimson flowers cover the plants in December and January.

Convenor: Joan M. Dingley.

Committee for 1969: Mrs M. W. Martin, Miss P. Bates

Messrs A. J. Farnell, J. A. McPherson, H. B. Redgrove.

HARDY FUCHSIAS IN THE GARDEN SCHEME

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

Plants that are trouble free, even though they are not rare, can be a joy and a help to any busy gardener. Into this category come some of the wild fuchsias—natives of Central and South America, though one, the trailing *Fuchsia procumbens* is a New Zealand plant. For many years, these shrubs have been grown successfully in our humid, Auckland climate, even though some come from the wild mountains of Magellan. They are not temperamental, and are free from ills that can befall other garden treasures. The modern fuchsias—with larger flowers and amazing colouring—have to be guarded more carefully, though, when space can be found for both the old and the new, charm and character is added to any garden. Such is the case, also, with roses and clematis.

The eighteen-inch *Fuchsia magellanica pumila* appears to thrive anywhere. In this garden, it grows on a south-facing rock trough against a four foot wall. Red China Roses and this dwarf fuchsia make excellent companion plants as both produce an abundance of bloom for many months. Nearby, there is a close relative—the delightful 'Tom Thumb'. This is a little taller, with larger leaves and fuller blooms than those of *pumila*. The mauve and crimson flowers smother the plant at times, especially in the hot weather. About every second year, we strike cuttings of these fuchsias and later put in fresh young plants. This gives us an opportunity to renew soil round the roses and keeps the little fuchsias suitably neat and compact.

Taller, arching and more graceful is *Fuchsia magellanica gracilis*—an excellent hedging plant, but here we favour its variegated form. This hardy, healthy fuchsia is a joy all year and highlights several spots in the garden. As a companion plant for old roses, it is invaluable, as the growth is not over rampant. Not so *Fuchsia magellanica alba*—a much taller plant with brittle stems, all too easily damaged by gales. Its growth in Auckland was lush, though we grew it successfully in an earlier, colder garden. After its removal, a close relative 'Mrs W. P. Wood', was put in its place. This fuchsia has larger leaves and flowers than the true type, the blooms being palest pink tinged with lilac.

Variegated foliage adds a great deal to garden interest, especially when flowers are scarce, and a valuable fuchsia, in this respect, is *Fuchsia magellanica macrostemma variegata*. If grown on a sunny ledge, or a large rock pocket this plant can be quite spectacular—less so in semi-shade. The young foliage is a rich crimson before creamy-yellow and green shadings appear; but at all stages it is pleasant. The reddish purple flowers are not large, though plentiful and persistent.



Fuchsia magellanica gracilis variegata

By pruning this fuchsia hard when the roses are cut back at the end of the winter, marvellous new growth appears quickly, helping to brighten the garden on cold days.

Very different in type is the tiny leaved *Fuchsia thymifolia* from Mexico. Its minute flowers of pink and white and small leaves make a pleasant contrast in front of the glossy, handsome foliage of a *Rugosa* hybrid growing on a raised rock pocket—the fuchsia trailing over the edge of the bed above variegated ajuga. Such changes in foliage can delight the eye. Across the pathway from *Fuchsia thymifolia*, is our own attractive *Fuchsia procumbens*, which sends its wiry stems trailing over a low rock wall in the company of *Vinca minor plena*. Instead of hanging down, the flowers of this native fuchsia are held erect. They are unusual,

with purple-tipped green sepals round a red and yellow corolla, these being topped by vivid blue stamens. After these charming blooms fade, large, cherry-red, oval berries appear amongst the foliage.

For a really sturdy shrub to use in a difficult corner at the rear of a dry shrubbery, there is nothing easier to grow than *Fuchsia arborescens*, another Mexican plant. The rosy-purple sprays of tiny flowers are reminiscent of those of the lilac—hence its other name *Fuchsia syringae-flora*. Later, sprays of blue-black berries appear. As this is a really tall fuchsia and a quick grower, we find it necessary to cut it back a little half-way through the season and drastically in the winter. This pruning appears to suit the shrub, for quickly, lovely new foliage appears and still more flowers. All these fuchsias start readily from cuttings, so replacements are easy—a real asset.

The Peruvian *Fuchsia serratifolia*, though tall, does not resemble in any way the large Mexican one, as each stem appears from the base in the manner of a perennial. Oblong, pointed leaves set off the unusual flowers with their long red, pink-tipped tubes—the sepals being tipped with green. For many years this fuchsia has been growing on a corner site at the back of a raised border—its companion plant being *Lantana Selloiwiana*, another South American shrub; but this year, after a prolonged drought, it is flagging a little, so in the winter it is to be lifted and replanted in completely fresh soil. This effort will be a small price to pay for the years of pleasure this plant has given us.

The Mexican *Fuchsia splendens* has pubescent, rather large, ovate-cordate leaves, which help to clothe bare wall in a difficult corner. The flower is unusual, as only the tube is red, sepals and petals being a vivid green. It grows alongside yellow roses and green nicotiana.

While overseas, we lost a charming herbaceous fuchsia which had given pleasure for many years at the rear of a rock garden. There was a collection of fuchsia species at one of the Royal Horticultural Society's shows in London and at last we were able to name our unusual treasure—*Fuchsia sanctae-roseae*, a native of Bolivia, so it was most disappointing to return home and find a dead plant—the only fuchsia we have lost. Unhappily, so far, we have not been able to replace it.

We do grow and admire many fine modern hybrids which make the garden colourful for months on end; but we still treasure these hardy types because of their accommodating habit of thriving in many an awkward corner, and for adding more lovely foliage to grace the garden throughout the year.

A TALE OF TWO CITIES

NAPIER AND HASTINGS are probably the nearest approach to twin cities in New Zealand drawing their livelihood from the same area, having a strong community of interest and at the same time an intense rivalry. In the result the area between and surrounding the two cities is closely settled and is as intensively cultivated as any similar area in New Zealand, and either city affords a most interesting venue for a gathering of horticulturally minded people.

Here we find great industrial concerns whose raw materials are provided by a great diversity of horticultural activities, large vineyards whose names are household words, vast areas of orchards, magnificent parks, reserves and sports facilities and some of the finest private gardens in New Zealand; gardens of a magnitude, atmosphere and maturity that would not be out of place in the Old World.

The civic authorities are not unaware of the cities' potentials as venues for conventions and their public relations policies are accordingly designed to foster such activities. Both cities have populations approaching 40,000 and the population of them and their environs would be in the vicinity of 100,000.

Napier was the venue for our Dominion Conference on the 20th February and it followed immediately the Institute of Parks Administration Conference in which many of our members have a close interest. Members of our Institute were royally entertained at a reception held in conjunction with the Institute of Parks Social Evening in the Napier Civic Building on the evening of the 19th February.

The Dominion Conference commenced officially at 9.00 a.m. 20th February in the Napier Wool Exchange and this well-appointed building was a constant reminder that initially Hawke's Bay's great wealth was based on wool and that it is still a major factor in their economy.

Mr Living, our Dominion President, in opening the proceedings of the well-attended meeting referred to the deliberations of the Parks' Administration Conference which had been mainly concerned with the institution of the Diploma of Parks Administration. This is not intended as a substitute for the N.D.H. Diplomas of our Institute, of Massey and Lincoln, but to be supplementary thereto. In fact, a N.D.H. from one of the preceding bodies is to be a prerequisite for the new diploma.

The official welcome and opening commenced at 10 a.m. and the Mayor of Napier in welcoming the delegates referred to his Council's great interest in beautification. They were vitally concerned with the preservation of their trees and already 40 per cent of their electrical reticulation had been placed underground. He suggested that one Institute objective could be the elimination of public hoardings and

referred to the success of women's organisations in Honolulu in this direction.

Mr Christie, local Member of Parliament, evinced his interest in the Institute's educational functions and indicated his support for the remit advocating the initiation of exploratory talks on horticultural education in secondary schools.

The Conference was officially opened by the Hon. Duncan MacIntyre, Minister of Lands and Forests, who impressed with his earnestness, awareness and breadth of knowledge and we hope to publish his address in full at a later date. Briefly horticulture dealt primarily with the provision of food and enjoyment and forestry was allied to these activities through its conservation policy, etc. Trees were the major providers of oxygen and also played a great protective role; the public access to the forests was constantly being approved and steps were being taken to relieve the monotony of the exotic forests by the planting of suitable ornamentals such as rhododendrons, etc. The preservation of certain areas such as the Waipoua Forest for all time was part of the department's policy.

The Lands and Survey Department now had a policy of diversification branching into many horticultural activities instead of confining itself to fostering the traditional farming occupations. The Maori Affairs Department was concerned to reserve certain areas for the encouragement of Maori arts and is finding it necessary to cultivate certain native plants. He was most interested in Mr Burstall's work on noteworthy and historic trees and in the preservation of Eastwoodhill and advised that the Plant Patents legislation was to be passed this year. A vote of thanks moved by Dr. J. Yeates was carried by acclamation.

Following morning tea, the Awards of Associate of Honour were presented to Messrs S. W. Peterson, B. Hollard and H. J. Clark, the formal resolutions being carried by acclamation. The Award was also made to Mr Jas. Stirling, who is at present overseas. Mr Burstall then spoke on noteworthy and historic trees and then discussion centred on the preservation of Eastwoodhill. Messrs Way and Berry, from Gisborne, stated that every effort should be made to preserve this unique planting for all time and they were strongly supported from the floor. It was felt that the Institute should play a major part in this and it is encouraging to note that there is every reason to hope that a strong District Council will be formed in the Poverty Bay area during the next twelve months. There was considerable favourable discussion and it is hoped that it will be possible to reopen the whole question of Eastwoodhill.

After Sub-Committee and District Council reports, Prof. J. Morrison

and Mr John Taylor, of Canterbury, presented papers on the future of the Institute. Though they agreed on many points there were also many areas of divergence and their views provoked many questions and considerable discussion. We are indebted to these gentlemen for their valuable contribution, and it is evident that in these changing times much thought has to be given to the Institute's changing role in the horticultural community.

The afternoon session ended with an address by Dr. J. Yeates on his recent visit to Britain for the R.H.S. Lily Conference and this was illustrated by remarkable colour slides.

THE BANKS LECTURE

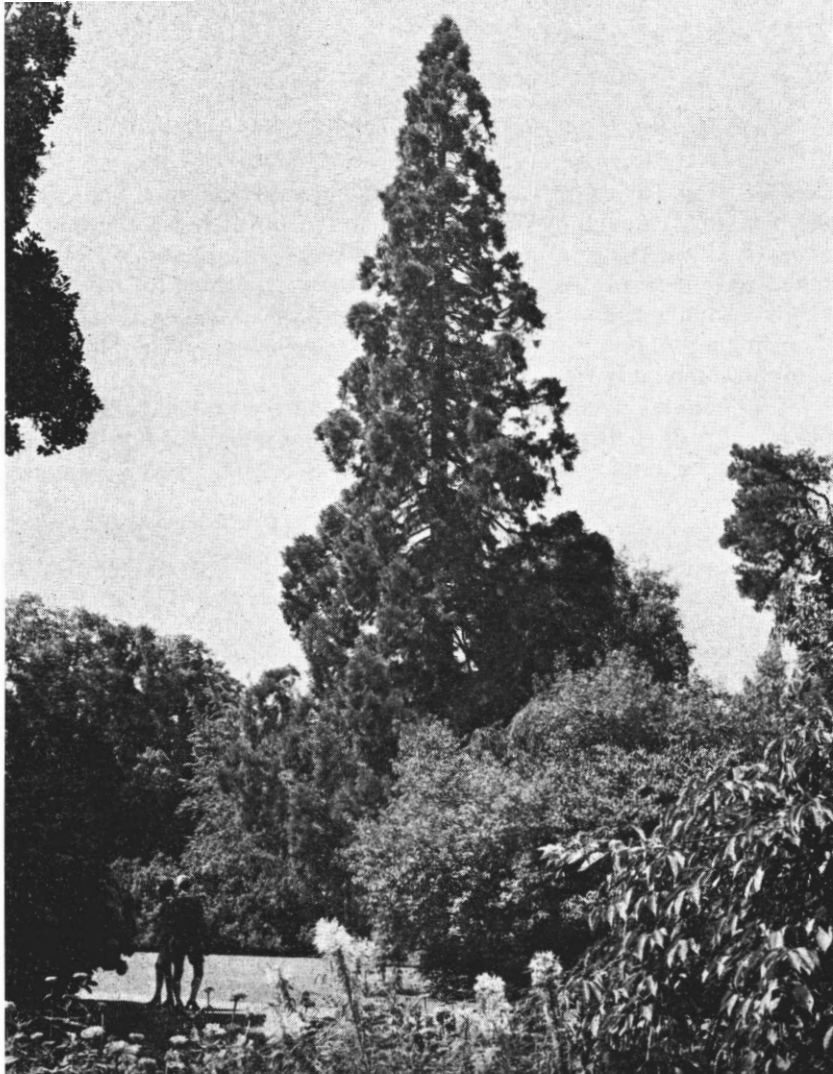
As customary the evening session was devoted to the Banks Lecture and this was given by Mr M. Grainer, who is in charge of Unilever's New Zealand activities. His subject was "Just Food" and at first thought this may appear an inappropriate subject for a horticultural gathering, but as our guest pointed out by far the greater part of the world's food is provided by horticultural activities. This was a most interesting lecture and the speaker was loudly applauded. All present left the hall much wiser and better informed on this vital subject. The Banks Lecture will be published in full in our June issue.

TOUR OF THE DISTRICT

The above lecture concluded the official business of the Conference but a large number of the delegates stayed on Saturday to participate in a full-day tour of the Napier and Hastings districts. This was organised by Mr Arthur Miller, well known for his local body activities



Dominion Conference delegates at 'Chesterhope'.



This 129ft. redwood is the monarch of 'Chesterhope'.

and for his deep interest in all horticultural affairs. In fact, the whole local organisation of the Conference was carried out by Mr Miller and it would be impossible to praise his efforts too highly.

Setting out at 9.15 a.m., we were first taken to Anderson's Nurseries, the largest raisers of pot plants in New Zealand. This is a complex of twenty-five large glasshouses as well as other forms of shelter. The vast range of potted plants is too long to list. Thence after morning tea to Anderson's new establishment at Pandora, where they raise Chrysanthemums flowering in pots throughout the year. There were other plants including many thousands of Norfolk pines for export.

Then along the Taradale Road to Greenmeadows, past Anderson's Park, 92 acres purchased by the Napier City Council and named after a generous benefactor. Next through Greenmeadows, passing the Mission and McWilliams Vineyards and on to Taradale, where we stopped in front of the garden of our guide, Mr Miller, the last Mayor of Taradale. The Taradale area formerly devoted to market gardening and small dairying holdings was now largely in vineyards and similar forms of horticulture. We then followed the new motorway to Pakowhai Hall and a repast that could only be described as magnificent, the catering being by a local women's organisation. Our next visit was to "Chesterhope", the 1600-acre estate of Miss J. Fernie, where a very old homestead was set in garden that could have been transferred from Britain with its avenue of walnuts, its velvet sward, lake, bridges, bog garden and stately trees. Perhaps pride of place went to the mighty sequoia that dominated the front lawn and was measured by Mr Burstall at 129ft in height. Such was the air of permanence that it was hard to believe that this garden was only one hundred years old.

From "Chesterhope" to Hastings, first calling at "Karamu", the old Ormond homestead, noted for its mile-long Oak Avenue and some of the finest and largest specimen trees in New Zealand. En route to the Hillview Orchards we passed many noted Hastings points of interest such as Frimley Park donated by the Williams family and site of the Hastings Rose Society's Garden of 5000 bushes, Lindisfarne, Wilson's Nurseries, Cornwall Park, the vast canneries of Unilever and Wattie's, the latter the largest in the Southern Hemisphere.

At Hillview Orchards the operation of the fruit grading machines was demonstrated and we made an extensive inspection of the heavily laden apple and pear trees, but the most treasured possession, the signature of our Queen, was also shown to us. Thence through the garden-lined streets of Havelock North to Te Mata Vineyards, which are one hundred years of age. The wine-making processes were explained to us and the massive tuns in the cellars impressed us with their air of utmost solidity. It was hard to believe that these weighty centurions had been tipped in the Napier earthquake and that many thousands of gallons of wine had gone down the drain. But then it was hard to believe that Napier and Hastings had been the victims of the most disastrous 'quake in New Zealand history. This was our final visit and before our return to Napier, appropriate refreshments were served according to each member's particular taste.

In conclusion, we must pay further tribute to Mr Miller, who not only organised this wonderful outing but also acted as host, courier and commentator. With his knowledge of the district who could have done it better?

PLANT RAISERS' AWARD

Gladanthera 'Lucky Star'

Raised by Mrs JOAN WRIGHT, Matakana, Northland.

The cultivar, *Gladanthera* var. 'Lucky Star', is an entirely new plant raised from seed by an amateur hybridiser, Mrs Joan Wright, (by occupation a Post and Telegraph exchange attendant) in her own garden at Matakana, North Auckland.

A fragrant tetraploid bigeneric hybrid, it was given the generic title of *Gladanthera* in accordance with the custom of composing a name from syllables taken from the generic names of the two different parent plants.

The parentage is as follows:—

Gladiolus var. 'Filigree'
(Tetraploid $4N = 60$ Chromosomes)

X

Acidanthera bicolor var. 'Murielae'
(Diploid $2N = 30$ Chromosomes)

Gladanthera 'White Triploid'
(Triploid $3N = 45$ Chromosomes)

X

Acidanthera bicolor var. 'Murielae'
(Diploid $2N = 30$ Chromosomes)

Gladanthera var. 'Lucky Star'
(Tetraploid $4N = 60$ Chromosomes)

As illustrated in the N.Z.G.C. Bulletin article, the hybrid appears intermediate for most characteristics. The fragrance is typical of *Acidanthera*, though much milder.

The ratio of seedlings with detectable fragrance obtained from crosses between *Gladanthera* 'Lucky Star' and *Gladiolus* cultivars is satisfactory, giving good prospects for raising attractive and fragrant gladiolus.

First flowered in May, 1961, *G.* 'Lucky Star' has been in cultivation for eight years. When propagated vegetatively from corms and cormlets, the form can be regarded as fixed. In fact, only minor variations occur when plants are raised from self-pollinated seed. Has been grown satisfactorily in U.S.A., New Zealand, and England.

CITATIONS FOR THE AWARD OF ASSOCIATE OF HONOUR

Mr H. JACK CLARK, Auckland

Mr Jack Clark began his career in horticulture at the age of seventeen when he joined Bella Vista Nurseries in Auckland as an apprentice. On completion of his training he started his own nursery, "Sunninghill", which he ran until his retirement nearly forty years later.

In his quest for knowledge Mr Clark covered many square miles of New Zealand's alpine country, collecting and studying the native flora. From overseas he obtained seeds and plants which he propagated and he raised many fine plant varieties. One of these is the well-known *Protea* 'Clark's Red'. A New Zealand pioneer in the art of Bonsai culture, he built up a collection of some two thousand specimens. His enthusiasm inspired others and as a result the Eden Garden Bonsai Society was formed.

Over the years Mr Clark also collected many hundreds of camellias and in this field he made his mark both in New Zealand and abroad as a grower and hybridiser, and raiser of many outstanding camellias, including the hybrid 'Anzac' and the reticulata 'Lisa-Gail'.

Mr Clark's home, adjacent to his nursery, was surrounded by a beautiful garden which he has shared with thousands of visitors. When he retired some six years ago from commercial nursery work this unassuming man continued to work as hard as ever, but for the benefit of the community as a whole. He has given generously of his labour, materials and advice, landscaping and planting the grounds of schools, colleges and churches, and borough and government reserves from North Cape to the islands of the Hauraki Gulf and south to Rotorua. He is widely known for his work in the establishment of Eden Garden, now one of the beauty spots of Auckland, contributing not only his ability as a landscaper but 80 per cent of the plant material as well.

Recently Mr Clark visited Tonga, where he spent a total of nine months, landscaping the new airport and its approaches, a model village and public buildings. He established a nursery where he propagated the thousands of shrubs required for this landscaping and also introduced many new species of plants into Tonga. His energy and generosity have ensured him of a special place in the hearts of the Tongan people.

Mr Clark is a retiring man but has freely shared his horticultural discoveries and knowledge and is now receiving well-deserved recognition by the official naming of some of his plant varieties. Because of his reticence about his work this citation can only present a bare outline of Mr Clark's achievements in, and contributions to, horticulture.

Mr BERNARD HOLLARD, Kaponga

Over forty years ago, Mr Hollard, a young New Zealand farmer, put a fence round what was left of a small patch of native bush on his property to keep his dairy herd from completely destroying the last of the trees; and from that small beginning grew one of New Zealand's most interesting gardens. Now something over five acres in extent, situated some two miles north of Kaponga on the lower southern slopes of Mount Egmont, this garden has become well known as a treasure house where natives and exotics live happily shoulder to shoulder, where many interesting and rare plants are found and the art of the hybridist brings new choice and lovely things to life. At an altitude of 1150 feet and with an over-generous rainfall, it is natural to expect that rhododendrons would be a special love of Mr Hollard. He has over 100 species and about 300 hybrids. He himself bought one of the first *R. griersonianum* in Taranaki and has evolved distinct cultivars. There are some 50 different cultivars of *Azalea indica*, *kurune* and *mollis*; about 90 different cultivars of camellias including several Kunming reticulatas and one of the species *fraterna*, found in Communist China about 10 years ago by botanists who hid three of them in their shirts when accosted by communist soldiers. One was sent to England, one to America and one to Australia, to be later propagated by Mr Les. Jury and now to find its home in Kaponga.

This is a garden of infinite variety—plants of Chile, England, California, Australia, and New Zealand. Mr Hollard tells stories of his plants and their parentage, their cultivation, and gives from his own down-to-earth knowledge first-hand information on how they should be managed.

He has written widely in the "New Zealand Gardener" on a comprehensive list of subjects over the past 20 years.

Mr Hollard has been a member of the Institute, the Pukeiti Rhododendron Trust, the Royal Horticultural Society of England, and of the Hawera Horticultural Society for many years. He acts as a judge of cut flowers and shrubs at shows.

He shares his garden with hundreds of visitors each year, and his knowledge is always available to them. At Institute meetings in South Taranaki and at Horticultural Society meetings in Hawera he brings samples and plants from his garden—shrubs, trees, rock plants and alpenes, natives, irises, ericas, etc., naming and describing them to a very interested audience.

Mr Hollard has made a very vital contribution for many years to horticulture in Taranaki, and throughout New Zealand, by his writings and by his willingness to share his wide horticulture knowledge.

Mr STUART PETERSON, Wellington

Mr Peterson has always had a very keen interest in horticulture, and after becoming established as an agricultural chemical salesman in this country started to assemble a selection of choice trees and shrubs in his own garden. This has been added to over the years, until now he has a wonderful variety—some very rare.

Later he formed his own business as a manufacturing agricultural chemist, and this soon developed into a large industry with factories in Wellington and Auckland, employing over 150 hands.

Although not at the foundation meeting of the Pukeiti Rhododendron Trust, he very soon associated himself with the enterprise, and in a very short time he was on the committee, and was chairman for a number of years. Over the years he and his wife have been among Pukeiti's greatest benefactors, having made many generous donations.

Through his close friendship with keen horticulturalists overseas, Pukeiti has benefited by a gift of over \$10,000 from one source, and a somewhat similar amount from another overseas friend. He has always been a keen advocate for the Trust, and it was principally through his wise counselling that the Pukeiti Rhododendron Trust account was formed.

He has always been a keen member of the New Zealand Rhododendron Association and has served on the Board; is most generous with donations and always attends the conferences.

Mr JAMES C. STIRLING, Wellington

Mr Stirling became a fourth-generation gardener when, on leaving school, he began his apprenticeship on his parent's nursery in Angus, Scotland, handling general nursery stock and out-of-season flowers and fruit. Later he went to Woodside Gardens as journeyman, then returned to his parent's nursery for a time before emigrating to New Zealand in 1926.

For 21 years he was employed in the Wellington Botanic Gardens, eventually becoming foreman. He resigned to take up a position with the Ministry of Works, where he has been for over 20 years; at the time of his retirement recently he was Supervisor of Government Grounds with responsibility for an area stretching from Kaikoura and Murchison in the south to Shannon and Pahiatua in the north. In addition he acted in an advisory capacity to the Ministry of Works in other parts of New Zealand. James Stirling has an outstanding record of horticultural service to the community.

His public lecturing covers a span of 37 years, 27 of these also as tutor for the W.E.A. During this time he averaged some 60-70 lectures

each winter to a wide range of audiences such as horticultural and floral art groups, Women's Institutes, schools and W.E.A., in many towns and cities throughout New Zealand.

He is founder-member and Vice-President of the Wellington District Rose Society, and of the New Zealand Organic Compost Society. He helped to sponsor a film on compost and when the film came to Wellington, under Mr Stirling's chairmanship, the Hon. Peter Fraser, Prime Minister, spoke on the importance of compost. He worked to ensure that children from every college in Wellington could see the film. To-day Mr Stirling is a Dominion Life Member of the New Zealand Organic Compost Society and Past President and Patron of the Wellington Organic Compost Society.

In 1940 he obtained his National Diploma in Horticulture. His thesis, "Hedges, Evergreen and Flowering—Culture and Use in Park and Home Gardens", was published in "New Zealand Plants and Gardens".

He has been a member of the R.N.Z.I.H. almost since its inception and served on Dominion Council for several years, and was a founder-member of the Wellington District Council, serving as chairman for six years.

For the Vocational Guidance Centre for several years Mr Stirling has spoken to sixth formers from all over New Zealand. For five years television viewers in Wellington had the weekly services of James Stirling in the programme entitled "In Your Garden".

The preservation of historic and noteworthy trees has also concerned Mr Stirling and where major earthworks have been planned he has endeavoured to preserve horticultural material if at all possible. He was responsible for the successful moving of a copper beech tree over 100 years old and weighing 60 tons. This tree moved into its new position in the courtyard of the Fergusson Building will be a distinct link with Wellington of the past. Through Mr Stirling's efforts three historic native trees were preserved from the path of the motorway.

Before his retirement Mr Stirling made sure that the pohutukawa trees in Parliament Grounds would be moved and not cut down. This work is in progress at present and is an example to the public on the value of preserving trees. Mr Stirling has actively advocated that any tree which is moveable and worth saving should be preserved in spite of expense.

He has made the public aware of the value of our native flora and the fine planting around Government Buildings is the result of his work. Situated in this position opposite Parliament this collection of New Zealand plants is perfect for overseas visitors and the man in the street to view. To all who enter Wellington via the Hutt Motorway, Mr

Stirling's work is evident as he ensured that the Ministry of Works adopted the policy of planting the crib walls. Up until his retirement he was responsible for the planting of over half a million plants in the walls of this motorway, this again being a fine example to the man in the street.

Thanks to the perception of Mr Stirling the horticultural trade now has two new worthwhile additions to its list of available native plants. These are *Pittosporum tenuifolium* 'James Stirling' and *Hebe ochracea* 'James Stirling'. The former was grown from seed collected by Mr Stirling near Tikitiki, East Coast. This east coast form of the matipo is a valuable addition to other forms of available matipos. The hebe was obtained from a garden in Taita over 35 years ago and although grown in native plant gardens and parks in New Zealand was not available through the trade until made available from Mr Stirling's own stock.

Mr Stirling has been chosen to landscape New Zealand's exhibit at Expo 70 with native plants and is to supervise the shipping of suitable rocks and plants and their planting in Japan.

No man is better known in the Wellington Province to the home gardener and the man in the street; his is an outstanding record of voluntary community service in the southern half of the North Island and one that fully occupied most of his time outside working hours. He has had a lifetime career in horticulture and served with distinction in the field of beautification, preservation and appreciation of our native flora, and many areas will be permanent memorials of his work.



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GROUND COVER IN THE CHRISTCHURCH AREA

(Continued)

*By N. W. DRAIN, N.D.H.(N.Z.), Christchurch**(Being a thesis submitted for the National Diploma in Horticulture)***CHAPTER 4****GROUND COVER PLANTS**

The following list contains detailed information on some of the plants already referred to in previous chapters.

Many species in the plant kingdom act as ground cover in their natural habitat, but relatively few have real horticultural value. Most of the plants to be described have been selected because:—

- (a) They are generally readily available* and easily propagated.
- (b) Have the ability to establish and cover rapidly in a fairly wide range of soils.
- (c) Are reasonably resistant to damage from physical elements and
- (d) Are long lived.

Obviously some knowledge of individual species is important as an aid to the correct selection of plants for a given situation and much of the following information is based on local experience and observation. The list has been divided into two groups based on growth habits as described on page of Chapter 2.

Plants with runners that root in the ground and/or which spread by means of underground roots comprise Group 1, while prostrate shrubs and those that are bushy in habit are in Group 2.

GROUP 1

These are representative of the best in ground cover plants containing species with the most rapid growth. In addition, by reason of their rooting habits they exercise direct control over soil movement—a most desirable attribute. For these reasons, they are usually the Landscape Architect's first choice for many situations.

Approximate height of plants is given immediately after each name.

Hedera helix

6" – 8" English Ivy

HABITAT

Europe

Probably one of the best known and most popular ground covers. Particularly suited for planting on shady banks and under large trees, though will succeed in full sun, providing there is not excess heat.

It has a very tenacious and vigorous habit of growth and because of this is not suited for small areas and will require regular trimming

*except where stated otherwise.

if adjacent to vertical structures. In the Christchurch Botanic Gardens is an established planting under a large tree and it is in these and similar situations that the English Ivy could be used to advantage more often.

VARIETIES

These are numerous and quite a number with small leaves and less vigour than the parent species are more suitable for small areas.

PROPAGATION

Cuttings and layers.

PLANTING

From pots or boxes. 18" apart for *Hedera helix* and less for most varieties.

Hedera canariensis

12" - 15" Canary Island Ivy

Variegated varieties of which there appear to be at least two grown locally, are better known than the parent species. They are very useful for brightening shady areas and one variety was propagated in quantity this year by the Christchurch Parks and Reserves Department for planting as a ground cover under some large trees.

PROPAGATION

Cuttings and layers.

PLANTING

From pots or boxes 18" apart.

Hypericum calycinum

1' Aaronsbeard, St Johnswort.

HABITAT

S.E. Europe, Asia Minor.

This is an excellent ground cover being tolerant of a wide range of soil conditions and is successful in sun or shade. It will often thrive in areas where other plants do not grow well. It has the added advantage of bright yellow flowers during the summer. It is a valuable plant for traffic islands, and because of its stoloniferous roots is suitable for planting on steep banks. In fact, it may be used for practically any situation where a ground cover planting is desired. Once established it benefits by an annual hard cutting back.

PROPAGATION

Seed, cutting or division.

PLANTING

From open ground 18" apart.

Vinca Minor

6" - 12" Periwinkle.

HABITAT

Europe and Western Asia.

This is one of the best evergreen ground covers and will do equally well in sun or shade. It has very persistent roots which assist it in becoming established in all but the poorest soils. There is probably no better plant to use as a ground cover on steep banks or under trees. It should prove useful planted on the steeper banks of the Avon River, Christchurch.

PROPAGATION

Division, root cuttings and stem cuttings.

PLANTING

From boxes or open ground 18" apart.

Mahonia aquifolium

12' - 4' Oregon Holly-grape.

This is a tall plant for a ground cover but because of its vigorous growth which makes a dense mat, is a splendid plant for a number of situations. It is suitable on banks and under trees and is tolerant of sun and shade. There appear to be several hybrids of this and other species and at the Municipal Nursery, Linwood, there is a very attractive variety, *Mahonia aquifolium juglandifolia*, with deep purplish leaves and a compact habit of growth. Plants of this were recently used at one of the newer traffic islands and the performance of this plant will be noted during the next year or two. Mahonias are tolerant of a wide range of soil conditions.

PROPAGATION

Division or root cuttings.

PLANTING

From open ground 18" apart.

Carpobrotus edulis

6" - 12" Iceplant, Hottentot fig.

HABITAT

South Africa.

Without doubt the most widely planted ground cover plant on sandy and hill areas in Christchurch in recent years, this ice plant is proving to be a first rate ground cover plant under conditions of heat and dryness. The plant may be seen as a 100% effective ground cover on a number of private properties in the New Brighton and Sumner districts and the Christchurch Drainage Board has used a considerable quantity as a stabiliser on banks surrounding the ponds of the Sewerage Treatment Works at Aranui. *Carpobrotus edulis* has a vigorous habit of growth with thick stems which root as they spread and is capable of forming a dense cover, particularly when planted on sand.

PROPAGATION

Is readily effected by cutting pieces of stem from established plants approximately 12" in length with or without roots attached and inserting these at an angle one third of their length into the ground in their permanent position. Cuttings can be spaced 18"-24" and planting may be carried out at almost any time of the year. Flowers of this species are yellow.

Gaultheria shallon

2' - 5' Salal, shallon.

HABITAT

Alaska and British Columbia to California.

This plant is frequently used as a ground cover in the U.S.A. but does not appear to have been planted to any extent in New Zealand. There is a small colony in the Christchurch Botanic Gardens flourishing in a shady area. In most shady conditions it often becomes a vigorous up-

right shrub, but when planted in poor soil and in full sun it forms a thick mat that makes a fine ground cover.

PROPAGATION	Seed or division.
PLANTING	From open ground 18" apart.
<i>Ajuga reptans</i>	4" -12" Bugle weed, Carpet Bugle.
HABITAT	Europe.

This is one of the better known ground covers forming a dense carpet of foliage over the soil. It is excellent for use in shady places though it will grow in full sun provided sufficient soil moisture is available. It has a stoloniferous habit of growth and spikes of blue flowers appear in the spring. It is probably more suited for planting in smaller areas. Plants should be spaced 6"-12". There are several interesting varieties as follows: *Atropurpurea*—with dark bronze leaves, *Variegata*—leaves variegated with creamy yellow, *Rubra*—leaves dark purple.

PROPAGATION	Seed and division.
PLANTING	From boxes or open ground 6" - 12" apart.

<i>Coprosma kirkii</i>	12" - 24".
HABITAT	New Zealand.

This is proving to be a particularly good ground cover plant for almost any situation. It makes fairly rapid growth, forming a dense cover within about three years from planting and it does appear to have a reasonably long useful life. It is a hybrid being a cross between *Coprosma reptans* and *Coprosma acerosa*. Both these species are found growing on the coastal sand areas of New Zealand and it is therefore not surprising that *Coprosma kirkii* may be used as a sand binder in coastal areas, being tolerant of these conditions.

PROPAGATION	semi-ripe cuttings.
PLANTING	From pots 18" apart.

<i>Podocarpus nivalis</i>	Alpine totara.
HABITAT	New Zealand.

This appears to be a rather variable plant, sometimes a small tree, while very prostrate forms have also been discovered. Although it has not been used generally as a ground cover, it does appear that the prostrate forms would be useful plants for this purpose. There is an excellent specimen in the alpine section of the Christchurch Botanic Gardens, while a very prostrate form was recently discovered in the Hanmer area, cuttings of which are now rooted and growing at the Botanic gardens. It is intended to further propagate this plant and to test its suitability for certain conditions such as on traffic islands. *In its natural habitat, the prostrate growths send out roots thus forming a matted growth over the grounds surface, this habit making the plant useful for holding the loose soil and shingle of alpine slopes.

**ROYAL NEW ZEALAND INSTITUTE OF HORTICULTURE
INCORPORATED**

**ANNUAL REPORT OF THE DOMINION COUNCIL
For the Year Ended 30th September, 1969**

Ladies and Gentlemen,

The Dominion Council has much pleasure in presenting the Annual Report for the year ended 30th September, 1969, which is the forty-seventh Annual Report of the Royal New Zealand Institute of Horticulture Inc.

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

Meetings:

- (a) **Annual Conference 1969:** The 46th Annual General Meeting and Conference of Delegates was held in Invercargill on 27th February, 1969. The local members and Invercargill City Council extended cordial hospitality to those attending. The Conference was officially opened by His Worship the Mayor of Invercargill, Mr N. L. Watson. The Banks Lecture was delivered by Mr M. R. Skipworth, of Wanaka; his subject being "Landscape and the Tourist Industry". This lecture was published in *Journal N.S.* Vol. 1, No. 3, June 1969.
- (b) **Dominion Council:** The Dominion Council met on four occasions during the year and the average attendance at these meetings was 19. Greater attendances at these meetings would be very welcome.
- (c) **Sub-Committees and Examining Board:** The Dominion Council again acknowledges with gratitude the co-operation and help received from the various sub-committees and the Examining Board. They have met regularly throughout the year, attending to the specialised business delegated to them.

In Memoriam:

It is with most sincere regret that the Dominion Council records the passing of some esteemed members during the year. Their passing is keenly felt and our sympathies are extended to their relatives; in particular Mr R. L. Thornton and Mr C. H. J. Wily, of Auckland (both Associates of Honour), Mr A. C. Whitehead (Wanganui) and Dr. J. C. Macdonald (Invercargill) (both Vice-Presidents).

Membership:

The total membership stands at 1615 (1669) including 43 Associates of Honour. A strong membership is vital to the well-being of the Institute and District Councils are urged to do all they can to enrol new members. We welcome all new members who joined during the year. The following table shows membership of the various districts, overseas and those unattached to any District Council. 1968 figures are shown in parentheses:—

Auckland (163) 149	Rotorua (11) 9
Canterbury (153) 149	South Canterbury (35) 33
Hawke's Bay (36) 31	South Taranaki (147) 137
Hutt Valley (43) 40	Southland (14) 16
Manawatu (50) 47	Taupo (52) 42
Nelson (16) 18	Waikato (335) 329
North Taranaki (206) 226	Wanganui (30) 32
Northern Wairoa (50) 54	Wellington (116) 116
Oamaru (2) 3	Whangarei (88) 71
Otago (46) 46	Unattached (39) 38
Poverty Bay (19) 14	Overseas (18) 15

Fellowships:

During the year the Dominion Council conferred "fellowship" upon 18 members.

District Councils:

The Dominion Council expresses its sincere thanks to the executives and members of District Councils who have done so much throughout the year to maintain the work of the Institute at the local level and to present the Institute to the people of their districts. It is through District Councils that the Institute is known, by and large, in district areas. There is so much done at the national level which is not readily known or understood by the general membership and citizens, but District Councils have an opportunity of providing the liaison between Dominion Council and these folk. It is true that District Councils are stronger in some localities than in others, but all can and do play a part, for which the Dominion Council expresses its appreciation and solicits strong loyalty and support throughout the ensuing year. It is pleasing to know that new members are being enrolled in some District Councils to replace resignations, etc., but overall membership is not increasing. It has already been stressed that the strength of the Institute rests upon a strong membership. The work of the Institute merits much stronger membership-strength and it is sincerely hoped that present members will rally their forces throughout the ensuing few years and embark upon a determined effort to increase the membership substantially. Membership is offered to those 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.

The Hutt Valley and Bays District Council has been merged into the Wellington District Council.

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.))

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. The Dominion Council expresses its warmest thanks 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 the tutoring of the candidates 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 for the considerable help given to the Institute in examinations matters.

The syllabuses for the National Diplomas have been revised. The changes should be announced shortly.

Finance:

- (a) **Annual Accounts:** These are appended to this report. Profit from sales of the publication, "Flowers for Shows", has continued to accrue. The financial strength of the Institute, however, rests upon a strong membership, which must be increased, 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) **Publications 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) **Examinations Grant:** The Dominion Council acknowledges also with thanks the capitation received from the Department of Agriculture for examination purposes. The contribution of \$100 from the N.Z. Institute of Park Administration, received just after the close of the year, is warmly acknowledged.

Nomenclature:

The Nomenclature Committee has been particularly active this year in publishing descriptions of cultivars of New Zealand plants in the Journal of the Institute.

A long felt need is likely to be satisfied with the preparation of a check-list of hebes. This will be carried out with their horticultural characteristics in mind. Such a major project has long been necessary but has been postponed until representative collections were well established. These are now flourishing and any assistance will be welcome which can be given to Mr R. H. Mole, Curator, Otari Native Plant Museum, Wellington, in supplying plants of new or unusual cultivars of this genus.

During the year a revised edition of the International Code of Nomenclature of Cultivated Plants was issued. The Institute acts as the distributor in New Zealand for this Code (price \$1.20). This is vital work and appreciation is expressed to the sub-committee.

Historic and Notable Trees:

Mr S. W. Burstall of the Forest Research Institute, Rotorua, has continued to do excellent work on this absorbing exercise which has now been before the Dominion Council for several years. The end of the exercise for Mr Burstall is in sight; the publication of the information is now receiving close attention. 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.

Information has been recorded to assemble lists for nine North Island regions. Those for Northland, Bay of Plenty, Poverty Bay and Hawke's Bay are finished, and those for Waikato, Taranaki, Rangitikei, Manawatu and Wairarapa are nearing completion. More field work is needed to complete lists for Auckland, Wellington and Wanganui. More field work is also needed to finish lists for Marlborough, North and South Canterbury. All other South Island lists are complete or near completion.

The Forest Research Institute has asked to have the information recorded initially as a series of Forest Service Reports, engaging Mr Burstall to do this. Copies would be available to our Institute and District Councils. It is expected that these would be completed by June 1970. Eight regional reports and one

national one are suggested. The eight regional reports would 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.

Journal:

The Journal has been maintained at a high literary standard. The efforts of the Editor, Mr John Gover, in maintaining the Journal are sincerely appreciated, and the assistance given to him by all contributors is acknowledged.

The Publications Committee has given careful attention to all matters pertaining to the Journal throughout the year. Some District Councils have consistently sent forward Notes for publication but more are earnestly desired. Specialist Societies are being invited to contribute, and a wider diversification of material hoped for. There are few media in New Zealand for the publishing of horticultural matter of quality.

Consideration is being given to developing a demand for reprints of published articles.

Publishing dates of the Journal were considered, but no change made for the present.

Award of Garden Excellence:

This Annual Award is operating well, and the sub-committee has done excellent work during the year. Twenty-one plants have been granted the Award for 1969. This list of plants, with descriptive notes, will be published in the Journal, March 1970 issue.

The sub-committee carefully considered the Remit and Report presented at the 1969 Conference. Out of this the sub-committee feel the need for a "work-sheet" to act as a guide for judging plants recommended for the Award, to maintain a continuity in the quality of the Award. A "work-sheet" will be submitted to the 1970 Conference for discussion and approval.

The numerical strength of the sub-committee has been increased by the addition of two members from Whangarei and two from Hamilton.

Plant Raisers' Award:

The Award has been made to Mrs Joan Wright, of Matakana, for the new type of plant x *Gladiolus*, 'Lucky Star'.

Remits Before the 1969 Dominion Conference:

Details of these remits and the discussion thereon have already been published in the report of the 1969 Conference in the September 1969 issue of the Journal. The matters arising have been dealt with as follows:—

- re Award of Garden Excellence—referred to the sub-committee who are bringing down a "work sheet" to assist in maintaining a continuity of quality in the Award. The numerical strength of the committee was increased by drawing personnel from other District Councils.
- re Honorary Life Membership—adopted and now operating.
- re Life Membership Subscriptions—being considered by the Finance Committee.
- re Book "Standard Common Names for Weeds in New Zealand"—adopted as a standard book of reference.

Associates of Honour:

The following nominations have been endorsed by the Dominion Council for submission to the 1970 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 H. J. Clark, Auckland.

Mr B. Hollard, Kaponga,

Mr S. W. Peterson, Wellington.

Mr J. C. Stirling, Wellington.

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.

Horticultural Producers' Council:

This voluntarily constituted Council, comprising most if not all of the horticultural producer-bodies, has met during the year to discuss issues of common interest including horticultural education. Its value in matters of national importance will become more and more apparent as time passes. The Council is constituted within the framework of the Institute.

Litter:

The Institute is represented on this National Council and fully endorses every effort to give effect to present legislation.

Eastwoodhill Property at Gisborne:

After very careful consideration of the implications of accepting this valuable property for preservation and development, the Dominion Council finally resolved that they could not undertake this responsibility but offered every assistance should a local trust be set up in Gisborne. Interested persons in Gisborne are looking into this.

Preservation of Trees:

Following upon our representations, the Nature Conservation Council confirmed, through their own enquiry, that there is a widespread desire for the preservation of historic, notable and amenity value trees, native and exotic, public and private. There is already a measure of protection given to native bush and trees in existing legislation, but it was found that there are areas outside the provisions of present Acts. The Nature Conservation Council has recommended to the Minister of Lands that the Native Plant Protection Act, 1934, be repealed and that new legislation be introduced to cover the protection of native trees and plants not otherwise covered by protective legislation; also the protection of exotic trees of historic, amenity or notable value; and regulations being framed and implemented to provide for the carrying out of the legislation, offences and manner of protection.

A. M. L. Rumble Estate (Stratford):

The circumstances surrounding this estate were fully set out in the 1968 Annual Report. Since then matters have progressed to the point where a suitable alternative scheme of bursaries to encourage horticultural students taking the Institute's Diplomas has been agreed upon by the trustees for submission to the Court.

Commonwealth War Graves Commission:

The Institute enjoys receiving a biennial report from the Commission in London on the state of plantings of New Zealand trees and shrubs in overseas

cemeteries where New Zealand servicemen are interred. Some information was published in our Journal (September 1969).

Visits by Overseas Horticulturists:

The Dominion Council has communicated with all likely sources to try and ensure advance notice being received of pending visits to New Zealand by eminent overseas horticulturists. Too often they come and go without our having an opportunity of extending hospitality. District Councils will be given this information as it comes to hand.

National Development Conference:

The Institute was associated with submissions to the Tourism Committee and, through the Horticultural Producers' Council, the Agriculture Committee. The Institute was represented at the final sessions of the Conference. Horticulture has been ranked very high as a "growth" industry, but would continue under the broad head of Agriculture rather than as a separate entity, as some would like. There is no doubt that the horticultural industry is developing rapidly and becoming more into prominence in the export trade as well as on the home market. The Institute must do all it can to keep to the fore with this development.

Lake Manapouri Power Project:

The Dominion Council has supported the Nature Conservation Council in expressing its concern and requesting a careful and full reconsideration by the Government of the need to raise the level of the lake by the proposed 27 feet, and urging all members of the Cabinet to make an inspection of the lake area. The Institute's views were clearly conveyed to the Minister of Electricity. If no objections are raised to this despoliation of one of our choicest natural scenic attractions there could be a gradual eroding of the Dominion's natural heritage with the passing of the years.

Horticulture in Schools:

The Manawatu District Council submitted a very comprehensive statement on this subject which is incorporated in one of the remits to come before the next conference. The question should be well discussed at the Conference and will be reported on in the Proceedings.

Plant Quarantine Regulations:

The proposed amended regulations were deferred by the Department of Agriculture pending consideration of an amendment to the old Orchard and Diseases Act, 1928. A confidential copy of the proposed amending Bill (Plant Health Act, 1969) was received by the Dominion Council for perusal and comment.

Judges' Register and Certificates:

The Register is functioning. During the year applications for registration were approved and appropriate certificates issued. The Register lists judges in the following: Floral Art—Decorative Work, Cacti and Succulents, Cut Flowers, Shrubs, Chrysanthemums, Roses, Daffodils, Vegetables, Lilliums, Dahlias, Gladioli.

The Iris Society and the National Rose Society have supplied full lists of their accredited judges.

Careers Booklet:

This booklet continues to be a most helpful publication in channelling young people into horticultural careers.

Horticultural Hosts:

Some District Councils have already named hosts for their areas. The

scheme is being used to help members of the Institute as they travel to other centres. More use could be made of the service.

"Flowers for Shows"—Horticultural Handbook:

Sales of this publication have continued during the year. More 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:

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

Loder Cup Award:

This Annual Award is offered to "Lovers of Nature in New Zealand to encourage the protection and cultivation of the incomparable flora of the Dominion." Mr R. Syme, A.H.R.I.H. (N.Z.), serves on the Loder Cup Committee, nominated by the Institute. The 1969 Award was made to Mr P J. Devlin, of Hamilton, and our congratulations are extended to him.

National Parks Boards:

The Dominion Council continues to make nominations for election to these Boards. District Councils are invited to put forward suitable nominees.

Conference Venues:

The Waikato District Council has extended an invitation to hold the 1972 Dominion Conference in Hamilton in the month of October. This would be quite independent of the annual conference of the Institute of Park Administration. Decision by the Dominion Council was deferred.

Our Jubilee Dominion Conference, 1973:

Already some thought has been given to the venue for our Jubilee (50th) Dominion Conference in 1973 and consultations held with the Institute of Park Administration.

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. Particular thanks are expressed to:

- (a) The Government, Ministers of the Crown, and Departmental Officers for their courteous attention to the needs of the Institute whenever they have been brought to their notice.
- (b) Local Bodies for their continued interest and financial support, and the Directors and Superintendents of Reserves.
- (c) Examiners, supervisors, the N.Z. 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 Service and Mr S. W. Burstall for assistance in matters relating to Historic and Notable Trees in New Zealand.
- (f) Mr M. R. Skipworth for his presentation of the Banks Lecture at the 1969 Dominion Conference.

Conclusion:

As Dominion President I express my personal 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.

We stand on the threshold of a new decade of time. None knows with any degree of certainty what it will hold for us, individually and as an Institute. While looking forward, with confidence, it is good also to reflect upon the past, that the lessons already learned might be useful in our thinking of the future. It is essential to our existence that we progress and have objectives to pursue, but, in this pursuing, it is vital to retain a happy balance in all of our decisions and actions on what to preserve on the one hand and what to demolish on the other, in the name of progress.

Our small country is richly endowed with a natural heritage of beauty and productivity almost unequalled in the world. How much of our natural heritage of irreplaceable scenic beauty and attractiveness can we afford to surrender to the demands and dictates of industrial progress? Wastage of our resources must never be tolerated. As an organisation, our Institute is at present endeavouring to ensure the preservation of historic and nationally important trees and groups of trees; it has expressed its views quite clearly on the anticipated despoliation of Lake Manapouri; it exerted some influence in the initial stages of the very commendable scheme we now have for the natural re-beautification of the area surrounding the Aratiatia Electric Power Project. Our country must look to the history of older countries and learn from the sad experiences that have flowed from the indifferent despoiling of their natural resources.

Objectively, the Institute has always sought to foster cultural interests in horticulture. In its publications—the Official Journal, and the book, “Flowers for Shows”, valuable horticultural knowledge is disseminated in a way that has assisted members and horticultural groups or societies throughout the Dominion and overseas. In the up-dating of Examination Syllabuses, the conduct of its annual examinations, and the awarding of Diplomas and Certificates, the Institute is contributing largely to the building up in New Zealand of a force of capable and highly qualified horticulturists fitted to meet the challenge and technological demands of the '70's.

Nevertheless, the Institute cannot rest upon the laurels of the past. Much still remains to be done. Let us then press on to full maturity in the pursuing of the objectives and aims set before us.

J. F. LIVING,
Dominion President.

ROYAL NEW ZEALAND INSTITUTE OF HORTICULTURE INCORPORATED

REPORT OF THE EXAMINING BOARD

On behalf of the Examining Board I have pleasure in submitting the following report for 1969.

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.)

Applications for Registration for Examinations:

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

	1968	1969
National Diploma in Horticulture	40	36
National Diploma in Fruit Culture	8	5
National Diploma in Apiculture	2	2
Certificate in Vegetable Culture	1	1
Horticultural Salesman's Certificate	—	2

1969 Examinations:

Results: These are published separately.

Statistics: The following tables will be of interest; 1968 corresponding figures are shown in parenthesis:

	Junior		Intermediate		Diploma	
<i>N.D.H. Examination</i>						
Number of Entries	77	(61)	53	(50)	19	(21)
Number of Passes	57	(44)	32	(31)	11	(17)
Percentage of Passes	74	(72)	60	(62)	58	(81)
Average marks—passes only	63	(60)	64	(61)	64	(62)

N.D.F.C. Examination

Number of Entries	9	(7)	1	(2)	3	(1)
Number of Passes	6	(4)	1	(2)	2	(1)
Percentage of Passes	66	(57)	100	(100)	66	(100)
Average marks—passes only	65	(69)	77	(66)	69	(63)

N.D.Ap. Examination

Number of Entries	—	(—)	3	(1)	—	(—)
Number of Passes	—	(—)	3	(1)	—	(—)
Percentage of Passes	—	(—)	100	(100)	—	(—)
Average marks—passes only	—	(—)	65	(72)	—	(—)

Certificate in Vegetable Culture

Number of Entries	5	(10)
Number of Passes	4	(5)
Percentage of Passes	80	(50)
Average marks—passes only	60	(66)

Conduct of Examinations

There were 94 candidates, 170 entries, sitting at 17 different centres.

Every endeavour is made to enable all 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 and others for their valued assistance and the facilities offered.

The examinations for 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 W. Nelson (Auckland) for their supervision of the Beekeeping Examination, and to Mr P. Muir, of St. Heliers, for the use of his apiary.

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	2	19	14	6	1	—	1	—	1	—
Number of Passes	1	17	10	2	—	—	1	—	1	—

The following constituted sections or the whole examination:

National Diploma in Horticulture:*Junior Stage:*

CARTER, T. A., Palmerston North	LEIGHTON, S. R., Hamilton
COLLINS, D. S.T., Tauranga	LENZ, B. S., Hamilton
DAVEY, K. L., New Plymouth	McKENZIE, T. R. J., Napier
DOUGLAS, B., Nelson	PAYNE, D. R., New Plymouth
DUFF, A. A., New Plymouth	SCOTT, Miss E., Queenstown
JOLLIFFE, A. G., Oamaru	SMITH, Miss P. R., Hamilton
LEIGH, G. J., Christchurch	SUTHERLAND, J. A., Auckland

Intermediate Stage:

ESTCOURT, D. E., Hastings
 FEATHERSTONE, W. A., Frankton
 MOFFITT, R. G., Christchurch
 RICHARDS, P. J., Palmerston North
 THOMPSON, R. V., Auckland

Diploma—Final:

GILL, R. R., Upper Hutt
 LOKUM, L., Trentham

National Diploma in Fruit Culture:*Junior Stage:*

JENSEN, G. V., Auckland

Final:

LEES, J. A., Kaikohe

National Diploma in Apiculture:*Intermediate Stage:*

MARSHALL, P. W., Hastings

Certificate in Vegetable Culture:*Final:*

MANVILLE, W. J., Wanganui

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

The donation of \$100 from the N.Z. Institute of Park Administration is acknowledged with thanks.

Assistance to Students:

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

Review of Syllabuses:

After detailed enquiry and investigation into the requirements of the various sections of the Horticultural Industry and Local Body Parks Departments carried out by the Examining Board, new schemes and syllabuses 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 subjects 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, are shortly to be submitted to the Minister of Agriculture for approval and official gazetting. The Examining Board aims to have these new Diploma Courses available to candidates in 1970. However, there are administrative and machinery

matters still to be determined in respect to tuition by the N.Z. Technical Correspondence Institute, cross-crediting in units passed under the old syllabuses, etc., but due attention is being given to these to avoid unnecessary delay.

The Examining Board places on record its sincere appreciation of the considerable assistance received from officers of the N.Z. Technical Correspondence Institute, from Professor J. A. Veale of Massey University, the Fruit-growers' Federation, the N.Z. Vegetable and Produce Growers' Federation, the N.Z. Nurserymen's Association, the Horticultural Producers' Council, and the N.Z. Institute of Park and Recreation Administration in formulating these new syllabuses.

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.

N.Z. Technical Correspondence Institute:

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 a wider range of 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.

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.

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, and supervisors 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; Mr P. Muir.
- (e) The Director of Horticulture and Officers of the Horticulture Division.
- (f) The N.Z. Fruitgrowers' Federation 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. D. GORDON,
Chairman.

DISTRICT COUNCIL NOTES**WAIKATO**

In common with much of the country the Waikato has experienced a rather dry summer and it is interesting to note how plants have reacted to these conditions. Lack of rain, despite watering, has caused problems for nurserymen and unless a considerable growth takes place in the early Autumn most field grown trees and shrubs will probably not be as large as in better growing seasons. South African and Australian plants are, somewhat surprisingly, not appreciating the hot, dry conditions so much as would be expected. Bedding plants, such as Zinnia and African and French types of marigold have given some magnificent displays, but many annuals from more temperate climates used for bedding have been rather fleeting in their length of flowering. In general despite the hot, dry weather and water restrictions in many areas most plants have survived these somewhat unusual conditions remarkably well, and actual losses are likely to be very few. At the October meeting Mrs Shirley Easter gave a most entertaining talk on some aspects of her work for radio and television and in the writing of her recently published book "The Tall Trees and The Gold". It is most encouraging to know that the natural and social history of an era passing so rapidly is being recorded so accurately and in such an interesting manner as Mrs Easter has.

Demonstrations are always popular, and Mr H. G. Whyte, who is an orchardist from Horsham Downs, near Hamilton, and a Vice-President of Waikato District Council, showed the methods used and explained the principles behind the techniques of grafting.

The Annual General Meeting in November was followed by a social evening. Competitions for vases of herbaceous flowers and trees and shrubs resulted in what was almost a small flower show and included some very good and many unusual flowers.

Once again the Waikato Rose Society staged its Annual Show in November in Hamilton and despite the not entirely ideal season the quality of flowers exhibited was very good. The Show was well supported by local and other nurserymen with exhibits of a wide range of plants and equipment.

In November a special meeting was held at which the Loder Cup was presented to Mr P. J. Devlin, of Hamilton. The citation for this was reported in the December issue of this Journal. The award was made to Mr Devlin by Mr D. J. Carter, M.P., deputising for the Minister of Agriculture. The Director of the Horticulture Division of the Department of Agriculture, Mr A. M. W. Greig, explained to those present the purpose of the Award and outlined its history since the presentation of the Cup by the late Gerald W. Loder in 1926. Representatives of the various organisations concerned in the nomination of Mr Devlin and of several county and municipal authorities in the Waikato were present.

The Waikato District Council was naturally gratified by the Award of the Loder Cup to Mr Devlin, and was honoured to be host to the many distinguished guests at the presentation.

WHANGAREI

NOVEMBER.—The speaker for the evening was Mr Tom Clarke, the well known and successful grower of roses. His talk on Rose Culture covered a year's programme in the garden.

Beginning in May with a general clean up and burning of old leaves, spraying while bushes are dormant, giving a topdressing of basic slag or

dolomite early in May. Mid June spray with Volck Supreme, colloidal copper at winter strength. Repeat three weeks later, good coverage is essential on bushes and ground. Late June or early July is a popular time for planting in Northland.

July: Mid July is early enough to begin pruning, though opinions differ on when and how to do this. Study your bushes, observe growth habits, and prune to suit your requirements. Use sharp secateurs. First remove all dead and spindly worn out wood, to open up the centre of the bush, then cut the remaining growths on an angle just above an outward facing eye. Prune climbers by removing old and worn out canes, and tie down the rest to a horizontal position and shorten them to a good eye. After pruning apply Volck Supreme, colloidal copper which assist in sealing the pruning cuts and are dormant sprays. If in doubt attend the pruning demonstrations by Rose Societies.

August-September: August is the time to give your bushes the start for the season. Manure with blood and bone, followed by a liberal dressing of compost worked into the ground (if possible). New spring growth and warmer weather attracts pests, so spraying is essential. Remember you prevent disease, you don't cure it.

APHIDES: Malathion (wetable powder) Menazon is a systemic spray that gives control for about 4 weeks. Used alone it is economical.

CATERPILLARS: Sevin.

BLACK SPOT: Phaltan, Melprex, Maneb, Captan or Thiram.

DUST: Zineb Dithane.

MILDEW: Karathane.

For the average gardener an all-purpose spray that combines a selection of the above ingredients is most suitable and readily available. Spray every 10-14 days. Read the labels very carefully and apply as directed. It is safer to use too little, than too much. Apply complete fertilisers as recommended by Rose Societies. In dry weather hose well and hoe well to keep soil friable.

October-November: Your blooms will be in proportion to your work and care. Continue your spraying and remove old blooms, so that bushes will retain their growth.

December: Mulch the beds with ensilage, peat, stable straw, well rotted grass clippings or other materials to conserve moisture and protect roots from drying out. Continue spraying and water if necessary.

January-February: Spray and water if needed. Remove old blooms—give a liberal dressing of sulphate of potash to harden off new growths. If you want a flush of autumn blooms you must not water in January. Break off old flower heads and in the first week of February you prune to a plump eye as if gathering long-stemmed roses. Conserve as much foliage as possible, manure as after winter pruning, and water well.

March-April: Spray and water. If making a new rose bed add as much compost as possible and leave to consolidate.

BASAL SHOOTS: In spring a crop of strong basal shoots will arise from the crown of the plants. These are important as they will make the frame-work of the future plant. When they are about 18" high, break the tip off. They can also be trained in the required direction by tying them with a piece of wool to a peg in the ground.

Finally Mr Clarke gave a list of roses suitable for Northland conditions:

Hybrid Teas— 'Whisky', 'Western Sun', 'Chicago Peace', 'Uncle Walter', 'Papa Meilland', 'Memoriam', 'Sarah Arnot', 'Angle Wings', 'Virgo'.

Floribundas— 'Pernille Poulsen', 'Anna Wheatcroft', 'Irish Mist', 'City of Leeds', 'Pink Parfait', 'Violet Carson', 'Heinz Erhardt', 'Paprika', 'Vagabonde'.

DISPLAY TABLE

Though the number of specimens on display was less than usual they covered not only a wide range of plants, but also a great diversity of countries of origin.

New Zealand provided the tiny iris-like *Libertia pulchella*, which is found in damp mossy places throughout New Zealand, up to 4,000ft. Its snow-white flowers are borne in bunches on slender stems above the 6" grassy leaves. For best effect it should be grown in a mass. Its sister plants are taller and larger with conspicuous flowers that grow readily in cultivation.

The dwarf cabbage tree *Cordylone pumilio* which is more common locally than further south, is stemless, and blooms profusely in warm, well drained positions. It has been used most effectively in gardens. The bronze leaved form is especially to be cherished.

Hebe 'Inspiration' which is a hybrid between two Northlanders *H. diosmaefolia* and *H. speciosa* is an especially good "doer" here and if kept pruned after flowering is a most rewarding sight.

Rhododendrons grown by Mr Blumhardt were of special interest, as they included the large flowered 'Purple Splendour' and the very tiny flowers of a varietal form of *Rh. brachyanthum* only $\frac{1}{4}$ of an inch wide, but useful for hybridising, and a native of China and Tibet.

From Greece came *Salvia haemotodes*, a lovely perennial with tall branching sprays of lilac blue flowers. It prefers a sunny, well drained site.

Thunbergia grandiflora with masses of sky-blue flowers, comes from India and is a strong growing climber which must be well pruned to give best results. It tolerates some frost, but likes sun and good soil.

Alstromeria from western South America and Brazil came to us in several species. The pink flowered species is a form of *A. ligtu* and is probably *A. rosea* from Chile. This is a good form and does not sucker as some of the red and yellow do.

The purple leaved *Continus coggygria* comes from Southern Europe and the Caucasus and is considered to be one of the best purple leaved shrubs. It thrives in sunny, well drained soil.



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