

blocks than short cut, less hygienic, production techniques. The result, knowing human nature, is probably inevitable. Cheap roses of doubtful virus status flood the market, claiming to be "High Health", or budded on "High Health" understocks. The buying public, always looking for a bargain, becomes disillusioned with the concept of "High Health", with the result that those nurseries who are endeavoring to produce the genuine article are forced to either lower their standards and compete pricewise or cater for a very limited discerning clientele.

The dream of "High Health" roses in every nursery in New Zealand becomes a nightmare.

I have told the story of viruses in roses in New Zealand because I believe no matter what line of plants you propagate you are likely to find parallel situations. Striving for worthwhile improvements in your product can easily be overcome by economic expediency.

SELECTION AND PROPAGATION OF NEW ZEALAND NATIVE PLANTS

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"Trust not authority, pay no heed to books, but go to the plants themselves". This quotation by Mr. R. Brown to Dr. Leonard Cochane, who prefaced his great work, "New Zealand Plants and Their Story" (1910) with it, should be permanently enshrined into the minds of all plantmen. Furthermore, through experience I have established that it is not advisable to rely too much even on your own conclusions when it comes to dealing with plants and nature.

The inherent genetic diversity of every species makes it impossible to be precise. For example, to conclude that *Pittosporum crassifolium* seed germinates in three months is basically a sound assumption, because in most cases that is correct. However, we have had a couple of batches of seed that took 15 months. To state that you could obtain 60% strike rate in *Metrosideros excelsus* cuttings by carrying out certain propagating procedures is only correct if you are referring to a specific cultivar or clone. I have discovered, to my cost, that any superior variety that warrants special attention generally proves the hardest to propagate. The genetic diversity of a plant definitely extends to its ability to grow from cuttings. This genetic diversity, when properly understood, gives the plant propagator the opportunity to select a superior cultivar for cultivation.

One of the rewards of collecting all our own seed each year for

our nursery requirements is that I get the opportunity to travel the length and breadth of the country and inspect our native flora in its natural habitat. With one or two exceptions, I have had the opportunity to inspect the natural habitat of all our native plants that we produce. There are many benefits to be obtained by studying plants in their natural habitats—not the least of these is the opportunity to enjoy a few weeks each year unharried by the normal grind of life. Plants have been around many hundreds of millions of years, growing in the most incredible spots, without being subject to man's technology. The opportunity to observe how they have adapted, propagate, and grow naturally will often reveal more secrets than years of experiments in the nursery.

The following two reasons have been the purpose of my trips into the wild:

1. The opportunity to select genetically superior material for cultivation.
2. The opportunity to understand the plants's place in the natural order of progression, and its associations with other plants.

After years of experience propagating and growing plants and dealing with the gardening public, I have found that the greatest problem we have is not how to propagate a plant, but how to ensure the plants are planted correctly in the right place. There can be no doubt that over the last 30 years the ability to propagate and produce plants has increased. However, during the same time plantsmanship has dramatically decreased. Some modern supermarket garden centres have no skilled staff, and their only concern is to get the plant through the checkout counter.

I am certain that excellence in plantsmanship and landscaping can only be achieved when the concept takes precedence over the plants themselves. We often see customers select a few beautiful plants for their garden, then they spend ten minutes wandering around the garden with the plants in one hand and the spade in the other, looking for a place to plant them. The end result is what I call "the scrambled plants syndrome". It contains no natural associations—generally made up of beautiful plants totally unrelated to each other and frightfully out of any balanced order.

The more time I spend in the mountains, hills, and bush, the more inspiration I get from the treasures of nature. Plants are not isolated individuals—they grow in very specific sites and in a set order of progression, dictated by the specific needs of the species. I totally reject any suggestion that there is a balance of nature. Nature is a battle-ground, with each species doing its utmost to survive. The success of one species is invariably at the downfall of another. In association with the geophysical features of a nation, natural plant associations create a unique national character that should be the

inspiration of all plantsmen, gardeners, and landscapers. This botanical image of a nation can be very strong. Australia, for example, has a landscape full of very strong elements that constitute its natural landscape image—red earth, time-worn rock outcrops, lanky eucalyptus trees, and yellow flowering acacias. China has its karst limestone hills, bamboo thickets, spreading banyan trees and water ponds. New Zealand has its fussy hills, *Phormium*, *Cordyline*, *Cortaderia*, tree ferns, craggy rocks and extensive tussock grasslands, which are distinctive elements that contribute to our national image and landscape. These images, made up of the unique elements of a nation's landscape, should be understood by all plantsmen. It is unfortunate that local people are the last to recognise the unique national character of their local landscape, and work "devil-possessed" to change it to something other than natural. The richness of nature's rewards is readily available for all to observe, and is inseparable from other disciplines. It is not possible to study plants and not be interested in geology. If you are interested in plants and geology, you must be interested in birds and insects. Furthermore, the rain, the wind, ice, snow, and the sun—each has its place and can contribute to all aspects of the natural environment. New Zealand, with its high number of endemic plants, ensures us a unique opportunity to develop a true New Zealand landscape—a style with as much strength and character as that developed over the centuries in Japan, a style that allows the natural beauty and the uniqueness of New Zealand to be re-created.

Natural New Zealand landscaping can easily be split into six basic and separate concepts:

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| 1. Mixed bush | 4. Swamp and its margins |
| 2. Alpine | 5. Woodland grove |
| 3. Sub-tropical ferny glade | 6. Individual specimen trees |

Each of these concepts is readily identifiable in the natural environment, and should be the inspiration of all plantsmen and landscapers. All of the secrets of how they grow, what they grow in, and how they are propagated, are contained in these natural associations.

1. **Mixed Bush** is an assortment of the smaller trees, from 5 to 10 metres, that can be grouped together to re-create the local vegetation and, in landscaping, can be used as a wind-break, screens along highways, and to soften the lines of harsh objects, like factories and buildings.
2. **The Alpine Rockery** takes its inspiration from above the treeline of our mountains. Properly placed rocks are the basis for any rockery. Placing rocks is an art in itself, the secrets of which can be readily explained by observing

rocky outcrops in the mountains. A rockery creates a specific area to place those small plants that would be lost elsewhere. These plants should be planted in the same balanced way as they would be found in nature. Rocks are best placed in intimate areas, where the small plants and little botanical treasures can be readily observed.

3. **The Sub-Tropical Ferny Glade** takes its inspiration from the shady and luxuriant corners of the rain-forest, with any of the lush broad-leafed green vegetation, liberally garnished with palms and tree ferns.
4. **Swamp and its Margins**—New Zealand swamps and wetlands are amongst the world's most distinctive, with the *Phormium* and *Cordyline* association, together with other wetland plants. These associations can, in fact, be planted on quite dry ground. However, they are best kept in association with wet, boggy areas. The associations and balances can be observed in any natural swamp still visible around the country.
5. **Woodland Grove**—The woodland grove is probably not a true New Zealand concept, as it did not exist until many of the trees were chopped down to clear land for farms, and small patches of natives were left in various places. Many of these patches of trees resemble more the English countryside. However, they can be seen on many farms in New Zealand. These unique groves of natives can be replanted, using the inspiration from the existing ones as a model.
6. **Individual Specimen Trees**—There is an art in placing large trees in the environment, be it in the cityscape or in the country. The most striking trees are generally those in the most unlikely places. Trees should always look as though they have been there since the beginning of time. There are plenty of examples of large natural trees, both in the countryside and in the city, that help to soften the harshness of man's creation by showing a certain degree of disorder.

New Zealand is a country that is sinking under a sea of foreign weeds. I believe we all have a duty to preserve our natural heritage, and that includes the natural landscape. If we do not, no one else will. Our natural landscape is just as endangered as are many of our plants. I am often asked why do we bother, by people who do not perceive some of our rare plants to have any appeal. There are many reasons, but the most important is that the measure of a man or a woman is for their compassion and protection of the defenceless things that need our help. It is unfortunate that we are inclined to admire most the acquisition of wealth, often by destroying the things most dear to us. There must be a place in our soul for all of nature's creation.