

Selection and Evaluation of Native Plants

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New Zealand's nursery people have the good fortune to be surrounded with a unique and varied flora. This flora, separated by the oceans for the past 100 million years, give this country a distinct character and a wealth of material to be discovered and enjoyed. This uniqueness is in part a result of the vast range of landscapes and climates—from alpine tundras to swamps, volcanic landscapes to humid coastlines—found in a relatively small country. Just imagine the awe and wonder those first botanists felt as they ventured through kahikatea forests (*Dacrycarpus dacrydioides* syn. *Podocarpus dacrydioides*), discovered the pohutukawa (*Metrosideros excelsus*), nikau palms (*Rhopalostylis sapida*), and the hundreds of other species that make up our landscape. Apart from attempting to keep body and soul together, and perhaps earning a living, native-plant nursery people can find much of their motivation from the joys of handling such a marvelous and unique range of plants. Propagation of these plants has ensured that we do not lose species, as their habitats are manipulated and lost. New habitats, however, occur in local gardens, parks, and reserves. The pace of discovery of new species may have slowed down over the last century, but our natives are still evolving and changing in response to their environment. The plant propagator, as a multiplier of plants, has a huge responsibility to maintain and strengthen the genetic quality of the natives they grow. When sourcing seed the form and features of the parent plant should be studied, the same goes for propagation by cuttings. Is it true to type? Is it a male or female form? Is the vigour, flower quality, and leaf form the best available? Strengthening the forms we grow now is important, but we can also take advantage of the continual evolution of our plants to have the excitement of discovery of a new form.

At C. H. Simpson Nurseries in Nelson, Cam Simpson has been growing New Zealand natives for the last 37 years. Inspired by the beauty and range of our landscape and flora, Cam has brought into production many plants that may have been otherwise lost and never appreciated. Cam has also striven to uplift the genetic quality of the natives he grows. Part of this is seeking new forms that will be an improvement on those already grown. It was with this need in mind that Cam started looking for an improved green-leaved *Pittosporum tenuifolium*. This shrub has many cultivars of various colours and shapes. The species type is propagated by seed. One batch of seed from New Plymouth gave eight plants that showed interesting forms. Propagating these by cuttings, growing them on both in the nursery and in a variety of garden sites, Cam began the evaluation process. Is this form stable and distinct? Does it maintain the vigour of the parent type? Is it prone to pest and disease attack? Many factors need consideration to eliminate all but the best forms. The results of this evaluation were the introductions, 'Waimea', 'Wai-iti', and 'Wairoa', named after local rivers. All three have a dense bushy shape and respond well to trimming. 'Waimea' has a fresh lime-green appearance, leaves smaller than the type but held on bright green stems. 'Wai-iti' has foliage with a larger leaf and a stronger green color and reddish-brown stem. 'Wairoa' has darker, glossy foliage and a more open habit.

Lophomyrtus xralphii 'Pixie' and 'Lilliput' were also chance seedlings. The seed, most probably a cross between *L. bullata* and *L. obcordata*, was collected from a garden near the nursery. Two of these seedlings had a particularly dwarf form and were grown on over the next 4 years and evaluated as to their merits. They performed well and were subsequently named 'Pixie' and 'Lilliput'. 'Pixie' makes a compact dwarf bush to 20 cm, with small mahogany coloured leaves. 'Lilliput', a larger growing form to 70 cm, has wine-coloured, rounded leaves.

A wildling of *Carpodetus serratus* also showed unusual form. Instead of the usual upright growth, in which the branches grow in flattened tiers, this seedling stayed low growing and spread out sideways. This makes an interesting shrub, however, evaluation will not be complete until this juvenile form reverts to its adult state.

Elaeocarpus hookerianus 'Moana', another juvenile form, was selected for its highly attractive foliage with unusual glossy brown leaves. Normally a seldom asked for native, propagation of this interesting form has led to many more plantings of this tree.

Lophomyrtus xralphii 'Matai Bay' was discovered while Cam was taking a break from the rigours of fishing in the Marlborough Sounds. A walk into the bush at Godsiff Bay revealed a particularly large-leaved form of *L. bullata*. This has maintained its size and colour through evaluation.

Extremes in the environment put pressure on a plant to evolve. The hunt for dwarf forms can often begin in windswept places where the low-growing survive well. Evaluation is important in these cases as the plant may revert away from its dwarf form once placed in a sheltered, fertile site.

Leptospermum scoparium is a shrub that hybridises freely and has many colourful forms. From seed sourced at Pillar Point at the base of Farewell Spit, Cam selected a prostrate manuka that maintains its compact weeping habit. The white flowers in summer are only part of its charm, fresh, green leaves that maintain their vigour throughout the year are another.

Looking for a plant in its preferred habitat can reveal gems. *Pseudowintera colorata* is a shrub found from the Mamaku Plateau in the north, to Stewart Island in the south. The green foliage is flecked with purples and reds. Again on the hunt for a better form, Cam went to the Ellis Basin at the base of Mount Arthur in northwest Nelson. *Pseudowintera* thrives in the limestone rock and sheltered aspect on the eastern side of the basin. Cuttings were taken from several particularly dark-red forms from which an outstanding type, now known as 'Winter Fire', emerged. By catching the eye of the customer, we can stimulate interest in planting New Zealand natives.

Seedling grown natives are important for the diversity that they give, and often the ease of propagation. However, in the case of *Clematis indivisa* (syn. *C. paniculata*), a stunning spring-flowering climber, by propagating cutting-grown male forms, the quality and size of the flower is improved.

Each distinct form that is found may, eliminate another lesser form in the market, add to the variety of recognised plants, or be superseded and never seen on a trade list. The evaluation of nursery plants is a perpetual, ongoing task.

To survive and make a living in the industry, the nursery person is called on to perform many roles: a marketer, accountant, mechanic, and lawyer. However, the role of the plants person is critical to the industry. The range and quality of plants we grow must only ever improve. The heart of this profession, should always be to appreciate and share our landscape and flora.