

The New Zealand Native Plant Collection at Dunedin Botanic Garden: "Our Treasure"®

Shirley Stuart

Dunedin Botanic Gardens, PO Box 5405, Moray Place, Dunedin

INTRODUCTION

Welcome to a brief glimpse of the treasure that is the New Zealand native plant collection at Dunedin Botanic Garden. What I would like to do this morning is to tell you a bit about how the native plant collection is arranged and show you some of the plants I think of as special. The collection covers approximately three hectares and we've got about 20 minutes, so it's a whirlwind tour and I would like to think you will be inspired to go and see it for yourself.

BOTANICAL ORGANISATION OF THE COLLECTION

The collection is grouped with a number of ideas in mind, one of the main ones being taxonomic relationships. We have collections based on genus, such as the *Hebe* collection. *Hebe* is a species-rich genus, with a great diversity in plant form and habit. Our collection of *Hebe* is historically important to the botanic garden because it originated from a donation of plants in the early 1900s that formed part of the basis of the native plant collection. Our collection displays whipcord forms such as *H. annulata* and larger-leaved species such as *H. bollonsii*, a species from the Poor Knights, Mokohinau, and Hen and Chickens islands off the coast of northern New Zealand.

Another historically important collection is New Zealand flaxes (*Phormium*), including the Rene Orchiston collection as well as the early flax plantings from the 1900s. While there are only two species of *Phormium*, *P. tenax* and *P. cookianum*, Maori recognise over 60 named forms, and it is the Rene Orchiston Collection that represents many of these.

Other genera-based collections include *Coprosma* and *Pittosporum*, which are both displayed in their own borders. Recently the *Pittosporum* border had drainage put in on the roadside and the soil level raised to overcome a high water table, and we are also increasing the diversity of the species we display. A couple of my favourite plants here are *P. cornifolium* and *P. patulum*, a nationally endangered subalpine species found in the South Island. We also have a *Pseudopanax* collection.

Family-Based Collections. Still on the taxonomic track, we have collections based on plant family, with Myrtaceae, Fabaceae, and Asteraceae represented, each with their own border.

Metrosideros carminea, a climbing rata, is represented in the Myrtaceae collection. Another plant in this collection is *Syzygium maire*, a tree of swamp and bog forests throughout the North Island and the north of the South Island.

The Fabaceae collection contains good-sized specimens of some of our native broom species, such as *Carmichaelia odorata* and *C. williamsii*, interesting plants with relatively large, pale yellow flowers with purple markings, making it one of my favourites. We couldn't go past the iconic *Sophora* species when talking legumes, and neither could we ignore the kaka beak (*Clianthus*), which has been adopted as the logo for the Dunedin Botanic Garden.

The Asteraceae family is the most species-rich family in New Zealand. Again there is a great diversity in plant form, size, and habit. The collection here represents the smaller herbaceous genera such as *Leptinella* and *Celmisia*, as well as the tree daisies such as *Olearia fragrantissima*, which has the most delightful peachy scented flowers. An unusual member of the family is *Brachyglottis sciadophila*, a liane of lowland forest margins that also occurs on the Otago Peninsula.

The last taxonomically based collection is that of the order Coniferales, or more simply put—our conifer collection. The conifer border displays plants from each of the four families that represent conifers in New Zealand. The Araucariaceae family has *Agathis australis*, which is growing well out of its natural range and is even producing cones; the celery pine *Phyllocladus trichomanoides* belongs to the Phyllocladaceae family; *Manoao colensoi* of the Podocarpaceae family; and *Libocedrus plumosa* of the Cupressaceae family.

THEMES AND HABITS

In the last 20 years there have been a couple more collections added to the Native Plant Collection, and these have been based on representation of a natural habitat. The wetland pond, located by Lovelock bush behind the Botanic Garden Centre, was dug out of a boggy piece of ground. Rather than trying to represent one particular wetland type, the outer plantings are designed to represent the natural succession seen in wetland communities, from emergent species in the pond to the trees and shrubs associated with wet areas. A peat mound was also developed to cater to alpine species that occur in mountain wetlands. Most of our other alpine natives are grown in the alpine scree garden, which was developed in the late 1980s. *Bulbinella angustifolia* is flowering right now [April], which probably shows you how reliable the seasons are here in Dunedin. *Myosotis colensoi* occurs in the east of the South Island from south Marlborough to Canterbury and is currently listed as nationally endangered. *Leucogenes leontopodium*, known as the North Island edelweiss, also occurs on some South Island mountain ranges. This is a dynamic and ever-changing garden due to the fact that many alpines can be difficult in cultivation, and if they survive they are treasured!

The final grouping concept I'll mention today is based on plant attributes or characteristics. The native cultivar collection falls into this category, and there are some wonderful foliage colours on show in this border. *Parahebe* 'Snowcap', a cultivated variety of the species *P. catarractae*, and *Hebe ochracea* 'James Stirling', a recipient of the Royal Horticultural Society's Award of Merit and one of my favourite plants, are both displayed in this border.

We have a collection of plants with a divaricating habit. This is a border that has interest all year round but really comes into its own at this time of year. This is also where we tell the story of plants that have a juvenile form and habit that is sometimes remarkably different from their adult forms such as *Elaeocarpus hookerianus*, which at the moment looks for all the world like it has some other plant growing up through the centre of its twiggy divaricate stems but is simply going through puberty.

Coastal plants are an important part of the collection because there are many that are now rare or endangered due to the increasing pressure people put on these areas in the way of coastal development. Sometimes they have a very limited distribution such as *Gunnera hamiltonii*, which only occurs on the south coast of the

South Island and on Stewart Island. *Euphorbia glauca* and the native pikao *Desmoschoenus spiralis* are listed as being in decline, and *Gentianella saxosa* isn't rare but it is a sweetie.

We have a collection of plants from our offshore islands, which include plants such as *Myosotidium hortensia* from the Chatham Islands, both the blue- and white-flowered forms. *Myosotis capitata* is a blue-flowered forget-me-not from the Auckland and Campbell Islands, and Kermadec Island nikau palm (*Rhopalostylis baueri*) does well with shelter.

Lastly there are the tree and shrub borders. Ferns are represented within these borders; a couple of examples are the silver fern, *Cyathea dealbata*, and *Marattia salicina*, which does well with a mulch of pea straw over winter. With the shelter provided by many mature trees and shrubs we are able to grow some plants that would not normally do so well this far south. *Meryta sinclairii* is a tree that doesn't like frost or cold wind, and another plant from the north that does well is *Rhabdanthus solandri*. This plant has flowers for many months of the year even here. While these borders cater to trees and shrubs, there are also a number of plants with habits that rely on trees and shrubs. *Parsonsia* and other lianes are grown throughout the borders. Epiphytes such as *Earina autumnalis* are placed in the forks of trees, and the hemiparasite *Ileostylus micranthus* or green mistletoe, has made itself quite at home in many trees and shrubs throughout Dunedin, to the point where it is difficult to explain that it is rare in parts of the country. To finish off today I'd like to show you my favourite plant, *Dracophyllum traversii*, and, just because he was there when I had the camera out, a kereru (New Zealand wood pigeon) in a *Cordyline*.