# Dunedin Botanic Garden update

Barbara Wheeler[1]

Southern African Garden site before development.
Image courtesy of Dunedin Botanic Garden

Local rock was used to form the biome beds.
Image courtesy of Dunedin Botanic Garden

Southern African Garden on completion.
Image courtesy of Dunedin Botanic Garden

Karoo bed – *Osteospermum ecklonis*
(syn. *Dimorphotheca ecklonis*; African daisy).
Image courtesy of Dunedin Botanic Garden

The Botanic Garden was established in 1863 and occupies 28 hectares split into two distinct areas.

The Lower Garden is situated on the valley floor (occupying 4 hectares) where a variety of more formally laid out plant collections are displayed. Traditional collections of rose garden, herbaceous borders, camellia borders, annual bedding displays, herb garden, water garden, alpine house, rock garden and winter garden (glasshouse) are represented in this area, along with the theme borders and the Otaru Teien and Clive Lister Garden.

The Otaru Teien was developed in 1998 and celebrates Dunedin's sister city link with Otaru, Japan and the Lister Garden was developed in 1999 as a result of a generous bequest from Professor Clive Lister. The extensive rock garden lies above Lindsay Creek at the point where flat land becomes steep taking full advantage of the natural slope and north facing aspect.

Conversely, the Upper Garden sprawls up and over the hillside in a less formal manner with the Native, Geographic, and 4-hectare Rhododendron Dell being the plant collections represented.

Bisecting the Upper and Lower Garden are the open spaces of the Arboretum that extend down the hillside. The aviary is also located in this area housing a collection of both exotic and native birds, some of which (kea and kaka) are part of national breeding programmes.

Gardens are ever changing entities and over the past twenty years the Dunedin Botanic Garden has been no exception. In fact these years have seen some of the most significant developments since the David Tannock era of the early to mid 1900s.

Of the more recent additions to the plant collections, the Southern African Garden has certainly had the most impact. Nearly two and a half years since the development of this garden, growth of the plants have barely seemed to cease, no doubt thanks to the mild winters Dunedin has been experiencing over recent years. Plants in this garden are displayed in the fynbos, karoo, savanna and forest biomes. Visitors to this garden are now able to appreciate the extent of the Southern African flora that can successfully be cultivated in the south of New Zealand.

Overshadowed by the more recent developments but certainly not less in importance is the development of other plant collections. Staff are constantly reassessing the existing plant collections and striving to extend and complement them in the best way possible.

Other works include the staged renovation of the Australian Plant Collection with soil improvement being the prime focus. In the New Zealand Native Plant Collection the Pittosporum Border has been renovated and extended in order to improve drainage and soil condition with a view to increasing the diversity of species cultivated. The New Zealand Native Plant Collection comprises of beds laid out according to genus (*Hebe* [*Veronica*], *Pittosporum*) and family (such as Asteraceae, Myrtaceae) as well as habitat beds (wetland pond, divaricates, scree) and beds for native cultivars. Also represented are various endangered plants scattered throughout the collection.

The theme borders have been developed to display plants in various themes, such as winter and spring flowering; coloured and

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Fynbos bed: *Gladiolus tristis* (ever-flowering gladiolus). Image courtesy of Dunedin Botanic Garden

Savanna bed: *Kniphofia northiae* (giant poker lily). Image courtesy of Dunedin Botanic Garden

Forest bed: *Sparmannia africana* (African linden). Image courtesy of Dunedin Botanic Garden

variegated foliage; fragrant flowers and foliage; and deciduous plants for autumn display. The Theme Borders have been further extended to include a display of plants useful for shelter and hedging purposes.

What seems an inevitable but unfortunate result of gardening is the attractiveness of a garden to some sectors of society who find entertainment in the destruction and mindless damage of plants. The close proximity of student residential flats and a local "watering hole" are seen to combine to exacerbate the amount of vandalism and as a result over the past year static security patrols have been engaged to provide additional security.

These patrols are present in the Garden at peak times associated with social activities and after end of year exams at the university. The presence of security has deterred some prospective vandals and without doubt has increased garden staff morale on Monday mornings.

Directional signage has been highlighted in surveys carried out in the Botanic Garden over the past few years as an area requiring improvement, especially through the less formal upper reaches of the Garden. Visitors to the Garden will notice a huge improvement starting in June/July 2005 with the installation of the new signs, and completion is scheduled for spring 2005.

After a break of ten years, formal apprenticeship training has been re-established at the Botanic Garden. There are currently eight apprentices undergoing training in the Level 4 (Advanced) Certificate in Amenity Horticulture with the aim over the next two years of having ten apprentices on staff at any one time. As anyone who trains will know, apprentice training does take time especially in today's world of the standards-based assessment, but the long-term benefits to the horticulture industry as a whole far exceed the difficulties experienced in the short term.

# Biomes

Biomes are the major ecological communities of the world, classified according to their predominant vegetation and characterised by particular climates and the plants and animals adapted to the environments.

Barbara Wheeler is Collections Supervisor for the Dunedin Botanic Garden. Her position includes overseeing plant collections, managing assets, maintenance contracts, and overseeing the apprenticeship program.

Several biomes (habitat types) occur in South Africa:

**Fynbos:** the major vegetation type of the Cape Floristic Kingdom and characterised by members of Ericaceae, Proteaceae and Restionaceae families.

**Karoo:** includes the Nama Karoo and Succulent Karoo biomes. Nama karoo is dominated by grassy, dwarf shrubland and succulent karoo by dwarf, drought adapted succulent shrubs.

**Savanna:** occupies 46% of land area in Southern Africa and is dominated by open grassland interspersed with trees and shrubs.

**Forest:** the smallest biome in Southern Africa occupying only 0.25% of the land area. Characterised by a multi-layered vegetation of trees, shrubs and herbs. Although the smallest in terms of land area, there are 1200 species recorded in this biome.