



2 - Southland Native Forest Restoration

Why Are Native Forests Important?

New Zealand's native forests are unique. Eighty million years of evolution in isolation from other continents produced a special collection of plants and animals found no-where else in the world. About 2000 years ago nearly 80% of New Zealand was covered in forest. Since that time forests have been cleared on a massive scale so that today only 21% of land is covered by forest. Forests are important in our day-to-day lives. They play many different roles including: reducing pollution; stabilisation of ground; have medicinal properties; recreation; tourism and education values.

The native forest remnants that remain are all important refuges for plants and native birds and help to give a New Zealand character to the landscape. In Southland, many different types of native forest remain from beech forest, to podocarp forests and lowland swamp forests to totara forests on sand dunes. Although these forests are different the restoration of all forest types depends not on planting the tall forest tree species but on following the principles of natural succession by planting nursery species.

What Are Nursery or Colonising Species?

Under natural conditions vegetation develops on a bare site through a series of stages. When restoring native forest through an exotic grass sward we are attempting to mirror these stages. The species chosen to plant are fast growing and are hardy to full sun, wind and frost and they create a sheltered shaded environment, attracting birds carrying other seeds and eventually taller tree species become established. In time the taller tree species overtop and shade out the nursery species, eventually replacing them.

Each group of plants in succession makes the site suitable for the next group, and so the forest continues. A dense sward of exotic grass can be the most limiting factor for seedling growth. It is imperative to control this grass by spraying, mulching, use of weed mats etc. Native birds play a major role in the spread of forest trees by eating the fleshy fruits and dropping the seed elsewhere. Birds are also particularly attracted to the nursery/colonising plants as they often have fleshy fruit or flowers containing nectar.

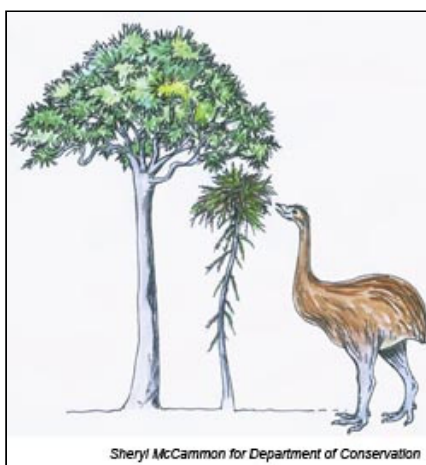
Using Local Plants

Eco-sourcing means sourcing plants from your local area. Plants sourced and grown from the local area are better adapted to conditions there, are more likely to survive and will help to preserve the distinctiveness of plants from the region. As a general principle select plants from seeds collected as close as possible to where you want to plant. As a minimum standard use seeds or plants from within the region e.g. Southland region.

Interest Story: Plant Adaptations

Lancewood is one of many native trees that look different when they are young to the adult. One theory is that the young tree developed tough narrow leaves to discourage browsing by the now extinct giant moa. Once the tree has grown above the height a moa could browse to the leaves change becoming fleshier and less serrated.

Many other native shrubs have evolved to form bushes of wiry, tangly interlacing branches with small leaves, often on the inside of the bush. This form can also be linked to the history of moa browsing. Unfortunately neither defence now works against present day introduced browsing animals which have teeth.



References

- Invercargill City Council (2001) *Otatara - Sandy Point Bushcare: A Guide to Enhancing Your Bush*.
- Porteous, T. (1993) *Native Forest Restoration: A practical Guide for Landowners*. Wellington: Queen Elizabeth the Second National Trust.
- Wilson, H.D. (1982) *Field Guide: Stewart Island Plants*. Christchurch: Field Guide Publications.
- Wilson, H.D. and Galloway, T. (1993) *Small-leaved Shrubs of New Zealand*. Christchurch: Manuka Press.

Caring for Existing Forest Remnants

- Avoid further bush clearance
- Fence from stock
- Control pest plants
- Control animal pests
- Garden with bush friendly plants

Restoring & Creating Forest Remnants

- Fence area from stock
- Plan early what to grow or order
- Clear ground of exotic grasses
- Plant nursery species
- Protect new plants from rabbits
- Weed plants for at least 2 years

Plants for Native Forest Restoration

The plants listed below are those to be mass planted in a restoration project. Refer to the booklet for plant tolerances.

- Wineberry ~ makomako (*Aristotelia serrata*)
- Cabbage tree ~ ti kouka (*Cordyline australis*)
- Broadleaf - kapuka/papauma (*Griselinia littoralis*)
- Tea tree ~ manuka (*Leptospermum scoparium*)
- Mapou ~ kohuhu (*Pittosporum tenuifolium*)
- Lancewood ~ horoeka (*Pseudopanax crassifolius*)
- Mingimingi/mikimiki (*Coprosma propinqua*)
- Tree fuchsia ~ kotukutuku (*Fuchsia excorticata*)
- Koromiko (*Hebe salicifolia*)
- Lemonwood ~ tarata (*Pittosporum eugenioides*)
- Hall's totara (*Podocarpus hallii*)

Southland Community Nursery in Otatara is a voluntary community project where you can pot up your own native plants from locally sourced seedlings for free. Advice is available on native plants and landscaping. Contact Chris and Brian Rance (03) 2131161. The Southland Community Nursery web site is <http://homepages.ihug.co.nz/~rances/>

For free advice on planning and designing your forest restoration programme or about Southland Landcare Groups contact Land Sustainability staff at Environment Southland (03) 211-5115

