



KEN MASON

Removing sycamore trees at Kanuka Bush in 1985, part of an urban forest restoration. The kanuka trees, above, were losing the battle with the aggressive sycamores. Below, large, thriving kanuka rise emergent above enhanced regeneration now 10 metres high.



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This process also allows light to reach the ground and enables ferns, shrubs and second-phase trees to develop.

The outward-reaching branches of fast-growing trees near the bush edge are also trimmed back to a main stem. This creates room for further edge planting which also helps form a dense shelter against the wind.

Some reintroduced trees need their neighbours trimmed back to give them a chance to enter the canopy and become seed sources. Often they are planted in clumps for ease of looking after and increase their chances of establishing a niche.

To enhance their growth, plantings are helped with added compost, water crystals and slow-release fertilisers. On really dry sites water penetrants are added to the soil.

Micro-organisms, fungi and invertebrates are established by bringing in nearby soil and leaf

Ken Mason contemplates another phase of 'stem reduction' at Kanuka Bush in 1999. At his feet, club mosses and filmy ferns are amongst the small plants re-established. The 13-year-old canopy forest is up to 10 metres high.



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litter. Missing local ferns, tree ferns, astelias, bush grasses, perchers, mosses, scramblers and shrub species are reintroduced. It is most satisfying to see these plants spread once there is a seed or spore source.

After 14 years, the Kanuka Bush sub-canopy is now up to 10 metres under open-spaced, large, emergent kanuka. This is very good growth for this southern latitude. Suitable micro-climates have formed for the re-establishment of delicate species such as filmy ferns. The formerly muddy ruin of a creek is now a delight, restocked with freshwater crayfish enjoying a shady bush environment.

Over the past five years, methods trialled at Kanuka Bush have been applied to a number of much-larger restoration projects about Dunedin, including replantings on Quarantine Island in Dunedin Harbour, and in an area of silver beech.

The methods outlined are not necessarily applied to the whole of a revegetation project. Better growth and moister areas are targeted first, along with sections along the visitor tracks where visual enhancement can add another dimension to restoration. The increased biodiversity created can then be left to spread into adjoining, untreated areas.

If feeling a little hesitant to try these methods, because they involve pruning or removing native trees, consider these points from nature. The race for light and resources in the bush is not very pretty. Losers die. That nice little fern will throw its fronds over the adjacent seedling to kill it, for the alternative is a tree and a dead fern. The methods outlined are just speeding up what nature is doing, but more within our lifetimes.

— KEN MASON is vice-chairman of Dunedin Forest and Bird, co-ordinator of Dunedin Teen Conservation, and an adviser to the New Zealand Ecological Restoration Network.

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