

Out-of-place native plants and environmental restoration

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In a recent (November 2008) trip to Mana Island, I found the fern *Doodia mollis* in what appeared to be a ‘natural’ site. The distribution of *D. mollis* is recorded by Brownsey and Smith-Dodsworth (2000) as “from Kaitaia to Thames, and in Hawkes Bay [sic]”. After the trip, I could find no record of *Doodia* being on Mana Island. With a view to making another trip to the island to take some photos, I got in touch with the ranger, who was shortly to leave the job. In discussing the matter with the ranger, he told me that he had planted eight *Doodia* ferns at the site some years ago. Mana Island is currently being revegetated with native plants from the mainland, to increase plant diversity and as a back-up refuge for some rare plants.

This then raised the question that had the ranger left without fortuitously passing on this information, would we have (mistakenly, as it turns out) accepted the *Doodia mollis* plants on Mana Island as a natural occurrence? If this population were natural, its outlying status would have made it of regional conservation interest. Similar finds of outlying populations that are almost certainly natural do occur. For example (L. Perrie, pers. comm. June 2009), the fern *Grammitis ciliata* was recently discovered in Otago (WELT P21459), some 200 km south of its previously recorded distribution of “Far North to Greymouth and Banks Peninsula” (Brownsey & Smith-Dodsworth 2000). Instead, *D. mollis* on Mana Island is actually an ‘out-of-place’ native plant, whose establishment nearly escaped recording.

Out-of-place native plants are now commonplace in New Zealand, with the public wanting native plants in their gardens. In rural areas, lifestyle-block owners and farmers are increasingly using native plants for riparian strips to protect waterways, attract native birds, and for erosion control on steep country.

Here in Wellington we have a number of out-of-place native plants that have become problem plants, effectively ‘weeds’. For example, *Pseudopanax lessonii* (coastal five-finger, houpara) and the hybrids *P. crassifolius* × *lessonii* are native to the coasts of the northern North Island, but now occur throughout the Wellington urban region. An endless variety of hybrids can be seen on most local bush walks. These introductions may be hybridising with our local populations of *P. crassifolius* (lancewood, horoeke).

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Pittosporum crassifolium (karo), another northern plant, is spreading around the coast from Eastbourne to the Wairarapa, along the Kapiti Coast, and it can also be seen in forested areas. There would be good reason to ban the sale by plant nurseries of both *Pseudopanax lessonii* and *Pittosporum crassifolium* outside their natural distribution ranges, and we should remove them and hybrids of the former wherever possible.

The attractive *Metrosideros excelsa* (pöhutukawa) is also from the north, and is probably here to stay. However, it should be prevented from spreading from urban areas to the natural Wellington coastline. In Eastbourne there is the threat that *M. excelsa*, which is used there extensively in roadside plantings and in parks, may hybridise with the *M. robusta* (northern rātā), that grows naturally on the nearby hills.

The wide range of *Sophora* (kōwhai) material offered by plant nurseries makes it difficult to know what the true-to-type *Sophora microphylla* strain is in the Wellington area. One possible site for sourcing genuinely Wellington-local material of *S. microphylla* for local restoration work is in the Hutt Valley along the fault scarp by State Highway 2, from Keith George Memorial Park to the Moonshine Valley turn-off. This area is isolated from urban gardens, although tūi and bellbirds travel big distances for the nectar-rich flowers of kōwhai and may have introduced some foreign genetic material. In pre-European times, the forebears of these kōwhai probably occupied the light wells along the Hutt River banks, while mature podocarp/broadleaved forest occupied the fertile valley floor. It would be nice to see progeny of the scarp kōwhai re-introduced along the Hutt River banks, and used for other restoration projects in and around the Wellington area. Similarly, *S. microphylla* on the hills on the Turakirae coast are isolated and the progeny of these plants could be sourced for plantings around the Wellington coastline. *Sophora molloyi* could also be sourced from here too.

With the popularity of native plants, plant nurseries now provide material from all parts of the country and offshore islands. This includes some of our rarest native plant species that are struggling in the wild due to a number of causes, e.g., loss of habitat due to human activity, animal browse, invasion by adventive weeds. Some attractive examples of such plants are *Clianthus* spp. (kākābeak), *Muehlenbeckia astonii* (shrubby tororaro), *Hebe speciosa* (napuka), and *Myosotidium hortensium* (Chatham Island forget-me-not). Plant nurseries have an important role to play in ensuring the survival of these threatened species.

But for actually restoring our environment, we need from plant propagators a ready supply of eco-sourced plants for the ecologically common/dominant species of each distinct geographical area; plants adapted to the local conditions that can establish quickly and are cheap

enough for mass plantings. Otherwise out-of-place species and genetic strains will continue to be mixed up in restoration work, and the natural distributions of our plants will become more and more clouded.

Re-vegetating our environment in an ecologically and genetically appropriate fashion will be a collaborative effort, through plant production, plantings, and education about what species/material are suitable for a given site. Although it is unclear who might take the lead, territorial and central government agencies, plant nurseries, and community groups have important roles to play. So too does the Botanical Society, in making our knowledge available for formulating guidelines (e.g., using our species' lists to draw up lists of native plants for particular Wellington locales), and advocating that ecological restoration be carried out in a responsible manner.

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REFERENCES

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: *New Zealand Ferns and Allied Plants*. Auckland, David Bateman Ltd.