

Restoring Richard Henry's dream: the evolution of translocation in New Zealand conservation

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The story of Aotearoa New Zealand is a familiar one and is recounted in several of the papers in this special issue of *Notornis* dedicated to translocations. Millions of years of isolation, a unique fauna and flora...and then the arrival of humans. We do not know what motivated the early Polynesian explorers to translocate themselves to the far reaches of the South Pacific, followed several hundreds of years later by Europeans. But ornithologists are more aware than most people that the impacts of human arrival, along with the intentional translocation of many species considered familiar and useful, was devastating. Approximately 50% of New Zealand bird species became extinct in the 1000 years following initial human contact (Holdaway 1989) leading the eminent biologist Jared Diamond to comment that "New Zealand no longer has an avifauna, just the wreckage of one". New Zealand has become a textbook example of what happens when humans arrive on an isolated island.

Thankfully for many of the surviving species, humans and their traveling companions did not manage to completely colonise the 10 000 or so islands that comprise the New Zealand archipelago. The value of the remaining isolated and relatively unmodified islands in protecting imperilled species was recognised very early with the pioneering but ultimately doomed translocations of kākāpō (*Strigops habroptilus*) and kiwi (*Apteryx* spp.) to Resolution I by Richard Henry in the late 19th century (Hill & Hill 1987). The concept was good in theory – move birds to a safe place beyond the reaches of introduced predators such as stoats (*Mustela erminea*), but unfortunately the stoats were very good at moving too, much better than was known at the time, and they managed to swim to isolated Resolution I. Several additional species, including such wonders as the huia (*Heteralocha acutirostris*), piopio (*Turnagra* spp.) and bush wren

(*Xenicus longipes*) slipped to global extinction following Richard Henry's tragedy (Tennyson & Martinson 2006). However, the notion of translocating rare and threatened species to safe islands persisted and was ultimately taken and developed to its full potential by a small group of dedicated and highly skilled workers in the New Zealand Wildlife Service in the late 1950s and early 1960s. This was the beginning of a halcyon period of New Zealand translocations with species such as the South Island saddleback (*Philesturnus carunculatus*), kakapo and Chatham Island black robin (*Petroica traversi*) snatched from the brink of extinction (Butler & Merton 1992; Lovegrove 1996; Balance 2010). Since then, translocation has become a critical tool in the fight to save many New Zealand species and ever improving pest eradication techniques have vastly increased the land area available for translocation activity. More recently, translocation has been "democratised" and taken to the people as community-based conservation groups increasingly plan, fund and carry out translocations of New Zealand birds, along with other taxa (Parker 2008; Parker 2013).

This special issue of *Notornis* covers the great span of New Zealand translocation expertise. Miskelly & Powlesland (2013) effectively demonstrate how New Zealand has come to be recognised as a world leader in translocation practice, in part through sheer numbers of translocations attempted, with their exhaustive description of over 1000 conservation translocations conducted from 1863-2012. Dowding & O'Connor (2013) and Innes *et al.* (2013) describe how translocations have been critical to the conservation management of threatened species whereas Powlesland *et al.* (2013), Bell *et al.* (2013a), Smuts-Kennedy & Parker (2013) and Empson & Fastier (2013) describe a more recent and exciting phenomena, that of translocating species as a component of ecological restoration. As Cromarty & Alderson (2013) demonstrate, this

is largely the result of community-based restoration groups rolling up their sleeves and getting on with the hard work of preparing sites for translocation and then doing the translocations themselves. Miskelly & Gummer (2013), Innes *et al.* (2013) and Bell *et al.* (2013b) describe novel techniques used to improve translocation success. Parker *et al.* (2013) present a paper on the less glamorous but critical side of translocations, post release monitoring, while Powlesland (2013) reviews a book that I impartially hope you will rush out and purchase to aid in your translocation endeavours. Finally, Saunders (2013) provides a fitting conclusion to this special issue with an obituary for Don Merton, one of the small group of pioneering New Zealand Wildlife Service personnel who led the development of modern translocation techniques. Merty's influence is profound, particularly for future generations of conservation biologists. He will be sorely missed but as this collection of papers demonstrates his work will endure and prosper.

So "where to" for the future of translocation as a conservation tool in New Zealand? There is no disputing we have had great success for some species, particularly those translocated to offshore islands. In contrast, the results of mainland translocations have been more mixed, likely because of increased opportunities for translocated birds and their offspring to disperse from protected sites into surrounding unprotected habitats. This is a particular problem for protected cells of habitat within larger contiguous unprotected habitats. As our understanding of dispersal behaviour increases we may be able to modify translocation techniques to deal with this problem. However, in the long term the ultimate solution may have to be technological improvements, along with broad societal commitment, to eradicating or reducing mammalian pests to near zero density over broad swathes of the mainland. A pest-free New Zealand may seem an outlandish pipe dream, but as recently as the 1970s eradication of rodents from any island was considered virtually impossible (Dingwall *et al.* 1978), and now pest removal on even some of the larger offshore islands is considered almost routine. We are slowly reclaiming big islands and the mainland itself from the pests that destroyed Richard Henry's dreams. Translocation will remain a critical tool for managing our threatened and endangered species on offshore islands. However, as the work described in this special issue demonstrates, translocation also provides a means to restore the New Zealand mainland to its ancient splendour. Richard Henry would surely approve and appreciate that his efforts were not in vain after all.

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