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Translocation statistics (2002-2010), and the revised Department of Conservation translocation process

PAMELA L. CROMARTY*
Science and Technical Group, Department of Conservation, PO Box 10-420, Wellington 6143, New Zealand

SHARON L. ALDERSON
Business Services Group, Department of Conservation, PO Box 10-420, Wellington 6143, New Zealand

Abstract In New Zealand, translocation of native species is increasingly being proposed and carried out by community groups as well as the Department of Conservation (DOC). Usually a formal translocation proposal needs to be prepared and approved. Trends in the number and type of proposals approved during 2002-2010 are discussed. Over 300 translocation proposals were approved in this period. Many proposals consisted of more than one transfer. In 2002, proposals from community groups and joint proposals with DOC made up 16% of the approved proposals. In 2005 this had increased to 58%, but it dropped down to 38% in 2007 and in 2010 it had again increased to 71%. Proposals to move birds made up the largest proportion of applications (74%), followed by reptiles (15%), plants (6%) and invertebrates (5%). Kiwi (*Apteryx* spp.), robin (*Petroica* spp.), North Island kokako (*Callaeas wilsoni*) and seabird species (including Procellariformes, Spheniscidae and Laridae) were the most commonly translocated species. In response to the increased number of applications from community groups to carry out translocations, DOC has revised and improved the process for carrying out native species translocation projects.

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INTRODUCTION

Translocations are carried out as a short or long-term way to increase the survival or recovery of a threatened species (*e.g.*, establish new populations, enhance existing populations or re-establish locally extinct populations), as part of a restoration programme, or to establish a species in an area for a specific purpose, such as advocacy, education or scientific study. Translocation of threatened fauna and flora to offshore islands is an important aspect of New Zealand conservation (Craig & Veitch 1990). Richard Henry pioneered translocating native birds to offshore islands in New Zealand in the 1890s (Atkinson 1990). In the late 1990s, fences designed to exclude all introduced mammals from natural habitats began to be used as a conservation strategy in New Zealand (Burns *et al.* 2012). The creation of such pest-free areas is an extension of the strategy of using pest-free islands for conservation. These sites have high translocation activity associated with them (Burns *et al*. 2012).

This paper aims to share information on changes in volume of translocations, who is undertaking them, and species that have been moved between

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*Correspondence: *pcromarty@doc.govt.nz*

2002 and 2010. It provides information on changes in DOC's translocation approval and permitting process and explains how this will facilitate relationship building, improve the chances of success of translocation projects and allow us to learn from translocation projects.

Legislative requirements of translocations

New Zealand's conservation managers face a complex of difficult and often conflicting questions when considering translocations. No simple set of guidelines should be used unquestioningly. The ultimate goal of "protecting New Zealand's distinctive fauna and flora for the benefit of present and future generations" must be kept to the fore (Craig & Veitch 1990). The following definitions of translocation and transfer have been used both in this paper and the New Zealand Department of Conservation's (DOC) translocation process documents. 'Translocation' is the managed movement of plants or animals from one location to another. Translocation covers the entire process, including planning, the transfer, release, monitoring and post-release management. A translocation can consist of one or more transfers. 'Transfer' is the part of a translocation that involves the physical movement of plants or animals from one location to another and their release or planting at the new site.

DOC can require an 'approved translocation proposal' from community groups as part of issuing permits to carry out translocation activities. DOC's jurisdiction over translocations undertaken by community groups and others comes through the legislation and the requirement for permits to carry out activities associated with the translocation. Specifically, this is via the Wildlife Act 1953 and the legislation that land managed by DOC is held under the Reserves Act 1977, National Parks Act 1980 and Conservation Act 1987. DOC staff are required to have an 'approved translocation proposal' before translocating indigenous protected wildlife and plants, and to meet the requirements of the 'Translocation SOP: Planning through to reporting for DOC translocations' (an unpublished internal document).

In 1990, DOC approved the 'Transfer guidelines for indigenous flora and fauna' (Molloy 1990). This was the Department's first formal document outlining translocation procedures. The objectives of the guidelines were 'to ensure the sound justification for intended transfers' and 'to ensure all foreseeable implications of transfers are considered.' The purpose of the guidelines was to provide a checklist of points to consider when planning a transfer, rather than to provide information on how to carry out transfers. At the time the guidelines were written it was envisaged that "many transfers carried out in the future will occur as part of the implementation of species recovery plans" (Molloy 1990).

In 2002 the guidelines were replaced by the 'Standard Operating Procedure for the Translocation of New Zealand's indigenous terrestrial flora and fauna' (Cromarty 2002). Standard operating procedures (SOPs) were being developed to provide national consistency across the Department's areas of activity. This document provided more comprehensive guidance on matters to be considered when translocating species. It was written for DOC staff as the majority of translocations were being undertaken by them. A spreadsheet recording approved translocation proposals was developed.

A review of the SOP began in 2005. It identified a large increase in the proportion of proposals coming from community groups and others (*i.e.,* non-DOC proposals), and that the SOP was difficult for them to use as it had been written for DOC staff. In Apr 2011 a revised SOP was approved which includes material written specifically for use by community groups, provides a focus on relationship building throughout the process of developing translocation proposals, and on sharing and learning from translocations once they have been carried out (Collen 2011a; 2011b; 2011c). The focus of this SOP continues to be on indigenous land animals and land plants.

The essence of the 1990 guidelines remains relevant and has been incorporated in the SOPs that have followed. The success of the guidelines/SOPs in achieving their objectives and purpose depends on those using them following their intent rather than the letter of the law. Our ability to learn from past translocations depends on the willingness of everyone to contribute to and maintain the information flow.

METHODS

This paper analyses records in the Translocation Spreadsheet, an internal document administered by DOC which records basic information on approved translocation proposals from the time the 2002 Translocation Process was approved. The spreadsheet includes only data for those groups of species covered by the DOC translocation process. These have changed a little between the 2002 and 2011 documents.

The data set covers the period 2002 to 2010. A single translocation proposal can cover one or multiple transfers, multiple source or release sites and/or multiple species (*i.e.,* as part of site restoration). There are gaps in the data set as not all approved proposals have been entered into the spreadsheet. Also the number of reports on translocations is fewer than the number of approved proposals recorded in the spreadsheet - information from reports has not been analysed as part of this paper.

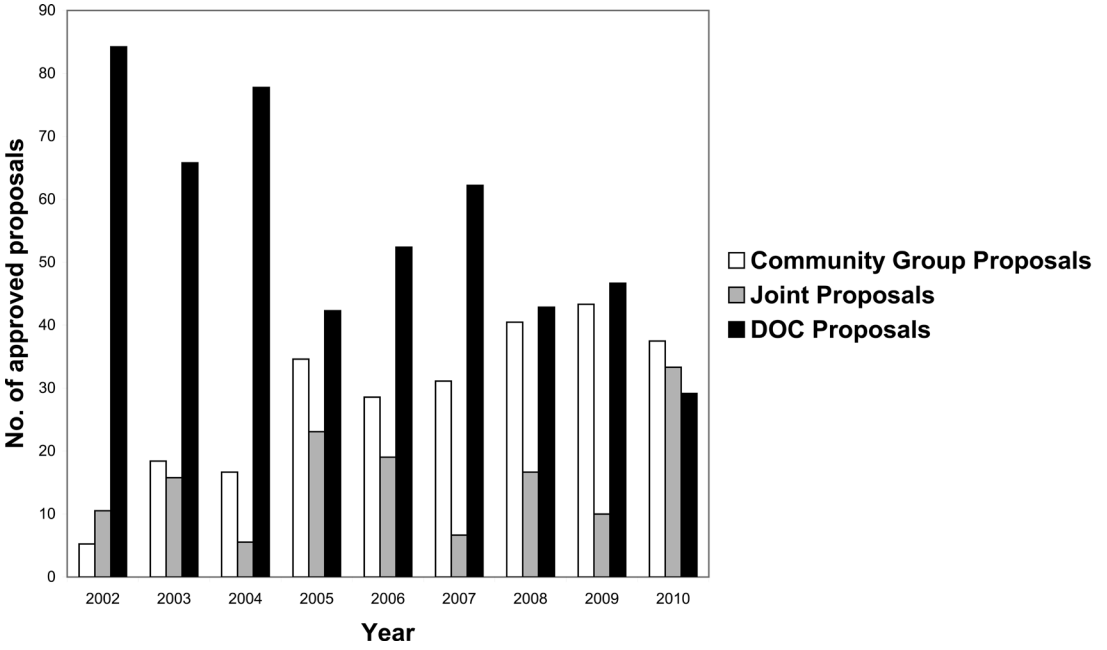

Fig. 1. Number of approved translocation proposals by Community Groups, Jointly with DOC, and DOC during 2002–2010.

Proposals have been classified according to the proposer-community group, joint (*i.e.,* community group and DOC), and DOC. Classification was done retrospectively and the affiliation of the proposers was sometimes unclear. Community group has been used to describe any individual or organisation other than DOC.

Information in the spreadsheet was collected by each of the DOC conservancies. DOC is a decentralised organisation with its National Office in Wellington and 11 conservancy offices located regionally throughout New Zealand. Some conservancy boundaries have changed over the period. For example, in 2010 the Wellington, Wanganui, Tongariro Taupo and Hawke's Bay Conservancies changed to become Wellington-Hawke's Bay and Tongariro-Whanganui-Taranaki Conservancies. Therefore, both Wellington and Wellington Hawke's Bay are reported in the tables.

RESULTS

Annual trends in translocation proposers 2002–2010

Annual trends in total number of translocation proposals and the changes in who has been preparing them are shown in Figure 1 and Table 1. Three hundred and two translocation proposals were approved during 2002-2010, and many of these consisted of more than one transfer. Annual totals varied over the period and showed no obvious trend over time. Nineteen proposals were approved in 2002; numbers peaked at 45 in 2007 and had decreased to 24 in 2010. The proportion of proposals from community groups and jointly with DOC has shown a general increase over the period, however, this increase was not linear. In 2002, proposals from community groups and those jointly with DOC made up 16% of the approved proposals. In 2005 this increased to 58%; it dropped down to 38% in 2007 and in 2010 it had increased to 71%**.** Community group proposals and those jointly with DOC were more often associated with restoration projects while many of the proposals by DOC were associated with species recovery programmes.

The regional distribution of translocation proposals differed between community group/joint proposals with DOC, and DOC approvals (Table 2). Conservancies with the highest number of Community Group proposals and those jointly with DOC were (in order from the greatest): Auckland, Wellington (including some from Wellington Hawke's Bay total), Canterbury, Waikato, East Coast Hawke's Bay (including some from Wellington Hawke's Bay total), Nelson Marlborough and Northland. Conservancies with the highest number of DOC proposals were (in order from the greatest): Southland, Nelson Marlborough, Wellington (including some from Wellington Hawke's Bay), Canterbury, Northland, Auckland and Bay of Plenty.

Table 1. Percentage of approved translocation proposals by Community Groups, Joint (Community Group with DOC), and DOC during 2002–2010. Percent values are relative to the total number of proposals approved.

Year	Community Group proposals (%)	Joint proposals (%)	DOC proposals (%)	Total number of proposals
2002	5	11	84	19
2003	18	16	66	38
2004	17	6	78	36
2005	35	23	42	26
2006	29	19	52	42
2007	31	7	62	45
2008	40	17	43	42
2009	43	10	47	30
2010	38	33	29	24

Composition of translocation proposals by major taxonomic groups

Birds comprised 74% of approved proposals, including over 50 taxa of threatened and non-threatened birds. Of the remaining approvals 15% were for reptiles and frogs, 6% for plants and 5% for invertebrates.

Most commonly translocated birds

Table 3 gives the groups of bird species for which translocation proposals were most often approved. This gives an indication of the most commonly translocated bird species. Kiwi (*Apteryx* spp.), robins (*Petroica* spp.), North Island kokako (*Callaeas wilsoni*) and seabird species (including Procellariformes, Spheniscidae and Laridae) were most commonly translocated. There were differences in who carried out the translocations for some species. Twenty five of 38 kiwi translocations were carried out under community group or joint proposals, compared with 13 carried out by DOC. Conversely, 20 of 22 North Island kokako translocations were carried out by DOC.

DOC's revised translocation process

A DOC approved translocation proposal is required when moving native animals from the wild to captivity, from captivity to the wild, and between wild locations. An 'approved translocation proposal' is not required for: captive to captive transfers; release of wildlife treated under permits to temporarily hold injured wildlife; some situations where wildlife is relocated from sites affected by development under RMA consents; translocations of exotic animals; or translocations of indigenous animal species that are game (Schedule 1 of the Wildlife Act) or that are not protected (Schedule 5 of the Wildlife Act).

However, a permit under the Wildlife Act for the capture or handling of species, issued by DOC, may still be required for these activities, for example for non-protected species being sourced from reserves.

The Process

DOC revised the process for community groups wishing to carry out native species translocation projects. The process has 5 stages: the idea, feedback, preparation of a translocation proposal and plan, transfer and release, and manage, monitor and report.

The idea

The first stage of a translocation is to have the idea, *e.g.*, 'wouldn't it nice to have robins in our restoration area?' Information available from DOC includes the information sheet 'Getting the go-ahead for a translocation' and the 'Translocation guide for community groups'. Once the community group has read the information, they write an 'Outline' of their idea and take it to their local Area Office of DOC.

Feedback

DOC Area Office staff consider the implications of the community group's outline and where appropriate (*i.e.*, if it is not feasible then they will not seek feedback from others) seek feedback from iwi affected by the proposal, key partners (*e.g.*, community groups helping manage conservation land) and other DOC staff. DOC Area staff then meet and give the community group feedback on the feasibility of the community group's translocation idea, any further information required, any aspects DOC would look at closely, and any feedback from iwi and key partners affected by the proposal.

Prepare a translocation proposal and plan

If the community group decides to proceed they meet with DOC staff to discuss their plan and obtain

Table 2. Distribution of approved translocation proposals by Community Groups, Joint (Community Group and DOC), and DOC translocation proposals by DOC Conservancies, 2002-2010.

Conservancy	Community Group proposals	Joint proposals	DOC proposals	Total
Auckland	35	1	10	46
Wellington*	6	13	15	34
Canterbury	9	6	16	31
Waikato	9	5	9	23
East Coast Hawke's Bay*	8	0	6	14
Nelson/Marlborough	1	9	25	35
Northland	8	1	11	20
Southland	0	5	40	45
Otago	2	1	6	9
West Coast	2	0	7	9
Tongariro Taupo*	1	1	3	5
Wanganui*	1	0	6	7
Bay of Plenty	0	1	11	12
Wellington Hawke's Bay*	6	2	4	12
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* Affected by changes in Conservancy boundaries, hence dual entry for Hawke's Bay and Wellington. The totals for East Coast Hawke's Bay and Wellington Conservancies would be higher if the Wellington Hawke's Bay total was included in them.

clarity on the level of DOC support they can expect in preparing the proposal, consulting with local iwi and carrying out the proposal. They will also go over the paperwork and the type of information to be included in the proposal, and DOC's process for considering proposals. The community group may also ask for other information from DOC. The community group then plan the translocation and complete the translocation proposal form - there is a lot of work involved in this stage of the project. The community group submit the proposal to their local DOC Area office. Their proposal is approved or declined.

Transfer and release

At least 2 months before the transfer, iwi affected by the proposal are informed and other key partners (including DOC) of the transfer date. The community group collect, transfer and release the animals/plants as set out in their approved translocation proposal in accordance with permit conditions and Animal Ethics Committee conditions, including carrying out disease management activities, and involving iwi and the community affected by the proposal. After each transfer the community group writes a transfer report which evaluates the outcomes achieved so far, and passes it on to DOC, iwi affected by the proposal and other key partners.

Manage, monitor and report

According to what was outlined in the approved translocation proposal the community group carries out short-term management and monitoring of the animal/plant at the destination site, and reports on the translocation project.

DOC staff follow a very similar process when planning and preparing translocation proposals and getting them approved.

DISCUSSION

Information from transfer and monitoring reports form a useful resource that can inform future translocations, and are being used by DOC to prepare best practice documents for some commonly translocated species (*e.g.*, North Island and South Island robins (*Petroica longipes* and *P. australis*).

The number of translocation proposals that came from community groups increased over the period 2002–2010 (Fig. 1). This trend is thought to be associated with the increase in the number of community-group led restoration projects. Unsurprisingly, those conservancies with large urban centres tended to have a larger number of community group and joint proposals. This may relate to the location of pest-proof fenced sites established by community groups in the period 1999-2009, which were most often sites of lesser biodiversity value close to population centres, and the presence of a motivated local human community (Burns *et al.* 2012). Projects listed on the Sanctuaries Network website

Table 3. Groups of bird species for which translocation proposals were most commonly approved, 2002 - 2010.

Species	Scientific name	Community Group proposals	Joint proposals	DOC proposals	Total
Kiwi subtotal	*Apteryx* spp.	11	14	13	38
Kiwi (all species) – Operation Nest Egg	*Apteryx* spp.	0	4	0	4
Great spotted kiwi	*A. haastii*	1	6	7	14
Little spotted kiwi	*A. owenii*	0	0	3	3
North Island brown kiwi	*A. mantelli*	10	4	3	17
Robin subtotal	*Petroica* spp.	14	5	7	26
North Island robin	*P. longipes*	12	3	2	17
South Island robin	*P. australis*	2	2	4	8
Stewart Island robin	*P. australis rakiura*	0	0	1	1
North Island kokako	*Callaeas wilsoni*	0	2	20	22
Seabird subtotal	Procellariformes, Spheniscidae & Laridae	8	4	6	18
Blue penguin (includes white-flippered)	*Eudyptula minor*	2	0	1	3
Chatham Island taiko	*Pterodroma magentae*	0	1	1	2
Chatham petrel	*Pterodroma axillaris*	0	1	1	2
Common diving petrel	*Pelecanoides urinatrix*	1	0	0	1
Cook's petrel	*Pterodroma cookii*	1	0	0	1
Fairy prion	*Pachyptila turtur*	0	1	0	1
Fluttering shearwater	*Puffinus gavia*	0	1	0	1
Grey-faced petrel	*Pterodroma macroptera*	3	0	0	3
Hutton's shearwater	*Puffinus huttoni*	0	0	2	2
New Zealand fairy tern	*Sterna nereis davisae*	0	0	1	1
Pycroft's petrel	*Pterodroma pycrofti*	1	0	0	1
Saddleback subtotal	*Philesturnus* spp.	3	o	12	15
North Island saddleback	*Philesturnus rufusater*	2	0	4	6
South Island saddleback	*Philesturnus caruncaulatus*	1	0	8	9
Blue duck	*Hymenolaimum malacorhynchos*	0	2	12	14
Stitchbird	*Notiomystis cincta*	0	8	5	13
Weka subtotal	All *Gallirallus australis*	7	2	3	12
Buff weka	*Gallirallus australis hectori*	4	2	0	6
North Island weka	*Gallirallus a. greyi*	2	0	1	3
Stewart Island weka	*Gallirallus a. scotti*	1	0	1	2
Western weka	*Gallirallus a. australis*	0	0	1	1
Brown teal	*Anas aucklandica*	0	5	5	10
Whitehead	*Mohua albicilla*	0	2	7	9
Total		43	44	90	177

(Sanctuaries of New Zealand 2012) also show that a number of 'Biodiversity Sanctuaries' (including 10 mammalian pest-free islands and 11/28 pest-proof fenced sites established in the period 1999–2009) are situated close to large urban centres. These sites have high translocation activity associated with them. For example, between 1999 and 2009 there were 63 translocations of 40 species into fenced sanctuaries, comprising 27 bird species, 5 reptiles, 4 invertebrates, 3 fish and 1 amphibian (Burns *et al.* 2012).

The majority of translocation proposals were for birds, with 5 times the number of proposals than for the next taxonomic group of reptiles and frogs. Bats did not feature in the list of proposals; however bat translocations have been approved in the past and are likely to be in future. One could speculate that this is because we know more about translocating birds than we do animals in the other taxonomic groups, and because birds are popular and more visible than most other groups.

The commonly translocated bird species varied between community group, joint proposals and DOC proposals. This is thought to reflect the difference in the focus of many of the proposals. Community group and joint proposals were more often associated with restoration projects, with an emphasis on bringing back common species that are no longer present at release sites or introducing 'iconic' species. In contrast, many of the proposals put up by the Department were associated with threatened species recovery programmes.

DOC's revised translocation process

The 2002 and 2011 translocation processes, outlined here, acknowledge the complexity of translocations. Translocations can have important, long-lasting effects not just on the animal or plant being moved, but often on its whole environment, most significantly through the risk of introducing disease. It is important that these aspects have been carefully considered by those who carry out translocations and when the Department approves translocations, and this includes DOC proposals. Consultation with iwi affected by the proposal and stakeholders is important to ensure cultural values are considered and incorporated for ongoing support and to maintain strong working relationships. Failure to engage can put future translocations at risk and not meet consultation/partnership expectations.

In response to the increased number of proposals coming from Community Groups, and as a result of feedback to the groups, DOC has revised and improved the process for community groups wishing to carry out native species translocation projects in a number of ways. DOC has written an information sheet 'Getting the go-ahead for a translocation' and the 'Translocation guide for community groups' to help community groups through the translocation process. DOC intends to spend time with community groups early on in the process to give feedback on the feasibility of their idea. If the idea is feasible and the community group decides to proceed DOC will meet with them to discuss expectations, identify potential issues, and assist with overcoming issues. Features of the application process that have been improved include early communication with those affected by the proposal (*e.g.*, iwi affected by the proposal, community groups helping manage conservation land, other DOC offices, etc).

The required reports on translocations will help inform planning and decision making on future translocations. As a result, DOC and community groups will be able to learn from the collective translocation experiences and share the learning with others. DOC's 2011 translocation process puts strong emphasis on the people and relationships, highlighting better communications throughout the process. If all parties are better informed DOC thinks the translocation is likely to have a higher chance of being successful.

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