# Translocation of Endangered Species to Islands

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Brian Bell introduced the discussion by explaining that translocation was one of many techniques available as a management tool for conservation of rare species. However, it should not be treated as an end in itself but should have specific objectives. We must be aware of the consequences of any translocation undertaken. Although we are discussing island transfers it could be extended to include mainland islands, where habitats have been isolated by land management and populations within them have no contact e.g. N.I. Kokako. While considering the limitations of transfers we could perhaps consider international translocations, for example the echo parakeet from Mauritius to Christmas Island. Zoogeographic regions might be the limits for such translocations.

The role of captive breeding was raised. Brian said there was a place for captive breeding in translocation. It has a number of problems which are not involved in wild species transfers. These include the problem of the species settling into captivity and when there they are move vulnerable to disease, getting them to breed, imprinting etc. Then there is the problem of releasing them back into the wild so that they are equipped to deal with predation, finding natural foods etc. There are few examples of success at present but the method should not be abandoned as it does provide another method of helping species in trouble, and in some cases may be the only practical solution.

Harry Butler raised the question of the legal ownership of captive animals as they are no longer wild. Andrew Burbidge considered it was essential that ownership of the animals should be maintained by the nature conservation authorities. This could perhaps be achieved by lending the animals to the zoos. Harry also raised the question of what do you do with animals bred up in captivity. He saw releasing them back into the wild as having some problems with the possibility of transmitting disease back into the field. Many diseases (not all) are present in the wild and only become problems under additional stress.

Andrew asked if there was a need for guidelines to be established for the geographic range of releases. Brian said no guidelines had been set up but it clearly needed considerable thought before any action was taken. Some releases could jeopardise later options.

Brian pointed out that zoos which have a multipurpose approach have a high disease risk. The New Zealand Wildlife Service had established a special station for breeding only takahe so that the disease risk factor could be kept to a minimum. Only eggs were taken into the station. The cost factor in captive rearing is also a disadvantage. Islands are really open-air aviaries and birds can be cropped from these from time to time very economically.

John Sinclair said there was an over-abundance of koala on Philip Island which could be placed elsewhere. This was also the case on Kangaroo and Magnetic Islands. They had originally been translocated to these islands. Several people questioned whether transfers should be made at all. Harry considered it important to boost numbers of endangered species as there was safety in numbers. Brian said priorities for translocation needed to be set and this could be on taxonomic as well as other grounds.

John raised the question of whether the transfer of kokako to Little Barrier was really in that species' interest. Once the birds were put on an island timber interests could say the birds were safe and their habitat was no longer critical. Ian Atkinson pointed out that we cannot guarantee the kokako will survive on Little Barrier in the long-term. Brian said that the birds had come from areas already being clearfelled. The main habitats (on the mainland) still required maximum protection to maintain the real core of the kokako population and

that had priority. The Little Barrier move was only additional security.

Brian continued by explaining that some translocations are not as successful as others. Recent stitchbirds transfers have been disappointing since, after initial establishment, numbers have declined. This may be due to a shortage of food at certain times during the year under unusual weather patterns, etc. The question is being studied. He also suggested that 30 birds is the minimum figure for transfers if this is possible. In the case of endangered species it is often necessary to transfer considerably less than this number. Harry inquired whether a "stud book" was kept for our translocated species. This was not done but in some cases where small populations are involved this virtually occurs, e.g. black robin. However, the main aim is to increase numbers as quickly as possible.

The question of re-introducing plants was discussed and it was suggested that tissue cultures may be a suitable way of avoiding the introduction of undesirable pathogens. Tony Robinson suggested that there were some problems in that the species you clone may have no resemblance to the wild population.

David Rounsevell asked whether translocation was anything more than buying time. Harry saw it as something one may be forced to do or a way of insuring future security. He did question the possibility of shifting animals from one region to another. However, some species have been saved by this method. There are New Zealand examples and others from the Pacific.

Harry also inquired whether we should examine the genetics of endangered species before doing further translocations. The development of new technology is increasing the scope of work that can be undertaken in this field. Brian pointed out that restrictions have been made in relation to moving kiwis because genetic studies involving blood protein analysis by electrophoresis have shown that there may be three distinct types of North Island brown kiwi. Insufficient genetic heterozygosity could also be a factor but if the individuals transferred are genetically diverse and the population grows quickly, there should be no long-term problems. Many island populations undoubtedly established naturally from a very small number of individuals and this seems to indicate that few problems will arise.

Tony pointed out that, despite the large number of islands, few options were available for transfer of mainland animals. Brian agreed that islands are a limited resource, particularly islands that are large enough to ensure long-term survival. While translocation is a management tool applicable in some circumstances, it is not the primary objective. This must be to preserve existing habitats and the species within them.