

Why are our birds endangered?

Before humans came to New Zealand, the song of native birds filled the forests. There were no introduced mammalian predators to kill them and compete for food, and there were plenty of undisturbed habitats.

Many of our birds lost the ability to fly well or in some cases to fly at all, because they didn't have enemies on the ground they needed to escape from.

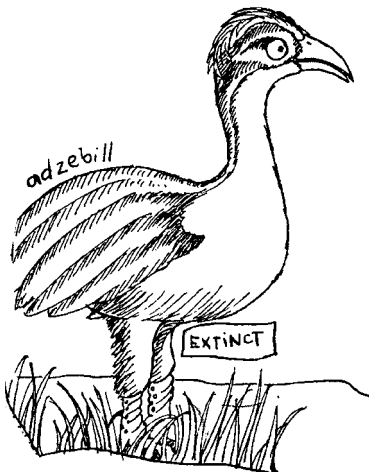
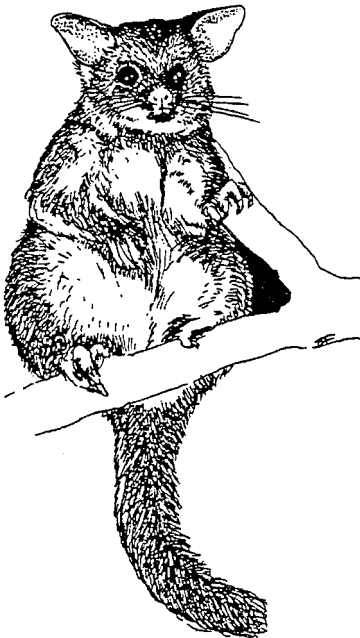
When humans arrived, they brought rats (excellent tree climbers), dogs, cats, stoats, ferrets, weasels, possums and hedgehogs; all of them predators that found it easy to catch and kill our vulnerable native birds.

Humans also brought animals such as cattle and sheep, so forests were cut down or burned to create grassland for them.

Possums were brought from Australia to try to set up a fur trade. They opened up the canopy of trees as they chew up the leaves, which made baby birds such as kokako easy for harrier hawks to see and prey on.

These animals still threaten our native birds today. The introduced predators, including possums, kill chicks, eat eggs and kill mother birds sitting on the nest. Possums, deer and wild goats eat the bush, and native forests are still sometimes cleared to make way for more farmland or housing, meaning that the birds lose their habitat.

When there is little food or shelter, many birds that don't actually die, stop breeding, so the next step for them is extinction. Unfortunately we can't bring the extinct birds back but we can do something to help other endemic birds that are endangered or threatened with extinction. Places like Tiritiri Matangi Island provide safe places for endangered and threatened birds and other creatures to breed.



What can you do to help?

Look after the environment and keep habitats safe where you live.

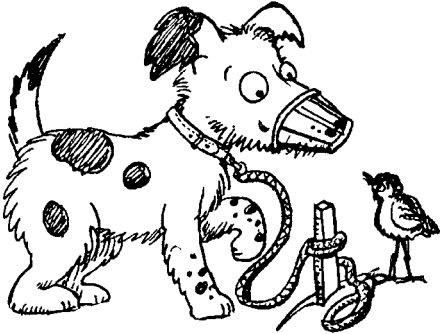
If you have a cat, keep it indoors at night and put a collar with a bell attached around its neck. When it dies of old age, don't replace it.

If you have a dog, keep it on a lead when out walking in areas where there are ground birds, eg nesting shorebirds.

Plant trees at home and school that will provide good food and shelter for native birds.

Don't collect birds' eggs or disturb nests.

Join a group like Supporters of Tiritiri Matangi or Kiwi Conservation Club that will help you to learn as much as you can about our native birds, insects and trees, and then you can pass on your knowledge to others.



Rare, vulnerable, threatened, endangered and extinct

Rare

Animals or plants that can only be found in a few places are rare. They are reduced in numbers, but not yet endangered as long as their habitat is safe and they are able to continue breeding without help from humans.

Vulnerable

Vulnerable animals or plants are of special concern because their numbers are low, and/or their habitat is degraded so that they may soon become threatened. They are at serious risk of becoming endangered.

Threatened

Their survival is under threat if steps are not taken to protect them. An animal or plant that is declared threatened means there is a serious problem.

Endangered

Similar to 'threatened' – in danger of becoming extinct. They are very vulnerable to habitat destruction and predators and may need to be moved to a safe place in order to reproduce. They need immediate attention and protection.

Extinct

This means they are gone from the world forever. It's too late to wish something had been done to save them.



How are these problems dealt with?

- Habitats saved and recreated.
- Pests removed and new pests prevented from arriving.
- Safe places provided, such as pest-free islands or predator-fenced areas on the mainland.
- Ongoing monitoring.
- Educating children and adults.



Kiore

Rattus excelans

Pacific or Polynesian rat

Kiore are the world's third most widely distributed rat, and are found throughout the Asia-Pacific region. They are poor swimmers and have reached New Zealand through deliberate introduction by humans.

Kiore were introduced to New Zealand by Maori in about the tenth century. They are of cultural and spiritual value to Maori because they were an important food and protein source when Maori first arrived.

Maori knew that kiore made tracks along the easiest routes from one feeding source to another, so they set special traps along those routes. When enough had been caught, they were prepared ready for eating and then stored in their own fat in gourds, ready to be offered to important guests and tohunga. Because they were so tiny and difficult to catch they were a delicacy.



Why were kiore a pest on Tiritiri Matangi?

Kiore became a real nuisance when farming stopped and the grass grew rank. When replanting began, it was originally thought the kiore would be manageable because the grass was being regularly mowed, and when there wasn't much food, their population stayed within acceptable limits.

However, with the sudden availability of young plants, and then birds and their eggs, the kiore population exploded. Tree seeds were eaten as soon as they fell to the ground, young plants were chewed to the ground overnight, the eggs of the precious rare birds were eaten, and doors and windows of the island houses had to be kept shut to keep kiore out of food and bedding!



How were they removed?

In 1993 the birds at greatest risk of poisoning (the takahe and brown teal) were captured and safely housed. Then over two tonnes of brodifacoum (a rodent poison) pellets were dropped over the island by helicopter. Four days of fine weather following the drop was needed to ensure the bait was eaten, and this was achieved.



What have been the benefits of removing kiore?

Within two weeks of the drop it was noticed that plants were showing a profusion of new growth and under the trees there was a carpet of seedlings for the first time.

Because there are no longer any kiore on the island, releases of kokako, matata, tuatara, geckos and skinks have been able to be carried out successfully.



Did you know?

Legend has it that kiore swam from Hawaiki in a long chain, each holding the tail of the one in front, and that this habit continued in New Zealand as they used this method to safely cross rivers and even Cook Strait.

References:

- Orbell, Margaret. 'The Illustrated Encyclopedia of Maori Myth and Legend'. Christchurch: Canterbury University Press (1995) 1999.
SOTM Bulletin 15, December 1993, 'Farewell to the Kiore'.

List of extinct birds

Extinct before people were in New Zealand (16)

Extinct albatross, *Manu antiquus*

Narrow-flipped penguin, *Palaeudyptes antarcticus*

Marples' penguin, *P. marplei*

New Zealand giant penguin, *Pachydyptes ponderosus*

Wide-flipped penguin, *Platydyptes novaezealandiae*

Amies' penguin, *P. amiesi*

Lowe's penguin, *Archaeospheniscus lowei*

Lopdell's penguin, *A. lopdelli*

Duntroon penguin, *Duntroonornis parvus*

Oliver's penguin, *Korora oliveri*

Harris' penguin, *Marplesornis novaezealandiae*

Moisley's penguin, *Tereingaornis moisleyi*

Ridgen's penguin, *Aptenodytes ridgeni*

Tyree's penguin, *Pygoscelis tyreei*

Miocene false-toothed pelican, *Pelagornis miocaenus*

Stirton's false-toothed pelican, *Pseudodontornis stirtoni*

Extinct after Polynesians arrived in New Zealand but before Europeans (34)

Little bush moa, *Anomalopteryx didiformis*

Upland moa, *Megalapteryx didinus*

Heavy-footed moa, *Pachyornis elephantopus*

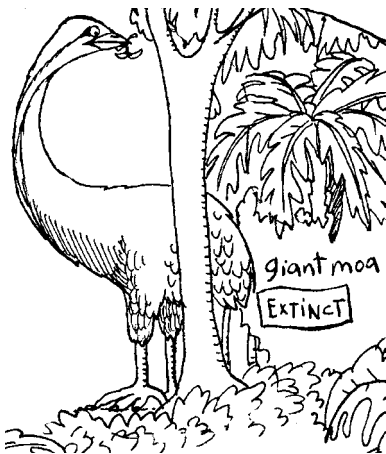
Crested moa, *P. australis*

Mappin's moa, *P. mappini*

Eastern moa, *Emeus Crassus*

Stout-legged moa, *Euryapteryx geranoides*

Coastal moa, *E. curtus*



Slender bush moa, *Dinornis struthoides*
 Large bush moa, *D. novaezealandiae*
 Giant moa, *D. giganteus*
 New Zealand pelican, *Pelecanus novaezealandiae*
 New Zealand swan, *Cygnus sumnerensis*
 South Island goose, *Cnemiornis calcitrans*
 North Island goose, *Cn. Gracilis*
 Chatham Island duck, *Pachyanas chathamica*
 Finsch's duck, *Euryanas finschi*
 Scarlett's duck, *Malacorhynchus scarletti*
 De Lautour's duck, *Biziura delautouri*
 Blue-Billed duck, *Oxyura australis*
 Eyles' harrier, *Circus eylesi*
 Chatham Island sea-eagle, *Haliaeetus australis*
 New Zealand eagle, *Harpagornis moorei*
 Snipe-rail, *Capellirallus karamu*
 Giant Chatham Island rail, *Diaphorapteryx hawkinsi*
 Hodgen's rail, *Gallinula hodgeni*
 Yaldwyn's wren, *Pachyplichas yaldwyni*
 Grant-Mackie's wren, *P. jagmi*
 New Zealand coot, *Fulica chathamensis*
 Adzebill, *Aptornis otidiformis*
 Giant Chatham Island snipe, *Coenocorypha chathamica*
 New Zealand owlet-nightjar, *Aegotheles novaezealandiae*
 New Zealand crow, *Palaeocorax moriorum*
 North Island takahe, *Porphyrio hochstetteri*



Extinct since Europeans arrived (15)

New Zealand little bittern, *Ixobrychus novaezealandiae*
 Auckland Island merganser, *Mergus australis*
 Chatham Island rail, *Rallus modestus*
 Laughing owl, *Sceloglaux albifacies*



Bush wren, *Xenicus longpipes*

Stephens Island wren, *Traversia lyalli*

Chatham Island fernbird, *Bowdleria rufescens*

Huia, *Heteralocha acutirostris*

Piopio, *Turnagra capensis*

New Zealand quail, *Coturnix novaezelandiae novaezelandia*

Dieffenbach's rail, *Rallus philippensis dieffenbachii*

Stewart Island snipe, *Coenocorypha aucklandica iredalei*

Little Barrier snipe, *Coenocorypha aucklandica barrierensis*

Chatham Island bellbird, *Anthornis melanura melanocephala*

South Island kokako, *Callaeas cinerea cinerea*

Total lost = 65

Lost since humans arrived = 49

References:

Kiwi Conservation Club website: <http://www.kcc.org.nz/>

Gill, Brian & Martinson, Paul. 'New Zealand's Extinct Birds' Auckland: Random Century, 1991.

Tennyson, Alan. 'Extinct Birds of New Zealand' Auckland: Reed 2006.

Translocations

Note: for descriptions of a Tiritiri Matangi translocation, read page 136/137 of Anne Rimmer's book and 'Dawn Chorus' 57 page 5.

Background

Since their arrival in New Zealand about 1000 years ago, humans have modified the land and introduced exotic plant and animal species, which has resulted in extinctions and the decline in abundance and diversity of New Zealand's flora and fauna.

It is of course too late for the extinct species. However translocations and reintroductions have been used throughout New Zealand to try to reverse the decline of our remaining endemic species.

In the past, translocations onto islands have involved birds, but more recently lizards, tuatara, bats and plants have also been successfully translocated.

Early translocations on Tiritiri Matangi included red crowned parakeets in 1974, saddleback in 1984, brown teal in 1987 and whitehead in 1989.

As the years have gone by, there have been further translocations: takahe 1991, North Island robin 1992, little spotted kiwi 1993, stitchbird 1995, kokako 1997, fernbird 2001, tuatara 2003 and tomtit 2004.

Although most bird translocations to the island have involved rare or endangered species, the introduction of some of the more common bird species such as robins, whiteheads and tomtits has helped recreate the diversity of birds formerly found in North Island forests.



What needs to be done?

Before a species can be translocated to a new location, a number of factors need to be investigated and considered.

Studies of diet and foraging need to be made:

- What does a species eat?
- Will there be competition for food?
- How many individuals can the proposed site sustain?
- What will be the consequences of habitat change?
- What effect will taking species from another location have?

A thorough habitat analysis needs to take place considering the availability of food, cover, water and suitable nesting sites, etc. Other factors to be considered are:

- Will there be sufficient numbers and variability of individuals to avoid inbreeding?
- How to ensure there is no disease transmission (translocations of stitchbird from Tiritiri Matangi to the Waitakere Ranges were delayed in 2006 when disease was suspected, but eventually went ahead following clearance).
- Support following release – monitoring, etc.

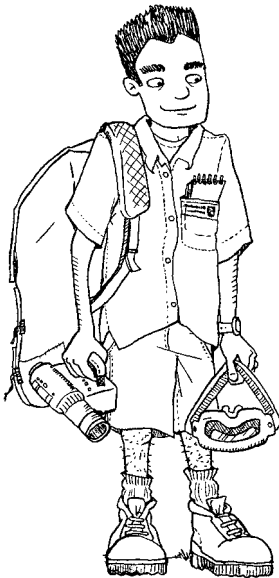
Procedures

All translocations of native species are under the control of the Department of Conservation, and must adhere to the strict guidelines set out in ‘Standard Operating Procedure for Translocation of New Zealand’s Indigenous Flora and Fauna’, 2002.

Proposals

Anyone can submit a proposal for translocation, and the application must be made to DOC conservancy offices at both the source site and the release site.

The proposal has to consider such things as the effect on the source population, the effect on the release site, translocation method, and also monitoring, research, and management requirements. If a recovery plan exists for the species, then the proposal for translocation must fit in with that as well.



People involved

Tangata whenua at both source and release sites must be approached for their approval, as must any other interested parties.

Most research is carried out by university staff and post-graduate students, and this is very intensive and thorough.

Pre and post-translocation monitoring is often carried out by scientists from universities, DOC and SOTM members.

Public releases on Tiritiri Matangi are usually attended by tangata whenua, members of SOTM, DOC staff and other people involved in the translocation and monitoring such as university staff and students, ornithological or herpetological society members, Forest and Bird Society representatives and other members of the public.

Monitoring

As Tiritiri Matangi is such a small island, intensive ongoing monitoring is a much simpler matter than in large areas of mainland bush, and SOTM is able to provide many willing volunteers to help DOC and university staff.

Birds are banded prior to translocation to assist with the identification of individuals. Each has its own combination of colour bands.

The territories of each pair of the larger rare birds (such as takahe, kokako and brown teal) are known and the birds are even given names. Regular checks are made to ensure they remain healthy.

References:

'Notornis', Vol 52, Part 3, Sept. 2005, p173.

Reintroduction in New Zealand, Reintroduction Specialist Group, Oceania Section:
www.massey.ac.nz/~darmstro/nz_background.htm.

Department of Conservation document: 'Standard Operating Procedure for Translocations of New Zealand's Indigenous Flora and Fauna', 2002.

