

**T**WO HUNDRED AND FIFTY PEOPLE stood around four boxes and watched 40 small birds fly to freedom on a new island.

As the birds left their travel boxes, the last was still eating – not yet realising that the door was open. The birds, oblivious to the people, eventually gathered in nearby trees, some calling to re-establish contact, others feeding immediately in their new home.

This first release of whitehead onto Tiritiri Matangi Island was just another planned transfer of one of our endemic native birds to an offshore island. Over 150 such releases have been made during the last century although the reasons, methods, success and personnel involved have varied widely.

Human colonization of New Zealand has had an enormous impact on our native fauna and flora. The extensive destruction of forest, wetlands, tussocklands and shrublands greatly reduced wildlife habitat and the plight of native birds has been compounded by the introduction of mammalian predators and herbivores. Eradication or even effective control of mammalian pests on the mainland is expensive and time consuming, and current control techniques are effective for only a short period. Island transfers are an essential safeguard against mainland extinctions. With over 700 islands around the coast we are fortunate to have a chance to retain some of our precious endangered wildlife.

### Islands Important

The importance of islands for the long term conservation of our native animals was recognised at the end of the last century when a flurry of activity saw kakapo and kiwi released onto a number of islands. Government purchase of Hauturu (Little Barrier), Kapiti and Resolution Islands was an important part of this early conservation effort and Hauturu and Kapiti remain a prime part of our conservation estate. The mammoth efforts of Richard Henry on Resolution Island are known to most not for the success but for the total failure of his venture.

For the conservation of most threatened species, islands are only useful if they do not have harmful introduced mammals and are far enough offshore to preclude invasion by stoats, rats and deer. It was ignorance of these very points which caused the failure of many early bird transfers to islands. For example, early transfers of kakapo and saddleback to Hauturu and Kapiti failed because both islands already had cats and Kapiti also had Norway rats. It was the subsequent arrival of stoats that spelt doom to the hundreds of kakapo and kiwi Richard Henry had transferred to Resolution Island.

The late Gordon Williams, a director of the Wildlife Service, noted that the "salutary lesson (of choosing islands out of the swimming range of stoats) remains unforgotten and strongly influences the choice of receptor islands by Henry's successors". The unfortunate use of Maud and Motukawanui Islands for saddleback transfers and their subsequent loss to stoats suggests that the reasons for Richard Henry's failure was still not fully appreciated. The continued use of Maud Island, known to be within the swimming range of stoats, for transfers of some of our rarest animals, such as kakapo, takahe and giant weta, highlights an ongoing dilemma for wildlife managers.

# ISLANDS

## Refuges for Threatened Species

*Salvation for many of New Zealand's native species lies in the sanctuary of the offshore and outlying islands dotted around our shores. Dr John Craig reports on the successes and failures of island bird transfers and some of the issues involved.*



### Success or Failure?

Why do some releases succeed and others fail? Largely we do not know, and it is unlikely that the same factors are responsible each time. Predators are clearly responsible in the examples of saddleback declines on Kapiti, Maud and Motukawanui. Catastrophes such as cyclones soon after release can reduce numbers to very low levels as well. For example, a cyclone killed most of the first Wildlife Service release of red-crowned kakariki on Tiritiri. Similarly a few days after a subsequent release done by Auckland University, a cyclone struck and we picked up many of the new birds dead on tracks.

Competition from related species, another factor that influences the outcome of a transfer, can usually be avoided although it does present difficulties in the case of the stitchbird. There is a very marked dominance hierarchy among our three honeyeaters, and stitchbird (especially the females) are at the bottom of this pecking order. This means that establishing small numbers of stitchbirds on islands where bellbirds are already present in large numbers will be difficult. For this reason islands such as Mokoia, now that the rats have been removed and Rangitoto, once the cats, rats and stoats have been removed, may offer the best chance for future transfers of our rarest honeyeater.

People often point to the small numbers of birds relocated as a reason for transfer failure but we have few releases of small numbers

that are not complicated by other variables such as predators. Anticipating problems with transfers of the few remaining black robin, Doug Flack released just five South Island robins onto Motuara and Alports Islands in the Marlborough Sounds. Both transfers were successful. The eventual transfer of the last seven black robins was also successful although it was the intensive management by Don Merton and his dedicated team that saved this species from extinction. These successful transfers of small numbers of robins contrasts with the inexplicable failure of two saddleback transfers of 29 (1968) and 30 (1985) to Fanal Island in the Far North.

Overseas work has suggested that known pairs and neighbours often establish better than a random mix of individuals. In the 1984 saddleback transfer onto Tiritiri Island, groupings of known pairs from the same area on Cuvier and hence sharing the same song were released into the same forest patch together. Most of these pair bonds remained intact during the first year and the Tiritiri population had the highest survival rate of any saddleback release. A planned trial release of pairs and unpaired saddleback onto Kapiti by Tim Lovegrove appears to have produced the reverse result with many of the pairs separating. While many factors differed between these releases, we would clearly benefit by planning future translocations as scientific trials to test the influence of numbers and sociality.

### Insignificant Failures

The few failures pale into insignificance compared with the enormous numbers of successful transfers. Although North Island saddlebacks failed on Fanal Island, transfers elsewhere have been so successful that we can hardly consider North Island saddleback endangered any longer. Saddleback provide an excellent example of how continued success and the development of transfer technology has allowed increasingly bold and innovative transfers, which continue to keep New Zealand at the forefront of bird transfer work.

Between 1925 and 1950 several unsuccessful attempts were made to transfer North Island saddleback onto islands in addition to Hen. The real successes began in the 1960s when transfers were made to Whatupuke (1964), Red Mercury (1966) and then Cuvier (1968). The experience gained in the Whatupuke transfer proved invaluable when a rapid response was needed to the ship rat invasion of Big South Cape Islands. South Island saddleback were rapidly transferred to islands nearby and subsequently as far as the Marlborough Sounds.

The continued success of saddleback transfers onto kiore-only islands but their failure to increase on Kapiti led to a highly innovative programme by Tim Lovegrove. Noticing that many saddleback were lost to Norway rats and weka at roost and nest sites, Tim began a programme of providing roost and nest boxes on Kapiti. By erecting similar boxes on Kawhitihu (Stanley) Island he established a trained source population. Even this mammoth task (involving many volunteers) has failed to produce a population that can increase in the presence of rats and hopes of eventual transfers to the mainland have faded. The prospect for Kapiti populations