

Interim report of the research of the mottled petrel (kori) on Whenua Hou during April 2012.

The Poutiri Ao ö Täne and Cape Sanctuary restoration projects have jointly submitted a proposal to translocate mottled petrel from Whenua Hou into two sites in Hawkes Bay.

The proposal is split into three stages, the first of which is a season of research to determine the fledging weights and wing lengths of the chicks and to establish if the artificial diet used in other petrel translocations would be suitable for this species.

Consultation with the Whenua Hou committee and the Kaitiaki Roopu was held and approval in principle for the translocations was given by both groups. There was support for the first stage with the final approval for stages two and three being dependant of the successful outcome of the previous stage.

On the 18th of April a team of five travelled to the island to carry out the research. The make up of the team changed throughout the time however it comprised representatives from the two projects as well as volunteers experienced in seabird transfers and a DOC Southern Island Area representative. Unfortunately an invitation to the Iwi to provide a representative was unable to be taken up; however Estelle Leask, a new member of the Whenua Hou committee was present for much of the time, carrying out kakapo feed-out duties.

The focus of the team was to identify 50 chicks in accessible burrows and establish inspection hatches above their burrow chambers.

Ten of the chicks were to be fed twice in their natal burrow to ensure that they would accept the artificial diet of blended sardines with codliver oil and vitamins before being moved to artificial burrows. They were then fed the artificial diet until they fledged and their wing length and weights compared with the other chicks. This diet has been well proven in other petrel translocations but needed to be trialled with kori to ensure that they could accept it. The forty remaining chicks were left in their natal burrows where they were fed by their parents. Twenty of these were weighed and measured on a daily basis to establish a growth pattern leading to fledging (the “handled” group). The remaining 20 were the “control” birds and only measured at the beginning and just before fledging in order to compare their data with the other two groups.

The locating of the 50 suitable chicks and the installation of the inspection hatches took four days. However as the team became more experienced the time for locating chicks was much quicker. Kori burrows are between one and two metres long generally and the presence of a chick could usually be confirmed by the chick attacking your hand or a short stick (a technique used by muttonbirders). The burrow chamber could then be located and the inspection hatch installed. The burrow location was then marked with a plastic rod and yellow triangle. There were a significant number of empty burrows from which chicks had obviously already fledged. Although the kori burrows were close to those of the titi, there was usually a degree of separation, the titi tending to be on the ridge tops with the kori on the slopes below them and there was no adverse impact on the titi population. A map of the burrow sites is appended.

All chicks were weighed, measured and cloacal swabs were taken. This swabbing was at the request of the kakapo team to establish if the Kori are carrying the salmonella disease. Blood samples were also taken from a representative number of chicks to carry out fatty acid and stable isotope analysis and to measure the possible effect of stress from the handling. The results from that work are not yet available but will be included in the final report. All chicks were banded with a standard metal leg band to overcome any possibility of misidentification through burrow swapping.

The trip ended with the last of the team leaving the island on the 7th of May. At that point all but two of the birds at natal burrows (one control and one handled bird) had fledged and it was expected that they would do so within the next few days.

The ten birds that were part of the artificial diet trial accepted the diet and the transfer to an artificial burrow and fledged with average wing length of 260.7mm (range 254-269mm) and weight of 337.3g (range 291 – 449g). One of these birds did cause some concern when it dropped below the perceived fledging weight however it did successfully fledge at that lighter weight.

The average wing length and fledging weight for the “handled” birds was 259.6mm (range 249-269mm) and 351.1g. Ten of the control birds fledged a few days after last measurements were taken. Their average wing length was 259.5mm (range 252-267mm) and weight was 346.2g (range 297-393g). All of these results are within the range that would be expected and there was no significant difference between the artificially fed birds and the others or between the handled and control birds.

Mottled petrel had a reputation of being prone to stress vomiting, i.e. regurgitating when being handled; however apart from one or two birds this was not a problem. These two birds stressed when initially handled but became more accepting after a couple of handles. Both birds fledged. Generally they accepted the regular handling remarkably well. There was no obvious adverse affect on the welfare of the birds through the handling.

The research was completed without the death of a single bird and all fledged (with the presumption that the remaining two were successful in fledging as they were both in good condition when the team left).

The wooden burrow lids were easy to install, were effective and left in situ along with the approved markers pending the approval of stage two of the translocation. The ten wooden artificial burrows were removed and given to the Iwi for their use.

The team’s effect on the island infrastructure was very minimal though we were fortunate in having fine weather for most of the time which greatly reduced the impact both on tracks and around the study areas. The tracks stood up to the foot traffic and the effect on the areas around the burrows was also extremely light. The team size was reduced as the project proceeded and less people were needed in order to help minimise the impact on the island.

We will be presenting a permit application for Stage 2 to Southern Islands Area for consultation with the WHC and KR in the near future and are happy to answer any

questions and come down to a meeting if desired. We will provide a copy of the final report on stage one to the groups as soon as it is completed.

We would like to thank the Whenua Hou committee and the Kaitiaki Roopu for giving their support to this first stage. Also I would like to record our genuine appreciation to the Southern Islands Area staff for their support and assistance. The kakapo team's hospitality while hosting us on the island was superb and Jo Hiscock's assistance did much to make the trip the success that it was. The help that the other staff gave right from our initial enquiries about the possibility of a translocation through to the assistance given we came off the island truly reflects the southern hospitality tradition. Many thanks it couldn't have happened without all of them.

Signed

Ken Hunt

Poutiri Ao o Tane project

Kahori Nakagawa

Cape Sanctuary



A marked mottled petrel burrow (burrow entrance at the base of astelia)



A mature chick – this chick fledged 5 days after this photo was taken.



Ken Hunt (DOC Napier) installing an inspection hatch above nesting chamber



Kahori Nakagawa (Cape Sanctuary) and Jo Hiscock (DOC Southland) feeding sardine smoothie to a chick at natal site.



One of the feeding trial chicks in a corflute box lined with natural vegetation, about to be transferred to artificial burrow.



Chicks being shifted to artificial burrows near the hut



A feeding trial chick settling in to its new home



Artificial burrows for the feeding trial birds. Burrows are made out of wooden box and Novaflow pipe to mimic natal burrows.