

To disturb or not disturb - A study of Stewart Island kiwi (*Apteryx australis lawryi*)

Emma Feenstra - Massey University & Landcare Research

The aim of this PhD project is to compare the effectiveness and efficiency of invasive and non-invasive methods for monitoring cryptic populations. This is being done using one of our iconic, taonga kiwi species, the Rakiura tokoeka (*Apteryx australis lawryi*) as a case study, over four sites on Stewart Island. Three non-invasive methods are being developed and trialled; trail cameras, acoustic recorders and scat mapping. The results from these will be compared directly with information gained from the invasive process of catching, handling and tracking using radio transmitters. As part of our 'invasive' component and with the help of funding provided by BNZRF in 2018, we put transmitters on 47 adult Rakiura tokoeka. We are now monitoring those individuals throughout the breeding season in order to attach transmitters on up to 20 chicks - the first time this has been done, which will provide novel information on survival, as well as breeding biology and dispersal. We have one chick hatched and successfully transmitted thus far, and with the help of additional funding from BNZRF 2019, we have burrow cameras monitoring nests for the emergence of further chicks, we have the equipment we need for ongoing monitoring of all the birds, and we will be able to upgrade the transmitters when the chicks have grown into juveniles.

We believe this project will supply valuable information that can be utilised within current monitoring methods to increase the reliability of results, contribute valuable knowledge on the Rakiura tokoeka population, including the survival of chicks, and provide guidelines for kiwi scat mapping, a new non-invasive methodology for kiwi monitoring. Due to the scale of the project, many people have been involved, mostly on a voluntary basis. Experienced kiwi practitioners from around the country as well as enthusiastic Stewart Island locals and others interested in learning about kiwi monitoring have been in the field with us over the last two years and continue to support the project whenever and however they can. We couldn't do it without you & or the support from BNZRF!

Follow our journey at <https://facebook.com/Rakiuratokoeka/> & contact emmafeenstra@gmail.com for more information on fieldwork and other volunteer opportunities



Never a dull moment on our nest cams with shared incubation!



Transmitter change for a young male Rakiura tokoeka