

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

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The aim of this PhD project is to compare the effectiveness and efficiency of invasive and non-invasive methods for monitoring cryptic populations. This will be done using one of our iconic, taonga kiwi species, the Rakiura tokoeka (*Apteryx australis lawryi*) as a case study. All kiwi species can be considered 'cryptic', in the sense that they are difficult to detect. This makes monitoring their populations challenging, and subsequent decisions about their conservation management problematic. Currently, both invasive and non-invasive methods are used to monitor cryptic populations. Invasive monitoring methods directly interfere with the animal, e.g., catching, handling and tracking, whereas non-invasive monitoring requires no contact, such as trail cameras. This project intends to explore the use of invasive and non-invasive monitoring methods for kiwi, their effectiveness at gaining the information desired and their efficiency in doing so, with a goal to promoting the use of non-invasive methods wherever possible.

Three non-invasive methods will be used; 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 funding provided by BNZRF we plan to attach transmitters to Rakiura tokoeka chicks - the first time this has been done, providing novel information on survival as well as breeding biology and dispersal. We believe this project will supply valuable information that can be utilised within current monitoring methods to increase reliability of results, contribute valuable knowledge on the Rakiura tokoeka population and provide guidelines for kiwi scat mapping, a new non-invasive methodology for kiwi monitoring.

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

