

Tiritiri Matangi Island Ruru Call Survey: 2016 Preliminary Report

John Stewart



Introduction

Ruru/morepork (*Ninox novaeseelandiae*), New Zealand's only surviving native owl, is known to be a common predator on Tiritiri Matangi Island and could be limiting the population sizes of some of their prey species. This is of particular interest to those involved in hihi monitoring and research on the Island. There is potential for a detailed study of the interactions between hihi and ruru to examine the inter-relationships and the possible impacts on hihi. In order to gain knowledge as a basis for more detailed research, and to follow the recommendation of the *Tiritiri Matangi Island Biodiversity Plan 2013* (SoTM 2013), which identifies population monitoring as a management requirement for virtually all bird species, The Supporters of Tiritiri Matangi (SoTM) have begun to collect information on the Island's ruru population.

This ruru call survey was authorised under a general permit (39910-Res) for non-invasive research and monitoring issued to SoTM by the Department of Conservation (DOC) in December 2014. The aim of the survey was to record the locations of ruru calling during the two hours after sunset, as a preliminary to mapping territories and planning further survey work to establish population size and dynamics, and impacts on prey.

Methods

An annual kiwi call survey has been carried out for several years. The survey requires that surveyors, located at ten observation points spaced across the Island, record the time, compass direction and distance of all kiwi calls heard during a two-hour period starting shortly after dusk. Participants also recorded weather conditions at each observation point. The 2016 survey took place over the nights of the 6th to 9th March, and participants were asked to extend their recording to include ruru calls, collecting exactly the same information as for kiwi calls. A total

of 18 participants took part, so the personnel changed from one night to the next. All were familiar with a range of ruru calls.



Map of Tiritiri Matangi Island showing approximate positions of observation points used in the survey.

Results

So far only the numbers of calls have been tabulated. Mapping the locations of calls is a more complex process and will be undertaken over the next few months. The table shows the number of ruru calls recorded at each of the ten sites for the four nights.

Site	6 th Mar	7 th Mar	8 th Mar	9 th Mar	Totals
1	2	6	4	3	15
2	14	2	0	17	33
3	6	1	17	7	31
4	13	7	1	7	28
5	7	5	0	8	20
6	5	1	0	1	7
7	1	4	7	5	17
8	10	8	5	3	26
9	23	1	17	18	59
10	8	4	11	4	27
Totals	89	39	62	73	263

Discussion

Almost all the ten sites recorded at least some ruru calls each night. The sites with the lowest number of calls were 6 and 7 at the north end of the Island where the vegetation is less well developed and is dominated by flax and low sparse scrub. Site 9, on the link track between Fisherman's Bay Track and the East Coast Track, had the most records, almost twice as many as the next best locations.

Many of the records at any one site will have been of the same bird calling from the same or a different location. Also, some calls will have been detected and recorded from more than one site. That being the case, we cannot determine how many individual birds were involved.

As expected, the survey generates a range of question, not only about the locations and numbers of ruru, but also about their behaviour. Why, for instance, were there more than twice as many calls recorded on 6th March as on 7th March? Weather conditions were not significantly different on the 7th than on any other night, so this result is unlikely to reflect participants' ability to hear the calls. Why do particular observation points record a lot of calls one night and very few or none at

all on another night? Such questions can only be answered by further research into the dynamics and behaviour of our ruru population. First we need to understand where their territories are and estimate their numbers, and this survey is a first step in that direction.

Participants

Helen Bucksey, Brian Chandler, Kathy Chandler, Yvonne Clark, Simon Fordham, Vix Franks, Beth Gibbs, Dave Jenkins, Margie Luby, Mhairi McCready, Kay Milton, Annette de Raat, Aaron de Raat, Mary-Ann Rowland, John Sibley, John Stewart, Karli Thomas, Noel Ward.