Tiritiri Matangi Island Ruru Nesting Survey: 2018 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. 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) are collecting information on the Island's ruru population.

This ruru nesting survey is 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 goals of the survey were to:

a) to find, map and monitor the breeding success of as many breeding pairs of ruru as possible using non-invasive methods,

b) to collect evidence of their prey items.

Methods

As ruru tend to re-use existing nest sites, regular checks were made on ten known previous sites. In addition, all field workers on the Island were requested to note and report any sightings of ruru. Where repeated daytime sightings of roosting adults were made, extra effort was put in to try to locate nests. Nest sites on Tiritiri Matangi are commonly found on the ground among exposed tree roots or inside a partly rotten cabbage tree. Holes in cabbage tree (and other tree species) are also commonly used.

Nests are sometimes located by accidentally flushing adults where they have nested close to an access track through the bush. Chicks in a nest make a 'clicking' alarm noise when they detect someone passing nearby and this can help to locate nests though they are usually found earlier at the egg stage.

Once located, nests were checked at approximately seven day intervals. Females sitting on eggs were not disturbed to count or check the clutch. Checking continued at each nest until a few days after fledging was first recorded.

Results

Seven active nests were located this season (Table 1). All seven produced at least one offspring.

Site	*Eggs*	*Chicks*
Apple bush	2	2
Inner Coastal Walk	2	1
Lighthouse Valley	2	1
Bush 6	2	2
Bush 5	2	1
Bush 3	2	2
Bush 22 – Hihi19	2	2

Table 1 – Locations and outcomes of nests found in 2017

Ruru were also recorded in most of the wooded gullies around the Island, usually in the more mature areas where potential nest sites were available. All sightings were followed up on repeat visits and it was often possible to re-find the birds.

Sites suspected of holding a breeding pair were searched for nests. Two new nest sites were found this year, one in Apple Bush where the resident pair moved to a new site about 50 metres from their previous location which had been occupied for at least three years and one in Bush 3 where what was probably the resident pair moved about 40 metres across a small ridge and into another gully.

The other five nests were all in the same locations as last year. One pair, in Apple Bush, switched to the other side of the base of a pohutukawa tree.

Previously used sites not used this year included Bush 21 (tree fall), the Shortcut (collapse of an old kakariki nest box) and Bush 22 where the original site was still available but not used.

In addition to the work described here, other birds were located during the annual ruru call survey carried out in March (Stewart, 2018).

Using records from all studies, pairs were located at the following sites:

NE Bay near diving petrel site
Silvester wetlands
West coast at Ngati Paoa Track
Bush 23
Sonya's Valley
Du Pont sign
Kawerau Tk near Tuatara sign
Cable Road/Kawerau Tk junction
Bush 3 gully
Hobb's Track/Bush 4
Bush 5/Landing Road Track
Wattle Valley/Graham's Road
Little Wattle Valley
Shortcut
Bush 6
Bunkhouse
Fisherman's Bay/Emergency Landing
Lighthouse Valley
Cable Track triangle
Cable Track near hihi feeder
Apple Bush
East Coast Track/Stagnant dam
Bush 21 (2 pairs)
Bush 22 (3 pairs)

Discussion

I estimate there were at least 27 pairs of ruru potentially breeding on the Island in 2017/18. This is slightly higher than the estimate for the previous two years.

Breeding success was higher than in previous years at 1.6 fledglings per pair from seven nests. A study carried out last year (Busbridge, 2017) recorded 1 fledgling per pair from ten nests.

Ruru tend to use the same nesting sites each year. Of the ten sites used in 2016, five were used again, two were lost (weather damage), two pairs moved (approximately 40 and 50 metres) and one site was abandoned. It will not be possible to gauge how typical this is until more years of data have been collected.

It had been planned to dig out the nest bases once the chicks had fledged to look for evidence of prey items (weta jaws, feathers, bird bands, etc.) but due to other commitments it was not possible to complete this part of the project.

References

Busbridge, S. 2017. A preliminary study on the diet and breeding success of ruru (Ninox novaeseelandiae) on Tiritiri Matangi Island. Unpublished Report. The Supporters of Tiritiri Matangi, Auckland.

Stewart, J. 2018. Tiritiri Matangi Island Ruru Call Survey: 2018 Report. Unpublished Report. The Supporters of Tiritiri Matangi, Auckland.