Greater Wellington
Te Pane Matua Taiao

Wellington City forests: Rodent monitoring report

June 2020

Report prepared by:	R Uys	Terrestrial Ecologist	
Report reviewed by:	P Crisp	Team Leader Terrestrial Ecosystems and Quality	
			Date: August 2020

The report may be cited as:

Uys R. 2020. *Wellington City Forests: Rodent Monitoring Report –June 2020.* Greater Wellington Regional Council, Unpublished internal report, Document # GW/ESCI-G-20/61, Wellington.

Summary

This report presents the results of the rodent monitoring conducted across the indigenous forests in the Wellington City Council in June 2020.

Key results of the latest rodent monitoring were:

- The rat tracking rate decreased from 14 percent in the last monitor in May 2019 to 6 percent in this monitor.
- The mice tracking rate remains at a low level (6 percent).

1. Introduction

Wellington City Council (WCC) has set a goal of making Wellington the first "predator-free" city in New Zealand. The focus is on eradicating rats and stoats, as they are the main introduced predators of indigenous birds. The plan is to start with the Miramar Peninsula and ultimately extend these eradication efforts to the entire Wellington City area. In doing so, it has been recognised that it is important to monitor the outcome of these eradication efforts to determine their success.

Bird monitoring stations were established across the WCC reserves network in 2011 and have been monitored annually since. This has established a baseline from which changes in bird populations can be monitored. Rodent tracking tunnels were added across the same reserves network of forests in 2016 and are monitored twice a year in May and November. This will allow changes in bird and rodent populations to be compared across this reserve network.

This monitor was scheduled to have been conducted in May 2020, but was postponed until June 2020 due to the Covid19 lockdown.

2. Methods

Monitoring of rodents across the WCC reserves is conducted using 19 lines (Figure 1), each with ten tracking tunnels spaced at 50m intervals. The lines were established on randomly selected starting points and compass bearings following the Department of Conservation's (DOC) protocol (Gillies & Williams 2013)[1]. Tunnels were laid in September 2016 and the first monitor was conducted in November 2016.

Monitoring is conducted twice a year in May and November using The Black Trakka tracking tunnel cards by Gotcha Traps Ltd. that have a preloaded ink pad in the middle. A blob of crunchy peanut butter is placed in the centre of the ink pad and the card left in the tunnel over one dry night. The cards are collected the next day and all the footprints identified.

[1] Gillies CA and Williams D. 2013. *DOC tracking tunnel guide v2.5.2: Using tracking tunnels to monitor rodents and mustelids*. Department of Conservation, Science & Capability Group, Hamilton, New Zealand (http://www.doc.govt.nz/Documents/science-and-technical/inventory-monitoring/im-toolbox-animal-pests-using-tracking-tunnels-to-monitor-rodents-and-mustelids.pdf).

The rodent tracking tunnel index (TTI) for the Wellington City forests is determined by calculating the percentage of tunnels that rats or mice were tracked at along each line and taking the average across the 19 lines monitored.

Note that this method only provides a coarse index of the relative abundance of rodents and is not a direct measure of their population density. The method is best suited to comparing gross changes in their relative abundance over time.

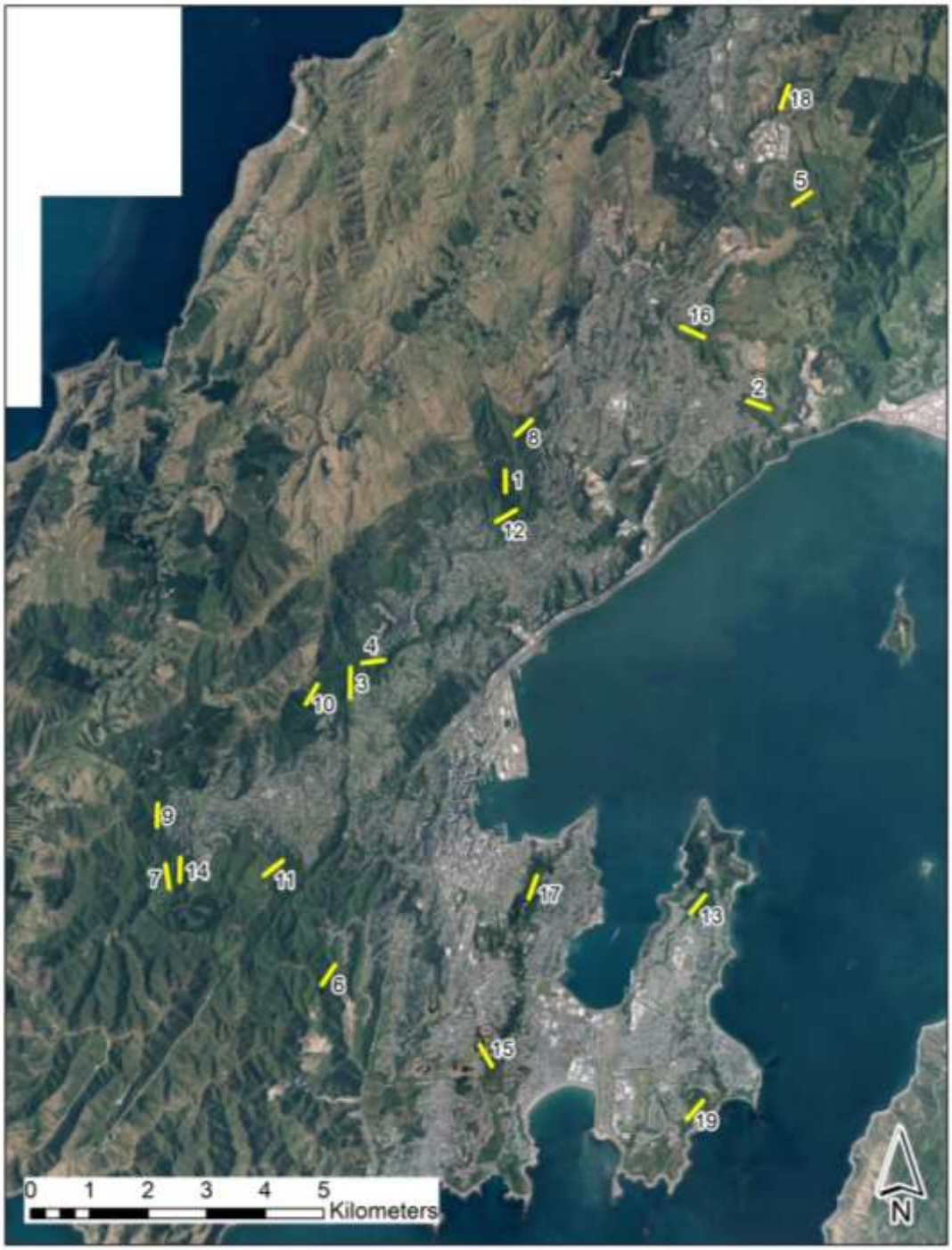

Figure 1: Distribution of rodent monitoring lines across the Wellington City forests

3. Results

The rat tracking rate increased to 9 percent from 6 percent in November 2019. (Table 1, Figure 2, Appendix 1). The mice tracking rate increased to 22 percent from 6 percent in November 2020. No hedgehog were encountered in this monitor.

Table 1: Tracking tunnel index calculated across the Wellington City forests for June 2020

Species	Tracking rate (%TTI)	SE (%)
Rats	9	3
Mice	22	4

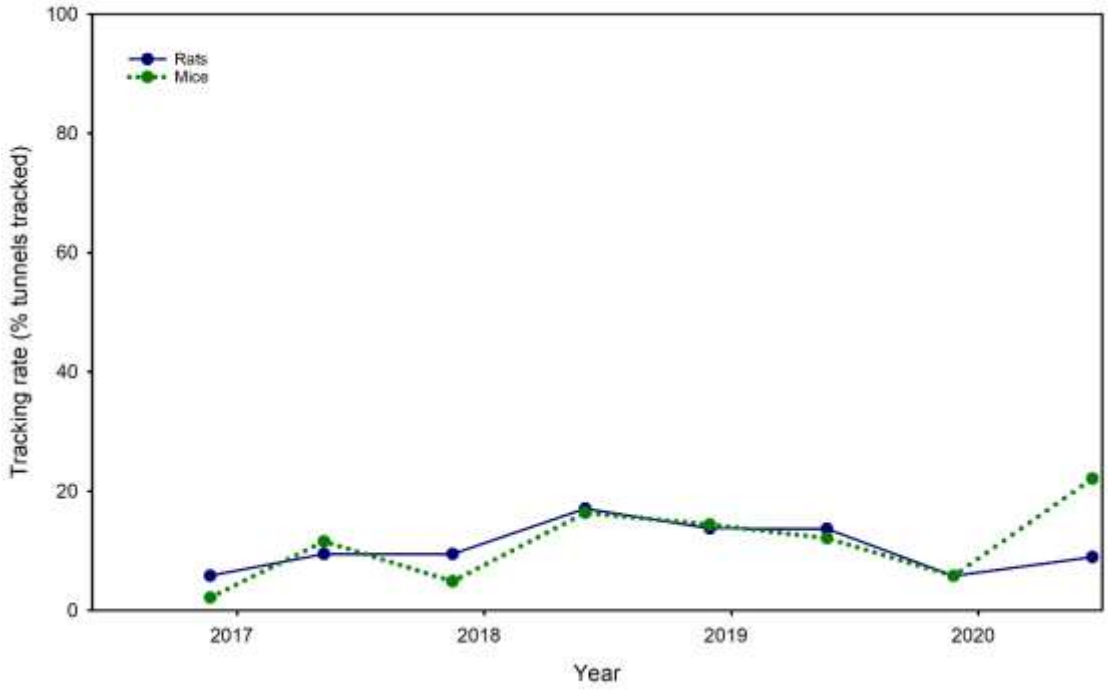

Figure 2: Rat and mice tracking rates across the Wellington City forests, surveyed in May and November each year

4. Analysis and comments

Although slightly increased from the last monitor, the rat tracking rate (9 percent) was within the 10 percent tracking rate target for rats. The mice tracking rate reached a recorded high (22 percent), but was still well below that recorded at the Key Native Ecosystem (KNE) sites monitored by Greater Wellington Regional Council. This increase in mice is possibly due to the generally warm and dry autumn that would have supported their populations.

Unsurprisingly, no hedgehog were recorded in this monitor as they are typically more active during the warmer months.

5. Appendix

Appendix 1: Summary of tracking tunnel index percentages for rats and mice calculated across the Wellington City forests

Date	Rats	Mice	Hedgehog
22-11-2016	6	2	5
09-05-2017	10	12	4
15-11-2017	10	5	6
30-05-2018	17	16	2
30-11-2018	14	14	11
22-05-2019	14	12	7
25-11-2019	6	6	7
17-06-2020	9	22	0