

Mt Victoria Vermin Trappers Report

Trap line: Telford

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Last run: 2024-07-14

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1 Code

The code used to produce this report is [open source](#) under an [Apache 2.0 license](#). Feel free to contribute. Or fork & go.

2 Introduction

This is a simple report of trapping activity and outcomes for the Mt Victoria Vermin Trappers' **Telford** trap line which covers the northern part of Wellington's Southern Walkway between Roseneath Park & Lookout and Mount Victoria Lookout. It uses the latest 'complete trapline' records since 2015-04-04 downloaded from trap.nz at 2024-07-14 14:32:01.46942.

The **Telford** trap line comprises 419 traps made up of the types shown in Table 1. This includes 45 supplementary traps.

Table 1: Trap types

trap type	N
A24	13
DOC 200	72
Mouse trap	3
T-Rex Rat Trap	11
Victor	322

3 Trap checking frequency

Figure 1 shows the frequency of records for each trap by month since the start of trapping. Normally we would hope there to be at least 2 checks per month. There are some clear gaps which will affect any subsequent 'trend' analysis.

4 Species caught

The species caught since the beginning of the monitoring dataset (2015-04-04) are shown in Figure 2. Note that this does not (cannot) include any species killed by the A24 traps (or indeed any other traps) which have then been eaten as carrion or otherwise removed before the trap has been re-checked.

In addition the frequency of checking (see Figure 1) is likely to affect the frequency of species capture since 'full' traps are unlikely to attract further kills until cleared.

Figure 3 shows the frequency of capture of different recorded species per month with additional smoothed fit lines for each species where sufficient data exists.

This plot appears to be particularly affected by the frequency of checking patterns shown in Figure 1. However if we compare periods of relatively frequent checking it appears that the frequency of rat capture is lower in early 2024 than in (e.g.) early 2020. However it also appears that the frequency of mouse capture has increased.

```
## 'geom_smooth()' using method = 'loess' and formula = 'y ~ x'
```

Figure 4 re-plots this data as a 'rate' by dividing by the number of clearing 'events' (i.e. someone recorded clearing the line) per month and the number of traps checked. This assumes each clearance took one day which is not necessarily true.

Note that this may also produce some strange outliers if a very small number of traps are checked and each have a species recorded.

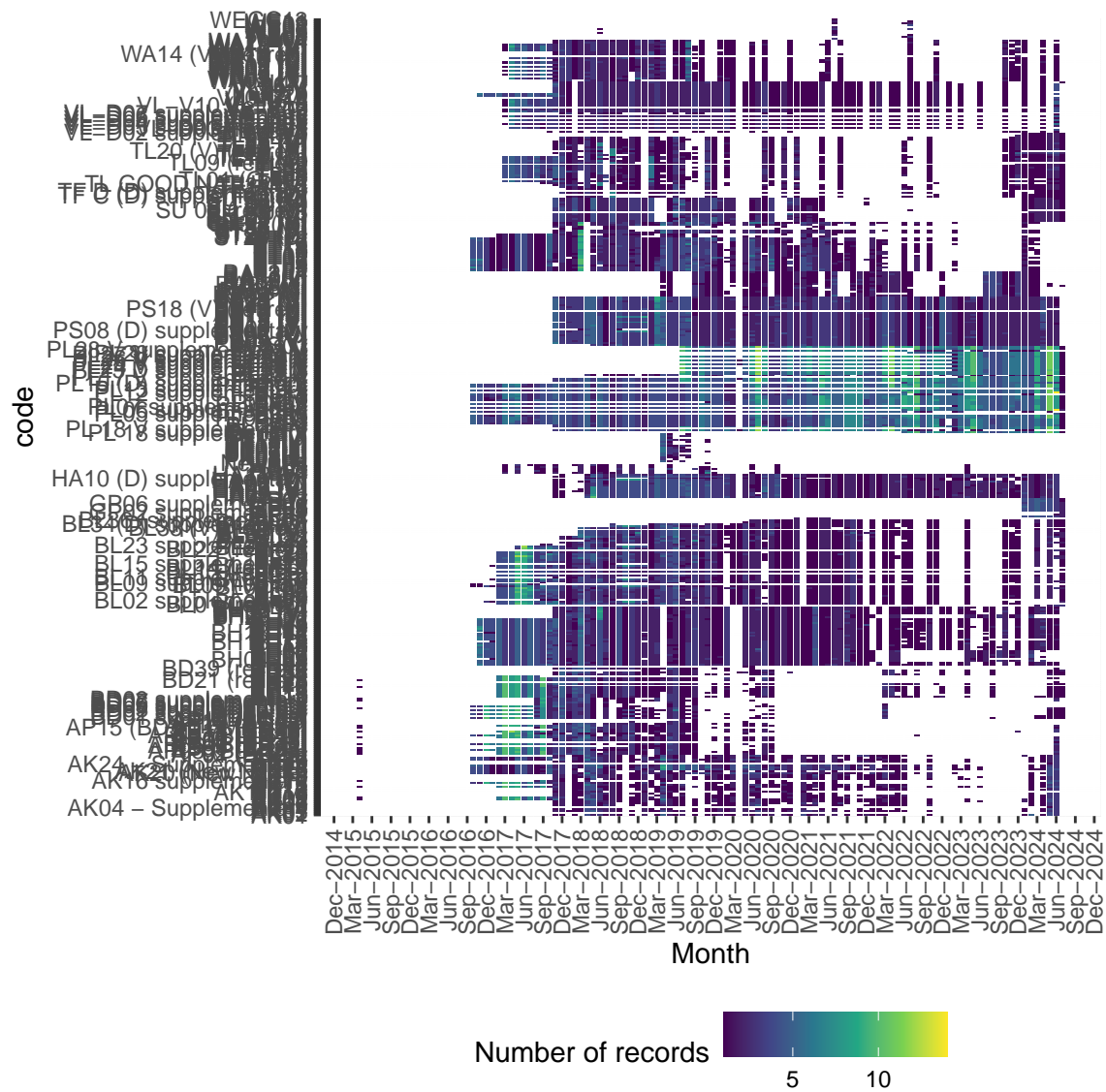


Figure 1: Trap checking frequency over time

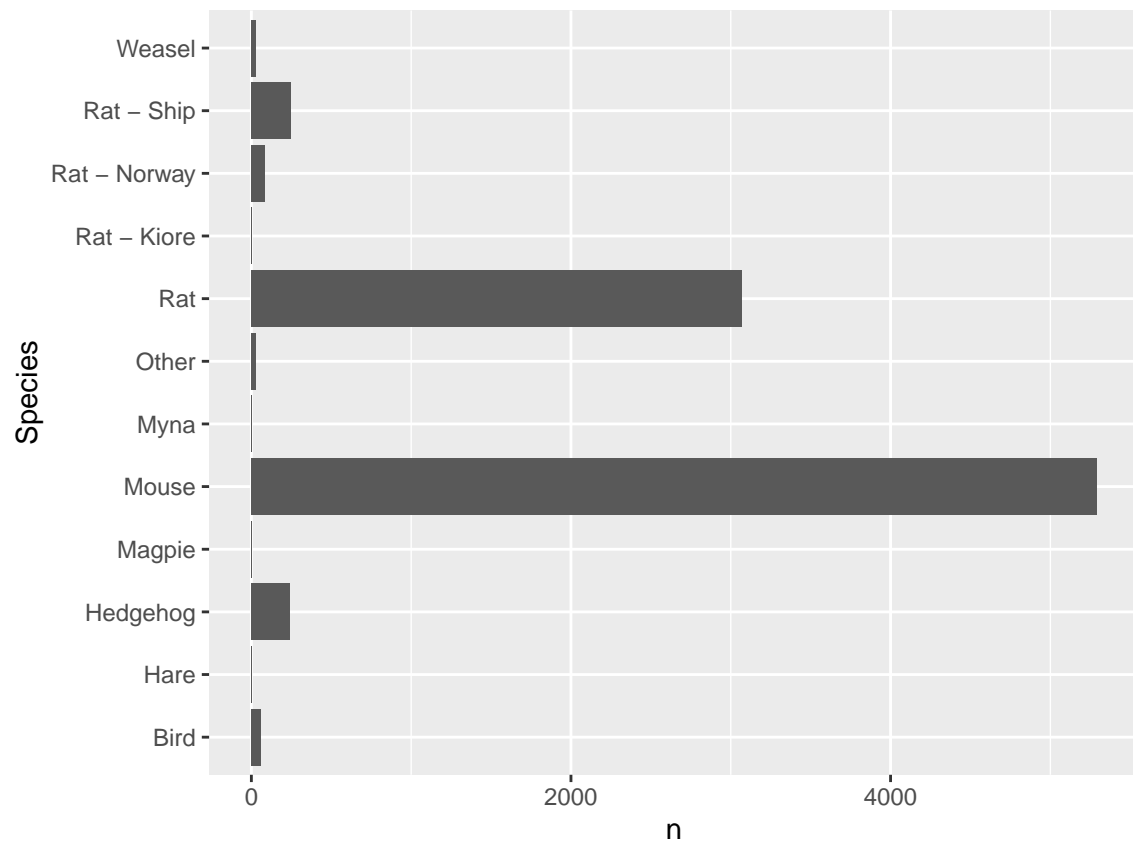


Figure 2: Species recorded

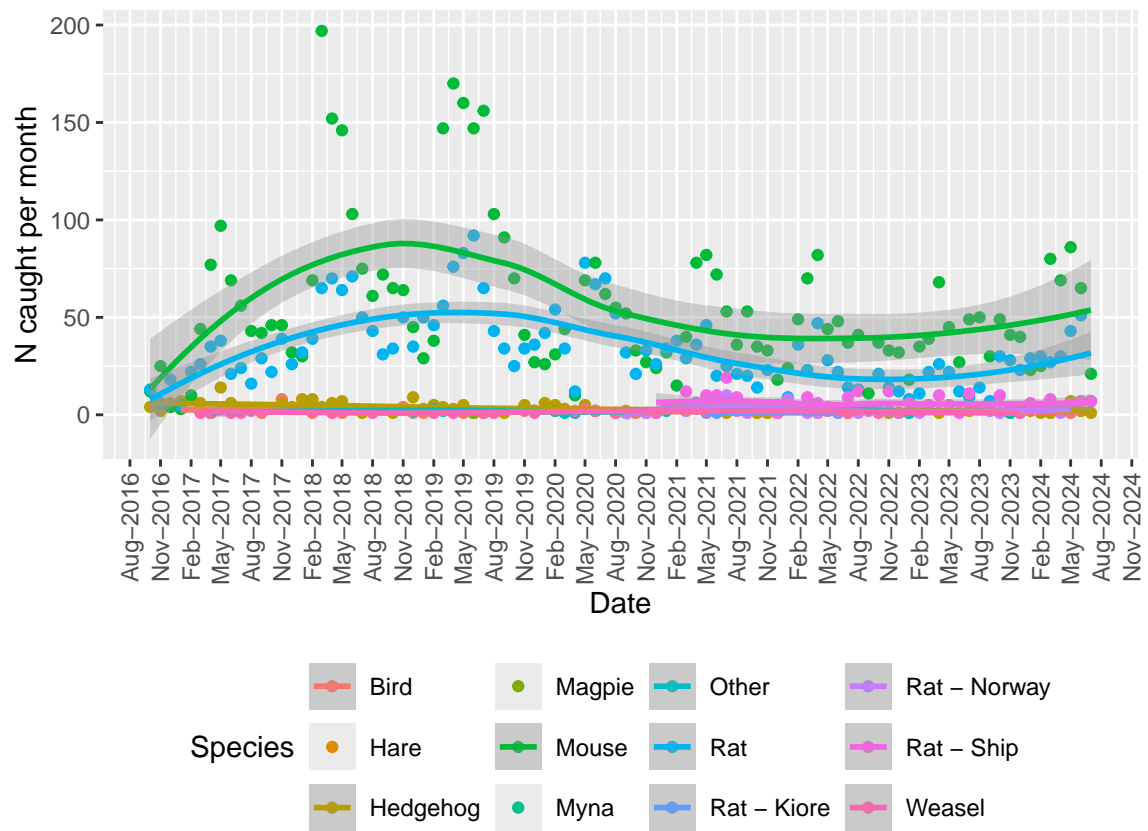


Figure 3: Frequency of species caught per month

```
## 'geom_smooth()' using method = 'loess' and formula = 'y ~ x'
```

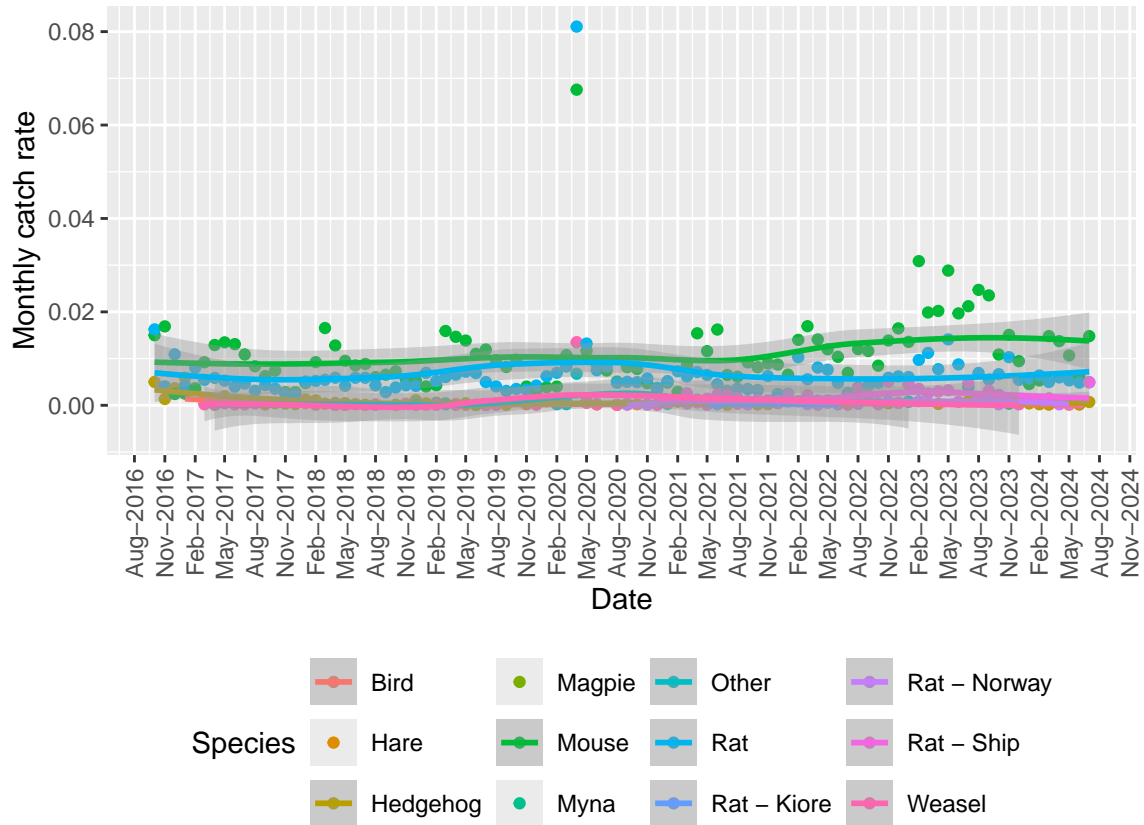


Figure 4: Rate of species caught per month/trap/clearance events

5 Seasonal analysis

Do we find a monthly/seasonal pattern? The first plot uses the aggregated frequency rather than the rate. The second plot (Figure @fig(fig:speciesRateMonth)) uses the mean of the rate calculated above.

```
## 'geom_smooth()' using method = 'loess' and formula = 'y ~ x'
```

6 Summary

Goes here

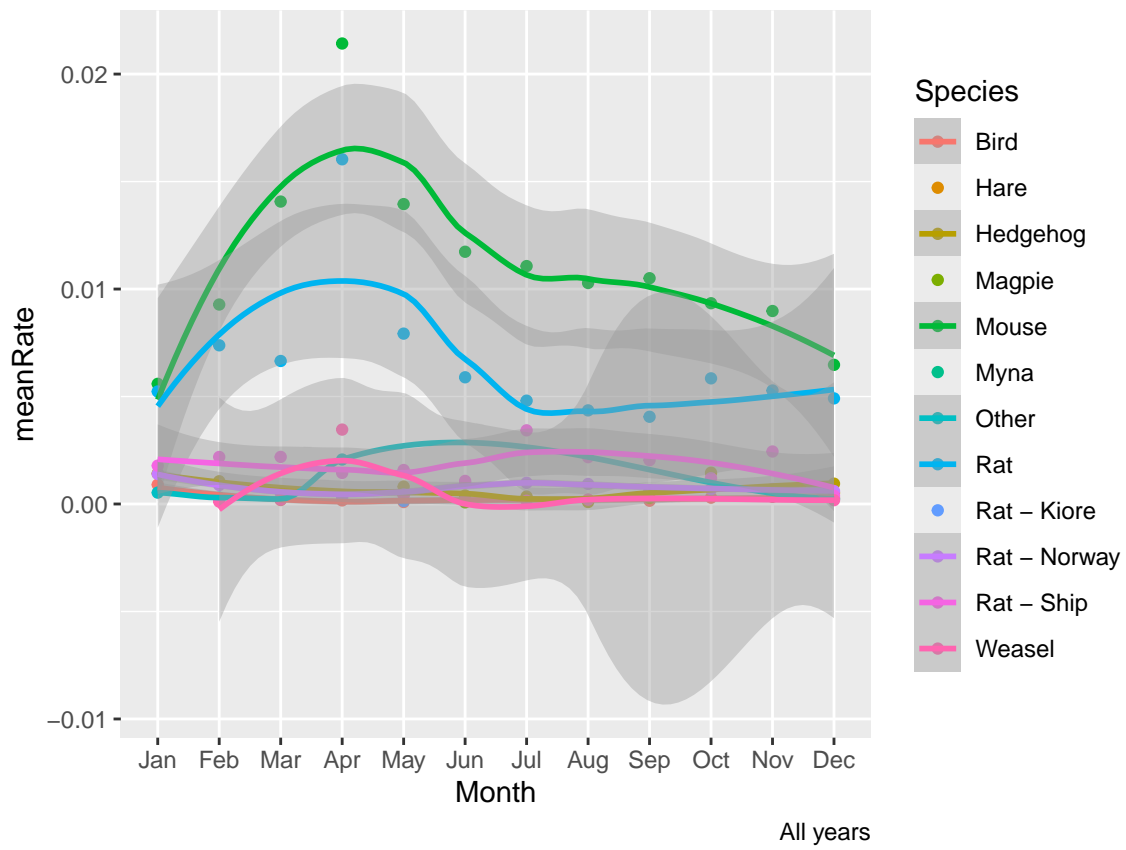


Figure 5: Species recorded by month