

Victoria University Trapping Results (Teachers)

Teachers notes- All students should have the student copy. This task is best done in groups with large A3 paper and markers. The end product will be each group presenting activity one and two to the class.

Table 1: Trapping catch by week

Week		Mouse	Ship Rat	Norway Rat	Hedgehog	TOTAL	Notes
1	March 21-27	12	18	2	1	33	Transects 1-3
2	March 28 - April 3	8	2	1		11	
3	April 4 - 10	2	4			6	
4	April 11 - 17		2			2	
5	April 18 - 24	7	2		1	10	Added transect 4
6	April 25th - May 1st	5	3			8	
7	May 2 - 8	11	3			14	
8	May 9-15	5	2			7	
9	May 16 - 22	2	1			3	
10	May 23-29	3	2	1		6	
11	May 30- June 5	2		1		3	
12	June 6-12	1				1	
13	June 13-19	2				2	
14	June 20-26		2			2	
15	June 27 - July 3	3		1		4	30/6 Added Transect 5
16	July 4 - July 10					0	
17	July 11 - July 17	1				1	
18	July 18 - July 24	1	1			2	
19	July 25 - July 31	2	1	2		5	26/7 Glued seeds
20	August 1 - August 7	6	1			7	
TOTAL		67	42	9	2	120	

Start by explaining that this document:

- Is an update of a trapping programme run by Emma Rowell at Victoria University and covers a period of five months of trapping. It was used to provide an update for all parties involved and interested in the trapping.
- Provided guidance for ongoing trapping programmes and how they could be improved. E.g. better siting of traps.
- Has a 'Notes' column on the far right that describes any major changes made to the trap lines during the programme. E.g. you will see that in week 19 pumpkin seeds were glued to the traps to stop mice from stealing the 'easier to take' baits like peanut butter.

First activity

Get students in groups to discuss both the table and the graph on this first page. Ask them to look at the following questions as a starting point.

- Why was this report produced?
- How would it help people?
- Describe three trends they can see in the data.
- How else could their group display this data?
- How do comments in the note section effect the data found in the table?

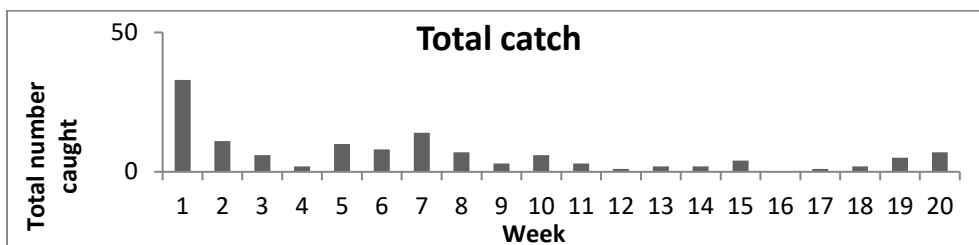


Figure 1: Total trapping catch by week, including ship rats, Norway rats, house mice and hedgehogs.

Second activity

The second step is for students to analyse species data.

Their focus will be on the relationship between the different species (mouse, ship rat and Norway rat)

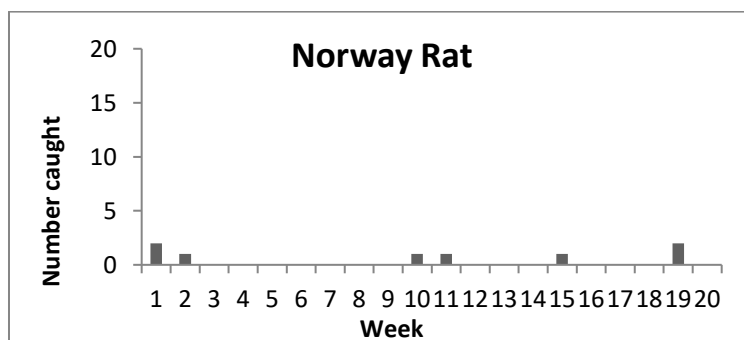
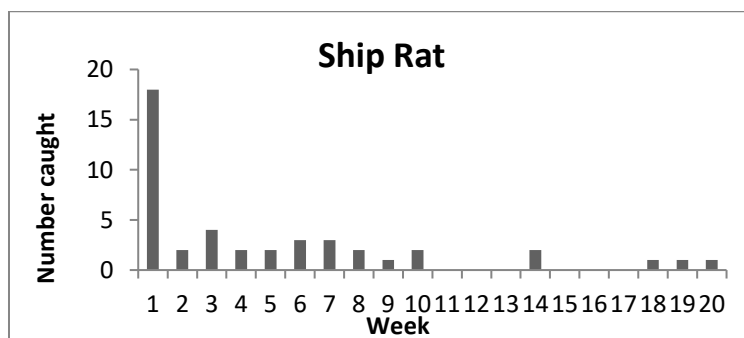
Below is information that students will need to use to analyse the data and make comments.

- Rats eat mice
- Ship rats can climb but Norway rats are poor climbers.
- Ship rat habitat:
Ship rats are rarely seen because they are nocturnal, live in trees and on the forest floor, and are often bait or trap-shy. They are most common in lowland forests, but are also found in parks, farmland, and in buildings. They are skilful climbers in buildings and forests and can scale rough vertical surfaces and run along fine wires/branches.
- Norway rat habitat:
Norway rats in New Zealand are ground dwellers which tend to be found around waterways, wetlands and coastal areas.
- Mouse habitat:
Mice can live in all New Zealand habitats. They are commonly found in overgrown areas where they have protection from rats, are common home invaders, and can be a real problem in cities and around farms.

See the Resources online section in the Maths lesson for hyperlinks to more information

Questions to ask

- Why do you think this area has a low number of Norway rats compared to ship rats?
- Why do you think the number of mice trapped increased again as rat numbers dropped?
- What other factors not seen on the graphs could influence numbers? E.g. Weather, season, new type of traps etc.



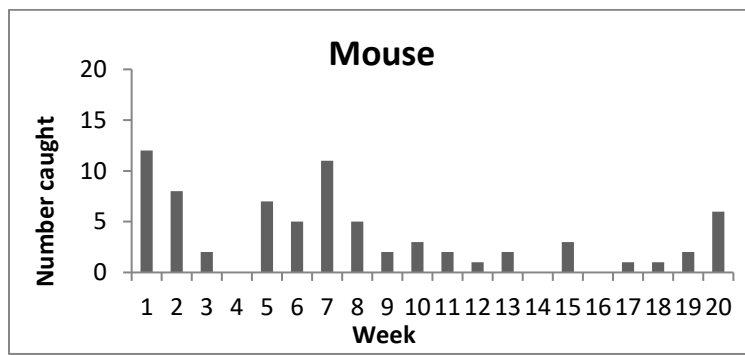


Figure 2: Trapping catch by week for a) ship rat b) Norway rat and c) mouse.

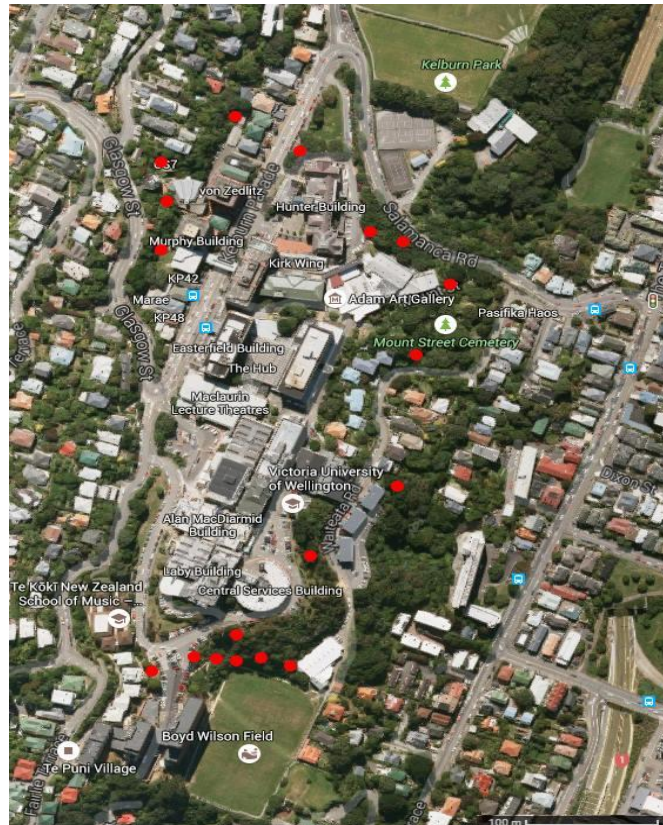


Figure 3: Location of trapping sites at Victoria University of Wellington, as of July 2015 (n=18).



Figure 4: Location of all pest species caught as at the 7th of August 2015.

Third activity

Extra for experts!: Students may also like to look at the two maps and make comment on any trends they can observe using what they have learnt in the previous two activities.

Animal ethics

This project was approved by John Miller, Executive Officer of the Animal Ethics Committee at Victoria University, on March 17th, 2015. At present, traps in use include one Victor Easy Set rat trap, one A24 Goodnature rat + stoat trap, two DOC 150's and 15 Kness Big Snap-E Rattraps. The Animal Welfare Act (1999) regulates trap use in New Zealand. The National Animal Welfare Act Committee (NAWAC) guidelines set welfare performance standards for animal traps in New Zealand (<http://www.biosecurity.govt.nz/animal-welfare/nawac/policies/guideline09.htm>). These guidelines enable traps to be prohibited, but not approved. Traps are tested against NAWAC guidelines, with results published by Landcare Research. The Goodnature A24 rat + stoat trap has met humane Class A NAWAC standards for stoats and rats (<http://www.goodnature.co.nz/index.php?pageID=products&productID=4>). The DOC 150 trap has been tested against and passed NAWAC standards for hedgehogs, rats and stoats, and the Victor Easy Set rat trap passed for both ship rats and stoats (<http://www.landcareresearch.co.nz/science/plants-animals-fungi/animals/vertebrate-pests/traps/traps-tested>). Produced by Kness Mfg. Co. Inc. in the USA, the Big Snap-E Rattrap has not yet been tested against NAWAC standards, but has passed Canadian and USA standards.

Future plans

To assess the impacts of our trapping on native fauna we plan to search for and monitor nests on campus, in conjunction with Nyree Fea, to get some indication of nesting success. We also plan to conduct periodical pest monitoring using tracking tunnels and chew cards, to continue to track rodent abundance on campus.