



In October and November 2016, education and science were combined to find out...

How Safe is my Cat?

Pupils from Waitati, Karitane, Purakaunui and Port Chalmers schools used GPS tracking and motion sensitive cameras around decommissioned (unset and unable to be set) trap boxes to determine how safe our cats are around the types of pest traps that are to be used within the Halo Project area.



Aims:

Through our citizen science project, we wanted to find out:

1. Are our pet cats a risk to birds that leave Orokonui Ecosanctuary?
2. Are our pet cats safe from the traps (DOC200 and Timms) we will be using to catch other mammalian predators in the Halo Project?
3. What other animals are interested in these traps?



The cats:

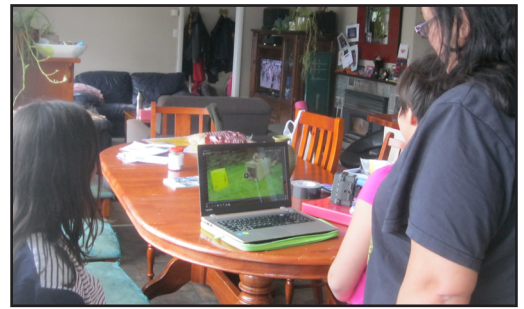
36 cats from 33 households were involved in the project. School children volunteered their cats for the study. To participate, cats had to be heavier than 3.2 kg, older than one year and healthy. All of the cats participating in the project were neutered. Only five of the 36 participating cats regularly wore collars prior to participating.



Methods:

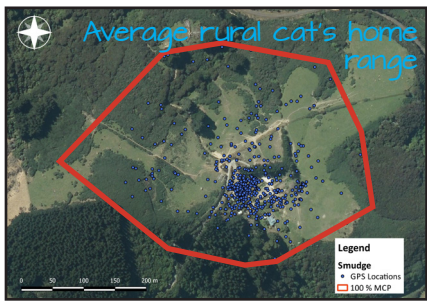
The first task was to establish how far cats travel from their home. To do this, GPS tracker collars were attached to the cats to map their movements over a two-week period. Their furthest GPS locations were joined together and the area inside calculated by the school children to give each cats' home range.

The second task was to see how our cats acted around traps. Decommissioned Timms and DOC200 traps were placed in the back gardens of families with cats. The Timms were baited with cinnamon-scented apple and the DOC200 with sardines (please note: this is NOT recommended bait), and subsequently exchanged for rabbit meat and an egg (correct bait). A motion-sensitive camera was set up to record all activity around the two traps. A total of 203 recordings were collected.



The children then watched all of their trap videos and documented what animals they saw and what those animals did around the trap boxes. Finally, those families who had a cat in the study recorded if their cat caught any prey and what it was, over a one month period.





Results - How far do cats travel?

Rural-living cats roamed much further than urban-living cats. The average home range for rural cats is 19.09ha (see area on far left) and for urban cats is 3.00ha (see left). Younger cats travel further than older cats and many cats roamed further at night (average home range 10.96 ha), compared to day (average home range 3.15 ha). We discovered that one 18 month old cat (Puss Puss) had an extraordinary home range of 227.27 ha whilst another cat, a 7 year old (Boo Boo) only ventured 0.75 ha. Both cats are female and both are in relatively rural areas. To show the difference between these two cats, we have made the two 'home range' areas (red lines) to the same scale. The area behind this text is Puss Puss' home range. The area in the very top right hand corner is Boo Boo's range.

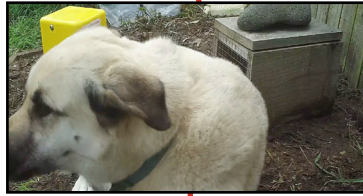


Average urban

Puss Puss' home range area

Boo Boo's home range area

Results - How safe are cats from traps?



Cats and (some dogs) were attracted to the DOC200 traps, with cats predominantly using them as a perch. Using the correct bait (rabbit and eggs) and positioning (at the back of the trap) we saw no cats attempt to retrieve it. Cats and dogs were not interested in the Timms traps at all.



Possums (target pest) loved the cinnamon scented apple in the Timms trap. Hedgehogs loved everything: apples, sardines and rabbit (target pest). Rats were also spotted investigating the traps (target pest). Birds weren't at all interested in either of the traps. Interestingly, stoats, ferrets and weasels were not spotted on any of the recordings.

Results - What did cats catch?

Ten cats caught 59 prey, including 18 birds and 4 skinks (the skinks were caught by one cat). The rest included 19 rabbits, 13 mice and five rats. Further to our research, cats bring home just a third to a quarter of what they catch based on collar mounted camera footage (Loyd, et al. 2013). Also, a large number of companion cats in areas inhabited by birds lead to large numbers of prey caught. For example, while we only recorded prey captured by ten cats, the other cats in our study may still have been catching prey and not brought them home at all. Additionally, there are many more companion cats in these areas that we didn't sample, which will also be catching prey.

Recommendations - What can cat owners do?

Keeping cats indoors at night can reduce their roaming. During the day, cats could wear a BirdsBeSafe® collar-cover (collars are separate) to help stop them from catching bird and lizard prey. These can be purchased from Orokonui Ecosanctuary for \$17. We can also make sure our cats are neutered to prevent unwanted breeding. In some places this is done for FREE: West Harbour residents can call Terry Marler at Pioneer Hall: 021 735 496 if you have a cat that requires neutering. On the trap footage, it was hard to tell if some cats were owned or stray. Collars and microchipping can help identify pet cats. Wellington City Council has introduced a new bylaw that legally requires owned cats over the age of 12 weeks to be microchipped.



Recommendations - What can people who want to protect birds do?

Get involved with the Halo Project. Contact halocoordinator@gmail.com. Also, it is really important that if you are going to use Timms or DOC200 traps they must be well-maintained and baits must be used correctly. Use the right baits for the right traps and place the bait in the correct position within the traps. Contact us if you are unsure.

