

Readymade feral cat bait trial, Rakiura

September 2023 update

Project summary

In winter 2023, the Department of Conservation (DOC) trialled a new toxic bait to protect native animals from feral cats on NE Rakiura/Stewart Island. This research advances knowledge and tools to eradicate feral cats on our precious islands like Rakiura/Stewart Island and Auckland Island as well to control feral cats on the mainland. During the study, DOC staff hand-laid a toxic meat bait on a ~1700 ha grid and monitored it with trail cameras, followed VHF-GPS collared feral cats and VHF tagged tokoeka (kiwi). Previous research gave us confidence that feral cats would eat the bait and there would be low risk to animals such as native birds and deer. All bait was removed at the end of the trial. Some hunting blocks were closed during the 10-week treatment period. People could still recreate in the area and were advised by signs of the trial and to follow warnings. We consulted with local iwi, hunting groups, government, NGOs and other community groups. We shared information and have worked to reduce impacts to people. Contact us with any questions.

Progress summary

- March 2023: Permission received from Environmental Protection Agency and Ministry for Primary Industries to carry out trial as proposed on the northeast coast of Rakiura.
- March 2023: Fourteen feral cats trapped inside treatment area and fitted with GPS-VHF collars.
- March-ongoing 2023: Community and hunter notification and engagement.
- May 2023: Fifteen Rakiura tokoeka caught inside treatment area and fitted with VHF transmitters.

- June 2023: Bait degradation study to inform how environmental conditions affect bait toxicity and degradation.
- June 2023: All DOC permissions in place.
- Early-mid July 2023: bait and camera grid established; two rounds of non-toxic prefeed bait applied; rodent & possum abundance monitoring.
- Mid-late July to early August 2023: three rounds of toxic bait applied; camera monitoring; tracking of VHF-GPS collared cats and VHF-tagged tokoeka.
- Mid-late August 2023: all toxic bait removed; two rounds of non-toxic bait applied for post-toxin monitoring; possum abundance monitoring; carcass monitoring plots installed to observe breakdown and inform caution period.
- Early September 2023: camera and bait grid removed.

Bait trial

In early July, a team of 6 established the bait and trail camera grid. There were a total of 600 bait points and 114 trail cameras over 1725 ha. Bait density was 1 bait per 2.9 hectare (equivalent to 1 bait per three full size rugby pitches).

Two rounds of non-toxic bait was applied over three weeks and camera footage gathered in the treatment area to allow analysis of feral cat population density before the toxin application. Abundance monitoring of possum and rodents was undertaken to understand what impact they had on bait availability to feral cats.

Three rounds of toxic bait was then applied over three weeks and camera footage gathered. The camera

footage showed that six VHF-GPS collared cats were present inside the treatment area during toxic baiting. To check for mortality, teams radio tracked VHF-GPS collared cats and VHF tagged tokoeka while toxic bait was present on the ground. Five VHF-GPS collared cats were found deceased during the toxic baiting period. Tissue samples were collected for toxin residue testing. No VHF tagged tokoeka died during the toxic baiting period. Bait degradation trials were completed during each application to understand how environmental conditions affected baiting outcomes. All unconsumed toxic bait was removed from the treatment area after baiting was completed.

A second camera monitoring phase with two rounds of non-toxic bait was completed over three weeks after the toxic baiting period. This was to take a second measure of feral cat population density after the toxic bait was applied, and to confirm which individuals identified during the pre-toxin phase were deceased. A second possum abundance measure was completed to find out if the bait affected their population.

Rats and possums consumed both non-toxic and toxic bait. No tokoeka or deer were observed consuming either toxic or non-toxic bait.

The bait grid, trail cameras and non-target monitoring devices were removed at the end of the trial in early September. Possum carcasses were installed following the toxic baiting period and the breakdown of these will inform the caution period for the treatment area.

Next steps

- September-December 2023: data analysis and reporting, including identification of individual feral cats on camera footage, feral cat population density modelling, bait efficacy metrics, collation of non-target species interactions with baits, bait degradation and more.

- December 2023-February 2024: publication of peer-reviewed articles arising from findings.
- January - February 2023: VHF tags are removed from tokoeka; carcass monitoring plots are checked to inform caution period.



Figure 1. Feral cat consumes meat bait during trial on Rakiura, winter 2023

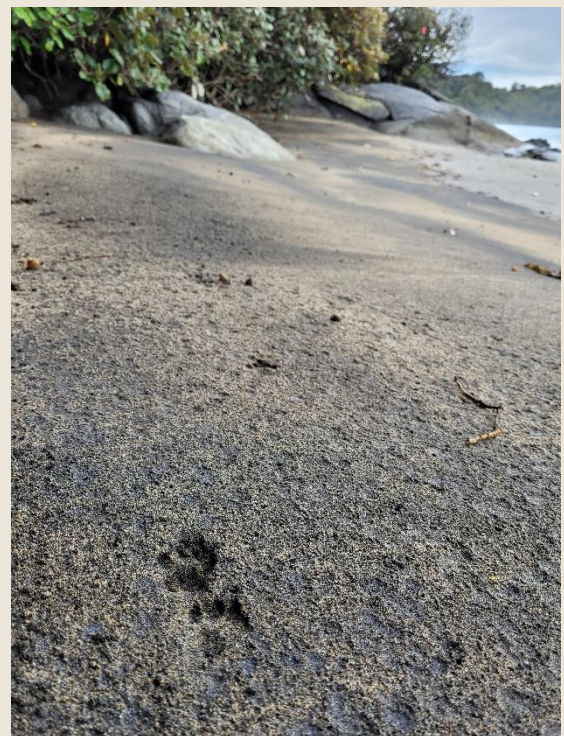
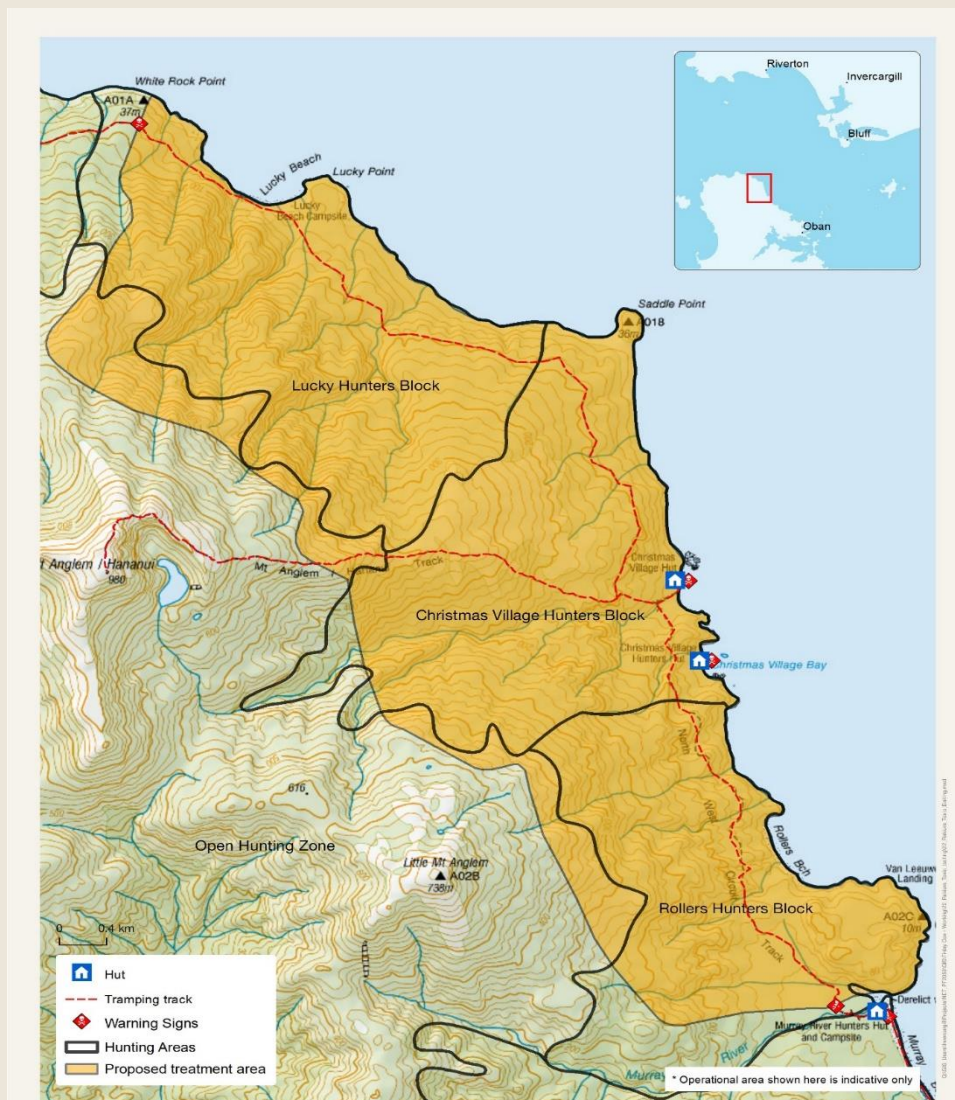


Figure 2. Cat prints on Rollers Beach heading toward a bait point (pink flagging in top right of photo)

Trial site on northeast coast of Rakiura

This map shows the actual area where the cat bait trial was undertaken during July-August 2023. Rollers, Christmas and Lucky hunting blocks are open for use and a caution period remains in place until further notice.



Warning signs indicate that pesticide residues may still remain in baits and carcasses, possibly for more than six months. Always remember:

- DO NOT touch or eat the bait
- WATCH CHILDREN at all times
- DO NOT EAT animals from this area
- Toxic baits and carcasses are DEADLY to DOGS

If you suspect poisoning always contact: Your local doctor or local hospital or the National Poisons Centre: 0800 764 766 or dial 111.

