



Vision

The forests and beaches of Abel Tasman are once again filled with the birdsong that awakens and delights visitors.
 Kia whakaoho te mauri o te Ata-hapara. Kia rongo, Kia Kite, Ki te reo koro tui o Te Tai tapu

Securing the Coast - Predator Control Report – December 2023

By Alistair Sheat

Overview

The **Abel Tasman Birdsong Trust** has objectives:

- ***To preserve native flora and fauna in Abel Tasman National Park.***
- ***To enhance the Abel Tasman National Park and its environs for recreation and enjoyment by residents and visitors now and in the future.***
- ***To generally promote the sustainable management of resources in the Park and its environs***

This is the second report using TrapNZ, (a Geographic Information System), and the first using the Goodnature dashboard.

ATBT manages 1,300 DOC150/200 box traps for mustelid/rat control, 800 Goodnature A24 traps for rat control, and 50 sentinel traps for possum control over an area of approximately 4,000 ha.

ATBT volunteers have trapped a grand total of 560 mustelids and 13,094 rats since October 2010.

What is the trend in rat numbers trapped by ATBT volunteers?

The chart below shows the total rat numbers trapped per month from 1st January 2019 to 30th November 2023.



Rats trapped from 1st January 2023 to 30th November 2023 shows a peak of rats killed in April then dropping but remaining higher than the same period in 2022.

Maps of Rats Trapped 1st January to 30th November 2023

TrapNZ has a couple of ways for showing where rats were trapped. One is a “heat map” for a quick visual, the other shows the actual number of rats trapped per trap box.

For heat maps, the colour changes from blue to bright orange when there is a higher ‘density’ of rats trapped.

Marahau to Onetahuti Bay Heat Maps

There are two sets of heat maps below. The one on the left is for 7 months from May to November 2023, and for comparison the one on the right is for 4 months from January to April 2023. There are similarities and differences between the two heat maps. Both show rats trapped ‘hot spots’ between the Tinline to Yellow Point (the nearest mainland point to Adele Island) with the highest density of rats trapped behind Appletree Bay (red circle) and at the beginning of the Coastal Track near Marahau.

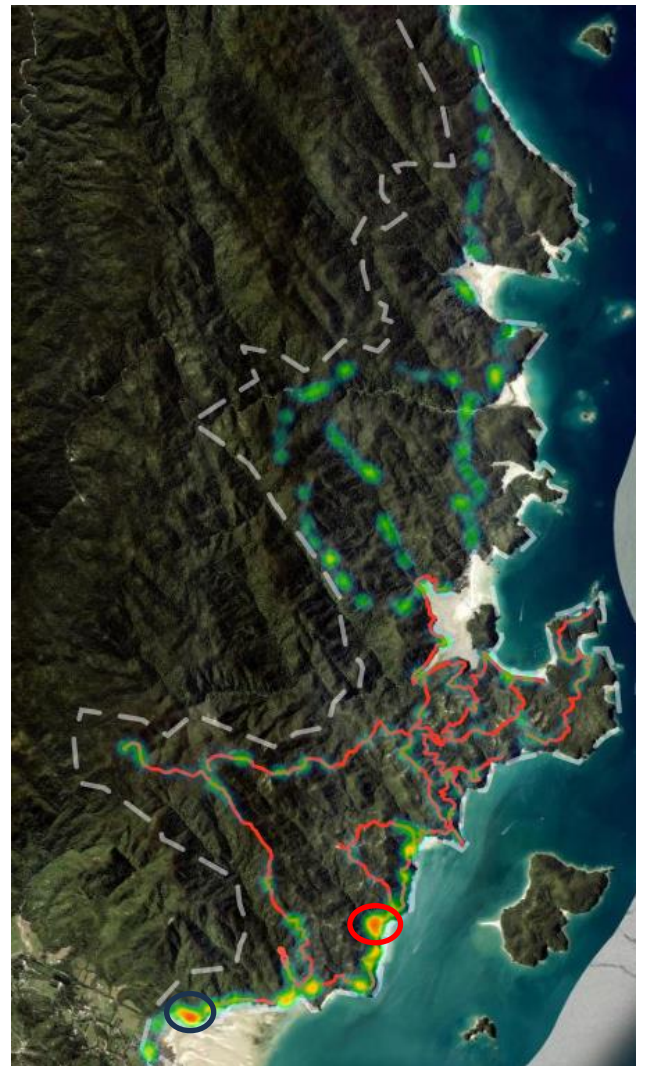
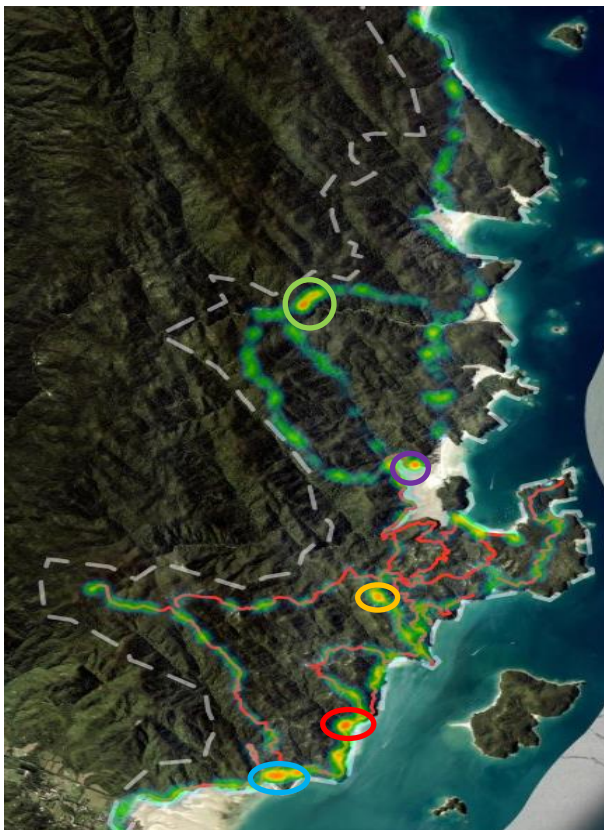
Differences between the two periods include:

- A hotspot at the beginning of the Coastal track (dark blue circle) in the period January to April, but not in the period May to November.
- A hotspot near Tinline (light blue circle) during May to November, but not so much from January to April.
- New hotspots on the trapline up the ridgeline up from yellow point (orange circle); near Torrent Village (purple circle); and on the Falls loop trapline in the May to Nov period (light green).

This indicates rats have location preferences, with clear favourite areas such as behind Appletree Bay.

Rat trapped Hotspots May to November 2023 (below)

Rat trapped Hotspots January to April 2023 (right)



Marahau to Torrent Village – Numbers of Rats Trapped

The following maps show how a heat map translates to the numbers of rats trapped by trap box. The first map from Marahau to Akersten Bay shows the hotspot near Tinline with 4,4,4,4 and 5 rats caught in individual trap boxes near each other (light blue circle) from May to November 2023.

The map also shows 7 rats all caught in the same double set trap A47 in the 4 months May to November 2023 (red circle). Trap A47 caught 4 rats from January to April 2023, making 11 rats in 11 months. A very high performing trap.



The area below from Akersten Bay to Torrent Village shows 2,4, and 3 rats caught in adjacent box traps in the trapline up from Yellow Pt/Akersten (orange circle). This particular trapline called Boundary Ridge is the boundary of the Moncrieff/Pitt Head A24 trapping network so it is good to catch rats at the 'biosecurity border' (green line).

There are some individual trap boxes within the A24 network that had multiple kills in the 4 months perhaps indicating the need to relocate/install extra A24 traps in those areas: 4 rats behind Cyathea; 3 rats up from Observation beach; 3 rats up from Watering Cove; 3,3,4,3, and 4 rats caught along Anchorage beach; and multi-catches (2, 3,3,2,2) along the wetland area of the Pitt Head stoat line.

Near Torrent Village there are some high catch trap boxes (5,4,7) (purple circle).



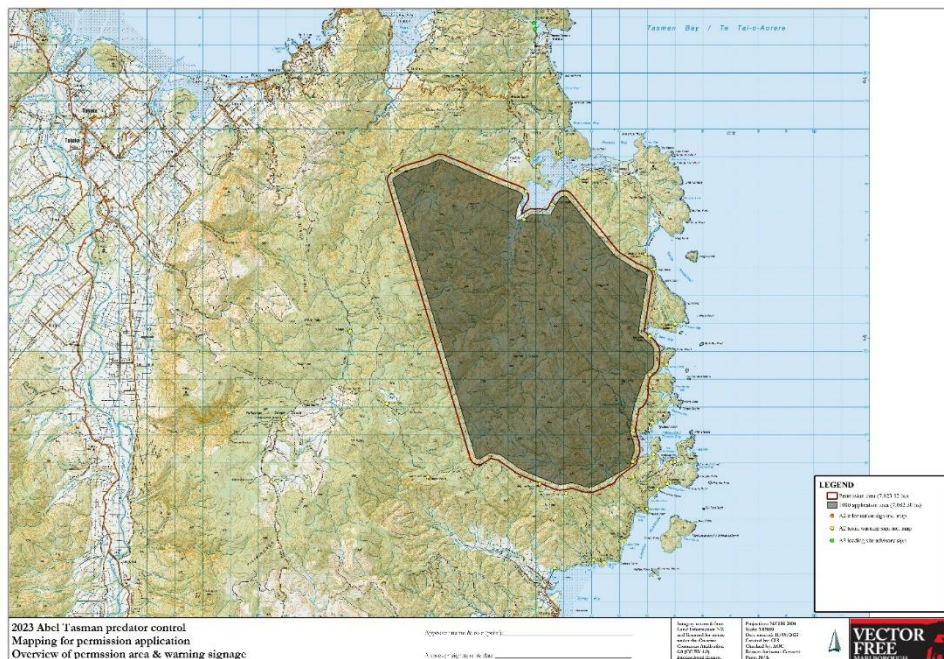
Torrent Village to Onetahuti- Numbers of Rats Trapped

The map below shows the hotspots on the Falls Loop trapline (light green circle) with 5,5,3,5 rats caught in adjacent traps.

An aerial 1080 treatment was conducted in November 2023. The treatment area can be seen in the map below.

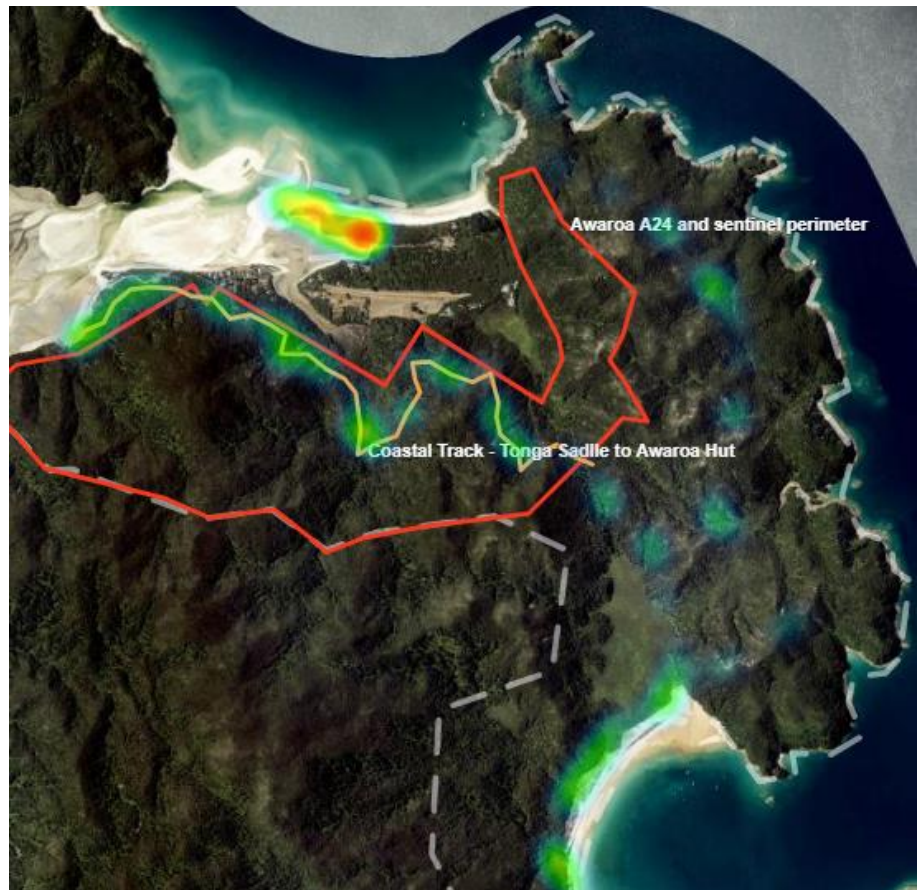
This area will include the Falls Loop trapline with the approximate eastern boundary shown by the red line.

It will be interesting to see the impact on rat catch on the Falls Loop trapline for trap checks after the 1080 operation.



Onetahuti to Awaroa

The heat map shows the highest density of rats caught from May to November 2023 are along the 'people's beach' on the western end of the Awaroa beach. This is a newly installed trapline by Jenny Dicks in June 2022. The rat catch results clearly shows a valuable installation.

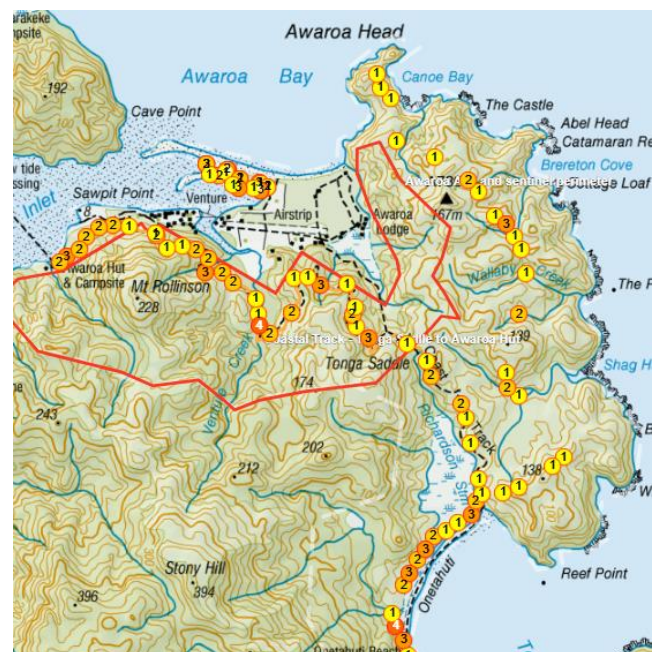


The map opposite shows how the heat map translates to numbers of rats trapped by trap box.

Note: The red polygon indicates the boundary of a possible future Awaroa A24 trap network.

Several traps have had multiple rat catches with 3 or more rats catch over 4 months.

The bottom map shows the detail of the beach traps with several traps getting multiple rat catches in the 4 months.



FTT Monitoring –what is left behind?

Since May 2023, Project Janszoon no longer conducts Footprint Tracking Tunnel (FTT) monitoring in the “Heart of the Park” area from Bark Bay to Moncrieff/Pitt Head. As a result, we no longer have a good standardised rat or mouse monitoring method to analyse the performance of ATBT’s A24 networks, or for comparing A24 networks with other areas in the Abel Tasman such as the area behind Awaroa that currently does not have any rat control, neither A24 nor aerial 1080.

A24 Rat Control

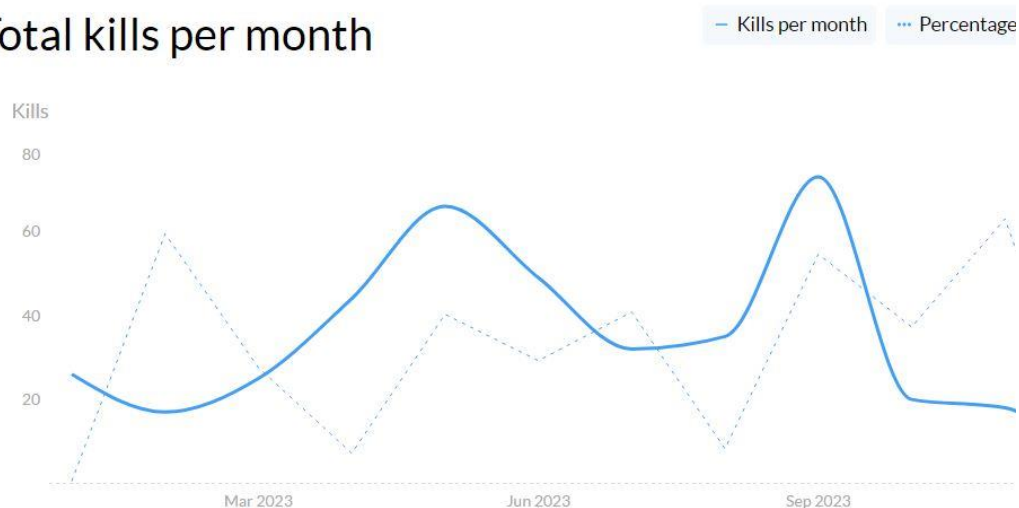
Of the 800 A24 Goodnature traps, 600 are deployed in the Moncrieff/Pitt Head area protecting a project initiative area called the “Moncrieff Sanctuary” (right).

The Moncrieff Sanctuary is a key strategic project for ATBT for the outcome of securing an area for protection of native birdlife, particularly bird species susceptible to rat predation such as South Island robin/toutouwai and tomtit/ngirungiru, and also for protection of re-introduced species such as Kākā and Brown teal/pāteke. There is a new Kākā nest currently in the Sanctuary area.



Of the 600 A24 traps in the Moncrieff Sanctuary, 135 have Chirps that measure the number of kills, and the time and date of those kills. The chart below is from the Goodnature dashboard and shows the kills per month of the 135 A24 traps over the last the months.

Total kills per month



The chart shows a peak of kills in May and September. The May peak is at a similar time to the April peak of rats trapped by box traps.

The Chirps recorded 412 kills over the last 12 months, or average of 3 kills per A24 trap.

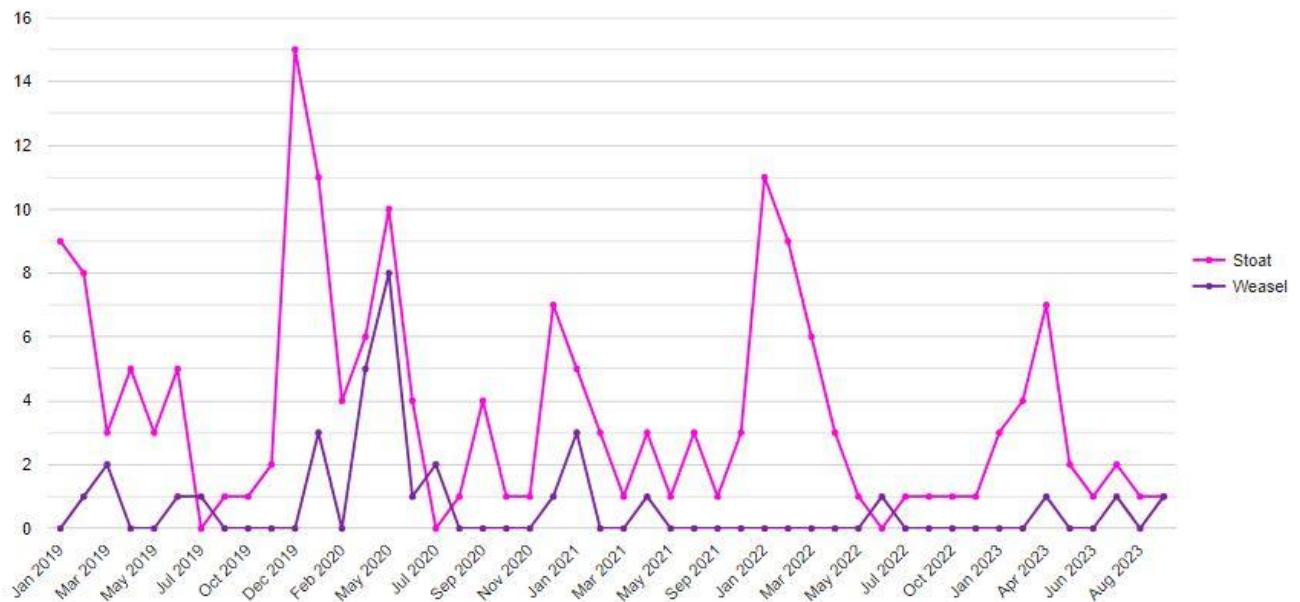
However, the kills per trap varies considerably with the best trap having 22 kills in the previous year. Seven of the 135 A24 traps had greater than 10 kills in the previous year. In comparison, 15 of the A24 traps have had no kills over the last 12 months and are being reviewed for potential relocation to a better habitat for killing rats.

What is the trend in mustelid numbers trapped?

Mustelid (stoats and weasels) numbers trapped from 1st January 2019 to 30th November 2023 shows a peak in stoats trapped in April 2023 that parallels the peak in rats trapped in April 2023.

The stoats trapped for January 2023 are much less than stoats trapped in January 2022 and the beech mast year in 2019.

ATBT total mustelids trapped per month from 1st January 2019 to 30th November 2023.



Where were mustelids trapped?

ATBT mustelids trapped 1st May to 30th November 2023 shows the stoats and weasels trapped are fairly evenly spread from Marahau to Awaroa.

Of note there were no stoats caught in the Moncrieff/Pitt Head A24 network area.

Two stoats were caught behind Appletree Bay that also happens to be a rat catch hotspot.



Outcomes from Rat and Stoat Predator Control

As noted in the A24 section, the desired outcome of ATBT's predator control is securing areas for protection of native birdlife that residents and visitors can enjoy now and in the future. Particularly bird species susceptible to rat predation such as South Island robin/toutouwai and tomtit/ngirungiru.

Below are images from the Moncrieff Sanctuary of a tomtit/ngirungiru recorded on a trail camera on the site of A24 CA7, a South Island robin/Toutouwai near an A24 trap line above Observation stream (photo by Biff Kitson), and a pair of robins near A24 trap site ABR15 near a stream that runs into the Torrent lagoon.



DOC150 and DOC200 box traps aim to control stoats that prey on larger re-introduced species such as Kākā, Brown teal/pāteke (photo by Craig Martin), and blue duck/whio (photo by Ron Moorhouse).



Volunteer Photographs from the Park

Don and Beryce have taken these photos of the small and beautiful:

Orchid *Caladenia Nothofageti*

Epiphytic orchid, *Dryomanthus Flavus*



Appendix 1: Securing the Coast

The theme of “Securing the Coast” is because the predator control work of ATBT volunteers is predominantly along the coast. The coast is where most visitors to Park experience the birdsong and where most of the tourism businesses operate.

Importantly, new research has indicated that predators breed up their numbers in the lower coastal areas before invading the centre and high altitudes of the Park. It is in these higher altitudes of the Park where rat sensitive species such as South Island robin/toutouwai stand a better chance of recovery.



Acknowledgements

A special thanks to all the Birdsong Trust volunteers for giving their time checking traps (and acting as impromptu visitor advisers and promoters of Birdsong Trust work).

Thanks to Peter Minchin for adding trapping data to the database for CT and Awaroa trap lines.

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Jim Livingstone, Chris Golding, and Josh Preston (DOC partners and advisers).

Bruce Vander Lee and team (Project Janszoon (PJ) partners and advisers)

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Abel Tasman Kayaks who host the Marahau gear shed, managed by Alistair Sheat

Bruce Reid who hosts the Motueka gear shed, managed by Pete Lucas

Tourism concessionaires whose levy component contributes to the funding of Abel Tasman Birdsong Trust operations.

Sponsors and donors for their contributions.

Pic Picot and Pics Peanut Butter for peanut butter for A24 trap lures.

Goodnature for providing advice and support for our A24 networks, and their special “Cahoot” initiative that offers a second Goodnature Trap for every one purchased for our conservation projects.

Finally, to all the Park visitors who show interest and support for all the work of the Abel Tasman Birdsong Trust. A special thanks to those that catch water taxis into the Park and contribute part of their taxi fare to ATBT’s conservation efforts.