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

Trapping Report - Dec 2019 by Alistair Sheat

Overview

The **Abel Tasman Birdsong Trust** has objectives "***to preserve native flora and fauna in Abel Tasman National Park***" and "***to enhance the Abel Tasman National Park and its environs for recreation and enjoyment by residents and visitors now and in the future***". The Parks native birdlife is preserved in part by trapping predators (mustelids and rats). Traps are checked by Abel Tasman Birdsong Trust volunteers twice per month. The results from trap checking are recorded and entered into the DOC "Animal Pests – Trapping" internet-based application that allows systematic recording of trapping results, data analysis and reporting of rats and mustelids (stoats or weasels) trapped by volunteers.

A total of 150 mustelids and 3,894 rats have been trapped by Abel Tasman Birdsong Trust volunteers since August 2015 when records first were stored in the database. Historic records show that between October 2010 and August 2015, 158 mustelids and 2156 rats were trapped, making a **grand total of 308 mustelids and 6,050 rats trapped since October 2010.**

August 2019 to December 2019 Trapping Results

Trapping results for the **five** months of August to December 2019 (table 1) show **17** mustelids and **790** rats were trapped. This compares with 7 mustelids and 916 rats trapped in **three** months May to July 2019.

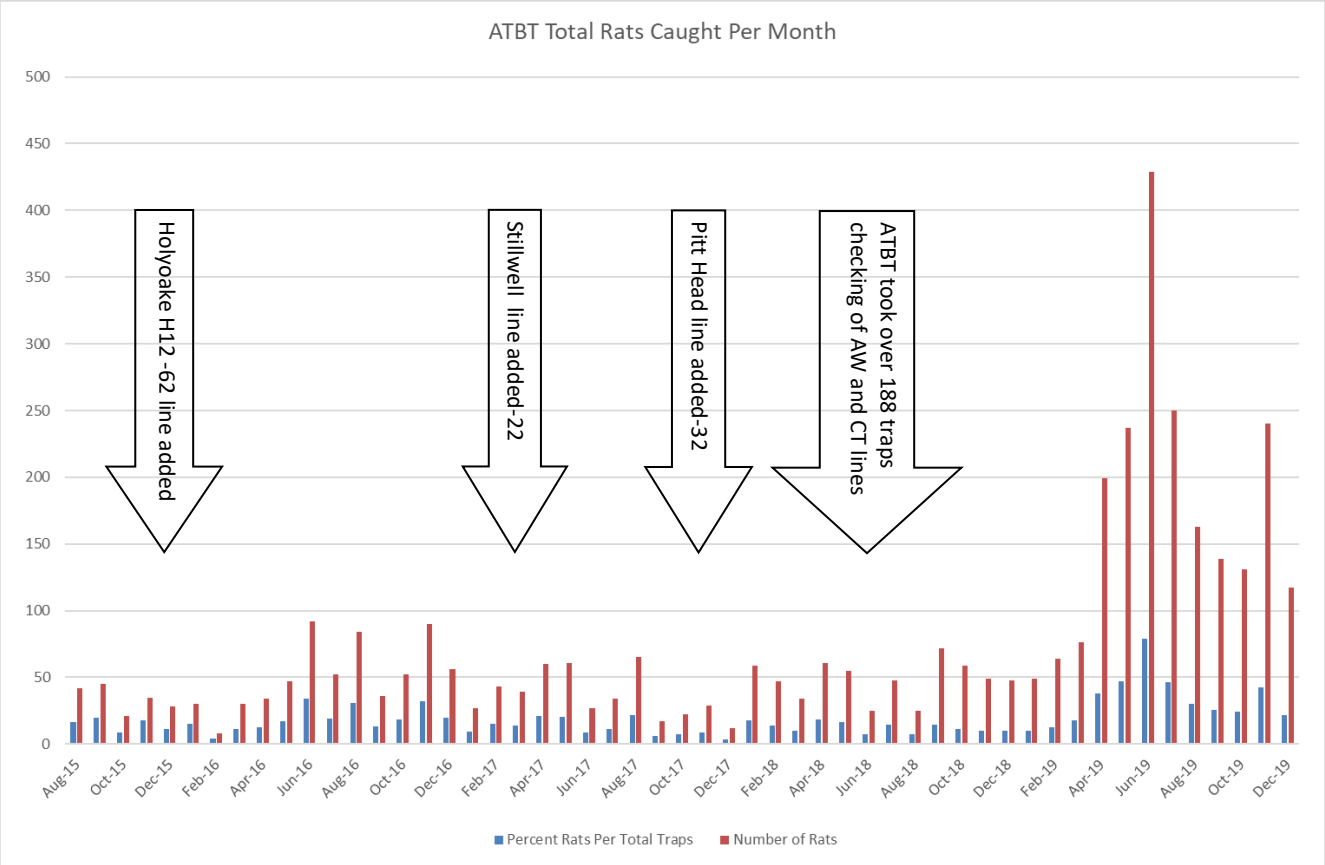
Table 1: Mustelids and rats trapped for August to December 2019

Line	Mustelids	Rats		Average Percent Rats Per Month Per Total Trap boxes	No of Trap Boxes on Line
A	2	207		29	145
B	0	23		12	39
C	0	26		23	23
H31/1 to H31/12	3	12		20	12
H1 to H62	4	104		34	62
Marahau	2	24		44	11
Stilwell	0	18		20	22
Tinline	1	13		33	8
Pitt Head	1	23		14	32
Awaroa Head	2	55		26	42
Coastal Track 1	0	95		51	37
Coastal Track 2	0	36		20	36
Coastal Track 3	2	68		41	33
Coastal Track 4	0	79		40	40
Lines Combined	17	790		29	542

Note: The rats and mustelids noted as trapped are from checking traps twice during the month, except for Stillwell, Pitt Head, and Awaroa lines that are checked monthly.

Question 1: What is the trend in rat numbers trapped by ATBT volunteers?

Chart 1 below shows the monthly % rats trapped per total trap boxes (blue line) and rat numbers trapped per month (red line) since August 2015.



The chart shows a continued decrease in rats trapped from August to December, except for an increase in rats trapped in November. The previous increase in rats trapped was due to a beech mast. Most trap lines exhibited a spike in rats trapped in November, particularly Pitt Head that went from 1 rat trapped in October to 19 rats trapped in November. It is unclear what caused the spike in rats trapped in November. Possibly a heavy rainfall event which has been known to increase the rat trapping rate[1].

Trap checking additions since August 2015

The increase in the number of rats trapped, particularly since December 2015 and June 2019, would be in part due to more trap boxes in operation and being checked by ATBT as in the table below.

Date	Location	Number of Boxes	Trap type
Pre Dec 2015	A, B, C, H	211	Single set DOC150, H1-11 double set DOC150
December 2015	H12 to H62	51	Double set DOC150
March 2016	H31/1 to H31/12	12	Double set DOC150
October 2016	B32 to B39	8	Single set DOC150
May 2017	SW1 to SW22	22	11 run through double set and 11 ZIP double set
Nov 2017	PH1 to PH32	32	Double set DOC150 Pitt Head stoat line
May 2019	A128 to A145	18	Double set DOC150 Torrent River to village
May 2019	AW	42	Double set DOC200 Awaroa Head line
June/July 2019	CT1, CT2, CT3, CT4	37,36,33,40	Double set DOC150 Coastal Track

[1] Using passive detection devices to monitor occupancy of ship rats (*Rattus rattus*) in New Zealand temperate rainforest; Christie J et al; *New Zealand Journal of Ecology* (2015) 39(1)

Grand total traps		**542**	

New double set trap box replacement of old single set trap boxes

Allan Barker is building new double set trap boxes over the next few years that will replace old single set trap boxes that increasingly require regular maintenance. To date 55 new double set trap boxes have been built and deployed from A1 to A55.

The initial trap boxes were wheel barrowed in and deployed between A1 and 19. Michelle and Regan Bridge (picture below) have been helping distribute and position the new trap boxes from A19 onwards. DOC have been boating in batches of new trap boxes into Tineline and Apple Tree Bay, and taking out old trap boxes.

ZIP double set trap boxes along the boundary of the Moncrieff A24 network

ZIP (Zero Invasive Predators NZ) have donated surplus double set DOC 200 box traps to the Abel Tasman Birdsong Trust.

Twenty-five of these trap boxes were helicoptered onto the ridgeline that runs between Yellow Point and Holyoake line (HO61). See blue line on Map 4 below. Most of these traps have been deployed along this ridgeline. New volunteer, Russel Trotter has been helping distribute traps from the helicopter drop.

Question 2: Where were rats trapped in August 2019 to December 2019?

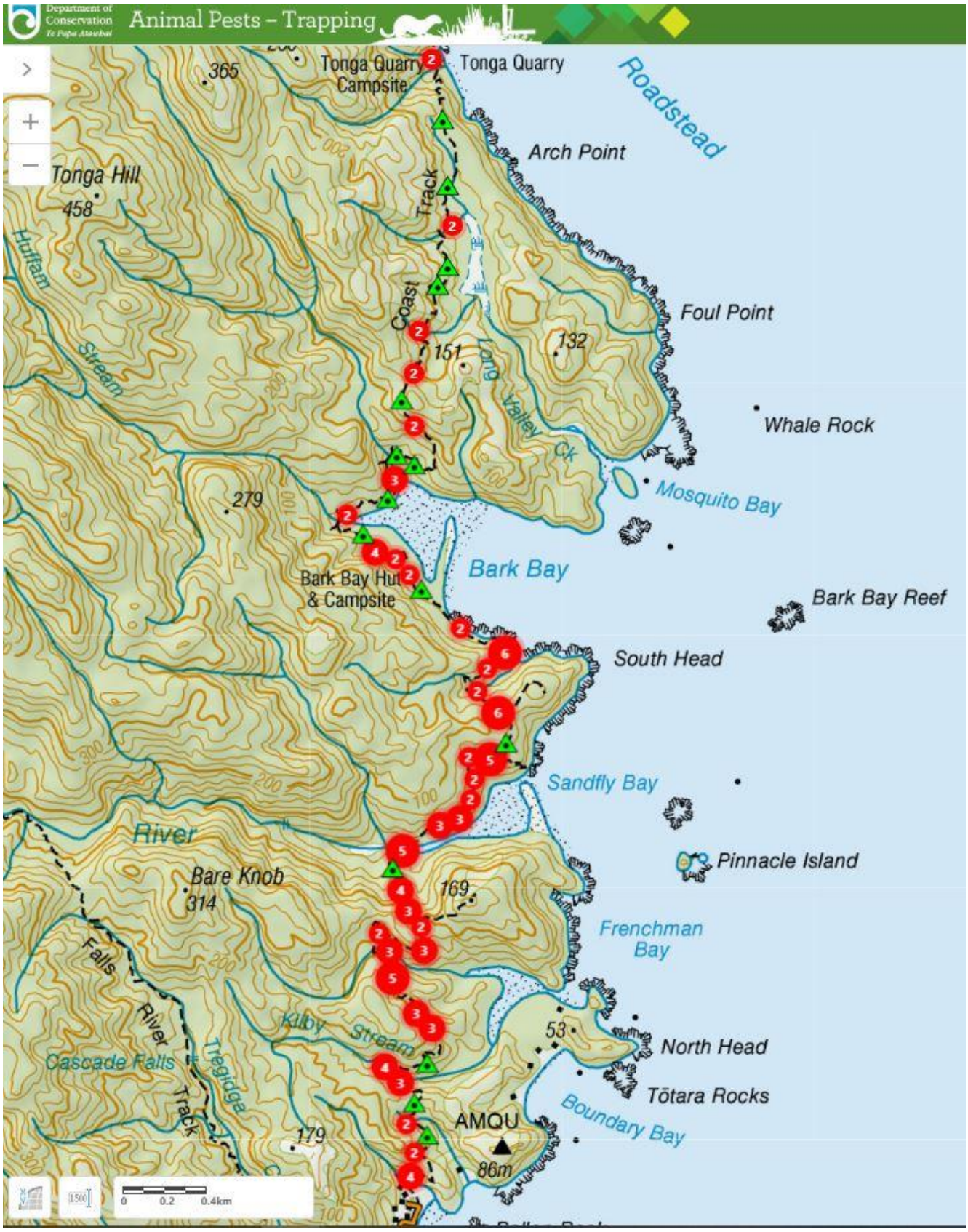
The map below shows the "density" clusters of rats trapped over the three months August 2019 to December 2019. Numbers in red circles represent clusters of rats trapped in adjacent traps. The higher the number in a red circle the higher the "density" of rats trapped.

Map 1: Rats trapped August 2019 to December 2019

The cluster map shows in the last five months the highest density of rats trapped are near the beginning of the Coastal Track (19); near Tinline (21, 21); Cyathea Cove (25,27); near Torrent Village (20); South Head (18); and North Head/Frechman Bay (21).

Map 2: Detail of the rat trapping densities from Awaroa to Tonga are shown below. The higher the number in the red circle the higher the density of rats trapped. Green triangles indicate only one rat trapped in a trap.

The map above shows high densities of rats trapped are Onetahuti (5, 5); Tonga saddle (6); above Awaroa airstrip (5, 6) and Awaroa Hut (5).Map 3: Detail of the rat trapping densities from Torrent village to Tonga are shown below. The higher the number in the red circle the higher the density of rats trapped.



The map above shows high densities of rats trapped were near Frenchman Bay (5); Sandfly Bay (5); and South Head (5, 6, 6).

Map 4: Detail of the rats trapped densities between Torrent village and Marahau shown below. The higher the number in the red circle the high the density of rats trapped.

The map shows high densities of rats trapped were near Torrent village (8); Cyathea Cove (7, 7); Apple Tree Bay (8, 11); Tinline (8, 8, 7); and the beginning of the Coastal Track (8).

A concern is some of the highest densities of rats trapped are within the Moncrieff A24 network near Cyathea Cove. Hence current work on assessing A24s using strike counters, “Chirp” strike counters, and trail cameras.

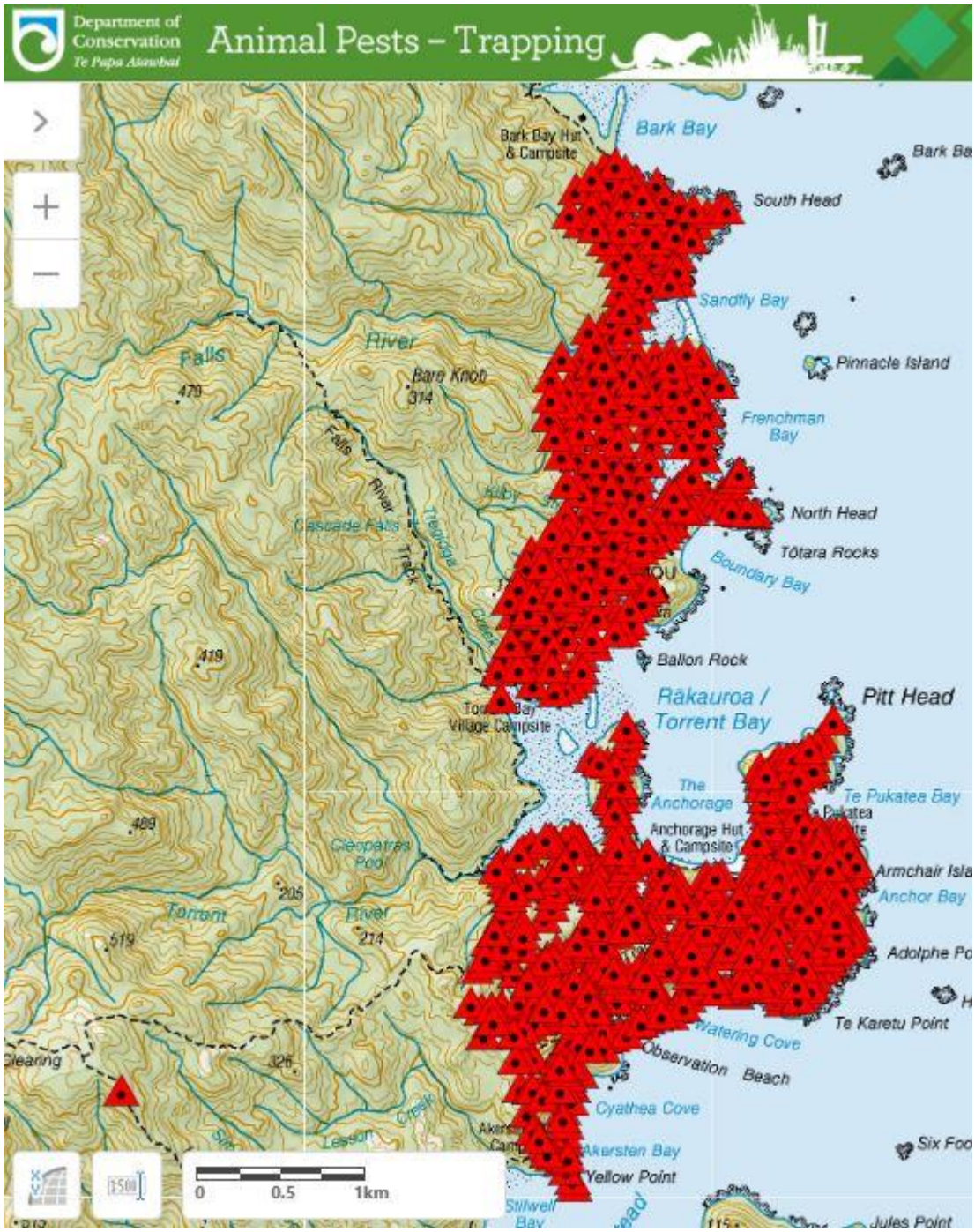
Pitt Head and Torrent Bay A24 Trapping

Abel Tasman Birdsong Trust received a Lotteries Grant called “Heart of the Park” for extending the current A24 trapping network in the Falls River and Moncrieff Reserve areas. This will help both birdlife in the area and reduce the risk of predators crossing the Astrolabe and invading Adele Island.

A total of 650 Goodnature A24 self-resetting traps are now in operation across Pitt Head, Torrent Bay, Falls River and Moncrieff Reserve/Cyathea areas (see map below). This is following the additional 205 A24 traps installed in the Falls River area and a further 120 A24 traps installed in the Moncrieff Reserve/Cyathea area.

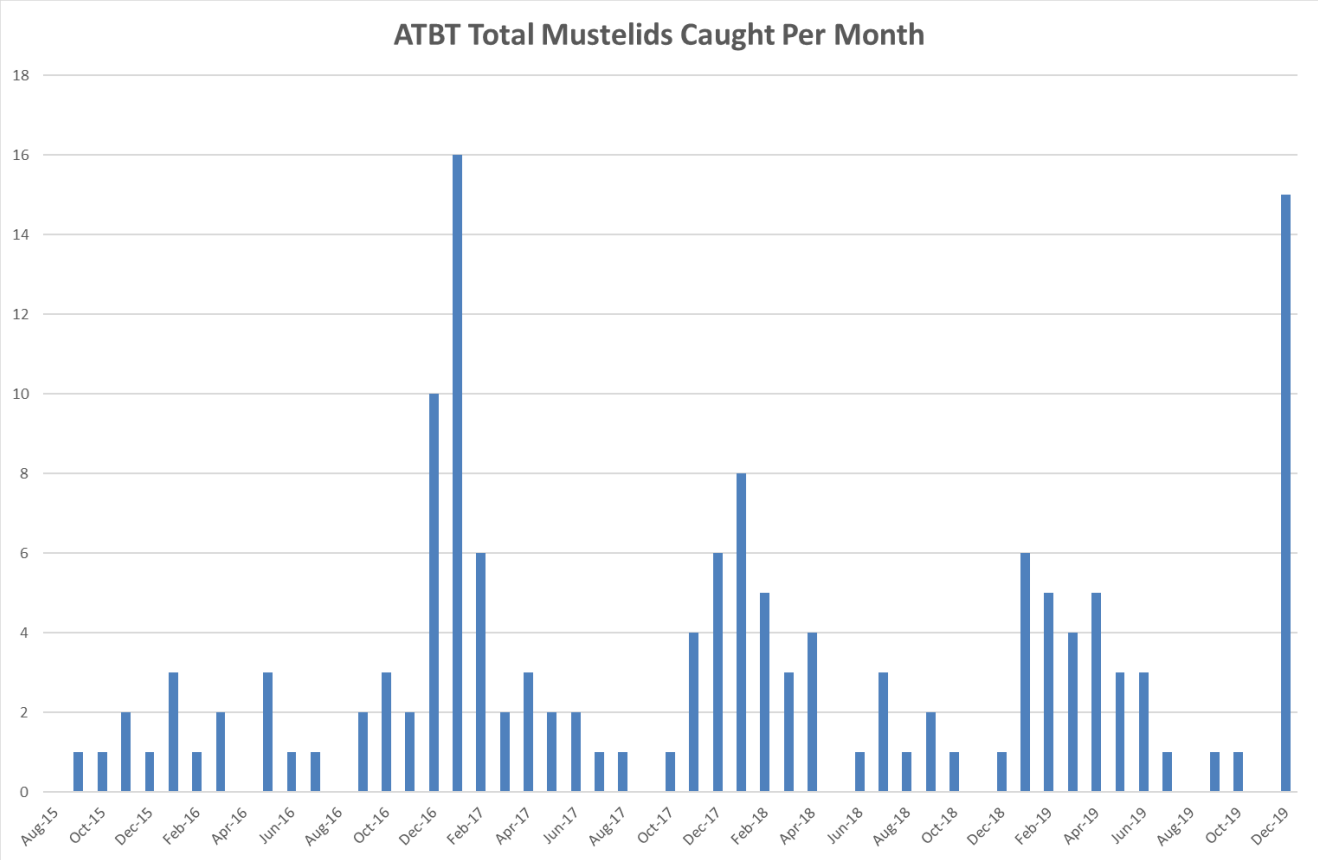
Currently the performance of the Moncrieff A24 network is being assessed using strike counters, “Chirp” strike counters, and trail cameras.

Map 5: Area covered ATBT A24 trapping network



Question 3: What is the trend in mustelid numbers trapped?

Chart 2: ATBT total mustelids trapped per month from August 2015.



Mustelid numbers trapped show a similar pattern compared to 2016 and 2017, except the number of mustelids trapped shows a significant increase for December 2019 when compared with previous years.

Question 2: Where were mustelids trapped?

Map 8: ATBT mustelids trapped August to December 2019

Mustelids (stoats and weasels) were mainly trapped on Marahau line (2); Holyoake line (6); near Pitt Head (3); and north Onetahuti (2).

Acknowledgements

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

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Michelle and Regan Bridge for helping distribute and position the new trap boxes from A19 onwards.

Bill Franklin DOC Marahau for boating in batches of new trap boxes into Tineline and Apple Tree Bay

Finally, to all the Park visitors who show interest and support for all the work of the Abel Tasman Birdsong Trust.