

Bat Surveying in Taranaki 2017-18 Report



Native Birds Taranaki

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Cover picture by Dave Bell: Pond in pines at John Walter's property, Pohokura Saddle, Taranaki.
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1. Introduction

New Zealand bats use a form of sonar known as echolocation to navigate, orientate and forage. The frequency of bat echolocation calls is generally much higher than humans can hear (ultrasonic). Bat detectors can be used to listen to these calls, and are useful tools to unobtrusively survey, monitor and identify bat species (Sedgely, 2008).

Following acquisition of Automatic Bat Monitors (ABM's) in 2012, a project surveying for these rare and endangered species has been undertaken in Taranaki and this report details the activities and results for the sixth (2017-18) season.

Bats are New Zealand's only endemic terrestrial mammal but are under significant threat from not only introduced predators but also by competition from numerous introduced species for food.

2. New Zealand Bats

Three bat species, all of which are endemic, are known from New Zealand, the lesser short-tailed bat (*Mystacina tuberculata*), greater short-tailed bat (*M. robusta*) and long-tailed bat (*Chalinolobus tuberculatus*) (O'Donnell et al 2013). Greater short-tailed bats are very likely now extinct.

The long-tailed bat has been recorded widely throughout the North Island, whilst the 'Central' lesser short-tailed bat is present in forests of the central North Island and has been recorded from northern Taranaki (O'Donnell et al 2010).

Under the recently updated New Zealand Threat Classification System, the long-tailed bat (LTB) is classed as Threatened – Nationally Critical whilst the 'Central' lesser short-tailed bat (STB) is regarded as At Risk – Declining (O'Donnell et al 2017).

3. Surveying during Previous Seasons

Surveying for bats in Taranaki commenced in the 2012-13 summer season, by concentrating in the Waitaanga area in northern Taranaki. Results (Bell, 2013) indicated both STB and LTB were still present at sites for where surveying and a population study was undertaken in 1998/99.

The 2013-14 season concentrated in ascertaining the presence of bats in Northern and North-eastern locations in Taranaki. But the opportunity was also taken, to return to Waitaanga and to Mt Damper to again monitor the continual presence of both LTB and STB. Results (Bell, 2014) were very pleasing and in keeping with those obtained during the 2012-13 season.

Surveying for the 2014-15 season was focused in Egmont National Park to determine if bats were present. Both LTB and suspected STB passes were recorded from within the National Park and results (Bell, 2015) confirm the existence of Long-tailed bats but the presence of Short-tailed bats must remain unconfirmed.

During the 2015-16 season surveying for bats was again mainly undertaken in northern Taranaki but two surveys inland from Hawera and Waverley were also successfully completed with pleasing results (Bell, 2016).

The 2016-17 season provided some outstanding results from both Waitaanga North and Waitaanga South Roads at Waitaanga and from Moeawatea in South Taranaki but disappointing results from Rotokare Scenic Reserve and a total nil result for bat passes for a survey in Egmont NP (Bell, 2017).

4. Surveying for 2017-18 Season

Again, only six surveys were completed during the 2017-18 season, with much time taken up with preparation for and conducting of the 5th NZ Bat Conference that was held in Eltham, South Taranaki from 27 Feb to 1 Mar 2018.

Surveys were concentrated mainly in eastern Taranaki at Pohokura, Pohokura Saddle and at Puniwhakau. Following information provided via DOC Taranaki of a bat found in a house at Pohokura (and subsequently caught and released) by Chris Carrick in April 2017, an initial survey was undertaken along Arnold Road, Pohokura with pleasing results.

Additional surveys were then completed at Pohokura Saddle, on Scott and Lynda Sutherlands' and John Walter's properties with great results, then at along Puniwhakau Road, including Wayne's property, again with valuable results.

Two further surveys were undertaken along Waitaanga Road, to the east and to the west of Waitaanga, with both long-tailed and short-tailed bats being recorded on specific detectors.

5. Results of Surveying for 2017-18 Season

During the 580 nights of surveying, a total of 7,696 bat passes were recorded, 7,617 for long-tailed bats and 79 for short-tailed bats. A detailed summary of these results is shown at Annex A, a copy of all this data has been forwarded for inclusion in the DOC National Bat Database.

A map illustrating the results for 2017-2018 is at Annex B, whilst an additional map displaying the results for all six seasons is at Annex C.

6. Discussion

Though only a small number of surveys were completed there were some highlights and valuable results obtained, these are now briefly discussed as follows:

6.1 Survey 48 – Arnold Road Pohokura

The first survey for the season was undertaken along Arnold Road at Pohokura, where there had been a report of a bat in a house. This produced good results (see Annex A) The eastern side of the road is extensively exotic pine forest, including Te Wera Forest where bats have been seen in the past.

6.2 Survey 49 – Pohokura Saddle

A survey was then completed on Scott and Lynda Sutherland's and neighbour John Walter's properties at Pohokura Saddle, with all ten detectors recording long-tailed bat passes. Especially pleasing were the results (591 passes) at the pond (see cover) in the pines on John Walter's property.

6.3 Survey 50 – Puniwhakau Road

Only seven suitable sites were used along Puniwhakau Road, again with extensive areas of exotic pine plantations on both sides of the road. Long-tailed bat passes were recorded at all seven sites, which provide for valuable additional information on their distribution within Taranaki.

6.4 Surveys 51 and 52 – Waitaanga Road

Two further surveys were undertaken along Waitaanga Road with a total of nineteen sites used, ten east of Waitaanga and nine to the west. These sites had previously been surveyed during the 2012-13 and 2013-14 seasons. Long-tailed bats passes were picked up on all but one of the 19 sites whilst nine of the sites also detected short-tailed bats but not in large numbers.

7. Conclusion

Though only a small number of surveys were completed during the 2017-18 season, valuable results on the continual presence of both LTB and STB bats in Taranaki were achieved. In addition, important bat records were obtained for new areas in eastern Taranaki at Pohokura and Puniwhakau.

8. Acknowledgments

A project like this could not be undertaken nor successfully completed without the assistance from a number of people and acknowledgement is given to the following with much appreciation to;

Chris Carrick for reporting his encounter with a bat in his house at Pohokura.

Scott and Lynda Sutherland for their hospitality and permission to survey on their property at Pohokura Saddle and for access to neighbour John Walter's property.

Wayne at Puniwhakau for his hospitality and permission to survey on his land.

Jane Hart for editorial assistance.

9. References

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Annex A to
Bat Surveying in Taranaki
2017-18 Report

Results from Bat Surveying in Taranaki 2017-2018

Note: that all these results have been forwarded to the Department of Conservation for inclusion in the National Bat Database.

Survey No	Det No	Location				Total No Nights	Bat Passes		
		Eastings	Northings	Description	Site		STB	LTB	Total
48	2	1744635	5660312	Arnold Road Pohokura	Road	11		119	119
	3	1744751	5660557	Arnold Road Pohokura	Road	11		155	155
	4	1744675	5660749	Arnold Road Pohokura	Road	11		104	104
	1	1744568	5660767	Arnold Road Pohokura	Stream	11		17	17
	5	1744621	5660995	Arnold Road Pohokura	Road	11		556	556
	7	1744676	5661327	Arnold Road Pohokura	Road	11		317	317
	6	1744698	5661356	Arnold Road Pohokura	Road	11		313	313
	8	1744766	5661619	Arnold Road Pohokura	Road	11		69	69
	9	1744589	5662642	Arnold Road Pohokura	Road	11		95	95
	10	1741139	5662688	S & L Sutherland Pohokura Saddle	Residence	11		12	12
49	1	1741219	5662495	S & L Sutherland Pohokura Saddle	ATV	10		30	30
	2	1741238	5662317	S & L Sutherland Pohokura Saddle	ATV	10		27	27
	3	1741299	5662361	S & L Sutherland Pohokura Saddle	ATV	10		76	76
	4	1741430	5662283	S & L Sutherland Pohokura Saddle	ATV	10		108	108
	5	1741516	5662202	S & L Sutherland Pohokura Saddle	ATV	10		265	265
	6	1741635	5662546	John Walter Pohokura Saddle	ATV	10		77	77
	7	1741611	5662623	John Walter Pohokura Saddle	ATV	10		84	84

	8	1741558	5662709	John Walter Pohokura Saddle	Pond	10		591	591
	9	1741599	5662758	John Walter Pohokura Saddle	ATV	10		92	92
	10	1741387	5662946	John Walter Pohokura Saddle	ATV	10		229	229
50	1	1748121	5645856	Wayne's Place Puniwhakau	ATV	10		78	78
	2	1746855	5646437	Puniwhakau Road Puniwhakau	Road	10		60	60
	3	1746039	5646035	Puniwhakau Road Puniwhakau	Road	10		142	142
	4	1744402	5646114	Puniwhakau Road Puniwhakau	Road	10		189	189
	5	1743329	5646344	Puniwhakau Road Puniwhakau	Road	10		198	198
	6	1742536	5645798	Puniwhakau Road Puniwhakau	Road	10		252	252
	7	1741204	5645698	Puniwhakau Road Puniwhakau	Road	10		23	23
51	1	1762451	5699785	Waitaanga Road Waitaanga	Road	10		693	693
	2	1762992	5700327	Waitaanga Road Waitaanga	Road	10	19	83	102
	3	1764093	5699547	Waitaanga Road Waitaanga	Road	10	15	89	104
	4	1764965	5699304	Waitaanga Road Waitaanga	Road	10		88	88
	5	1765613	5698367	Waitaanga Road Waitaanga	Road	10	3	485	488
	6	1766041	5697845	Waitaanga Road Waitaanga	Road	10	15	324	339
	7	1766869	5697420	Waitaanga Road Waitaanga	Road	10	7	366	373
	8	1767178	5697704	Waitaanga Road Waitaanga	Road	10	1	124	125
	9	1767343	5697898	Waitaanga Road Waitaanga	Road	10	14	173	187
	10	1760651	5700003	Blue Cumberworth's Waitaanga	Bush	10		671	671
52	1	1755832	5697920	Waitaanga Road Kotare	Road	10	3	41	44
	2	1755282	5697906	Waitaanga Road Kotare	Road	10	2	33	35
	3	1754710	5698051	Waitaanga Road Kotare	Track	10		73	73
	4	1754275	5697180	Waitaanga Road Kotare	Road	10		48	48
	5	1753556	5697318	Waitaanga Road Kotare	Road	10		3	3
	6	1752361	5697289	Waitaanga Road Kotare	Road	10		0	0
	7	1750765	5697622	Waitaanga Road Kotare	Road	10		2	2
	8	1750067	5697294	Waitaanga Road Kotare	Clearing	10		1	1
	9	1749519	5696161	Waitaanga Road Kotare	Road	10		7	7

53	1	1721258	5631866	Rotokare SR	Track	11		6	6
	2	1721629	5631907	Rotokare SR	Track	11		0	0
	3	1721551	5631892	Rotokare SR	Track	11		1	1
	4	1721504	5631865	Rotokare SR	Track	11		0	0
	5	1721010	5631793	Rotokare SR	Track	11		6	6
	6	1721010	5631846	Rotokare SR	Track	11		0	0
	7	1723866	5633351	The Totaras Aorere Road Mangamingi	ATV	11		7	7
	8	1723554	5633285	The Totaras Aorere Road Mangamingi	ATV	11		7	7
	9	1723509	5633135	The Totaras Aorere Road Mangamingi	ATV	11		0	0
	10	1723819	5632907	The Totaras Aorere Road Mangamingi	ATV	11		8	8
Totals =						580	79	7617	7696

Site Description:

Road – Formed public road sealed or metal surface

Farmland – Bush edge and surrounding farmland

Bush – no formed/unformed access way

Pond – Small farm dammed waterway

4x4 - Unformed non-public road requiring 4 wheel drive

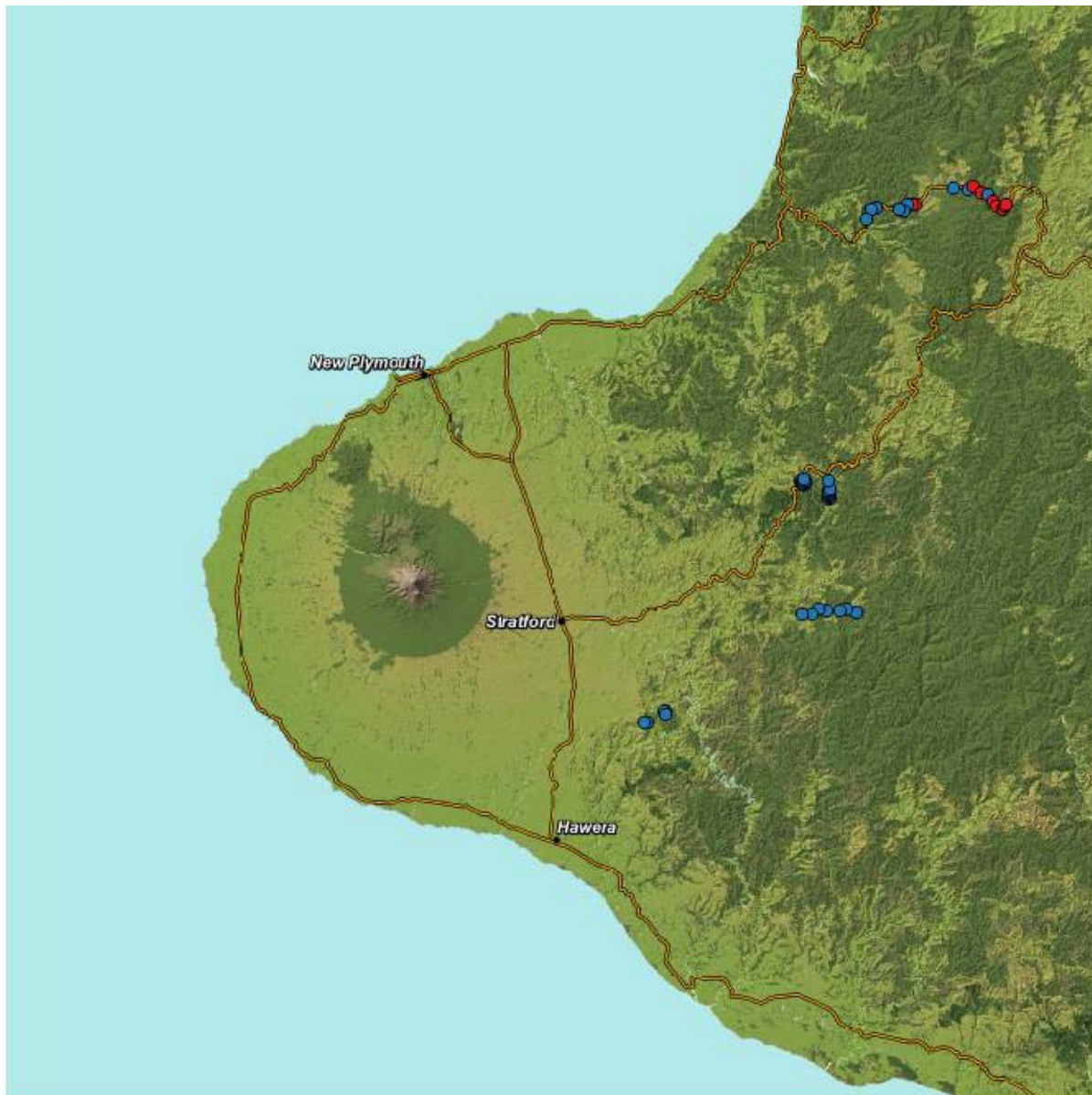
Track – formed walking track

Clearing – bush clearing, often forestry skid site

ATV - Track requiring ATV bike, often forestry/bench tracks

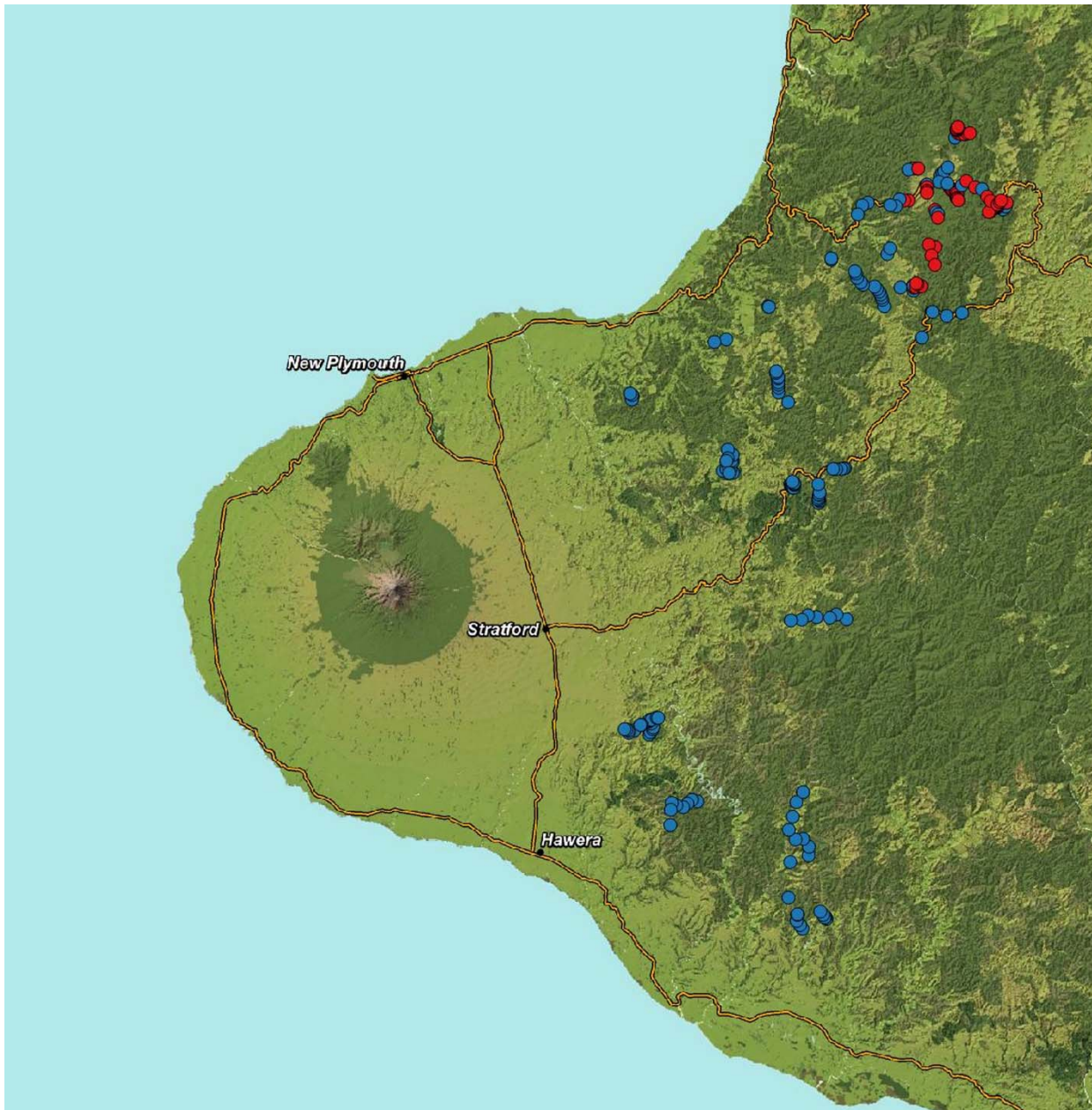
Pines – Small exotic pine plantation

Taranaki Bat Survey Results 2017-2018



- Key to Symbols:**
- - Long-tailed bat
 - - Both Long-tailed and Short-tailed bats

Taranaki Bat Survey Results – All Seasons



- Key to Symbols:**
- - Long-tailed bat
 - - Both Long-tailed and Short-tailed bats