

Bat Surveying in Taranaki 2016-17 Report



Native Birds Taranaki

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Dave Bell

Cover picture by Dave Bell: Pond at Old Waitaanga School, Waitaanga, Taranaki.
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9 Spencer Place
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www.nzfalcon.org.nz or nativebirds@xtra.co.nz



Contents

Contents	i
1. Introduction	1
2. New Zealand Bats	1
3. Surveying during Previous Seasons	1
4. Surveying for 2016-17 Season	2
5. Results of Surveying for 2016-17 Season	2
6. Discussion	2
6.1 Survey 42 – Waitaanga	2
6.2 Survey 44 – Moeawatea	3
6.3 Survey 47 – Egmont National Park	3
7. Conclusion	3
8. Acknowledgements	3
9. References	4
Annexes:	
A. Results from Bat Surveying in Taranaki 2016-2017	A1
B. Taranaki Bat Survey Results 2016-2017	B1
C. Taranaki Bat Survey Results – All Seasons	C1

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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 are 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 (Sedgeley, 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 fifth (2016-17) 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 considered to be very likely now extinct.

The long-tailed bat 'North Island' 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 New Zealand Threat Classification System, the long-tailed bat (LTB) 'North Island' is classed as Threatened – Nationally Vulnerable whilst the 'Central' lesser short-tailed bat (STB) is regarded as At Risk – Declining (O'Donnell et al 2013).

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).

4. Surveying for 2016-17 Season

Unfortunately, only six surveys were completed during the 2016-17 season, with inclement weather playing a major factor in 2016 as well as the time taken, ultimately unsuccessfully in attempting to gain access to survey in Te Wera Forest in eastern Taranaki.

This season two surveys were undertaken at Rotokare Scenic Reserve plus a third completed at Tim and Sue Hardwick-Smith's neighbouring land, The Totaras. Details on these surveys have been the subject of a separate report (Bell, 2017).

5. Results of Surveying for 2016-17 Season

During the 590 nights of surveying, a total of 4,309 bat passes were recorded, 4,277 for long-tailed bats and 32 for short-tailed bats. A detailed summary of these results is shown at Annex A, a copy of this data has been forwarded for inclusion in the Department of Conservation National Bat Database.

A map illustrating the results for 2016-2017 is at Annex B, whilst an additional map displaying the results for all five 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 42 – Waitaanga

Particularly pleasing results were achieved from surveying both Waitaanga North and Waitaanga South Roads and from the pond at the old Waitaanga School. Especially outstanding was Site 4 on Waitaanga North Road with 975 LTB passes recorded

during the ten nights of surveying. Also, the recording of 32 STB passes at the southern end of Waitaanga South Road, was a very satisfying result.

6.2 Survey 44 – Moeawatea

Surveying inland from Waverley, on the roads to and at Moeawatea provided valuable new data on the presence of LTB in the area with passes recorded at all ten sites. The results from Moeawatea Valley Road itself were particularly pleasing.

6.3 Survey 47 – Egmont National Park

Unfortunately, the last survey for the 2016-17 season results were disappointing, in that no bat passes were recorded on any of the ten ABMs along Egmont Road and on the lower Waiwhakaiho Track in Egmont National Park over the nine nights of surveying.

7. Conclusion

Though only a small number of surveys were completed during the 2016-17 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 a new area inland from Waverley at Moeawatea.

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;

John and Donna Sandilands and Adam and Leanne for permission to survey on their properties at Waitaanga.

The crew at Rotokare Scenic Reserve, especially Trainee Ranger Faith Doman and Aaron Jacobson for their enthusiastic help.

To Tim and Sue Hardwick-Smith for permission to access and undertake the bat surveying on their property, The Totaras.

Stu Cockburn at the DOC Conservation Electronics Team for help with clarifying the analysis of the data.

Jane Hart for eagle eyed proof reading and editorial assistance.

9. References

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Annex A to
Bat Surveying in Taranaki
2016-17 Report

Results from Bat Surveying in Taranaki 2016-2017

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

Survey No	Det No					Total No Nights	Bat Passes		
		Eastings	Northings	Description	Site		STB	LTB	Total
42	1	1759682	5700348	Waitaanga North Road Waitaanga	Clearing	10		201	201
	2	1759792	5701018	Waitaanga North Road Waitaanga	Road	10		209	209
	3	1760051	5701351	Waitaanga North Road Waitaanga	Road	10		79	79
	4	1760258	5701506	Waitaanga North Road Waitaanga	Road	10		975	975
	5	1760701	5701998	Waitaanga North Road Waitaanga	Road	10		611	611
	6	1759616	5700217	Old School Pond Waitaanga	Water	10		182	182
	7	1758117	5699884	Waitaanga South Road Waitaanga	Road	10		73	73
	8	1758118	5699559	Waitaanga South Road Waitaanga	Road	10	1	30	31
	9	1758110	5699082	Waitaanga South Road Waitaanga	Road	10	7	55	62
	10	1758122	5698863	Waitaanga South Road Waitaanga	Road	10	24	224	248
43	1	1721725	5631907	Rotokare Scenic Reserve	Lake Edge	10		0	0
	2	1721717	5632021	Rotokare Scenic Reserve	Lake Edge	10		7	7
	3	1721582	5632676	Rotokare Scenic Reserve	Lake Edge	10		0	0
	4	1721055	5631948	Rotokare Scenic Reserve	Lake Edge	10		0	0
	5	1721041	5631752	Rotokare Scenic Reserve	Carpark	10		5	5
	6	1720417	5632203	Sangster Road Rotokare SR	Road	10		0	0
	7	1720496	5632191	Sangster Road Rotokare SR	Road	10		1	1
	8	1720759	5632149	Sangster Road Rotokare SR	Road	10		2	2
	9	1720759	5632149	Sangster Road Rotokare SR	Road	10		3	3
	10	1720961	5632054	Sangster Road Rotokare SR	Road	10		2	2

44	1	1741124	5615680	Nukuhau Road Waverley	Road	11		51	51
	2	1743405	5616492	Mataimoana Road Waverley	Road	11		13	13
	3	1743452	5617569	Ahoroa Road Waverley	Road	11		67	67
	4	1742727	5618558	Ahoroa Road Waverley	Road	11		6	6
	5	1741777	5618478	Ngarahu Road Waverley	Road	11		49	49
	6	1740894	5611255	Okahutiria Road Waverley	Road	11		5	5
	7	1740936	5619689	Whenuakura Valley Road Waverley	Road	11		81	81
	8	1741412	5621307	Moeawatea Valley Road Waverley	Road	11		165	165
	9	1741890	5623122	Moeawatea Valley Road Waverley	Road	11		103	103
	10	1742722	5624375	Moeawatea Valley Road Waverley	Pond	11		258	258
45	1	1723577	5631516	The Totaras Aorere Rd Mangamingi	ATV	9		7	7
	2	1723726	5631824	The Totaras Aorere Rd Mangamingi	ATV	9		2	2
	3	1724015	5632191	The Totaras Aorere Rd Mangamingi	ATV	9		3	3
	4	1724079	5632425	The Totaras Aorere Rd Mangamingi	Clearing	9		12	12
	5	1723819	5632907	The Totaras Aorere Rd Mangamingi	ATV	9		62	62
	6	1723509	5633135	The Totaras Aorere Rd Mangamingi	ATV	9		52	52
	7	1723554	5633285	The Totaras Aorere Rd Mangamingi	ATV	9		116	116
	8	1723866	5633351	The Totaras Aorere Rd Mangamingi	ATV	9		196	196
	9	1724489	5633614	The Totaras Aorere Rd Mangamingi	ATV	9		7	7
	10	1724692	5633599	The Totaras Aorere Rd Mangamingi	Road	9		78	78
46	1	1721622	5631874	Lake Track Rotokare SR	Track	10		0	0
	2	1721731	5632034	Lake Track Rotokare SR	Track	10		13	13
	3	1721812	5632579	Lake Track Rotokare SR	Track	10		0	0
	4	1722622	5632748	Menzies Farm Mangamingi	Farmland	10		7	7
	5	1722493	5632713	Menzies Farm Mangamingi	Farmland	10		48	48
	6	1721359	5632560	Lake Track Rotokare SR	Track	10		0	0
	7	1721013	5631763	Vehicle Entrance Rotokare SR	Road	10		32	32
	8	1720988	5632021	Sangster Road Rotokare SR	Road	10		29	29
	9	1720752	5632142	Sangster Road Rotokare SR	Road	10		83	83
	10	1720490	5632191	Sangster Road Rotokare SR	Road	10		73	73

47	1	1696921	5657980	Waiwhakaiho Track Egmont NP	Bush	9		0	0
	2	1696823	5658037	Waiwhakaiho Track Egmont NP	Bush	9		0	0
	3	1696703	5658130	Waiwhakaiho Track Egmont NP	Bush	9		0	0
	4	1696561	5658180	Waiwhakaiho Track Egmont NP	Bush	9		0	0
	5	1696490	5658184	Waiwhakaiho Track Egmont NP	Bush	9		0	0
	6	1697008	5657807	Egmont Road Egmont NP	Road	9		0	0
	7	1696390	5656509	Egmont Road Egmont NP	Road	9		0	0
	8	1696035	5655876	Egmont Road Egmont NP	Road	9		0	0
	9	1694895	5654144	Egmont Road Egmont NP	Road	9		0	0
	10	1694679	5653723	Egmont Road Egmont NP	Road	9		0	0
Totals =						590	32	4277	4309

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

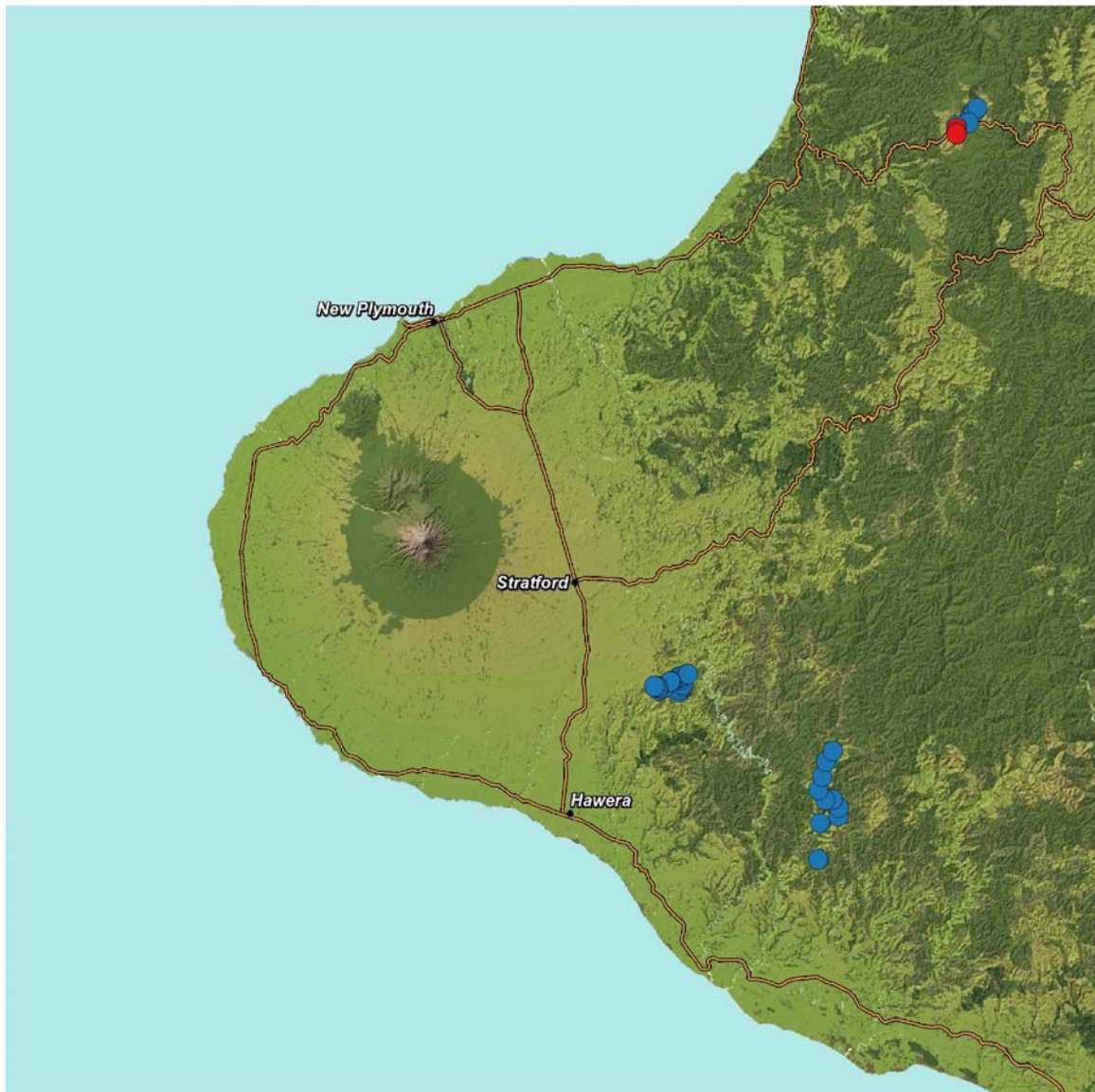
Track – formed walking track

Clearing – bush clearing, often forestry skid site

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

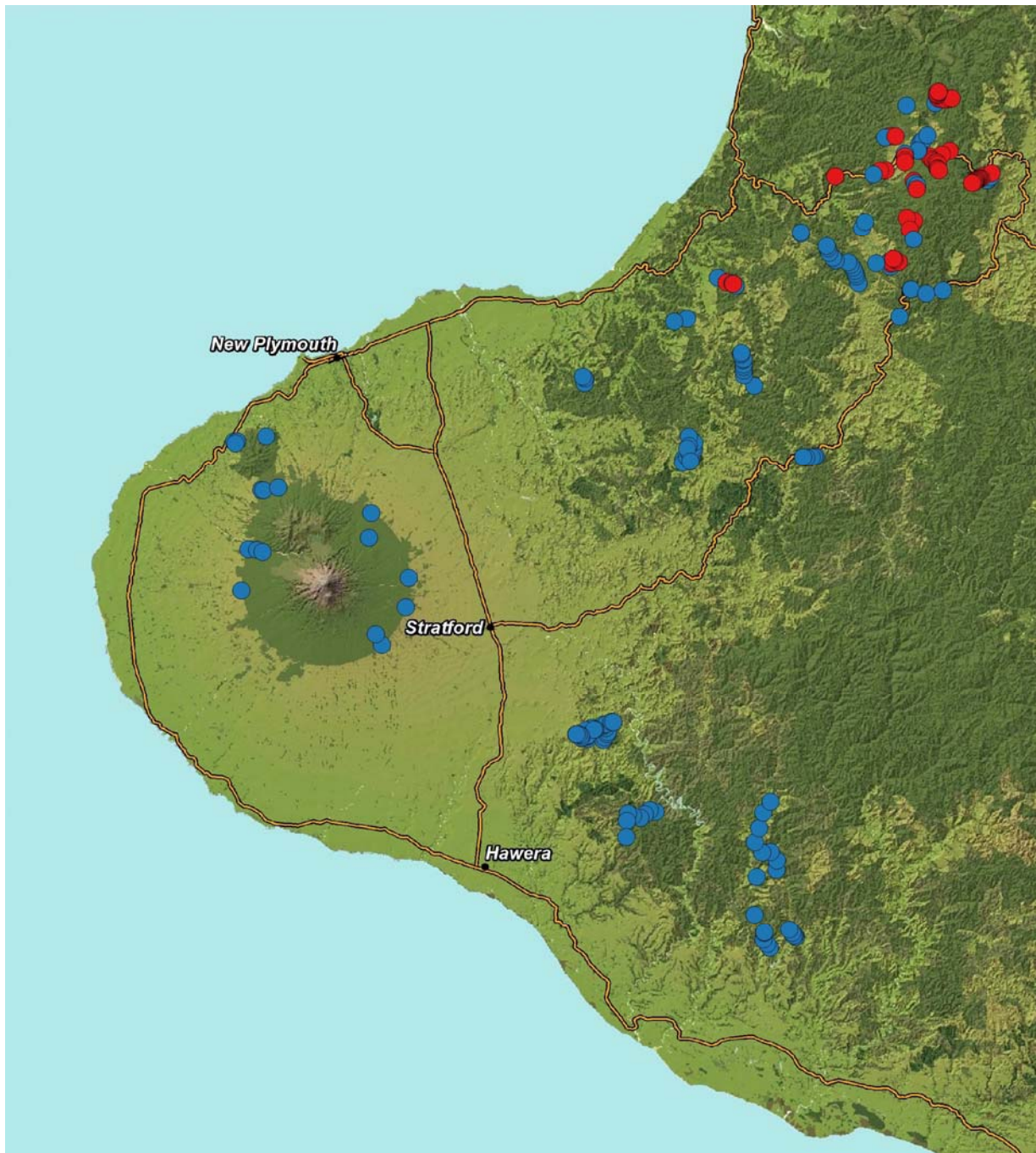
Pines – Small exotic pine plantation

Taranaki Bat Survey Results 2016-2017



- 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