

Bat Surveying in Taranaki 2019-20 Report



Native Birds Taranaki

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Cover picture by Dave Bell: Mohakatino Conservation Area with Mt Taranaki in the distance, Taranaki. 24 February 2020.

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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).

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.

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 eighth season (2019-20).

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 New Zealand Threat Classification System, the long-tailed bat (LTB) is currently classed as Threatened – Nationally Critical whilst the 'Central' lesser short-tailed bat (STB) is regarded as At Risk – Declining (O'Donnell et al. 2018).

3. Surveying during Previous Seasons

Surveying for bats in Taranaki commenced in the 2012-13 summer season. Unfortunately, the software associated with the model ABM used during the first three seasons of surveying (2012-13, 2013-14 and 2014-15) was found to be unreliable in ascertaining bats passes, particularly with short-tailed bats.

As such the results from those three seasons' surveying have been discounted, the reports raised (Bell, 2013, 2014 and 2015) have been withdrawn and all the applicable records removed from the National Bat Database.

Subsequently re-surveying of the locations from the first three seasons, with new different bat recorders has been progressively undertaken, together with new sites has now been completed for those areas considered as important or still accessible.

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 National Park (Bell, 2017).

Only six surveys were undertaken during the 2017-18 season that concentrated mainly in Eastern Taranaki at Pohokura and Puniwhakau, with two surveys along roads at Waitaanga. Pleasing results were achieved with good numbers of long-tailed bat passes recorded together with lesser short-tailed bat passes recorded at Waitaanga (Bell, 2018).

Ten surveys were completed during the 2018-19 season, that involved both private land, one of which was out of Taranaki and a number of re-surveys for locations previously surveyed, including on Public Conservation Land (Bell, 2019).

4. Surveying for 2019-20 Season

Eight surveys were complete for this season concentrating on re-surveying previous sites from the first three seasons, these included at Okoki, in Egmont National Park and at Waitaanga together with a new site accessed off the end of Mangakara Road into the Mohakatino CA.

5. Results of Surveying for 2019-20 Season

During the 841 nights of surveying, a total of 12,338 bat passes were recorded, 10,896 for long-tailed bats and 1,442 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 National Bat Database.

A map illustrating the results for 2019-2020 is at Annex B, whilst an additional map displaying the results for all the current five seasons is at Annex C.

6. Discussion

During the ten surveys completed during the 2018-19 season there were some highlights and valuable results obtained, these are now briefly discussed as follows:

6.1 Survey 64 – Kaka Road Okoki

Only 66 long-tailed bat passes were picked up over 81 nights of recording, but this is in line with the previous survey undertaken in 2014.

6.2 Surveys 65 & 66 – Egmont National Park

Two surveys were completed in Egmont National Park at three separate locations, York Road, Pembroke Road and at Egmont Road. No bat passes were recorded on any of the recorders over a total of 210 nights of surveying. Together with two previous surveys undertaken in and on the boundary of the National Park last season also with no bat passes recorded it must again be thought very doubtful that there are bats in Egmont National Park.

6.3 Surveys 67 to 71 – Waitaanga

These five surveys were completed in an area where it was known there had previously been both long-tailed and short-tailed bats recorded. Three of the surveys were re-surveys whilst the other two covered new locations. In a total of 550 nights recording there were long-tailed bat passes recorded on every night and there was only one night on one recorder where short-tailed bat passes were not also recorded.

7. Conclusion

Though it was disappointing not to achieve any positive results from both surveys in Egmont National Park, it was very pleasing and valuable to obtain records at Waitaanga and being able to confirm the continuing presence of both Long-tailed and Short-tailed bats there.

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;

Allan Sole for access though his land and the resulting surveys at Waitaanga North Road, Waitaanga.

Scott and Robyn Gower for access through their farm at Mangakara Road, Ohura to the Mohakatino Conservation Area.

Jane Hart for editorial assistance.

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Annex A to
Bat Surveying in Taranaki
2019-20 Report

Results from Bat Surveying in Taranaki 2019-2020

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				No Nights	Bat Passes		
		Eastings	Northings	Description	Site		STB	LTB	Total
64	1	1730125	5680720	Kaka Road Okoki	Road	9		2	2
	2	1730408	5680515	Kaka Road Okoki	Road	9		0	0
	3	1731072	5680393	Kaka Road Okoki	Road	9		0	0
	4	1731569	5680375	Kaka Road Okoki	Road	9		0	0
	5	1732645	5680331	Kaka Road Okoki	Road	9		0	0
	6	1732699	5680460	Kaka Road Okoki	Road	9		3	3
	7	1732911	5680449	Kaka Road Okoki	Road	9		0	0
	8	1733137	5680532	Kaka Road Okoki	Road	9		17	17
	9	1733155	5680343	Kaka Road Okoki	Road	9		44	44
65	1	1701368	5650578	York Road Loop Track Egmont NP	Clearing	11		0	0
	2	1701207	5650495	York Road Loop Track Egmont NP	Track	11		0	0
	3	1701050	5650389	York Road Loop Track Egmont NP	Track	11		0	0
	4	1701280	5650444	York Road Loop Track Egmont NP	Clearing	11		0	0
	5	1701236	5650401	York Road Loop Track Egmont NP	Clearing	11		0	0
	6	1700932	5647041	Pembroke Road Egmont NP	Road	11		0	0
	7	1698917	5647543	Potaema Swamp Egmont NP	Swamp	11		0	0
	8	1699321	5647531	Pembroke Road Egmont NP	Road	11		0	0
	9	1698851	5647929	Pembroke Road Egmont NP	Clearing	11		0	0
	10	1702522	5646914	Old DOC Office Pembroke Road	Clearing	11		0	0

66	1	1697001	5657791	Egmont Road Egmont NP	Road	10		0	0
	2	1696389	5656498	Egmont Road Egmont NP	Road	10		0	0
	3	1696043	5655871	Egmont Road Egmont NP	Road	10		0	0
	4	1694892	5654146	Egmont Road Egmont NP	Road	10		0	0
	5	1694649	5653716	Egmont Road Egmont NP	Road	10		0	0
	6	1696146	5655680	Ngatoro Track Egmont NP	Bush	10		0	0
	7	1696136	5655779	Ngatoro Track Egmont NP	Bush	10		0	0
	8	1695961	5655780	Mangaoraka Loop Track Egmont NP	Bush	10		0	0
	9	1695818	5655739	Mangaoraka Loop Track Egmont NP	Bush	10		0	0
	10	1695886	5655873	Mangaoraka Loop Track Egmont NP	Bush	10		0	0
67	1	1758831	5696862	Te Rerepahupahu Falls Track Waitaanga CA	Track	10	74	21	95
	2	1759032	5696777	Te Rerepahupahu Falls Track Waitaanga CA	Track	10	7	22	29
	3	1759185	5696662	Te Rerepahupahu Falls Track Waitaanga CA	Track	10	22	3	25
	4	1759256	5696458	Te Rerepahupahu Falls Track Waitaanga CA	Track	10	9	18	27
	5	1759406	5696303	Te Rerepahupahu Falls Track Waitaanga CA	Track	10	10	78	88
	6	1759497	5696104	Te Rerepahupahu Falls Track Waitaanga CA	Track	10	8	7	15
	7	1759462	5695952	Te Rerepahupahu Falls Track Waitaanga CA	Track	10	29	9	38
	8	1759481	5695779	Te Rerepahupahu Falls Track Waitaanga CA	Track	10	71	108	179
	9	1759606	5695665	Te Rerepahupahu Falls Track Waitaanga CA	Track	10	74	112	186
	10	1759762	5695635	Te Rerepahupahu Falls Track Waitaanga CA	Track	10	14	118	132
68	1	1761422	5705353	Mohakatino CA Waitaanga	ATV	13	6	60	66
	2	1761603	5705922	Mohakatino CA Waitaanga	Clearing	13	8	529	537
	3	1761743	5706208	Mohakatino CA Waitaanga	ATV	13	51	322	373
	4	1761805	5706513	Mohakatino CA Waitaanga	ATV	13	10	181	191
	5	1762076	5706169	Mohakatino CA Waitaanga	ATV	13	44	152	196
	6	1762635	5706451	Mohakatino CA Waitaanga	ATV	13	9	722	731
	7	1762737	5706176	Mohakatino CA Waitaanga	ATV	13	11	393	404
	8	1762935	5706250	Mohakatino CA Waitaanga	ATV	13	12	426	438
	9	1763151	5706150	Mohakatino CA Waitaanga	ATV	13	15	144	159
	10	1763465	5706268	Mohakatino CA Waitaanga	ATV	13	4	205	209

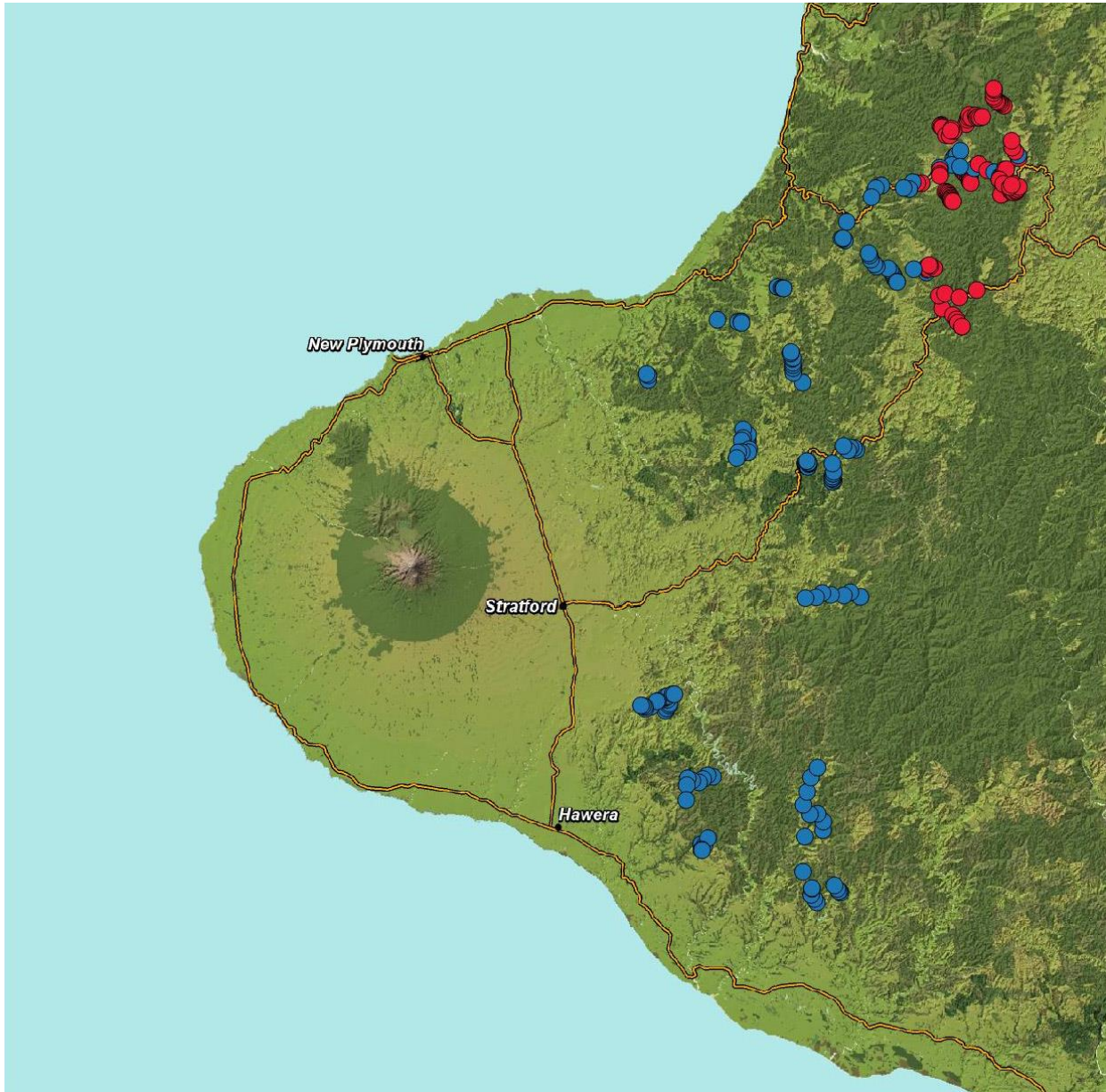
69	1	1758328	5705249	Allan Sole Property Waitaanga	Track	13	2	39	41
	2	1758268	5705233	Allan Sole Property Waitaanga	Track	13	3	77	80
	3	1758176	5705132	Allan Sole Property Waitaanga	Clearing	13	1	242	243
	4	1758326	5704998	Allan Sole Property Waitaanga	Track	13	2	170	172
	5	1758408	5704931	Allan Sole Property Waitaanga	ATV	13	16	354	370
	6	1758907	5703962	Waitaanga CA Waitaanga	Bush	13	11	296	307
	7	1759355	5703922	Waitaanga CA Waitaanga	Bush	13	1	75	76
	8	1759845	5704509	Allan Sole Property Waitaanga	ATV	13	2	190	192
	9	1759593	5704776	Waitaanga CA Waitaanga	ATV	13	14	349	363
	10	1759493	5704536	Allan Sole Property Waitaanga	4x4	13	17	365	382
70	1	1766170	5707676	Mohakatino CA Waitaanga	ATV	10	30	225	255
	2	1765841	5707911	Mohakatino CA Waitaanga	ATV	10	49	97	146
	3	1765637	5708055	Mohakatino CA Waitaanga	ATV	10	33	119	152
	4	1765429	5708144	Mohakatino CA Waitaanga	ATV	10	141	99	240
	5	1765267	5708230	Mohakatino CA Waitaanga	ATV	10	84	156	240
	6	1764982	5708534	Mohakatino CA Waitaanga	ATV	10	58	313	371
	7	1764865	5708792	Mohakatino CA Waitaanga	ATV	10	77	180	257
	8	1764866	5709281	Mohakatino CA Waitaanga	ATV	10	69	121	190
	9	1764967	5709635	Mohakatino CA Waitaanga	ATV	10	155	199	354
	10	1764912	5709816	Mohakatino CA Waitaanga	ATV	10	43	115	158
71	1	1765618	5698373	Waitaanga Road Waitaanga	Road	10	4	502	506
	2	1766094	5697840	Waitaanga Road Waitaanga	Road	10	82	850	932
	3	1766933	5697426	NG Tucker SR Waitaanga	4x4	10	14	175	189
	5	1767174	5697701	Waitaanga Road Waitaanga	Road	10	20	805	825
	6	1768038	5701080	Mangakara Road Ohura	Road	10	1	219	220
	7	1767986	5701417	Mangakara Road Ohura	Road	10	0	82	82
	8	1767614	5701902	Mangakara Road Ohura	Road	10	3	179	182
	9	1767255	5702394	Mangakara Road Ohura	Road	10	9	433	442
	10	1767157	5703256	Mangakara Road Ohura	Road	10	13	174	187
	Totals =						841	1442	10896

Taranaki Bat Survey Results 2019-2020



- 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