

# **LAKE TARAWERA**

## **BIRD MONITORING - 2011**

(Five Minute Bird Counts)

### **KARIRI POINT; Te Rua a Umukaria**



View of Kariri Point – south side.

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For Bay of Plenty Regional Council (BOPRC).

## SUMMARY

A series of Five-Minute Bird Counts (5MBC) were undertaken at Kariri Point in November 2011, this repeated 5MBC monitoring carried out three years earlier in November 2008 and three years prior to that in 2005. Results of the 2005, 2008 and 2011 bird counts can be compared with initial (baseline) bird counts taken in 2003, though fewer counts were taken. *See Table 1. Pg5; Figure 1. Pg7.*

5MBC monitoring at Kariri Point has been carried out four times in the past nine years, with results showing constant increases in both the bird species present, (types of birds) and their relative abundance (numbers of birds). This suggests that the environment has improved for birds over this time and could be attributed to the ongoing control of rodents and possums in the area. Breeding success in particular may have improved due to reduced predation of birds during their nesting time.

The Lake Tarawera Care Group (LTCG) has carried out regular pest control on and around Kariri Point since 2003, using fixed wax baits in bait stations targeting rodents and possums. This work is done on a voluntary basis by local residents throughout the year and is sponsored by the Bay of Plenty Regional Council (BOPRC).

## INTRODUCTION

Kariri Point (Te Rua a Umukaria) is a peninsula on the western side of Lake Tarawera, approximately 15 hectares in size. The land tenure is divided; part council reserve, part Maori land and part private property. A mausoleum for the Spencer family stands on a high point in the forest.

The Iwi for this area is Tuhourangi.

A grassed reserve, car park, boat ramp, jetty and swimming beach are on the northern side of the peninsula. Boat sheds, car park area, toilet block, boat ramp and jetty are on the southern side of the peninsula. Approximately 1.25 hectares of mostly undeveloped private property, (presently well vegetated) is situated in the middle, between the two grassed reserve areas and adjoining the forested peninsula. The peninsula itself is well forested and an informal path winds around the Peninsula and past the Spencer Mausoleum. Forest canopy is low and dominated by Mahoe (*Melicytus ramiflorus*), with some mature Robinia /Black Locust trees, (*Robinia pseudoacacia*) standing above the Mahoe (Robinia is the main exotic plant present). Sub-canopy species include Kawakawa / Pepper tree (*Macropiper*

*excelsum*), Hangehange (*Geniostoma ligustrifolium*), Karamu (*Coprosma robusta*), Rangiora (*Brachyglottis repanda*), Five-finger (*Pseudopanax arboreus*), Pate (*shefflera digitata*), Mangeao (*Litsea calicaris*), Kohuhu (*Pittosporum tenuifolium*), Tree Fushia / Kotukutuku (*Fushia excorticata*), Wheki (*Dicksonia squarrosa*), Mamaku (*Cyathea medullaris*) and Ponga / Silver fern (*Cyathea dealbata*). The dominant sub-canopy species is Kawakawa. Several ground fern species are present. The forest floor is fairly open with moderate amounts of leaf-litter and some seedlings growing. Noticeable during the 2011 survey was the number of large dead Robinia trees on the ground with lush hound's tongue fern (*Microsorium pustulatum*) growing along the top of them. There appeared to be more leaf litter present then in 2008, (predominately mahoe leaves) and more seedlings growing (a mix, but mostly native species). In some areas (especially light wells) Old Mans Beard (*Clematis vitalba*) was obvious and growing vigorously. Kariri Point is a popular boat launch area, used and visited by many people throughout the year.



*Kariri Pt Reserve - Native regeneration and obvious leaf-litter.*

## METHOD

Standard five-minute bird count (5MBC) methodology, (Dawson and Bull; 1975) was used for this survey.

Count stations spaced approximately 200 metres apart around the peninsula were used to survey birds from. Observations of birds seen or heard within a 100 metre radius of a count station over a five minute time period were recorded. The time, date, and weather conditions (Sun, wind, temperature, and precipitation) were recorded at each count station. The same count stations were used for this survey as were used in 2005 and 2008 and located using G.P.S. co-ordinates.

*See Appendix 2. Pg11*

Bird counts were carried out between 9.00am and 1.00pm (NZ standard time) to be consistent with previous counts, and to avoid both the dawn chorus and the quiet afternoon periods. All counts were undertaken on days with fine, calm weather conditions and weekend days were avoided where possible (extra noise, traffic, bird disturbance).

In 2003 - eight counts were made at six count stations, on one day in Oct.

In 2005 - fourteen counts made at six count stations over two days in Nov.

In 2008 - fourteen counts made at seven count stations over two days in Nov.

In 2011- fourteen counts made at seven count stations over two days in Nov.

Table 1: Bird Species Observed & Count Results: 2003 - 2011

<i>Number of Spp</i>	<b>Common Name</b>	<b>Scientific Name</b>	<b>2011</b>	<b>2008</b>	<b>2005</b>	<b>2003</b>
1	<b>Kereru</b>	<i>Hemiphaga novaeseelandi</i>	3	3	0	0
2	<b>Tui</b>	<i>Prosthemadera novaeseelandiae novaeseelandiae</i>	40	38	14	3
3	<b>Kingfisher</b>	<i>Halcyon sancta vagrans</i>	4	7	2	7
4	<b>Bellbird</b>	<i>Anthornis melanura oneho</i>	14	6	6	1
5	<b>Shining Cuckoo</b>	<i>Chrysococcyx lucidus lucidus</i>	8	10	4	0
6	<b>Silvereye</b>	<i>Zosterops lateralis lateralis</i>	21	26	0	3
7	<b>Fantail</b>	<i>Rhipidura fuliginosa placabilis</i>	13	8	16	3
8	<b>Grey Warbler</b>	<i>Gerygone igata</i>	17	21	14	8
9	<b>Black-backed Gull</b>	<i>Larus dominicanus dominicus</i>	2	3	0	0
	<b>Gull, Red-billed</b>	<i>Larus novaehollandiae</i>	3	0	0	0
10	<b>Shag, Little</b>	<i>Phalacrocorax melanoleucos brevirostris</i>	1	1	0	0
11	<b>Shag, Black</b>	<i>Phalacrocorax carbo nova</i>	1	0	0	0
12	<b>Pukeko</b>	<i>Porphyrio porphyrio melanotus</i>	0	1	0	0
13	<b>Australian Coot</b>	<i>Fulica atra</i>	19	3	0	0
14	<b>Mallard Duck</b>	<i>Anas spp</i>	0	3	0	0
15	<b>Scaup</b>	<i>Aythya novaeseelandiae</i>	26	19	0	3
16	<b>Dabchick</b>	<i>Poliiocephalus rufopectus</i>	5	1	0	2
17	<b>Black Swan</b>	<i>Cygnus atratus</i>	18	2	0	11
18	<b>Goose, Canada</b>	<i>Branta Canadensis maxima</i>	5	0	0	0
19	<b>Swallow, Welcome</b>	<i>Hirundo tahitica neoxena</i>	24	0	0	0
20	<b>Australasian Harrier</b>	<i>Circus approximans</i>	1	0	0	0
21	<b>Magpie</b>	<i>Gymnorhina tibicen (sp)</i>	0	0	0	2
22	<b>Eastern rosella</b>	<i>Platycercus eximius</i>	1	0	0	0
23	<b>Californian Quail</b>	<i>Callipepla californica</i>	3	2	2	0
24	<b>Myna</b>	<i>Acridotheres tristis</i>	1	1	0	3
25	<b>Blackbird</b>	<i>Turdus merula</i>	29	37	20	8
26	<b>Thrush, Song</b>	<i>Turdus philomelos</i>	5	6	10	4
27	<b>Starling</b>	<i>Sturnus vulgaris</i>	4	4	2	1
28	<b>Yellowhammer</b>	<i>Emberiza citronella</i>	0	2	0	0
29	<b>Chaffinch</b>	<i>Fringilla coelebs</i>	25	42	38	5
30	<b>Goldfinch</b>	<i>Carduelis carduelis</i>	3	0	0	0
31	<b>Greenfinch</b>	<i>Carduelis chloris</i>	4	0	0	4
32	<b>House Sparrow</b>	<i>Passer domesticus</i>	10	6	0	9
33	<b>Hedge Sparrow</b>	<i>Prunella modularis</i>	1	2	0	0
		<b>Total Bird Numbers →</b>	311	254	128	77
		<b>Total Bird Species →</b>	30 spp	25 spp	11 spp	17 spp

## RESULTS

Results of the 2011 survey show an increase in both species recorded, and bird numbers counted. Species recorded included a mix of water birds, forest passerines and introduced garden/farmland passerines and one raptor. Over half the species counted were native birds, (a mix of large and small forest passerines, water and edge birds). Of note is the increase in water birds counted, Black Swan, Australian Coot, Scaup and Dabchick. Tui numbers have continued to increase and many more Bellbirds, Starling, Chaffinch and House Sparrow were counted then in any previous survey.

Native Species: - 17

Introduced Species: - 13

**During the 2011 5MBC Survey, 30 species of bird were observed over two days in November, at fourteen count stations. A total of 311 birds were counted, with an average of 22.2 birds per count station (this includes water birds).**

*See Table 1. Pg5.*

NB. Significantly more Dabchicks were seen during 5MBC monitoring then were included in the results (on one day 3 pairs were seen but couldn't be included).

In 2008, 25 species of bird were observed over two days in November, at fourteen count stations. A total of 254 birds were counted, with an average of 18.2 birds per count station (including water birds).

In 2005, 11 species of bird were observed over two days in November, at fourteen count stations. A total of 128 birds were counted, with an average of 9.1 birds per count station (No water birds were counted/included).

In 2003, 17 species of bird were observed on one day in October at eight count stations. A total of 77 birds were counted, with an average of 9.6 birds per count station (this includes water birds).



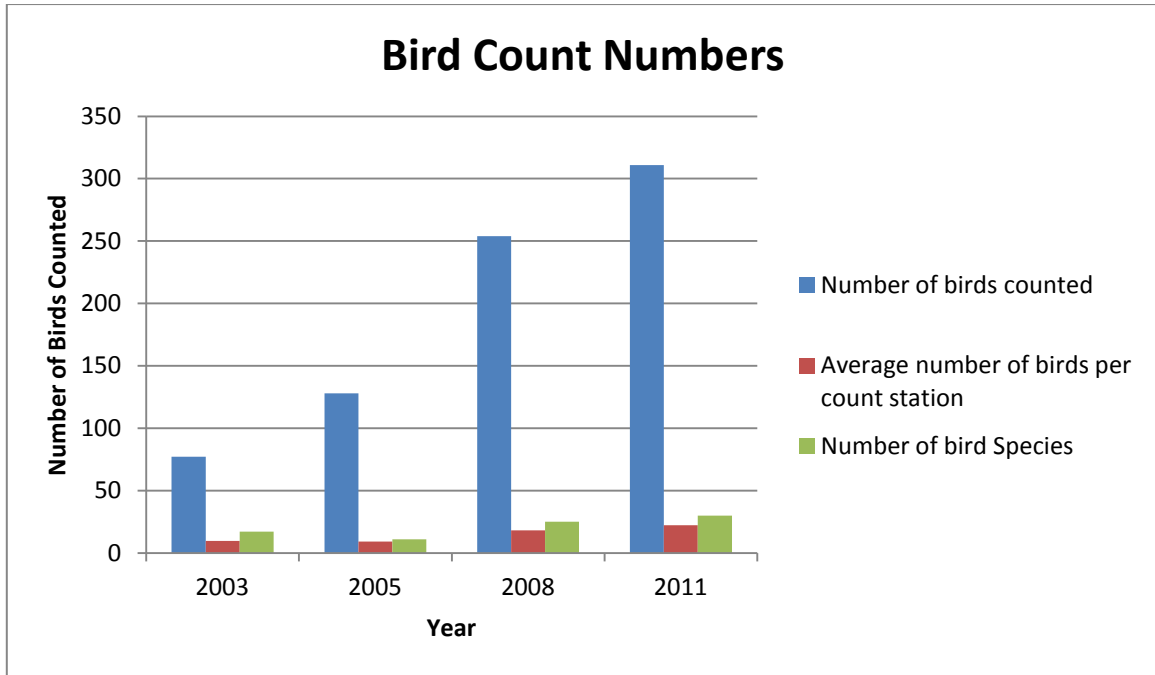


Figure 1. Bird Count Results; 2003 - 2011.

(NB. 2003 data collected from eight count stations, whereas 2005, 2008 and 2011 data collected from fourteen stations)



*Lush Hounds Tongue fern growing on fallen Robinia trees.*

## CONCLUSION

An increase in the number of birds counted, (abundance) and the number of species counted, (presence) does suggest that conditions have improved and are continuing to improve for birds at Kariri Point.

Ongoing rodent and possum control allows plants to grow more vigorously, (without constant leaf, flower, and fruit browse), native regeneration to occur, increased invertebrate and other life and overall improved ecosystem health. A healthier more diverse ecosystem means better habitat with more food for birds.

Ongoing pest control will help to ensure Kariri Point is a safe place for birds to live and breed with the likelihood of predation by pests especially during the breeding season greatly reduced.

My general impression of Kariri Point Reserve was of improved habitat. There appeared to be more seedlings growing on the forest floor, more leaf-litter and more life present than in 2008. Vegetation seemed lush; canopy cover good and light-wells where old Robinia had fallen over were full of seedlings (including some pest plant species). The presence of more birds is probably a reflection of the improved health of the whole Tarawera residential area (Spencer Road pest control) and the good spring / early summer weather conditions enhancing plant growth and flowering.

Because of the small size of this area, (approximately 15 ha) results of 5MBC monitoring can only suggest possible changes and trends.

## RECOMMENDATIONS

- That this community initiated and driven project be encouraged to continue.
- That more information be provided to the public regarding this community project to help increase awareness. Possibly by way of information / interpretation panels – placing a panel on each side of the peninsular where public use of jetties, boat ramps, car parks etc is most concentrated. Information about Dabchicks in particular would be valuable, as they are an uncommon endemic species and present in good numbers on this lake.



## ACKNOWLEDGEMENTS

I would like to acknowledge the Bay of Plenty Regional Council for sponsoring this project, including reporting; also the Lake Tarawera Care Group for their ongoing pest control efforts.

My thanks to Ian Phillips of BOPRC and Bob Scopes from Lake Tarawera for providing me with helpful information.

Special thanks to Bob Scopes for his contribution to this community driven project.

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## APPENDIX : 1

### NAMES OF BIRD SPECIES OBSERVED: 2003 - 2011

	<b>Common &amp; Maori Name</b>	<b>Scientific Name</b>
1	<b>Kereru / Kukupa/NZ pigeon •</b>	<i>Hemiphaga novaeseelandi</i>
2	<b>Tui •</b>	<i>Prosthemadera novaeseelandiae novaeseelandiae</i>
3	<b>Kingfisher / Kotare•</b>	<i>Halcyon sancta vagrans</i>
4	<b>Bellbird / Korimako •</b>	<i>Anthornis melanura oneho</i>
5	<b>Shining Cuckoo / Pipiwharauoa •</b>	<i>Chrysococcyx lucidus lucidus</i>
6	<b>Silvereve / Touhou •</b>	<i>Zosterops lateralis lateralis</i>
7	<b>Fantail / Piwakawaka•</b>	<i>Rhipidura fuliginosa placabilis</i>
8	<b>Grey Warbler / Riroriro •</b>	<i>Gerygone igata</i>
9	<b>Black-backed Gull / Karoro•</b>	<i>Larus dominicanus dominicus</i>
	<b>Gull, Red-billed / Tarapunga•</b>	<i>Larus novaehollandiae</i>
10	<b>Shag, Little /Kawaupaka•</b>	<i>Phalacrocorax melanoleucos brevirostris</i>
11	<b>Shag, Black / Kawau•</b>	<i>Phalacrocorax carbo nova</i>
12	<b>Pukeko /Swamp hen•</b>	<i>Porphyrio porphyrio melanotus</i>
13	<b>Australian Coot•</b>	<i>Fulica atra</i>
14	<b>Mallard Duck</b>	<i>Anas spp</i>
15	<b>Scaup /Papango•</b>	<i>Aythya novaeseelandiae</i>
16	<b>Dabchick / Weweia•</b>	<i>Poliiocephalus rufopectus</i>
17	<b>Black Swan</b>	<i>Cygnus atratus</i>
18	<b>Goose, Canada</b>	<i>Branta Canadensis maxima</i>
19	<b>Swallow, Welcome•</b>	<i>Hirundo tahitica neoxena</i>
20	<b>Australasian Harrier /Kahu•</b>	<i>Circus approximans</i>
21	<b>Magpie, Australian</b>	<i>Gymnorhina tibicen (sp)</i>
22	<b>Eastern rosella</b>	<i>Platycercus eximius</i>
23	<b>Californian Quail</b>	<i>Callipepla californica</i>
24	<b>Myna</b>	<i>Acridotheres tristis</i>
25	<b>Blackbird</b>	<i>Turdus merula</i>
26	<b>Thrush, Song</b>	<i>Turdus philomelos</i>
27	<b>Starling</b>	<i>Sturnus vulgaris</i>
28	<b>Yellowhammer</b>	<i>Emberiza citronella</i>
29	<b>Chaffinch</b>	<i>Fringilla coelebs</i>
30	<b>Goldfinch</b>	<i>Carduelis carduelis</i>
31	<b>Greenfinch</b>	<i>Carduelis chloris</i>
32	<b>House Sparrow</b>	<i>Passer domesticus</i>
33	<b>Hedge Sparrow /Dunnock</b>	<i>Prunella modularis</i>

•Designates native bird species

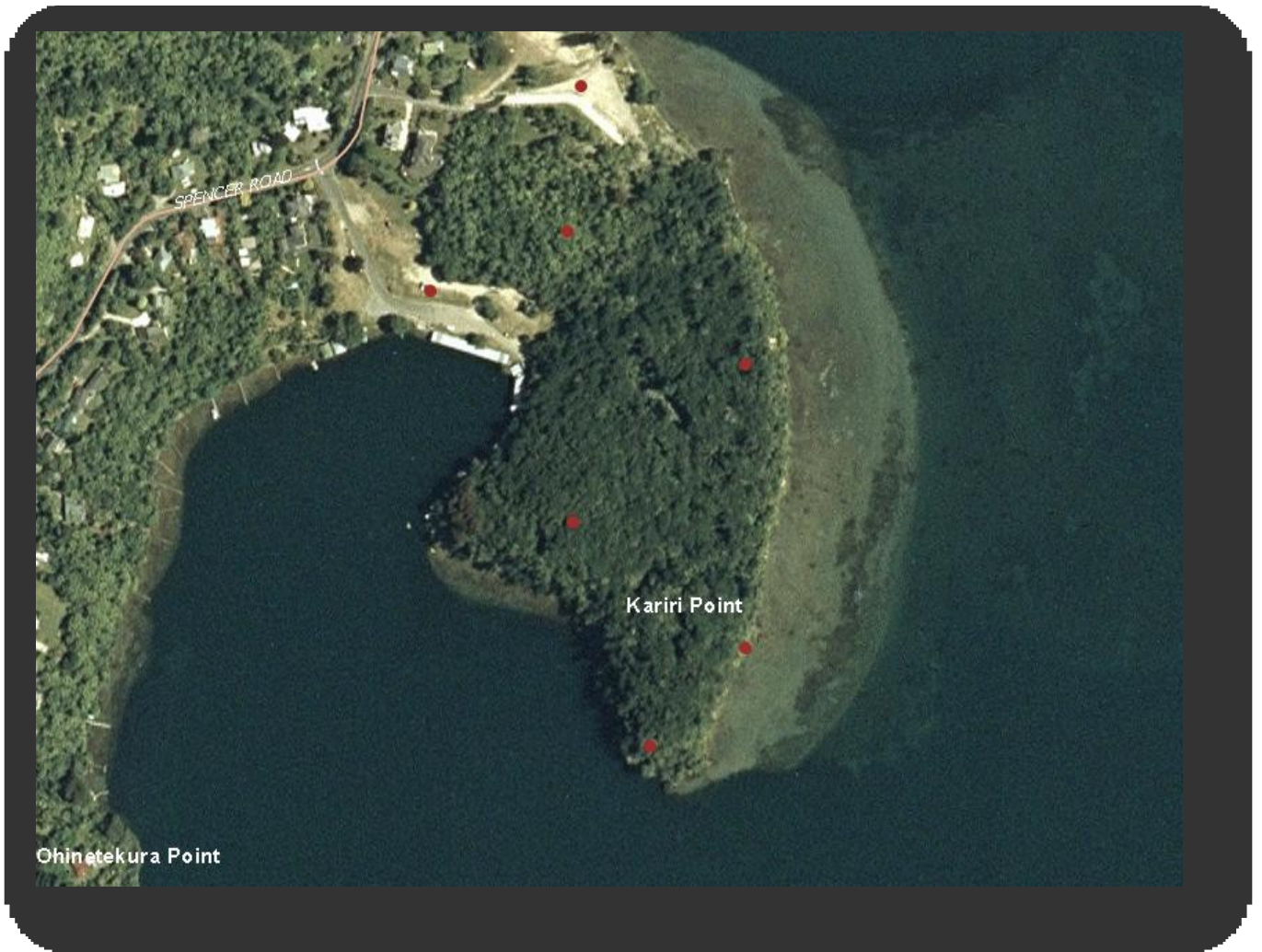
## APPENDIX : 2

### Count Stations

<b>Count Stations</b>	<b>G.P.S Co-ordinates</b>	<b>Location</b>
1	1897305 5767040	Open area, grass reserve, near lake.
2	1897417 5766851	Under forest canopy
3	1897417 5766661	Under forest canopy
4	1897353 5766595	Under forest canopy
5	1897301 5766745	Under forest canopy
6	1897296 5766941	Under forest canopy
7	1897204 5766900	Open area, grass reserve, near lake, boat ramp.

APPENDIX : 3

Kariri Point  
(Te Rua a Umukaria)



Aerial photo of Kariri Point, showing bird-count stations (red dots).