

LAKE TARAWERA

BIRD MONITORING – 2011

Five Minute Bird Counts

SPENCER ROAD



Fieldwork and Report by Carmel Richardson,
For The Bay of Plenty Regional Council (BOPRC).

SUMMARY

A series of five-minute bird counts (5MBC) were carried out along Spencer Road and adjoining streets over four days in November/December 2011(over four weeks). This survey repeated bird counts carried out along Spencer Road in November/December 2008 and late November 2005. Results of the 2005, 2008 and 2011 bird counts are compared in this report.

See Figure 1. Pg5.

Bird count monitoring has been carried out three times in seven years along Spencer Road, with results showing increases in both the species of bird present (types of bird) and their relative abundance (numbers of birds). This suggests that the local environment has improved since the start of pest control in 2000, allowing more birds to live and breed successfully in a safer environment with increased variety and availability of food.

The Lake Tarawera Care Group (LTCG) is made up of local residents who volunteer their time to this project, carrying out regular pest control on private property and reserve land in the settlement area of Lake Tarawera. Originally started in June 2000 to reduce a major rodent infestation in the settlement, pest control now targets possums as well as rodents in an effort to improve the general environment and enhance the native bird population.

Approximately 75% of property owners at Lake Tarawera are members of the LTCG.

The work of the LTCG has been sponsored by the Bay of Plenty Regional Council (BOPRC).

INTRODUCTION

Spencer Road is the main access road to Lake Tarawera and the settlement of houses there. It runs 8 kilometres along the north western side of Lake Tarawera, approximately 16 kilometres north east of Rotorua city.

On the western side of Spencer Road above the houses are plantation pine and eucalyptus trees, farmland and pockets of native forest. East of Spencer Road is Lake Tarawera and at the northern end of the road is native forest which connects with Lake Okataina.

Over 470 residences are dotted through the well vegetated strip of land between Lake Tarawera and the farmland above, forming a corridor of native vegetation, exotic garden plants, large trees, lawns, wetland and farmland. The different habitats and variety of plants growing there, provide good food and shelter for birds throughout the year.



Typical road edge vegetation.

METHOD

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

Count stations spaced approximately 200 metres apart along Spencer Road 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, precipitation) were recorded at each count station for each 5MBC carried out. The same count stations were used during this survey as were used in 2005 and 2008 and were located using existing residential house numbers and G.P.S. Co-ordinates. *See Appendix 2. Pg10.*

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 conducted in fine, still conditions with no rain. Weekend days were avoided where possible due to extra noise, traffic and activity.

In 2005 forty counts were made from 23 count stations over five days.
In 2008 forty counts were made from 23 count stations over four days.
In 2011 forty counts were made from 23 count stations over four days.

RESULTS

Thirty five different bird species were observed over the four day count period in Nov-Dec 2011 from forty count stations on Spencer and adjoining Roads. A total of 1638 birds were counted with an average of 40 birds counted per station (this includes water birds). See Figure 1. Pg5.

Six more bird species were recorded then in 2008 and almost double the number of birds counted. Forest, garden, farmland passerine species, as well as some water and wading birds were recorded. Just over half the species counted were native birds and of these Tui, Kereru and Bellbird showed a dramatic increase in numbers. Of introduced bird species, House Sparrow, Chaffinch, Starling and Blackbird showed the most dramatic increase in numbers. Five water-bird species were recorded that had not previously been recorded (including Dabchicks... and good numbers of these were seen). See Table 2. Pg7.

Native species:- 18

Introduced species:- 17

- Tui numbers were noticeably higher than in previous 5MBCs and very conspicuous in flowering and fruiting trees and shrubs.
- Kereru were very conspicuous with groups of up to 7 birds seen together at one time.
- Dabchicks were more conspicuous than in 2008.
- Two residents spoke of a single Kaka spending 2-3 months in and around Stoney Point Reserve during the winter of 2011.
- One resident spoke of seeing a male Tomtit in her garden and also further along Spencer Road (near the north end of Spencer Road), though none were seen/heard during this survey.
- Many trees were in full flower or fruit (including Kamahi, Putaputaweta, Cabbage trees, Kohuhu, flowering Cherry).

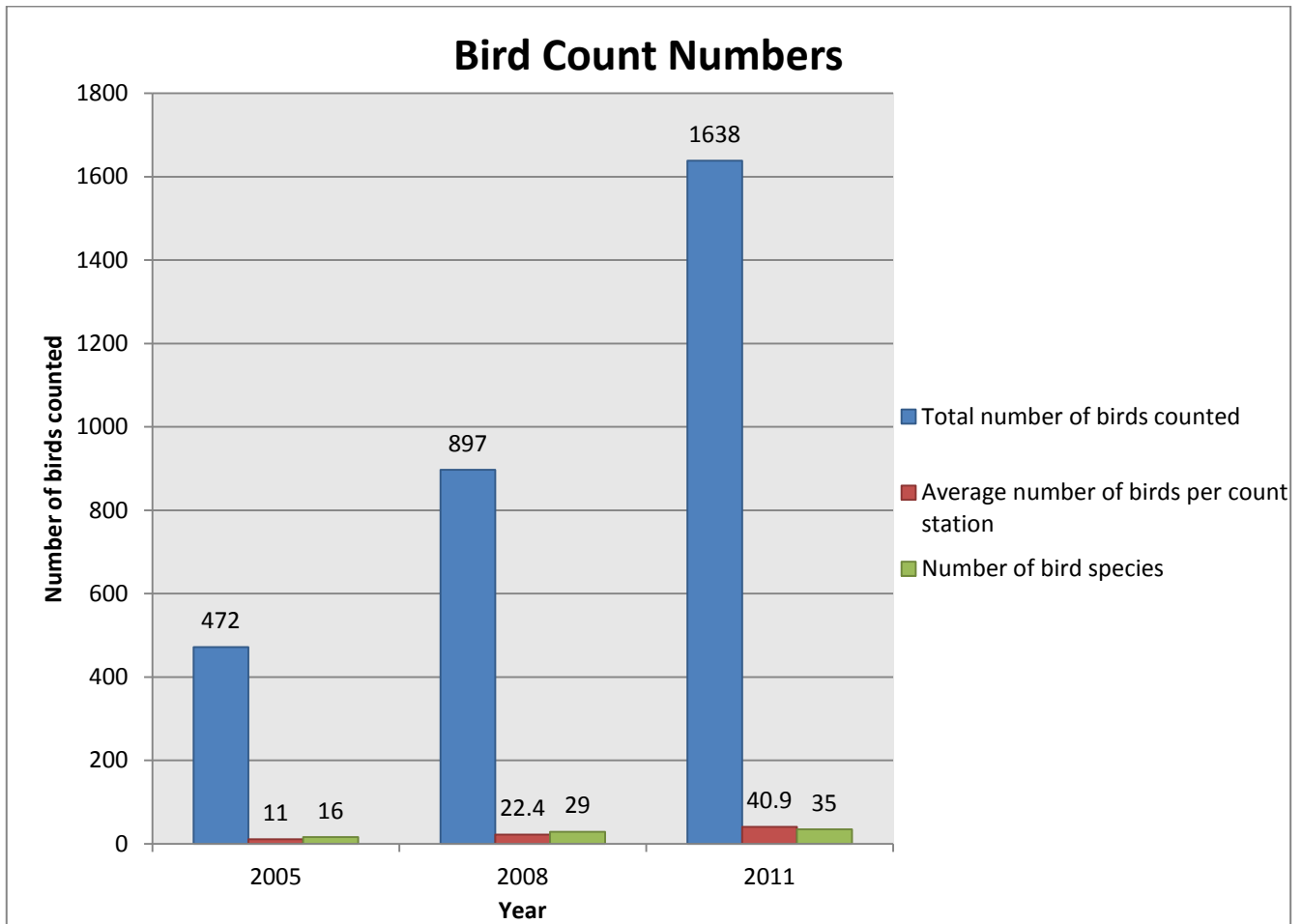


Figure 1. Bird Count Results, 2005, 2008, 2011.

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 many birds in the Lake Tarawera settlement area.

Ongoing rodent and possum control will be allowing a wide variety of plants to grow vigorously, without constant leaf, flower, and fruit browse, thereby creating better habitat, with more food available for birds. Maintaining low numbers of rodents and possums will help to keep this environment relatively safe for birds to live and breed in as the likelihood of predation, especially during the breeding season will be greatly reduced.

Results of bird counts can only suggest changes and possible trends. I am aware that some of the bird species showing the greatest increase in numbers are also some of the most conspicuous species by their size, presence, and/or activity.

Table 1: 2011 Bird Count Results

	BIRD SPECIES RECORDED	NUMBERS COUNTED	AVERAGE PER COUNT
1	Kahu / Harrier•	2	0.05
2	Kereru•	75	1.87
3	Tui •	315	7.87
4	Kingfisher •	5	0.12
5	Bellbird•	74	1.85
6	Shining Cuckoo•	16	0.40
7	Silvereye•	8	0.20
8	Fantail•	15	0.37
9	Grey Warbler•	21	0.52
10	Welcome Swallow•	37	0.92
11	White-Faced Heron•	4	0.10
12	Black-backed Gull•	11	0.27
13	Little Shag•	1	0.02
14	Black Shag•	2	0.05
15	Scaup•	35	0.87
16	Dabchick•	3	0.07
17	Pukeko•	2	0.05
18	Australasian Coot•	8	0.20
19	Black Swan	19	0.47
20	Canada Goose	29	0.72
21	Australian Magpie	1	0.02
22	Eastern Rosella	7	0.17
23	Pheasant	3	0.07
24	Californian Quail	31	0.77
25	Myna	36	0.90
26	Blackbird	162	4.05
27	Song Thrush	28	0.70
28	Starling	283	7.07
29	Yellowhammer	2	0.05
30	Chaffinch	122	3.05
31	Greenfinch	24	0.60
32	Goldfinch	12	0.30
33	House Sparrow	217	5.42
34	Hedge Sparrow	15	0.37
35	Skylark	2	0.05
36	Unknown Finches/Fledglings	28	0.70

•Designates native bird species

Table 2: Bird Species Observed – 2005-2011

Number of Spp.	Common Name	Scientific Name	2011	2008	2005
1	Kahu/Australasian Harrier	<i>Circus approximans</i>	2	3	4
2	Kereru	<i>Hemiphaga novaeseelandi</i>	73	40	10
3	Tui	<i>Prosthemadera novaeseelandiae novaeseelandiae</i>	310	169	72
4	Kingfisher	<i>Halcyon sancta vagrans</i>	5	7	8
5	Bellbird	<i>Anthornis melanura oneho</i>	72	46	36
6	Shining Cuckoo	<i>Chrysococcyx lucidus lucidus</i>	16	17	4
7	Silvereye	<i>Zosterops lateralis lateralis</i>	8	6	8
8	Fantail	<i>Rhipidura fuliginosa placabilis</i>	15	8	0
9	Grey Warbler	<i>Gerygone igata</i>	21	28	10
10	Welcome Swallow	<i>Hirundo tahitica</i>	37	16	0
11	White-Faced Heron	<i>Ardea novaehollandiae</i>	4	0	0
12	Black-backed Gull	<i>Larus dominicanus dominicus</i>	11	12	0
13	Seagull/Red billed Gull	<i>Larus novaehollandiae</i>	0	6	0
14	Shag, Little	<i>Phalacrocorax melanoleucos brevirostris</i>	1	2	0
15	Shag, Black	<i>Phalacrocorax carbo</i>	2	0	0
16	Scaup, New Zealand	<i>Aythya novaeseelandiae</i>	35	0	0
17	Dabchick, New Zealand	<i>Poliiocephalus rufopectus</i>	3	0	0
18	Pukeko	<i>Porphyrio porphyrio melanotus</i>	2	1	0
19	Australian Coot	<i>Fulica atra</i>	8	4	0
20	Black Swan	<i>Cygnus atratus</i>	19	2	0
21	Canada Goose	<i>Branta canadensis</i>	29	0	0
22	Australian Magpie	<i>Gymnorhina tibicen</i>	1	0	0
23	Eastern Rosella	<i>Platycercus eximius</i>	7	8	0
24	Pheasant, Ring-necked	<i>Phasianus colchicus</i>	3	0	0
25	Californian Quail	<i>Callipepla californica</i>	31	10	6
26	Myna	<i>Acridotheres tristis</i>	36	33	20
27	Blackbird	<i>Turdus merula</i>	160	76	152
28	Thrush, Song	<i>Turdus philomelos</i>	28	26	29
29	Starling	<i>Sturnus vulgaris</i>	281	157	12
30	Yellowhammer	<i>Emberiza citronella</i>	2	14	0
31	Goldfinch	<i>Carduelis carduelis</i>	12	11	0
32	Chaffinch	<i>Fringilla coelebs</i>	120	76	31
33	Greenfinch	<i>Carduelis chloris</i>	24	25	32
34	House Sparrow	<i>Passer domesticus</i>	215	2	66 *
35	Hedge Sparrow	<i>Prunella modularis</i>	15	85	?
36	Skylark	<i>Alauda arvensis</i>	2	4	8
37	Unknown Finches & Fledglings	N/A	28	3	0
		<i>Total Bird Numbers →</i>	1638	897	472
		<i>Total Bird Species →</i>	35	29	16

*NB Type of Sparrow was not specified in the 2005 report. Therefore 66 is most likely to be a mix of Hedge and House Sparrow species.

RECOMMENDATIONS

That this community initiated and driven project be encouraged to continue.

ACKNOWLEDGEMENTS

I would like to acknowledge the Bay of Plenty Regional Council for sponsoring this project; including reporting.

I would also like to acknowledge the Lake Tarawera Care Group and residents of the Tarawera community for their ongoing (and successful) pest control efforts.

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

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APPENDIX : 1

NAMES OF BIRD SPECIES OBSERVED - 2011:

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

APPENDIX : 2

Count Stations

<i>Count Stations</i>	<i>Approximate Location of Count Stations</i>	<i>GPS Co-ordinates</i>
1	19 Spencer Road	1896679 / 5766343
2	33 Spencer Road – Junction	1896839 / 5766464
3	54 Spencer Road	1896867 / 5766728
4	75 Spencer Road	1896998 / 5767326
5	93 Spencer Road	1897146 / 5764960
6	133 Spencer Road	1897192 / 5767147
7	152 Spencer Road	1897242 / 5767388
8	165 Spencer Road	1897291 / 5767614
9	177 Spencer Road	1897205 / 5767788
10	199 Spencer Road	1897116 / 5767901
11	225 Spencer Road	1896953 / 5768038
12	248 Spencer Road	1896875 / 5768254
13	265 Spencer Road	1896883 / 5768429
14	10 Waitangi Road	1896897 / 5768666
15	450 Spencer Road	1896934 / 5769684
16	1 Ronald Road	1897370 / 5769874
17	Solitaire Lodge entrance	1897151 / 5769920
18	510 Spencer Road	1897124 / 5770164
19	524 Spencer Road	1897210 / 5770353
20	537 Spencer Road	1897267 / 5770469
21	568 Spencer Road	1897477 / 5770531
22	588 Spencer Road	1897737 / 5770594
23	581 Spencer Road	1897764 / 5770499

APPENDIX : 3 Map of Lake Tarawera Settlement Area

