

BIRD MONITORING – 2008
Five Minute Bird Counts

SPENCER ROAD; LAKE TARAWERA



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For Environment Bay of Plenty.

SUMMARY

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

See Figure 1. Pg 5.

Repeated bird counts along Spencer Road should, over time, show increases in both the species of bird present (types of bird), and their relative abundance (numbers of birds). This would suggest that the local environment has improved since the start of pest control in 2000, allowing many birds to breed successfully in a safer environment, with improved variety and availability of food.

The Lake Tarawera Care Group (LTCG) has carried out regular pest control on private property and reserve land in the settlement area of Lake Tarawera since June 2000. Pest control was originally started to reduce a major rodent infestation in the settlement, but now targets possums as well as rodents in an effort to improve the general environment and enhance the native bird population.

The work of the LTCG has been sponsored by Environment Bay of Plenty. (EBOP)

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.

This well vegetated strip of land between the lake and farmland has more than 470 residences dotted through it, forming a corridor of native vegetation, exotic garden plants, large trees, lawns, a wetland and some farmland.

Native vegetation grows on many of the road banks and edges, comprising a mix of plant species, all of which provide good food and/or shelter for birds throughout the year.



Typical native vegetation growing on road edge.

METHOD

Standard five-minute bird count 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 period were recorded. The time, date, and weather conditions (Sun, wind, temperature, precipitation) were recorded at each count station, for each count carried out. The same count stations were used for this survey as were used in 2005, and located using existing residential house numbers, and G.P.S. *See Appendix 2. Pg 10.*

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 able to be conducted in fine, still conditions with no rain.

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.

RESULTS

29 different species of bird were observed during the four days in November-December 2008, at forty count stations along Spencer and adjoining roads. A total of 897 birds were counted, with an average of 22.4 birds per count station (this includes water birds). *See Table 1. Pg 6.*

In 2005, only 16 different species of bird were observed during the five days in November, at forty count stations. A total of 472 birds were counted, with an average of 11.8 birds per count station and no water birds recorded.

This is a substantial increase in bird species recorded, and almost double the number of birds counted. Forest, garden, farmland passerine species, as well as a few water birds were recorded. Approximately half the species counted were native birds, and of these Tui and Kereru, then Grey Warbler and Shining Cuckoo showed the most dramatic increase in numbers, while Kahu, Kingfisher, and Silvereye decreased in number slightly. Of exotic bird species, Starlings showed the most dramatic increase in numbers. *See Table 2. Pg 7.*

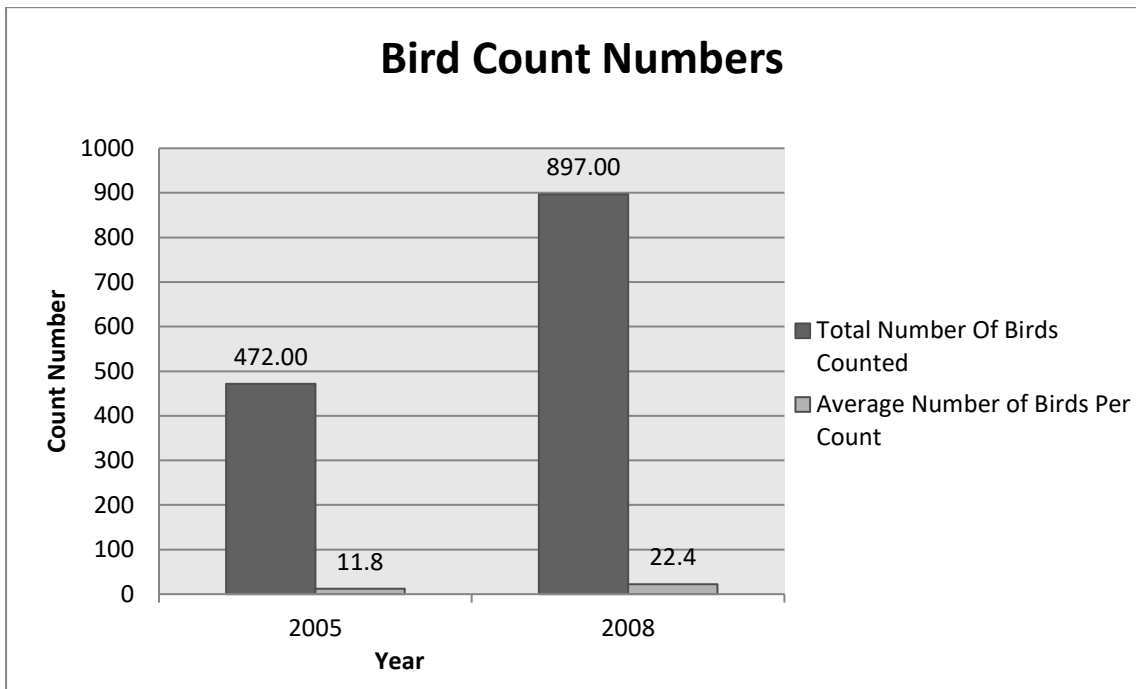


Figure 1. Bird Count Results, 2005 and 2008.

CONCLUSION

An increase in the number of birds counted (abundance), and of the different bird species counted (presence), does suggest that conditions have improved for many bird species in the Lake Tarawera, Spencer Road 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 a 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. Reduced predators, plus abundant year round food is definitely beneficial for birds.

Results of bird counts can only suggest changes and possible trends. I am aware that the bird species showing the greatest increase in numbers for this 2008 survey, are also some of the most conspicuous species by their size, presence, or activity.

Table 1: 2008 Bird Count Results

	BIRD SPECIES RECORDED	NUMBERS COUNTED	AVERAGE PER COUNT
1	Kahu / Harrier•	3	0.07
2	Kereru•	40	1
3	Tui •	169	4.2
4	Kingfisher •	7	0.17
5	Bellbird•	46	1.1
6	Shining Cuckoo•	17	0.4
7	Pukeko•	1	0.02
8	Silvereye•	16	0.4
9	Fantail•	8	0.2
10	Grey Warbler•	28	0.7
11	Welcome Swallow•	16	0.4
12	Black-backed Gull•	12	0.3
13	Sea Gull•	6	0.15
14	Little Shag•	2	0.05
15	Australasian Coot•	4	0.1
16	Black Swan	2	0.05
17	Eastern Rosella	8	0.2
18	Californian Quail	10	0.25
19	Myna Indian	33	0.8
20	Blackbird	76	1.9
21	Song Thrush	26	0.6
22	Starling	157	3.9
23	Yellowhammer	14	0.35
24	Chaffinch	76	1.9
25	Greenfinch	25	0.6
26	Goldfinch	11	0.27
27	House Sparrow	2	0.05
28	Hedge Sparrow	85	2.1
29	Skylark	4	0.1
30	Unknown Finch	3	0.07

•Designates native bird species

Table 2: Bird Species Observed – 2005-2008

Number of Spp.	Common Name	Scientific Name	2008	2005
1	Kahu/Australasian Harrier	<i>Circus approximans</i>	3	4
2	Kereru	<i>Hemiphaga novaeseelandi</i>	40	10
3	Tui	<i>Prosthemadera novaeseelandiae novaeseelandiae</i>	169	72
4	Kingfisher	<i>Halcyon sancta vagrans</i>	7	8
5	Bellbird	<i>Anthornis melanura oneho</i>	46	36
6	Shining Cuckoo	<i>Chrysococcyx lucidus lucidus</i>	17	4
7	Pukeko	<i>Porphyrio porphyrio melanotus</i>	1	0
8	Silvereye	<i>Zosterops lateralis lateralis</i>	6	8
9	Fantail	<i>Rhipidura fuliginosa placabilis</i>	8	0
10	Grey Warbler	<i>Gerygone igata</i>	28	10
11	Welcome Swallow	<i>Hirundo tahitica</i>	16	0
12	Black-backed Gull	<i>Larus dominicanus dominicus</i>	12	0
13	Seagull/Red billed Gull	<i>Larus novaehollandiae</i>	6	0
14	Shag, Little	<i>Phalacrocorax melanoleucos brevirostris</i>	2	0
15	Australian Coot	<i>Fulica atra</i>	4	0
16	Black Swan	<i>Cygnus atratus</i>	2	0
17	Eastern Rosella	<i>Platycercus eximius</i>	8	0
18	Californian Quail	<i>Callipepla californica</i>	10	6
19	Myna	<i>Acridotheres tristis</i>	33	20
20	Blackbird	<i>Turdus merula</i>	76	152
21	Thrush, Song	<i>Turdus philomelos</i>	26	42
22	Starling	<i>Sturnus vulgaris</i>	157	12
23	Yellowhammer	<i>Emberiza citronella</i>	14	0
24	Goldfinch	<i>Carduelis carduelis</i>	11	0
25	Chaffinch	<i>Fringilla coelebs</i>	76	14
26	Greenfinch	<i>Carduelis chloris</i>	25	0
27	House Sparrow	<i>Passer domesticus</i>	2	?
28	Hedge Sparrow	<i>Prunella modularis</i>	85	66 *
29	Skylark	<i>Alauda arvensis</i>	4	8
30	Unknown Finch	?	3	0
		<i>Total Bird Numbers →</i>	897	472
		<i>Total Bird Species →</i>	29	16

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

RECOMMENDATIONS

1. That this community initiated and driven project be encouraged to continue.
2. That bird counts not be conducted on weekend days, as human activity and noise is much greater then during the week, especially in summer.

ACKNOWLEDGEMENTS

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APPENDIX : 1

NAMES OF BIRD SPECIES OBSERVED: 2005 – 08

	Common and Maori Name	Scientific Name
1	Kahu /Australasian Harrier	<i>Circus approximans</i>
2	Kereru /Kukupa / NZ Pigeon	<i>Hemiphaga novaeseelandi</i>
3	Tui	<i>Prothemadera novaeseelandiae novaeseelandiae</i>
4	Kingfisher , NZ / Kotare	<i>Halcyon sancta vagrans</i>
5	Bellbird / Korimako	<i>Anthornis melanura oneho</i>
6	Shining Cuckoo / Pipiwharauoa	<i>Chrysococcyx lucidus lucidus</i>
7	Silvereve / Touhou	<i>Zosterops lateralis lateralis</i>
8	Fantail / Piwakawaka	<i>Rhipidura fuliginosa placabilis</i>
9	Grey Warbler / Riroriro	<i>Gerygone igata</i>
10	Black-backed Gull / Karoro	<i>Larus dominicanus dominicus</i>
11	Seagull / Red billed Gull	<i>Larus novaehollandiae</i>
12	Shag, Little / Kawaupaka	<i>Phalacrocorax melanoleucos brevirostris</i>
13	Pukeko / Swamp hen	<i>Porphyrio porphyrio melanotus</i>
14	Coot , Australian	<i>Fulica atra</i>
15	Black Swan	<i>Cygnus atratus</i>
16	Welcome Swallow	<i>Hirundo tahitica</i>
17	Eastern Rosella	<i>Platycercus eximius</i>
18	Skylark	<i>Alauda arvensis</i>
19	Quail , California	<i>Callipepla californica</i>
20	Myna , Indian	<i>Acridotheres tristis</i>
21	Blackbird	<i>Turdus merula</i>
22	Thrush , Song	<i>Turdus philomelos</i>
23	Starling	<i>Sturnus vulgaris</i>
24	Yellowhammer	<i>Emberiza citronella</i>
25	Chaffinch	<i>Fringilla coelebs</i>
26	Sparrow , House	<i>Passer domesticus</i>
27	Sparrow , Hedge / Dunnock	<i>Prunella modularis</i>
28	Greenfinch	<i>Carduelis chloris</i>
29	Goldfinch	<i>Carduelis carduelis</i>

APPENDIX : 2

Count Stations

Count Stations	Approximate Location of Count Stations
1	19 Spencer Road
2	33 Spencer Road – Junction
3	54 Spencer Road
4	75 Spencer Road
5	93 Spencer Road
6	133 Spencer Road
7	152 Spencer Road
8	165 Spencer Road
9	177 Spencer Road
10	199 Spencer Road
11	225 Spencer Road
12	248 Spencer Road
13	265 Spencer Road
14	10 Waitangi Road
15	450 Spencer Road
16	1 Ronald Road
17	510 Spencer Road
18	524 Spencer Road
19	537 Spencer Road
20	568 Spencer Road
22	581 Spencer Road
23	588 Spencer Road

APPENDIX : 3 Map of Lake Tarawera Settlement Area

