

Bird monitoring on
Banks Peninsula:
Annual report for 2007 & 2008

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Executive summary

A network of five-minute bird count sites has been established by local community groups and Environment Canterbury on Banks Peninsula to monitor the effectiveness of pest control programs in increasing native bush bird numbers. This is the first annual report from this monitoring effort for 2007 and 2008.

A total of 55 count stations at 23 sites across Banks Peninsula were established. A total of 94 counts were conducted by 10 observers over the reporting period. The counts were spread out over the calendar year, with the highest number of counts conducted during the breeding season (Oct/Nov) and winter (Jun/Jul).

A total of 11 native bird species, plus 12 introduced ones were recorded across all the sites. Maps of the distribution of 9 selected native species and the count sites are included in the report. The more commonly recorded species were bellbird, silvereye, grey warbler, brown creeper, fantail and kereru. Rifleman, shining cuckoo, and tomtit were the least often recorded.

Two sites have repeat counts for the same time of year. These sorts of sites – i.e. those with repeat counts in the season, by the same observer, will become the most valuable for monitoring any changes over time.

Recommendations for counters, methods, and the data sheet are included at the end of the report.

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1 Introduction

Banks Peninsula is a unique and important part of Canterbury, with a large and rich diversity of native plants and animals (Figure 1-1). However, many of these indigenous species are under threat from introduced pest species. A number of initiatives are underway on Banks Peninsula to control pest species and enhance habitat through fencing, covenants and planting.

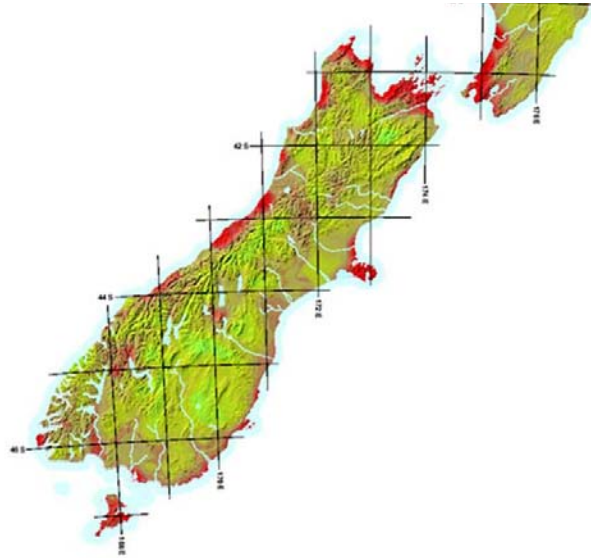


Figure 1-1 Richness of native bird species on the South Island (source: *The Atlas of Bird Distribution in New Zealand 1999-2004*). Higher numbers of bird species are shown in red.

To monitor whether pest control is having the desired effect, e.g. increasing the numbers of native bush bird numbers, a network of five-minute bird count sites was established by the Upper Harbour Trappers group in September 2007. This is a local community group involved in pest animal control and habitat enhancement (e.g. fencing, weed control, and planting) around the upper Akaroa Harbour area.

The network of count sites and participants increased over the period of this report, with assistance from the Banks Peninsula Conservation Trust. The monitoring program has also been supported by Environment Canterbury and the Christchurch City Council.

Monitoring is important for several reasons, including the need to understand the ecological consequence of management actions. For example, studies have shown that reducing possum numbers can allow ship rat numbers to increase up to fivefold¹. Rats have been shown to be one of the main causes of mortality for eggs, chicks, and sitting adult forest birds in non-beech forest on the New Zealand mainland².

This is the first annual report from this monitoring effort for 2007 and 2008 (for all data received by 30 January 2009).

¹ Sweetapple and Nugent 2007

² reviewed by Innes 2005

2 Methods

A series of five-minute bird count sites have been established around Banks Peninsula (Figure 2-1). The sites each contain between 1 and 5 stations, depending on the size of the bush patch. The stations are a minimum of 200 metres apart. The sites are in a variety of habitat types including native and exotic forest as well as gardens. Many of the sites are surrounded by paddocks or other types of vegetation.

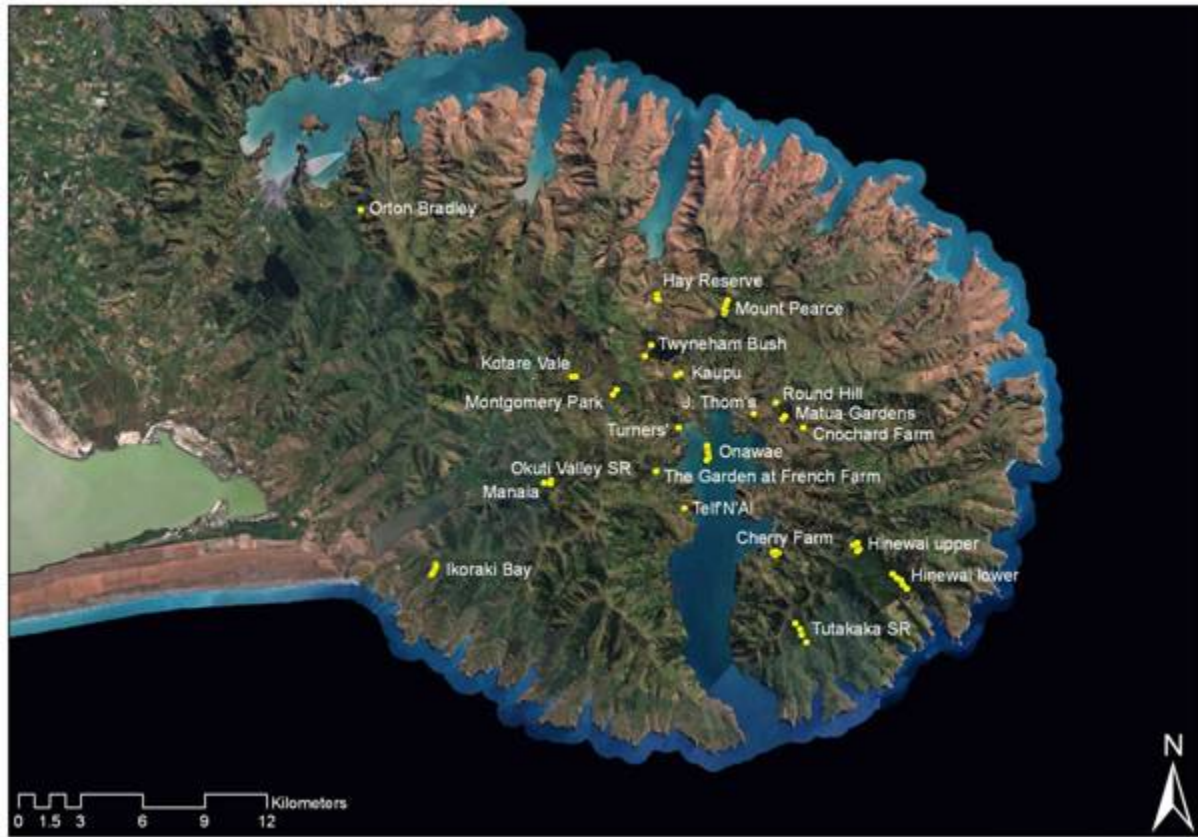


Figure 2-1 Five-minute bird count sites on Banks Peninsula

The initial sites were established around the upper Akaroa Harbour area in September 2007. Sites were selected by participants involved in the Upper Harbour Trappers group following standard five-minute bird count guidelines (Appendix 1) with an emphasis on regenerating native bush communities. Additional sites were later established across the wider peninsula by local residents and Environment Canterbury. Criteria for choosing these sites included proximity of other count sites, vegetation type (with a focus on native bush), elevation (attempting to cover a range of elevations), and logistics (e.g. access).

A committee was established by the Banks Peninsula Conservation Trust to assist with training, advice for involved landowners, and coordination of the project. Standardised field forms and instructions were developed for use by the observers (Appendix 1) and a monitoring proposal has been written (Appendix 2).

A training day was held at the Manaia Native Habitat / Holiday Park, Okuti Valley, Banks Peninsula in April 2008. Training included presentations on bird identification, protocols, data collection, and practice sessions (Appendix x). Participants were also provided with a small field identification booklet and a CD of bird calls. At least one follow-up field session was held at Akaroa.

The minimum goal is to count each site at least once yearly, preferably during the breeding season when birds are most detectable and evenly distributed.

If time and resources allowed then the next goal is to conduct at least one count per 'season'. The seasons were defined as breeding (Oct / Nov), post breeding (Jan/Feb), and winter (Jun/Jul).

The final goal, time permitting, was to count a site monthly. Initially three counts per season were recommended, but that has been revised to one count (based on consultation with a number of statistical experts). More sites was advised over more counts at the same site.

Data which was sent to Environment Canterbury by 30 January 2009 was entered into a copy of the NZ Department of Conservation standard five-minute bird count spreadsheet³. Data received after 30 January 2009 will be included in the next annual report.

Observers varied in their experience and data recording methods; therefore some adaptations have been used. Where 'several' was recorded on the data sheet for a species (e.g. several bellbirds), a '3' was entered (e.g. 3 bellbirds). If the comments section for species contained the statement 'so many I don't know', then the number '5' was entered. If there was a tick or no number for a species, then '1' was entered. In one case only ticks were recorded. In another case the total numbers of calls were recorded. These two sets of records were excluded in the analysis of average numbers of species.

Data checking was conducted in several ways. As questions arose, they were noted and the observers contacted by email or phone if possible in some cases. In September 2008 a meeting for local landowners was organised by the Upper Harbour Trappers Group in Duvauchelle. At this meeting the observers present were given a chance to check their five-minute bird count data. In November 2008 three observers were visited with copies of their data for checking, to provide additional field forms, and go over any issues or questions.

The data has been made widely available by putting a copy of the spreadsheet on 'BP Birds'⁴ (a Google Group website). BPBirds members have also been notified by email. The original data is stored on a spreadsheet in the Environment Canterbury computer system which is regularly backed up.

³ (<http://www.doc.govt.nz/conservation/native-animals/birds/five-minute-bird-counts/the-standard-method/>)

⁴ <http://groups.google.co.nz/group/BPbirds/files>

3 Results and discussion

A total of 55 count stations at 23 sites have been established to date (Table 3.1). Data has been recorded from 10 observers who conducted a total of 94 five-minute counts between September 2007 and December 2008. Four sites had more than one observer.

Table 3.1 The number of count stations per 5mbc site, total number of counts undertaken at each site between Sept 2007 and Dec 2008, and the observers for each site

Site name	Number of count stations	Number of counts	Observers (initials)
Cherry Farm	5	1	PD
Cnochard Farm	1	3	TF
Hay Reserve	2	3	BK & FS
Hinewai lower	5	1	TH
Hinewai upper	5	1	TH
Ikoraki Bay	4	1	FS
J. Thom's	1	9	JT
Kaupu	2	1	FS
Kotare Vale	2	2	FS
Manaia	1	4	FS
Matua Gardens Retreat	2	6	SL
Montgomery Park	2	3	BK & FS
Mount Pearce	5	2	FS
Okuti Valley SR	2	1	FS
Onawe	5	8	SL & JM
Orton Bradley	1	1	FS
Round Hill	1	15	PS
Telf'N'Al	1	15	IT
The Garden at French Farm	1	6	BT
Turners'	1	4	FT & RT
Tutakaka SR lower	3	1	FS
Tutakaka SR upper	1	1	FS
Twyneham Bush	2	3	BK
Total	55	94	10

Counts were conducted in every month except August (Table 3.2). Counts were spread out between seasons as follows: 28 during the breeding season (Oct/Nov), 15 post-breeding (Jan/Feb), and 25 in winter (Jun/Jul).

Two sites have repeat counts for the same time of year. These sorts of sites – i.e. those with repeat counts in the season, by the same observer, will become the most valuable for monitoring any changes over time.

Table 3.2 Timing of the 5 minute bird counts by site. Counts by different observers are recorded separately (as this is a potentially large source of variability)

Site name		Month											
(observers initials)	Year	J	F	M	A	M	J	J	A	S	O	N	D
Cherry Farm	2007												
	2008											1	
Cnochard Farm	2007												
	2008											2	1
Hay Reserve	2007												
(BK)	2008						1						1
Hay Reserve	2007												
(FS)	2008							1					
Hinewai upper	2007												
	2008											1	
Hinewai lower	2007												
	2008												1
Ikoraki Bay	2007												
	2008							1					
J. Thom's	2007											3	
	2008							3					3
Kaupu	2007												
	2008							1					
Kotare Vale	2007												
	2008							2					
Manaia	2007												
	2008							4					
Matua Gardens	2007									1	1	1	
	2008		2				1						
Montgomery Park	2007												
(BK)	2008						1						1
Montgomery Park	2007												
(FS)	2008							1					
Mount Pearce	2007												
	2008							2					
Okuti Valley SR	2007												
	2008							1					
Onawe	2007												1
(JM)	2008												
Onawe	2007												3
(SL)	2008		1				1	1			1		
Orton Bradley	2007												
	2008							1					

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Site name		Month											
(observers initials)	Year	J	F	M	A	M	J	J	A	S	O	N	D
Round Hill	2007												
	2008		3	3	3	3						3	
Telf'N'Al	2007												
	2008	3	3	3	3	3							
The Garden at	2007												
French Farm	2008	3			3								
Turners'	2007										3		
	2008												
Tutakaka SR	2007												
lower	2008							1					
Tutakaka SR	2007												
upper	2008							1					
Twyneham Bush	2007												
	2008						1					1	1
Totals		6	9	6	9	6	5	20	0	1	11	17	1

A total of 11 native and 12 introduced forest bird species were recorded during the counts (Table 3.3). This species list is typical of what would be expected for Banks Peninsula.

Table 3.3 Average numbers of forest birds detected during Banks Peninsula 5-minute bird counts. Categorisation of birds as forest species follows O'Donnell & Dilks (1986, p 23 & 24). Two sites had numbers of calls recorded or ticks of species present – these are listed separately.

	COUNT SITE																							
	Cherry Farm	Cnochard Farm	Hay Reserve	Hinewai lower	Hinewai upper	Ikoraki Bay	Kaupu	J.Thom's	Kotare Vale	Manaia	Matua Gardens	Montgomery Park	Mount Pearce	Onawe	Orton Bradley	Okuti Valley SR	Round Hill	Turner's	Twyneham Bush	Tutakaka SR lower	Tutakaka SR upper	Telf'N'AI	Garden at French Farm	
Native species																								
Australasian harrier		2								1	1			1			1						2	√
Bellbird	3	6	3	2	4	2	4	6	2	3	3	5	1	3		3	2	2	2	1	2	29	√	
Brown creeper			2	2	3		3		1	3	2	2	3	3		3	1		1					
Grey warbler	2		2	2	5	1	2	2	2	2	1	1	2	2	2	1	1	1	2		1			
Kereru (NZ pigeon)	2	2	1	1	1		3	7		1	2						1	1				3	√	
NZ kingfisher				1							1			2				1					√	
S.I. fantail	1	2	3	1	2		2	2		1	2		1	2			3	3	3	1		4	√	
S.I. rifleman		3			1						2			1										
S.I. tomtit					2								1											
Shining cuckoo					1			1			1			1				1						
Silvereeye (waxeeye)	2		2				6	3	3	3	2	2	6	2	3		3	4		2	1	1	4	√
Introduced species																								
Australian magpie		3	1			1		1	2	1	1	1	2			1	2	2					7	√
Blackbird	2	6	3	1	2		2	2	1	3	3	1	1	2			2	1	2		1		√	
California quail	1	15									2							3					1	√
Chaffinch	1		1			2		5		1	2		2	3			3	1					√	
Dunnock (Hedge sparrow)							2	1			2			2			1	2			3		√	
Goldfinch			5	1							3			3			2		1					
Greenfinch		3									1			2										
House sparrow		3		1				1			2						6	9					√	
Redpoll	3							2			1		2	2										
Song thrush	1	9	2		1	2	2	1	3	1	1	2	2	2		3	3	1					√	
Starling		4	4							1	2			1				6					√	
Yellowhammer		13	1								1	1		1				1	2					
Unknown	8	3	1	1	2	3		5		3	3	2	1	3	1		5		2	1	1		√	

The areas that were counted during the breeding season are likely to have higher numbers of birds and more species than those only counted during the winter, as some birds migrate (e.g. shining cuckoo) or are less detectable during winter (e.g. grey warbler).

Parts of Banks Peninsula regularly have some species not normally found in the Port Hills or Christchurch such as brown creeper, rifleman, and tomtit.

Some native forest birds, which are almost certainly present in some of the sites, were not recorded (e.g. morepork). Single tui and falcon have been sighted on Banks Peninsula in recent years; however they were not detected in these counts. Weka and long-tailed cuckoo may also present, at least occasionally, but were not recorded. Other methods, such as presence/absence mapping, night counts, collecting community records, or playback may be needed to detect these scarcer species.

In addition to the forest birds, seven native and two introduced coastal or open-water species were recorded (Table 3.4). Welcome swallow and paradise shelduck were the two most recorded by location (5 sites), followed by skylark (4 sites), then pipit (3 sites). Only the sites near the coast or paddocks are likely to record these species.

Table 3.4 Average numbers of coastal and open-country bird species detected near Banks Peninsula 5-minute bird count stations during counts. Categorisation of birds as open or coastal-water species follows O'Donnell & Dilks (1986, p 23 & 24). Two sites had numbers of calls recorded or ticks of species present – these are listed separately

	COUNT SITE																						
	Cherry Farm	Cnocharad Farm	Hay Reserve	Hinewai lower	Hinewai upper	Hutchinsons	Kaupu	J.Thom's	Kotare Vale	Manaia	Matua Gardens Retreat	Montgomery Park	Mount Pearce	Onawe	Orton Bradley	Okuti Valley SR	Round Hill	Turner's	Twyneham Bush	Tutakaka SR lower	Tutakaka SR upper	TelfNAI	Garden at French Farm
Native species																							
NZ pipit											1			1			2						
Paradise shelduck				1						1	1			2				2					
Red-billed gull														2									
Southern black-backed gull														2									
Spur-winged plover																2		1					
Welcome swallow		4							2		1			3			3						
White-fronted tern														1									
Introduced species																							
Canada goose														2				12					
Skylark									1		1			1			1						

The average counts of nine key native forest bird species are displayed in Figures 3-1 and 3-2. The three most commonly detected birds were bellbird, grey warbler, and silvereye (waxeye). Bellbirds were the most widespread, and were recorded at 22 of the 23 sites (Figure 2-1, Table 3.5). The three least often recorded of these nine birds were tomtit, rifleman, and shining cuckoo.

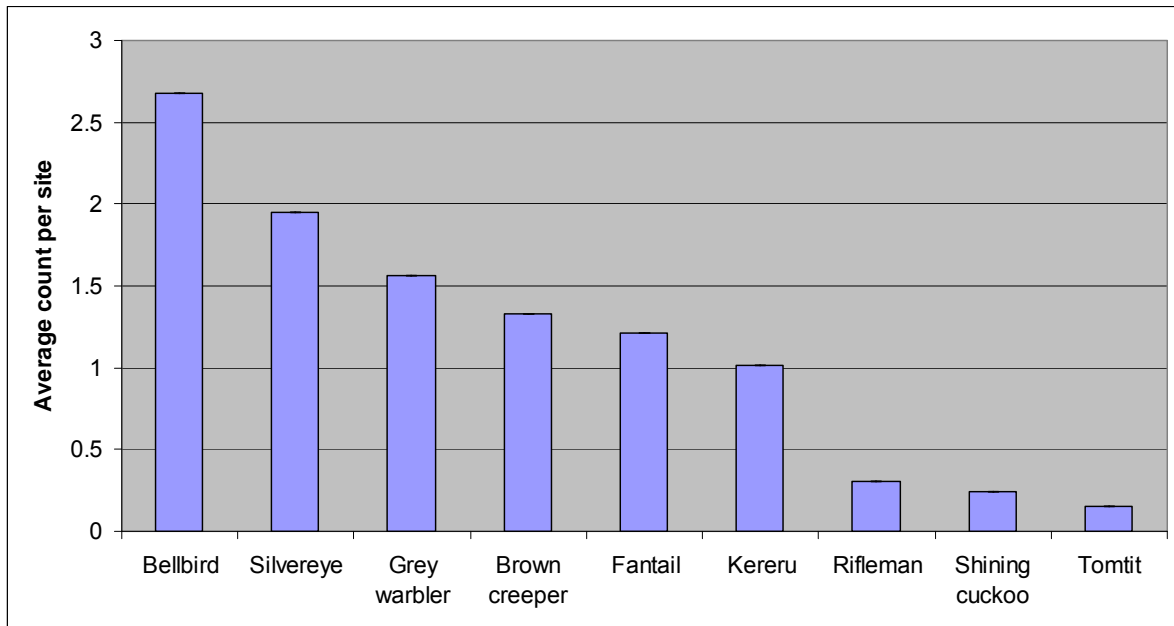
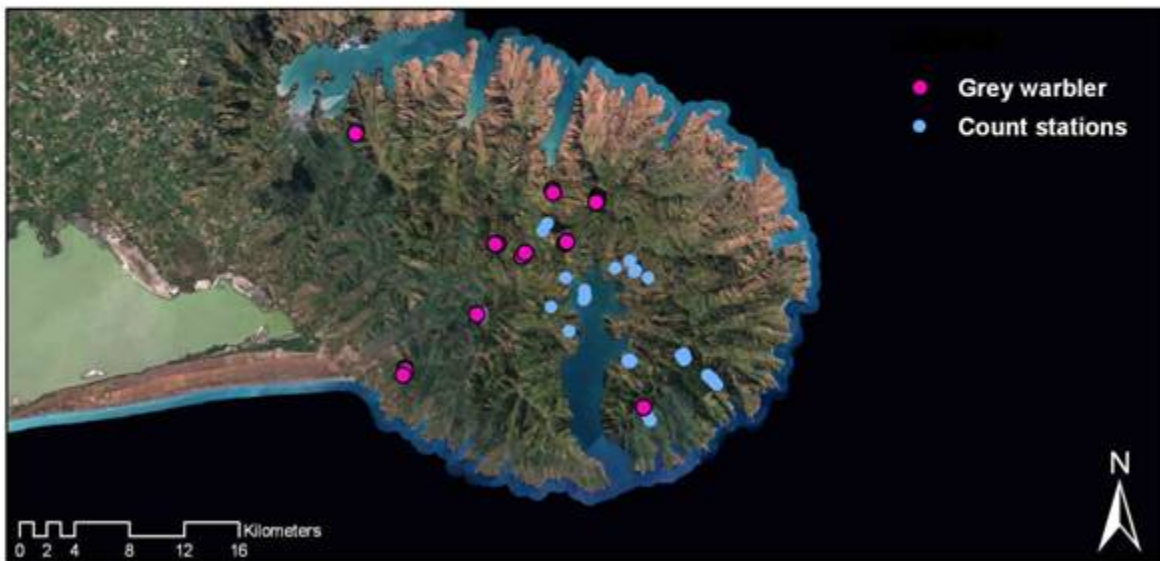
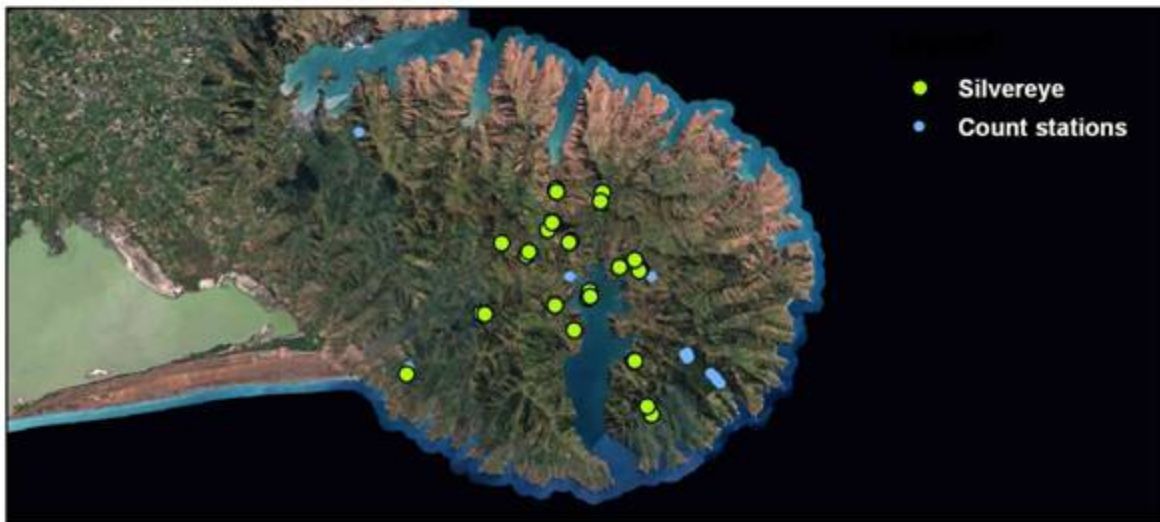
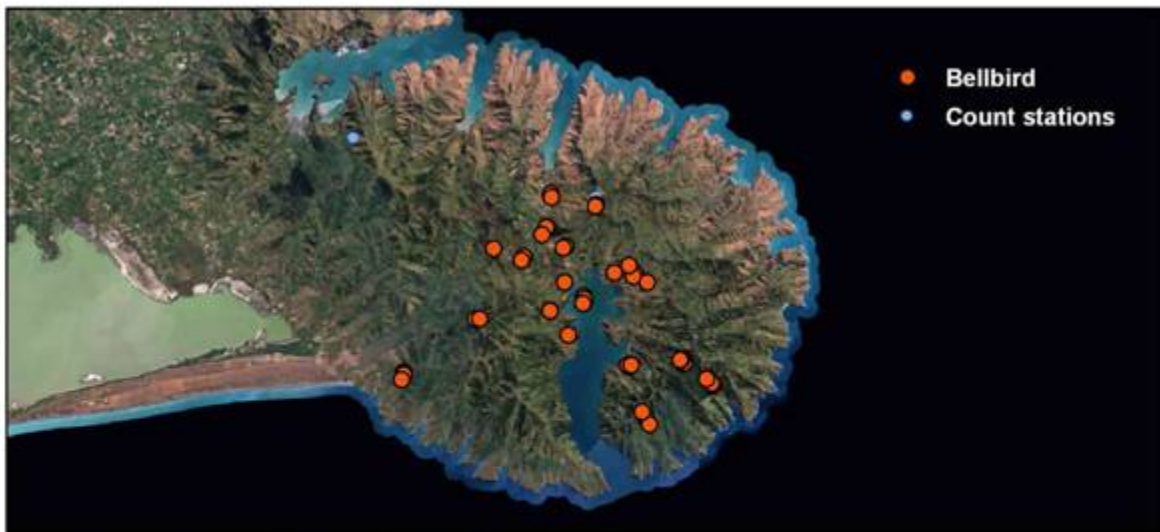
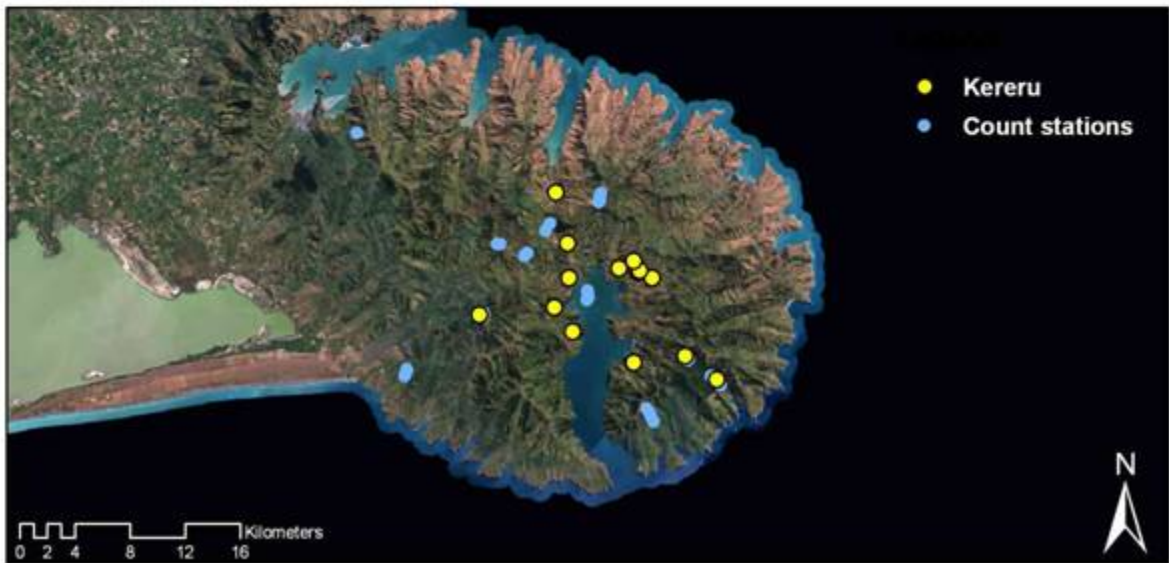
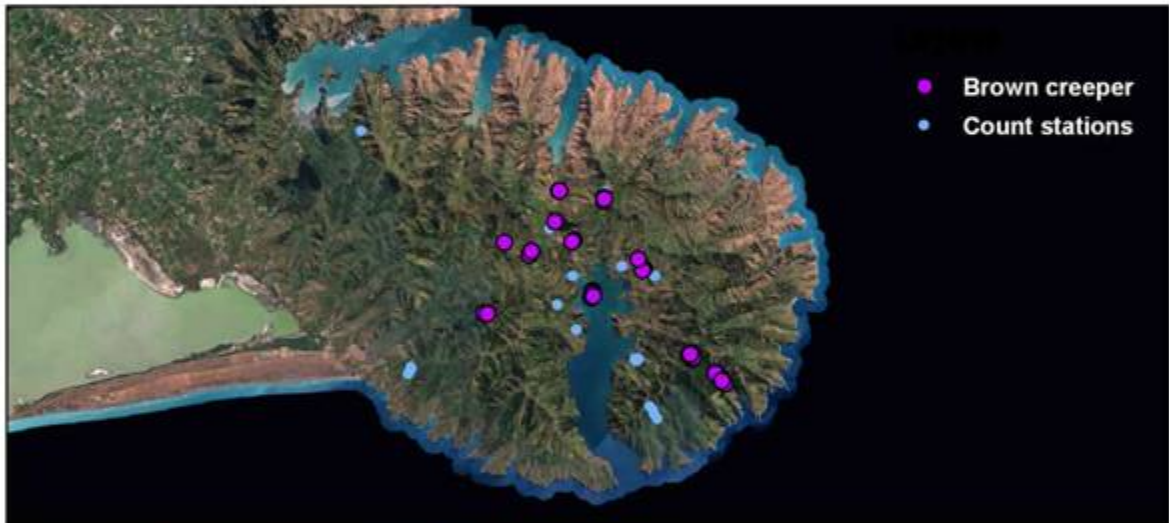
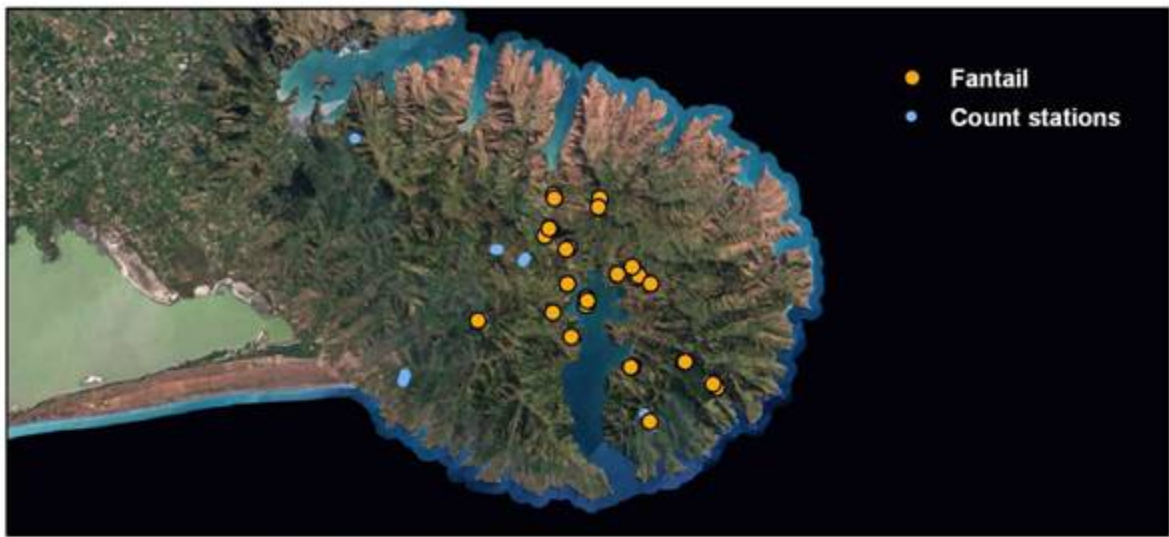


Figure 3-1 Average numbers of nine key forest bird species detected for all count sites over all seasons and for all observers.

It is important to note that the average numbers for the five-minute bird counts are 'indices of abundance' and therefore comparisons should not be made between species. For example, just because more bellbirds are recorded than silvereeyes does not mean there are larger numbers of bellbirds at these sites. This is because there are differences in detectability between species (e.g. bellbird calls are louder than rifleman, so will be heard more often) and differences between observers (e.g. more observers recognise bellbird or grey warbler calls than brown creeper or tomtit calls). However, once more years of data have been collected, changes in abundance over time may be compared for the same species at the same time of year (and by the same observer).



17 Feb 09 F.Schmehl Z:\WrdMap 9.26 min bird counts



17 Feb 09 F:Schmechel Z:\VrdMap 9 26 min bird counts

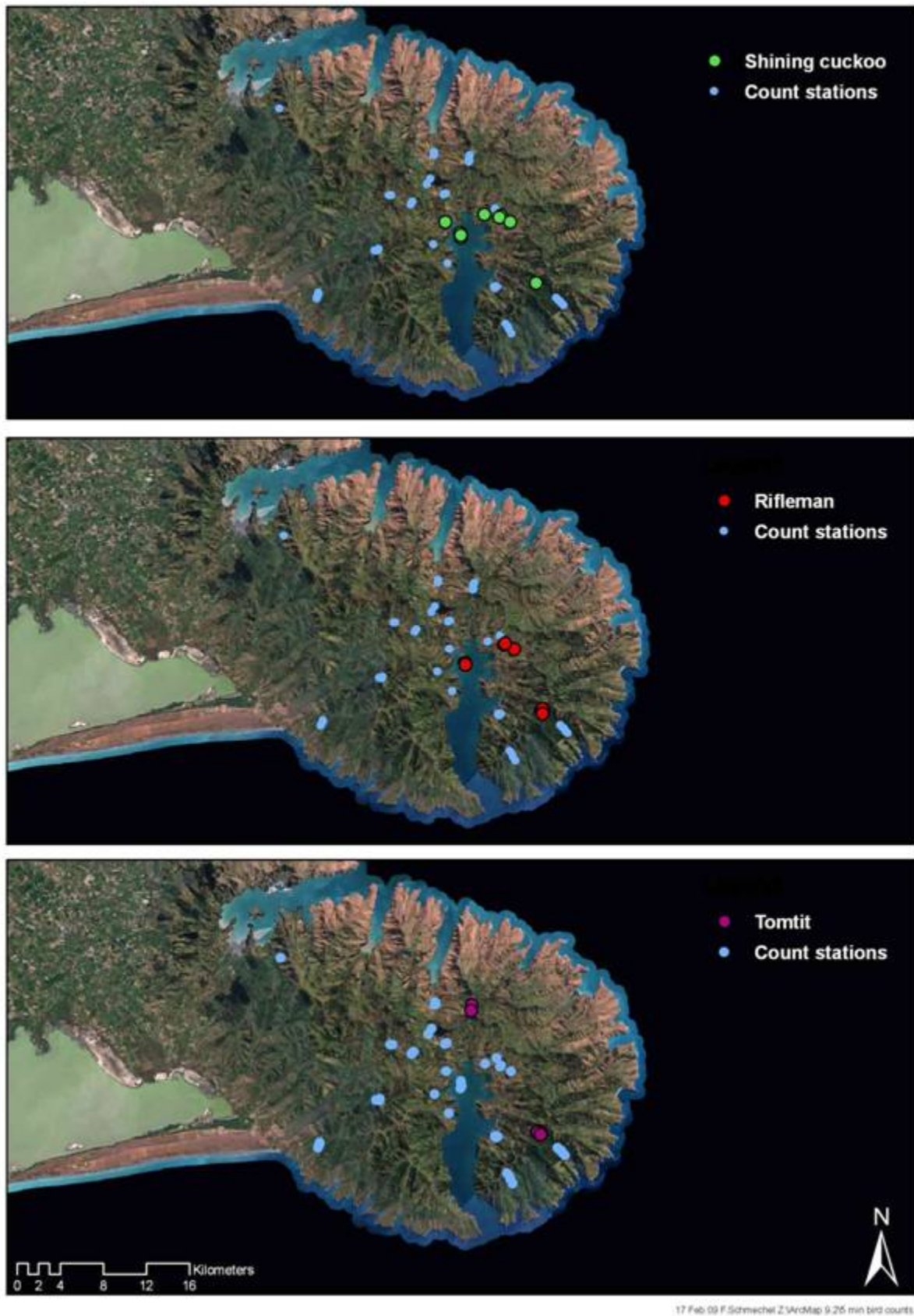


Figure 3-2 Distribution of key native bush bird species

Although caution must be used in interpreting the data due to all the potential sources of variation, a broad picture has emerged of the native bush birds. Bellbird and silvereye were found in most count sites most times of the year (Table 3.5). Grey warbler, brown creeper, and fantail were present and detected in many sites much of the year. Kereru were also present and detected in many sites throughout the year; however, longer count times of 10 minutes have been recommended as optimal for this species. Rifleman, shining cuckoo and tomtit were detected in fewer areas, and/or in only some seasons.

Table 3.5 Proportion of 23 count stations where selected native species were detected at least once. N is the number of stations where each species were recorded

Species	Proportion of stations where detected	If detected at site, average number detected	N
Bellbird	96%	2.9	22
Grey warbler	87%	1.8	20
Silvereye	78%	2.7	18
Fantail	74%	1.1	17
Brown creeper	57%	2.4	13
Kereru	57%	2.0	13
Shining cuckoo	22%	1.1	5
Rifleman	17%	1.7	4
Tomtit	9%	1.7	2

4 Recommendations

To counters

- At the end of the count check that all boxes have been filled in (e.g. temperature, precipitation)
- For unknown species, include in the columns with the actual count (treat the unknowns just like other species)
- Record numbers for all species identified
- Don't knowingly count a bird more than once
- If interested in tracking kereru specifically, extend the counts to 10 minutes, but make sure the 5 minute bird count is still valid, i.e. record the data from the first 5 minutes separately from the second.
- If no birds at all are detected at a station be sure and still write down the details for that station.
- Prioritise for future counting those sites with repeat counts in the season, by the same observer, as these will become the most valuable for detecting changes over time.
- Mapping bird locations while counting can be a very useful tool and is recommended (Figure 4-1)

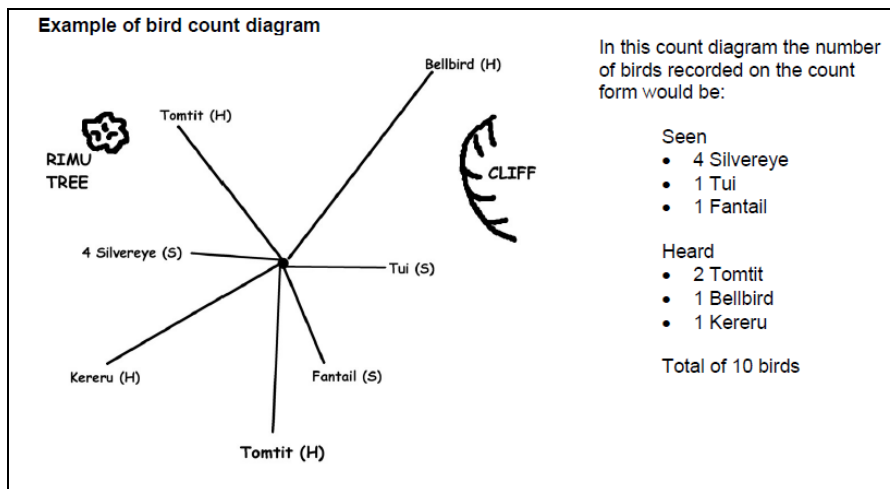


Figure 4-1 Bird count diagram example from the FORMAK monitoring kit developed by Peter Handford, (www.formak.co.nz).

Methods

- Optional - after the first 5 minutes stay at station another 5 minutes and record every new species (not numbers, just new species). Move around a bit and try to identify any species that caused confusion during the first 5 minutes.

Data sheet

- Change the order of weather and noise items to match the spreadsheet (and minimise data entry errors).
- Modify the top section to better fit spreadsheet fields (remove line number; add unique survey name, general location, and specific location).
- Modify 'other noise' to match the 'standard recording of conditions' (0 = not important, 1 = moderate, 2 = loud)
- Add lines for the contact details of recorder (email address or phone number as minimum) and coordinates of the stations (optional if a repeat survey).
- Add a section to note any bird species heard between adjacent stations (to develop a list of all species seen/heard in a particular area).
- Add a list of the following key protocol points on back of data sheet:
 - All birds that cannot be identified should be recorded (as "unknown").
 - Individual birds should not knowingly be counted more than once.
 - If a bird calls in one place and later one of the same species calls some distance away, they should be recorded as two individuals unless there is evidence that the first bird moved to the second place.
 - Record time and all the weather and noise boxes.

5 Acknowledgements

Sue Lovett and John Thom instigated the Upper Harbour Trappers Group and the earliest count sites. Data was collected by Ben Kennard, Bryan Tichborne, Ian Telfer, John McIlroy, Paddy Stronach, Tricia Hewlett, Patsy Dart, R. Turner, and Tracy Foley. Overall coordination was provided by Rachel Barker and Tina Troup. Site coordination was provided by Sue Lovett, Eric Spurr, Kate Whyte, Tina Troup, and Andrew Crossland.

Advice and assistance in developing the program was provided by: Rachel Barker, Eric Spurr, Patsy Dart, Andrew Crossland, Sheila Patch, Jan Walker, John Thom, Liz Maaka, Sue Lovett, Tina Troup, Wayne Beggs, and Heidi Stevens. Eric Spurr developed the data forms and instructions. Andrew Crossland provided photo and contents for the BP bird identification booklet, and Les McPherson provided a CD of BP bird calls. Mark Parker assisted with data entry and analysis.

Useful suggestions and review of the report were provided by Lynette Hartley, Philip Grove, Rachel Barker, and Mark Parker.

6 References

- Robertson CJR, Hyvönen P, Fraser M, Pickard C. 2007. Atlas of Bird distribution in New Zealand 1999-2004. Wellington: The Ornithological Society of New Zealand. 533 p.
- Sweetapple, PJ, Nugent G. 2007. Ship rat demography and diet following possum control in a mixed podocarp-hardwood forest. *New Zealand Journal of Ecology* 31: 186-201.

Appendix 1 – Five-minute bird count data forms and instructions

BANKS PENINSULA CONSERVATION TRUST
Five-Minute Bird Count Method Instruction Sheet
May 2008

(Adapted from the Department of Conservation Specification No.10)

Introduction

- The five-minute bird count (5MBC) has been used in NZ for over 30 years, and is the most widely used method for determining *status and trend* in forest bird populations.
- The method involves an observer standing at one place (“point” or “counting station”) and counting all the birds heard and/or seen in exactly 5 minutes
- Counts made at several points in an area provide an estimate of *relative abundance* (or an index of the population) of each bird species detected.
- Repeated counts made in a standardised way over several years provide a measure of *changes* in the relative abundance of birds.
- Note that the counts are not a census or count of the whole population (but an index of the population) because not all birds are detected –an unknown number remain hidden.
- The method is most powerful when counts are repeated annually over long time frames (>10 years), when sample sizes are high (minimum of 10 points), and when variation in observers, times of day, and environmental conditions are minimised.

Establishing counting stations

- Generally it is better to have more counting stations visited less frequently than few counting stations visited more frequently.
- Counting stations should be separated by at least 200 m, so that they are independent, and at least 100 m inside the edge of the forest or habitat of interest.
- Counting stations should be permanently marked (or tagged) so that the same stations can be revisited each time a survey is done.
- Mark the locations of counting stations on a NZMS 260 map, and compile a list of counting stations with their grid references (from map or GPS), altitude (from map or GPS), and habitat type (native forest, exotic forest, open country, or urban).

Conducting counts

- Equipment needed: Watch with seconds hand or stop-watch (alarm function useful), pen/pencil, recording sheet, clipboard (or similar), binoculars.
- Only one person should count birds. If a second person is present (e.g. for safety) they may time the 5 minutes but must not draw the counter’s attention to any birds.
- On arrival at a counting station, stand quietly and begin counting birds as soon as possible (e.g. stopped breathing heavily, got field recording sheet ready, etc.), normally within 1–2 minutes of arriving.
- Record all birds detected (heard and/or seen) for exactly 5 minutes.
- The majority of birds will be heard first rather than seen first. If you wish, you can record birds first heard and first seen separately, but the total heard and total seen should add up to give the total number of birds detected.
- Any birds that cannot be identified should be recorded as “unknown”, with a description if possible. Identification may be checked after the count is finished.
- Individual birds should not knowingly be counted more than once in any one 5-minute period; i.e. if same bird calls several times it should be counted only once.
- However, if an individual bird was counted at a previous station it should be counted again; i.e. each counting station is treated as a separate entity (independent).

- No birds should be assumed to be present without some visual or auditory clue to their presence (e.g. a flock of silvereyes is noted as the number heard calling rather than the number the observer guesses such a frequency of calling would represent).
- If a bird calls in one place and later one of the same species calls some distance away, they should be recorded as two individuals unless there is evidence that the first bird moved to the second place.
- There is no agreed limit on how far away birds should be recorded. However, DOC recommends that birds calling from a very long way away (e.g. bellbirds calling from across the valley) should *not* be recorded. Birds flying overhead should be recorded.
- Record observations on a standard form so that all relevant information is recorded. At end of count check that all information is recorded and in correct columns and lines.

Standardising conditions

- Weather: Counts are best made on fine, calm days. Do not count during strong winds or heavy rain because these conditions affect the behaviour of birds and the ability of observers to detect them.
- Time of day: Counts should be made between 1.5 hours after sunrise and 1.5 hours before sunset to avoid changes in conspicuousness associated with sunrise and sunset. In midwinter a suitable counting time is between 9.30 am and 3.30 pm (NZ Standard Time) and in mid-summer it is between 7.30 am and 7.30 pm (NZ Summer Time).
- Time of year: Counts should be made at each station at least once per year, in October/November (i.e. in the breeding season). Ideally, counts should be made monthly. If this is not possible, consider making counts in January/February (late summer) and June/July (winter) as well as October/November.

Data collation

- If more than one person is present during a count at a station, for example during training, only one person's counts should be used for that station.
- Collate survey information and store securely, preferably immediately on return from the field.
- If you are able to, enter observation and count data into an Excel spreadsheet (download one from <http://www.doc.govt.nz/templates/page.aspx?id=45210>)
- Post field recording sheet to Frances Schmechel, Environment Canterbury, P O Box 345, Christchurch. Or email Excel spreadsheet to frances.schmechel@ecan.govt.nz

For more information:

- Visit the Department of Conservation website for a summary of information on 5MBC: <http://www.doc.govt.nz/templates/page.aspx?id=33083>
- Contact the Banks Peninsula Conservation Trust
For general enquiries: Rachel Barker tel: 03- 962-9555 or rachel.barker@landcare.org.nz
For data enquiries:
Frances Schmechel, ECan, tel: (03) 372-7060 or frances.schmechel@ecan.govt.nz
Eric Spurr, Landcare Research, tel: (03) 321-9809 or spurre@landcareresearch.co.nz

Useful websites:

What Bird? <http://www.whatbird.co.nz/>

Te Ara - Encyclopedia of NZ site, <http://www.teara.govt.nz/TheBush/NativeBirdsAndBats/en>

Five-Minute Bird Count Recording Sheet					
Make counts between about 1.5 hours after sunrise and 1.5 hours before sunset. Don't count in heavy rain or strong wind.					
Observer	Date (day, month, year)				
Location					
Line Number (if count stations on a line)					
Count Station Number					
Time (at start of count)					
Bellbird					
Blackbird					
Brown Creeper					
California Quail					
Chaffinch					
Dunnock (Hedgesparrow)					
Fantail					
Goldfinch					
Greenfinch					
Grey Warbler					
Harrier					
House Sparrow					
Kereru (Wood Pigeon)					
Kingfisher					
Long-tailed Cuckoo					
Magpie					
Pheasant					
Pipit					
Redpoll					
Rifleman					
Rock Pigeon					
Shining Cuckoo					
Silvereye (Waxeye)					
Skylark					
Song Thrush					
Starling					
Tomtit					
Welcome Swallow					
Yellowhammer					
Species Unknown (describe if possible)					
Temp 1=below 0°C, 2= cold (0-5), 3=cool (6-10), 4=mild (11-15), 5=warm (16-22), 6=hot (>22)					
Sun (minutes of sun overhead during 5-min count)					
Precipitation Type: N=none, M=mist, R=rain, H=hail, S=snow					
Amount: 0=none, 1= dripping foliage, 2=drizzle, 3=light rain, 4=moderate, 5=heavy rain					
Wind 0=leaves still or move without noise, 1=leaves rustle, 2=leaves or branches in constant motion, 3=branches or trees sway					
Noise other than wind (e.g., stream, traffic) 0=not important, 1=moderate, 2=loud					

Please tick here if you don't want the data above being made publicly available.
Other Notes

Please fold along lines, lightly cellotape or staple together, attach stamp, and post completed form to:

Affix
stamp
here

Frances Schmechel
Environment Canterbury
PO Box 345
Christchurch

**BANKS PENINSULA CONSERVATION TRUST
Five-Minute Bird Count Site Information Sheet
May 2008**

Location _____

Line Number (if count stations on a line) _____

Distance between stations (if count stations on a line) _____

Station number	Grid reference From NZMS260 or GPS (circle one of above)												Altitude (m)	Habitat type (native forest, exotic forest, open country, urban)	
1								N						E	
2								N						E	
3								N						E	
4								N						E	
5								N						E	
6								N						E	
7								N						E	
8								N						E	
9								N						E	
10								N						E	
								N						E	
								N						E	
								N						E	
								N						E	
								N						E	
								N						E	
								N						E	
								N						E	
								N						E	
								N						E	
								N						E	
								N						E	

Observer _____

Date _____

Appendix 2 – Bush Bird monitoring programme proposal and map of coordination areas

Community Bush Bird Monitoring Programme Proposal
11 May 2008

Workshop on Identification and Monitoring

A workshop about bush bird identification and monitoring was held on Banks Peninsula in mid-April. Thirty-five people from the Peninsula, Christchurch and a cross-section of organizations attended for the day, despite the morning's rain. The event was set up by the Banks Peninsula Conservation Trust to help interested landowners and the wider community of Banks Peninsula identify bush birds (both native and introduced) by observing and learning how to monitor them.

The workshop was held at Manaia and Okuti Reserve near Little River. It was planned with help from landowners on the Peninsula as well as representatives from NZ Landcare Research, the Christchurch City Council, Environment Canterbury, Department of Conservation, the local runanga, and the Ornithological Society.

A variety of people turned up, from beginners to experienced bird watchers, and all enjoyed honing their skills with the help of knowledgeable bird specialists. The aim was to train volunteers to use the national standard Five-Minute Bird Count (5MBC) method promoted by the Department of Conservation.

With data from regular observations carried out by trained volunteers in a range of habitats across the Peninsula we hope to establish trends in bush bird populations and determine whether they are increasing, declining or holding their own. The observations will also help determine the presence or absence of species, and allow us to keep watch on the rare species of Banks Peninsula.

Bush Bird Monitoring Network

A Community Bush Bird Monitoring Network was proposed as a result of the workshop, with the Peninsula divided into five broad areas for monitoring at least three times per year. The three main seasons recommended for monitoring are June/ July, October/ November, and January/ February. Volunteers will be working throughout the Peninsula, and Environment Canterbury will be providing an analysis of the data findings. We plan to provide regular updates on the volunteer's monitoring through the Trust's newsletter, *Landnotes*.

There is already a group of people monitoring birds within the inner Akaroa Harbour. The Port Hills are also actively monitored by the Christchurch City Council's rangers. An expansion of the network of volunteers is an exciting step forward, and the opportunity to combine with vegetation monitoring is another proposal in the making.

The overall goal of learning more about the current habitat and birdlife across the Peninsula is gaining widespread support amongst those that treasure Banks Peninsula.

Bush Bird Monitoring Network Coordination

There is a proposal to coordinate the Bush Bird Monitoring Network by splitting the Peninsula into five broad geographic areas, with each area having an Area Coordinator. An overall Network Coordinator is suggested as the main contact person for bird monitoring right across the Peninsula. The roles are proposed as follows:

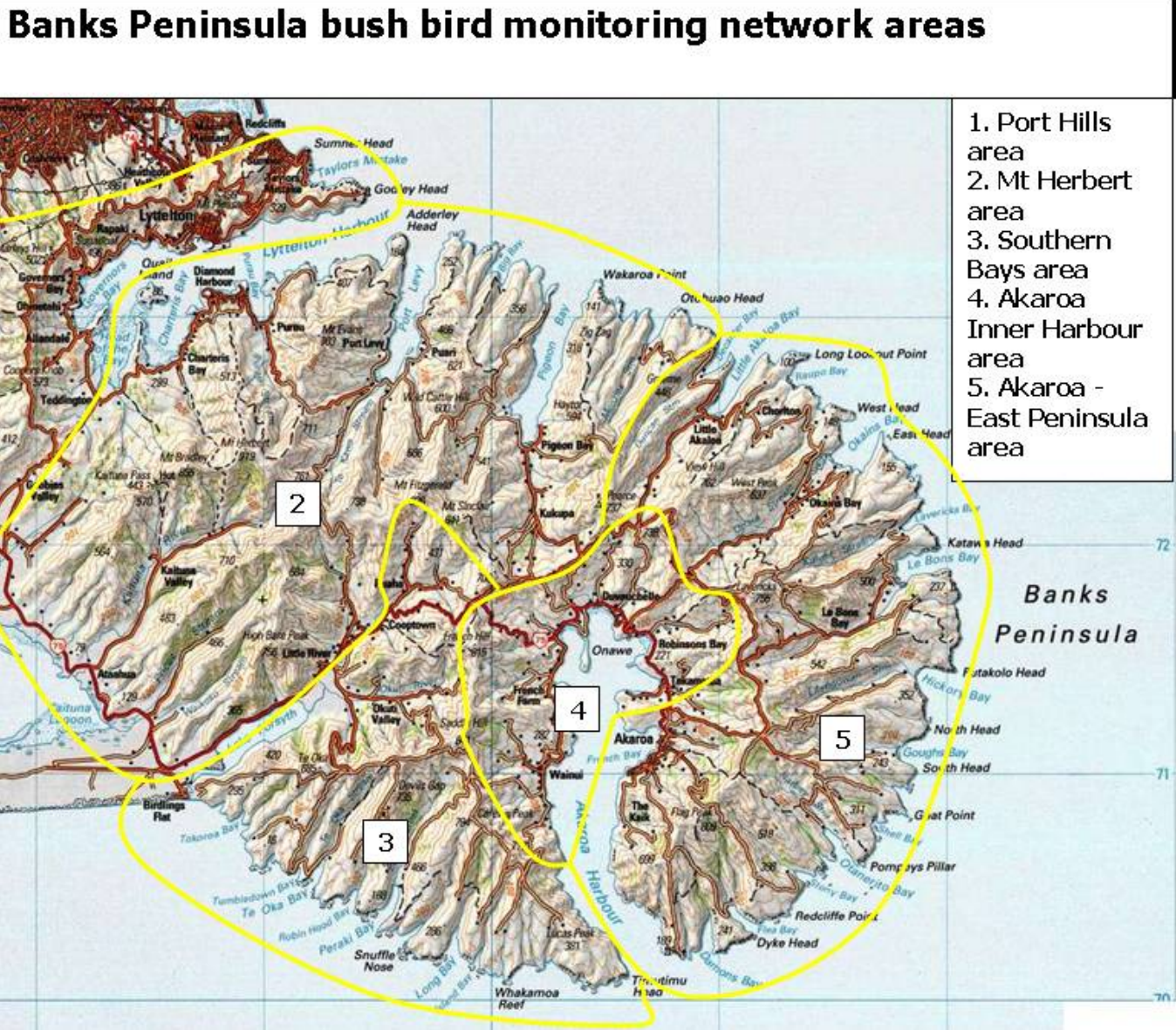
1. Bush Bird Network Coordinator role:
 - Keep an updated database of all volunteers in each area of the Peninsula.
 - Keep in regular email or phone contact with each Area Coordinator in the 5 areas.
 - Help people get underway with monitoring by putting people in touch with each other.

- Keep a record of where the various monitoring sites are located.
 - Help provide a GPS point for locating monitoring sites.
 - Spend time with volunteers who want more assistance to firstly identify bird species at the selected site(s) and secondly to practice Five Minute Bird Counts (5MBCs) on site.
 - Keep in regular contact with the BPCT Coordinator (Rachel Barker) and the BPCT Management Committee representative (Patsy Dart).
 - Rachel will make initial contact with covenant landowners for permission to conduct 5MBCs. The Network Coordinator should continue to keep in contact with landowners who wish to be kept informed, invited to join in the counts, and informed of findings.
2. Bush Bird Area Coordinators' role:
- Five area volunteers are proposed for five geographic areas across the Peninsula.
 - These five people will encourage volunteers to join a team(s) in their area.
 - They will work with the Network Coordinator to identify sites in their area.
 - They will also work with the Network Coordinator to help people get underway with both bush bird identification and the Five Minute Bird Counts.
3. Suggested people:
- Tina Troup, Bush Bird Network Coordinator

 - Eric Spurr, Akaroa Area Coordinator (from Akaroa to Little Akaloa)
 - Sue Lovett, Akaroa Inner Harbour Area Coordinator
 - Tina Troup, Mt. Herbert Area Coordinator
 - Kate Whyte, Southern Bays Area Coordinator
 - Andrew Crossland, Port Hills Area Coordinator

Please refer to the attached map for divisions of the five areas across Banks Peninsula.

4. Where to next?
- Proposed at the 9 May BPCT Management Meeting
 - To be further discussed amongst interested volunteers
 - A funding proposal to be put forward at least to cover petrol costs for a) the Network Coordinator and b) the Area Coordinators
 - An expanded funding proposal could be developed to establish a paid part-time position for the Network Coordinator.(to be discussed further with the Chair and Deputy-Chair of the Trust).



Appendix 3 – Five-minute bird count training day programme and notes

Bush bird monitoring workshop – Manaia, Okuti Valley
18 April 2008

Feedback on bird count exercise

- good consistency between observers as to number of species
- (N.B. Make a note of species observed between counts if not observed during count)
- remember to keep looking during count
- If necessary, check ID after the 5 mins is finished to avoid distraction
- A watch / stopwatch with alarm is good.

Eric

- only 1 person making observations and writing
 - second person ok but stays silent – *doesn't draw attention to missed birds so as not to bias the results* (roles – timekeeper and safety)
 - do not extend beyond 5 minutes
 - If in open space – go out 200m (*from bush edge*).
 - It's ok to take a dictaphone, then transfer data to forms.
 - Minimum spacing between count stations – 200m
-
- Check at end of each count to make sure nothing ticked in wrong box!
 - Ticks on left of box, total on right (circled to avoid confusion with ticks)
 - You can make seen first heard first columns, but don't double count same bird. Submit data as totals of both.
 - Practice several times before doing official count.
 - Make notes at bottom of form, eg. "I don't know my finches"

Data websites and data management options

1. DOC website: www.doc.govt.nz/templates
2. Landcare Research site: www.nzbrn.org.nz (New Zealand Biodiversity Recording Network)
3. FORMAK Forest Monitoring and Assessment Kit
4. Send to Frances Schmechel at ECan, P O Box 345, Christchurch or frances.schmechel@ecan.govt.nz

Monitoring sites

1. Andrew & Phil – 20 sites on Port Hills
3 x per year (Oct-Nov, Jan-Feb, June-July)
2. Eric, Barbara, Patsy, Tina, Wayne – sites in Akaroa region:
Nikau Palm Gull, top of Flea Bay (Helps covenant), Armstrong Reserve, Garden of Tane
5. Annelies & Kees – Western Valley
6. Jan W.

7. Tina – Purau, Port Levy (incl. Monument, rununga Conservation Agreement), Holmes Bay, Prices Valley, Kaituna Valley, (Governor's Bay)
8. Pru & Ben –Hay Reserve in Pigeon Bay
9. Kate – Southern Bays
10. Phil – Ahuriri (need access permission)
11. Jill, Tricia, Paul – Hickory Bay, Gough's Bay, Paua Bay, Fisherman's Bay, Elangowen, Cloud Farm, Hinewai
12. Robin – Le Bons
13. Anne Sherlock – Church Bay
14. Diane, Rachel – Manaia (Okuti Valley)

Existing people / sites underway:

Telfer – Tikau Bay

Russel Turner – Barry's Bay

Bruce Clement – Pipers Valley

Paddy Stronach – Robinson's Bay

Duncan McMillan – Ngaio Point

Ongoing training

Area support groups: Three sessions per year – just before count periods (Oct-Nov, Jan-Feb, June-July?)

Sites: town, Port Hills, Akaroa, Little River

Trainers / support people

Kees, Eric, Andrew, FS, Tina, Sue, Martin, Phil



Bush Bird Monitoring Workshop

Friday 18 April
9.30 am- 4.00 pm
Manaia, Okuti Valley



Time	Topics	Speaker
9.30 START	Welcome, outline and purpose of day	Rachel Barker, BPCT and Dianne Kennedy, Manaia
9.45	Developing a vision for Banks Peninsula	Pam Richardson, BPCT
9.55 5 mins each	Getting started: recording bush birds Getting started: including predator control Getting started: Quail Island/ Ōtamahua	Sue Lovett, Robinsons Bay John Thom, Duvauchelle Tina Troup, Holmes Bay
10.15	Native and introduced bush birds of Banks Peninsula slide show. Best times of year to monitor bush birds. Recognising birdsong using CD recordings.	Andrew Crossland, CCC
11.00	Morning tea	
11.20	How to record birds using the five minute bird count (5 MBC) field form	Eric Spurr, Landcare Research
11.45	Practise in the field. Divide into field groups to walk through Manaia Native Habitat and Okuti DOC Reserve.	Rachel to form groups. Field Group leaders: Eric Spurr, Andrew Crossland, Sue Lovett, Frances Schmechel, Tina Troup, Jan Walker, Martin Tickner, and Robin Burleigh
BYO LUNCH	<i>Bring your own lunch to have in the field, or back at the staff common room</i>	
2.15	Feedback from bird counting field work	Rachel to coordinate with all
2.40	Data discussion. Options for depositing data.	Frances Schmechel, ECan
3.00	Banks Peninsula sites suitable for monitoring	Rachel Barker and Robin Burleigh, Josef Langer Trust
3.20	Invitation to join a Community Monitoring Programme	All to discuss
3.45- 4.00 FINISH	Where to next?	Rachel and all

Many thanks for your participation in this event. Please feel free to contact Rachel, the BPCT Biodiversity Co-ordinator for any further questions.

Rachel Barker freephone: 0508-5826-322 or rachel.barker@landcare.org.nz

Registrations:

Dianne Kennedy
Emma Wood

Okuti Valley
Okuti Valley

Rachel Barker	BPCT
Kristina Townsend	BPCT
Kate Whyte	BPCT, Oashore
Patsy Dart	BPCT, Akaroa
Pam Richardson	BPCT, Pigeon Bay
Annelies Pekelharing	BPCT, Little River
Prue Kennard	BPCT, Pigeon Bay
Ben Kennard	BPCT, Pigeon Bay
Tina Troup	Holmes Bay
Sue Lovett	Robinsons Bay
John Thom	Duvauchelle
Andrew Crossland	CCC
Eric Spurr	Landcare Research
Frances Schmechel	ECan
Jan Walker	Ornithological Society
Martin Tickner	Puaha Valley
Wayne Beggs	DOC
Liz Maaka	Runanga
Robin Burleigh	Josef Langer Trust
Duncan McMillan	Duvauchelle
Glynis Dobson	Reynolds Valley
Jill Tini	
Calum McIntosh	Redcliffs
Pat McIntosh	Redcliffs
Norma Horne	Little River
Elaine Batt	Puaha Valley
Les McPherson?	
Phil Crutchley?	