

# THE Birds OF BRITISH COLUMBIA

---

VOLUME 4

PASSERINES

WOOD-WARBLERS  
THROUGH  
OLD WORLD SPARROWS

---

## APPENDICES

---

- 1 Migration Chronology / 2
- 2 Summary of Christmas Bird Counts in British Columbia: 1957 through 1993 / 12
- 3 Summary of Breeding Bird Surveys in British Columbia: 1968 through 1994 / 37
- 4 Examples of Bird Species Richness and Density in Old-growth Coniferous and Broad-leaf Forests of British Columbia / 86

## APPENDIX 1

### Migration Chronology

In the following table, dates are given for regular spring and/or autumn migrants in 7 coastal and 11 interior locations throughout the province. The data for compiling the migration dates were obtained from the literature as well as from field notebooks of birders. Periods of records vary with area as follows: Victoria (1969-97), Tofino (1968-97), Vancouver (1968-97), Harrison (1974-92), Sunshine Coast (1971-97), Bella Coola (1991-97), Masset (1980-95), Okanagan (1897-1997), Nakusp (1975-97), Radium (1979-86), Kamloops (1978-97), Williams Lake (1958-97), Quesnel (1980-95), Prince George (1981-97), Mackenzie (1991-97), Fort St. John (1980-97), Fort Nelson (1975-95), and Atlin (1991-97). Dates for peak movements (Fig. 1) are generally given as ranges. A single date indicates a calculated average for all records. Localities and dates were deleted if information was incomplete.

Each species generally falls into 1 of 3 categories: summer visitant, winter visitant, or passage migrant. Earliest arrival, peak movement, and latest departure dates are given for each "season." A completed matrix for each category is as follows:

	SPRING			AUTUMN		
	Early Arrival	Peak Movement	Late Departure	Early Arrival	Peak Movement	Late Departure
Summer Visitant	x	x	—	—	x	x
Winter Visitant	—	x	x	x	x	—
Passage Migrant	x	x	x	x	x	x



**Figure 1.** In late July, Yellow-headed Blackbirds move away from their nesting colonies and gather in flocks before departing to wintering grounds in late August and early September (Creston, 12 July 1984; R. Wayne Campbell).

*Migration Chronology*

	SPRING			AUTUMN		
	Early Arrival	Peak Movement	Late Departure	Early Arrival	Peak Movement	Late Departure
<b>Tennessee Warbler</b>						
Okanagan	6 May	19 May	1 Jun	27 Aug	18 Sep	10 Oct
Williams Lake	16 May	25 May	–	–	–	9 Sep
Prince George	20 May	–	–	1 Aug	–	21 Sep
Mackenzie	12 May	–	–	–	–	15 Sep
Fort St. John	14 May	18-28 May	–	–	9-22 Aug	18 Sep
Fort Nelson	20 May	29 May-5 Jun	–	–	–	–
<b>Orange-crowned Warbler</b>						
Victoria	9 Mar	Apr	–	–	Sep	28 Oct
Vancouver	13 Mar	15-30 Apr	10 May	19-25 Aug	Sep	–
Harrison	4 Apr	–	–	–	1-5 Sep	28 Sep
Tofino	10 Mar	–	–	–	10 Aug-18 Sep	–
Masset	19 Apr	29 Apr	21 May	–	–	–
Okanagan	17 Mar	1-15 May	–	–	15 Aug-15 Sep	4 Nov
Nakusp	19 Apr	3-15 May	–	–	–	16 Nov
Kamloops	14 Apr	10-20 May	–	–	1-15 Sep	11 Oct
Williams Lake	28 Apr	4-20 May	22 May	16 Aug	mid-Sep	10 Oct
Prince George	22 Apr	16-21 May	–	1 Aug	–	11 Sep
Mackenzie	24 Apr	4 May	–	7 Aug	18 Aug-20 Sep	–
Fort St. John	26 Apr	29 Apr-5 May	–	–	15-31 Aug	27 Sep
Fort Nelson	27 Apr	30 Apr-13 May	–	–	–	–
<b>Nashville Warbler</b>						
Victoria	13 Apr	–	3 May	5 Aug	–	21 Nov
Vancouver	11 Apr	–	24 May	1 Aug	–	5 Oct
Harrison	13 Apr	–	31 May	–	–	–
Okanagan	5 Apr	1-15 May	–	–	15 Aug-15 Sep	1 Oct
Nakusp	24 Apr	–	–	–	–	27 Sep
Kamloops	18 Apr	5-15 May	–	–	–	13 Sep
Williams Lake	28 Apr	6-17 May	–	–	12 Aug-7 Sep	14 Sep
<b>Yellow Warbler</b>						
Victoria	8 Apr	1-10 May	–	–	1-15 Sep	9 Nov
Vancouver	9 Apr	5-15 May	–	–	20 Aug-5 Sep	24 Nov
Harrison	4 May	–	–	–	–	18 Sep
Sunshine Coast	29 Apr	22 May	–	–	13 Sep	1 Oct
Okanagan	10 Apr	1-15 May	–	–	15-31 Aug	25 Sep
Nakusp	4 May	–	–	–	–	22 Sep
Kamloops	2 May	18-25 May	–	–	–	10 Sep
Williams Lake	29 Apr	9-18 May	–	–	6 Aug-12 Sep	4 Oct
Prince George	26 Apr	14 May	–	–	–	1 Sep
Mackenzie	14 May	15-29 May	–	–	7-27 Aug	11 Sep
Fort St. John	9 May	18-26 May	–	27 Jul	10-30 Aug	14 Sep
Fort Nelson	8 May	21-27 May	–	–	–	–
<b>Magnolia Warbler</b>						
Kamloops	–	–	–	–	–	20 Sep
Prince George	23 May	25 May	–	–	–	–
Mackenzie	2 May	–	–	–	–	19 Sep
Fort St. John	19 May	22-28 May	–	–	15-30 Aug	7 Sep
Fort Nelson	22 May	25 May	–	–	–	–
<b>Cape May Warbler</b>						
Fort St. John	19 May	–	–	–	–	21 Aug
Fort Nelson	23 May	–	–	–	–	14 Aug
<b>Yellow-rumped Warbler</b>						
Victoria	–	17 Apr-15 May	–	–	15 Sep-15 Oct	–
Vancouver	–	10 Apr-10 May	–	–	15 Sep-15 Oct	–
Harrison	22 Mar	13 Apr-11 May	–	15 Aug	15-30 Sep	31 Oct
Sunshine Coast	9 Mar	15 Apr-5 May	–	–	18 Sep-6 Oct	14 Dec
Masset	15 Apr	–	5 May	–	–	–
Okanagan	30 Mar	15 Apr-10 May	–	–	1-15 Sep	12 Nov
Nakusp	4 Apr	24 Apr-15 May	–	–	5-18 Sep	9 Dec
Kamloops	27 Mar	25 Apr-10 May	–	–	5-20 Sep	6 Nov
Williams Lake	30 Mar	15 Apr-12 May	–	–	16-24 Sep	19 Nov
Bella Coola	9 Apr	–	–	–	–	3 Oct
Prince George	8 Apr	20 Apr	–	–	3-24 Sep	8 Oct
Mackenzie	17 Apr	10-15 May	–	–	25 Aug-21 Sep	25 Sep



Appendix 1

	SPRING			AUTUMN		
	Early Arrival	Peak Movement	Late Departure	Early Arrival	Peak Movement	Late Departure
<b>◀ YELLOW-RUMPED WARBLER</b>						
Fort St. John	21 Apr	10-17 May	–	–	11 Aug-14 Sep	5 Oct
Fort Nelson	25 Apr	14-19 May	–	–	16 Sep	22 Sep
<b>Black-throated Gray Warbler</b>						
Victoria	1 Apr	early May	–	–	mid-Sep	12 Oct
Vancouver	3 Apr	–	25 Apr	–	–	–
Sunshine Coast	29 Mar	18-30 Apr	–	–	11-18 Sep	29 Sep
<b>Black-throated Green Warbler</b>						
Fort St. John	9 May	15-25 May	–	17 Aug	22 Aug-2 Sep	5 Sep
<b>Townsend's Warbler</b>						
Victoria	3 Apr	15 Apr-15 May	–	–	late Sep	28 Oct
Vancouver	16 Mar	May	–	–	Sep	16 Nov
Harrison	4 May	–	–	–	–	27 Dec
Sunshine Coast	13 Apr	15-30 Apr	–	–	11-18 Sep	11 Oct
Masset	18 Apr	–	–	–	–	3 Sep
Okanagan	26 Apr	14-21 May	–	–	15 Aug-10 Sep	3 Nov
Nakusp	5 May	–	–	–	–	22 Sep
Kamloops	1 May	20-25 May	–	–	–	10 Oct
Williams Lake	4 May	7-20 May	22 May	4 Aug	10 Aug-13 Sep	4 Oct
Prince George	5 May	late May	–	–	–	8 Sep
Mackenzie	4 May	15-20 May	–	–	20-30 Aug	21 Sep
Fort St. John	7 May	7-19 May	19 May	8 Aug	25-31 Aug	31 Aug
<b>Palm Warbler</b>						
Fort St. John	9 May	10-15 May	–	–	15 Aug-1 Sep	14 Sep
Fort Nelson	13 May	15-20 May	–	–	4 Sep	16 Sep
<b>Bay-breasted Warbler</b>						
Fort St. John	23 May	–	–	–	–	31 Aug
Fort Nelson	29 May	–	–	–	–	24 Aug
<b>Blackpoll Warbler</b>						
Mackenzie	–	–	–	–	23 Aug-3 Sep	15 Sep
Fort St. John	9 May	18-25 May	–	8 Aug	20-29 Aug	13 Sep
Fort Nelson	13 May	–	–	–	–	21 Aug
Atlin	17 May	21-31 May	–	–	14-21 Aug	27 Aug
<b>Black-and-white Warbler</b>						
Fort St. John	13 May	20-25 May	–	–	14-22 Aug	1 Sep
Fort Nelson	13 May	20 May	–	–	–	–
<b>American Redstart</b>						
Vancouver	17 Apr	–	–	–	–	5 Nov
Okanagan	2 May	25 May-5 Jun	–	–	20 Aug-1 Sep	7 Sep
Nakusp	23 May	–	–	–	–	17 Sep
Williams Lake	26 May	3-13 Jun	–	–	17 Aug-1 Sep	10 Sep
Prince George	18 May	28 May-1 Jun	–	–	–	18 Sep
Mackenzie	22 May	29 May-2 Jun	–	–	20-26 Aug	24 Sep
Fort St. John	15 May	18-24 May	–	–	10 Aug-3 Sep	14 Sep
Fort Nelson	23 May	25 May-3 Jun	–	–	–	–
<b>Ovenbird</b>						
Williams Lake	15 May	–	–	–	–	11 Jul
Prince George	22 May	–	–	–	–	8 Jul
Mackenzie	20 May	–	–	–	–	18 Sep
Fort St. John	13 May	17-21 May	–	–	10-25 Aug	1 Sep
Fort Nelson	18 May	22-31 May	–	–	–	22 Jul
<b>Northern Waterthrush</b>						
Victoria	Apr	–	–	–	–	4 Oct
Vancouver	12 Apr	–	26 Apr	17 Aug	–	21 Sep
Okanagan	2 May	mid-May	–	–	Aug	1 Sep
Nakusp	15 May	–	–	–	–	4 Aug
Radium	–	–	–	–	–	18 Aug
Williams Lake	17 May	20-25 May	25 May	–	–	15 Sep
Quesnel	19 May	–	–	–	–	30 Aug



## Migration Chronology

	SPRING			AUTUMN		
	Early Arrival	Peak Movement	Late Departure	Early Arrival	Peak Movement	Late Departure
<b>◀ NORTHERN WATERTHRUSH</b>						
Prince George	3 May	15-22 May	–	–	–	8 Sep
Mackenzie	14 May	14-21 May	–	–	6-10 Aug	17 Sep
Fort St. John	9 May	11-19 May	–	–	18-28 Aug	21 Sep
Fort Nelson	13 May	15-20 May	–	–	–	28 Jul
<b>Connecticut Warbler</b>						
Fort St. John	29 May	17-27 Jun	–	–	–	21 Aug
Fort Nelson	19 Jun	–	–	–	–	–
<b>Mourning Warbler</b>						
Fort St. John	24 May	25-29 May	–	–	20 Aug-1 Sep	2 Sep
Fort Nelson	7 Jun	10-14 Jun	–	–	–	–
<b>MacGillivray's Warbler</b>						
Victoria	4 Apr	12-21 May	–	–	–	3 Oct
Vancouver	20 Apr	–	–	–	19-24 Aug	11 Oct
Harrison	29 Apr	10-27 May	–	–	–	21 Sep
Tofino	16 May	–	–	–	–	24 Sep
Sunshine Coast	20 Apr	10-20 May	–	–	–	18 Sep
Okanagan	3 May	10-30 May	–	–	8 Aug-10 Sep	–
Nakusp	10 May	–	–	–	–	7 Sep
Kamloops	11 May	15-25 May	–	–	20-30 Aug	24 Nov
Williams Lake	9 May	14-26 May	–	–	13 Aug-16 Sep	11 Oct
Prince George	17 May	24-29 May	–	–	–	12 Sep
Mackenzie	21 May	24-30 May	–	–	10-27 Aug	12 Sep
<b>Common Yellowthroat</b>						
Victoria	26 Mar	8-14 May	–	–	31 Jul-26 Aug	14 Oct
Vancouver	2 Apr	–	–	–	26 Aug-16 Sep	20 Nov
Harrison	5 Apr	–	–	–	–	22 Sep
Tofino	2 May	–	–	–	–	17 Nov
Okanagan	4 Apr	15-21 May	–	–	23 Aug-3 Sep	9 Nov
Nakusp	10 May	–	–	–	–	3 Oct
Kamloops	6 May	18-25 May	–	–	1-10 Sep	27 Sep
Williams Lake	3 May	15-20 May	–	–	10-21 Sep	2 Oct
Prince George	21 May	–	–	–	15 Sep	23 Sep
Mackenzie	22 May	29 May-2 Jun	–	–	24 Aug-19 Sep	28 Sep
Fort St. John	24 May	25-29 May	–	–	20 Aug-10 Sep	28 Sep
Fort Nelson	17 May	19-22 May	–	–	–	28 Aug
<b>Wilson's Warbler</b>						
Victoria	6 Apr	early May	–	–	early Sep	20 Oct
Vancouver	11 Apr	–	–	6 Sep	–	14 Nov
Harrison	27 Apr	10-24 May	–	5 Aug	–	15 Sep
Okanagan	16 Apr	late May	–	5 Aug	early Oct	mid-Sep
Nakusp	2 May	11 May-4 Jun	–	–	–	12 Oct
Kamloops	30 Apr	10-20 May	–	–	5-15 Sep	28 Sep
Williams Lake	28 Apr	1-15 May	21 May	16 Aug	16 Aug-20 Sep	4 Nov
Bella Coola	3 May	–	–	–	–	–
Prince George	4 May	9 May	–	–	–	20 Aug
Mackenzie	22 Apr	26 May-5 Jun	–	–	26 Aug-9 Sep	23 Sep
Fort St. John	4 May	9-14 May	25 May	–	20 Aug-10 Sep	22 Sep
Fort Nelson	17 May	19-28 May	–	–	–	2 Sep
<b>Canada Warbler</b>						
Fort St. John	22 May	25-31 May	–	–	10-15 Aug	28 Aug
Fort Nelson	7 Jun	–	–	–	–	–
<b>Yellow-breasted Chat</b>						
Okanagan	22 Apr	–	–	–	–	21 Sep
<b>Western Tanager</b>						
Victoria	15 Apr	mid-May	–	–	–	27 Sep
Vancouver	15 Apr	–	–	–	–	3 Nov
Harrison	27 Apr	–	–	–	–	23 Sep
Sunshine Coast	Apr	13-23 May	–	–	10-15 Sep	13 Oct
Okanagan	9 Apr	mid-May	–	–	mid-Aug	30 Sep
Nakusp	2 May	10-20 May	–	–	–	10 Sep
Kamloops	1 May	15-30 May	–	–	–	10 Sep



Appendix 1

	SPRING			AUTUMN		
	Early Arrival	Peak Movement	Late Departure	Early Arrival	Peak Movement	Late Departure
<b>◀ WESTERN Tanager</b>						
Williams Lake	29 Apr	11-23 May	–	–	18-24 Aug	25 Sep
Prince George	9 May	20 May	–	–	15 Aug	17 Sep
Mackenzie	11 May	25 May	–	–	4-8 Aug	9 Sep
Fort St. John	9 May	11-22 May	–	–	22-28 Aug	7 Sep
Fort Nelson	18 May	20-25 May	–	–	–	–
<b>Spotted Towhee</b>						
Okanagan	6 Mar	10-19 Apr	–	–	3 Aug-10 Sep	31 Oct
Nakusp	18 Mar	–	–	–	–	–
Kamloops	2 Mar	11-20 Apr	–	–	–	13 Oct
Williams Lake	12 Mar	14 Apr	–	–	–	9 Nov
<b>American Tree Sparrow</b>						
Victoria	–	–	28 Mar	24 Oct	–	–
Vancouver	–	10-20 Mar	11 Apr	7 Oct	25 Oct-5 Nov	–
Masset	–	–	–	16 Oct	–	21 Dec
Okanagan	–	mid-Apr	10 May	7 Sep	late Oct	–
Kamloops	–	–	27 Mar	20 Sep	15-25 Oct	–
Williams Lake	–	–	23 Apr	12 Oct	–	–
Prince George	25 Mar	–	24 Apr	16 Sep	–	–
Mackenzie	9 Apr	–	–	–	–	20 Oct
Fort St. John	4 Apr	15-30 Apr	17 May	30 Aug	19 Sep-8 Oct	31 Oct
Fort Nelson	22 Apr	28 Apr-6 May	–	–	10-17 Sep	7 Oct
<b>Chipping Sparrow</b>						
Victoria	1 Apr	9-21 Apr	–	–	26-31 Aug	11 Oct
Vancouver	6 Apr	–	–	–	–	23 Oct
Harrison	27 Apr	–	–	–	–	–
Sunshine Coast	16 Apr	7-22 May	–	–	–	29 Sep
Okanagan	27 Mar	1-7 May	–	–	–	25 Oct
Nakusp	6 May	16-31 May	–	–	–	5 Sep
Kamloops	7 May	15-20 May	–	–	1-10 Sep	11 Sep
Williams Lake	4 May	10-24 May	–	–	26-29 Aug	12 Sep
Prince George	4 May	late May	–	–	–	28 Sep
Mackenzie	29 Apr	–	–	–	–	9 Sep
Fort St. John	6 May	9-13 May	–	–	–	22 Sep
Fort Nelson	11 May	17-24 May	–	–	–	–
<b>Clay-colored Sparrow</b>						
Vancouver	14 Apr	–	–	–	–	31 Oct
Okanagan	6 May	–	–	–	–	24 Nov
Kamloops	20 May	–	–	–	–	8 Sep
Prince George	16 May	late May	–	–	–	16 Aug
Mackenzie	18 Apr	–	–	–	–	7 Sep
Fort St. John	13 May	–	–	–	9 Aug-6 Sep	22 Sep
Fort Nelson	25 May	–	–	–	–	8 Aug
<b>Brewer's Sparrow</b>						
Okanagan	19 Apr	–	–	19 Aug	–	4 Sep
<b>Vesper Sparrow</b>						
Victoria	12 Apr	–	–	–	–	15 Nov
Vancouver	21 Mar	23 Apr-13 May	–	–	26 Aug-24 Sep	18 Oct
Harrison	27 Apr	–	–	–	–	11 Sep
Okanagan	4 Apr	15 Apr-13 May	–	–	26 Aug-9 Sep	16 Oct
Kamloops	14 Apr	1-10 May	–	–	5 Aug-11 Sep	29 Sep
Williams Lake	16 Apr	25 Apr-15 May	–	–	13 Aug-3 Sep	10 Sep
Prince George	8 May	–	–	–	–	27 Aug
Mackenzie	15 May	–	–	–	–	–
Fort St. John	29 Apr	–	–	–	24 Aug-8 Sep	8 Oct
<b>Lark Sparrow</b>						
Okanagan	12 Apr	15-22 May	–	–	late Aug	15 Sep
Kamloops	15 May	–	–	–	–	21 Aug
<b>Savannah Sparrow</b>						
Victoria	–	15-30 Apr	–	2 Aug	8 Sep-10 Oct	19 Nov
Vancouver	12 Mar	9 Apr-7 May	–	–	25 Aug-5 Sep	–
Harrison	24 Mar	12 Apr-11 May	–	–	31 Aug-15 Sep	27 Nov



*Migration Chronology*

	SPRING			AUTUMN		
	Early Arrival	Peak Movement	Late Departure	Early Arrival	Peak Movement	Late Departure
<b>◀ SAVANNAH SPARROW</b>						
Sunshine Coast	4 Apr	15 Apr-7 May	–	23 Aug	7 Sep-15 Oct	2 Nov
Okanagan	25 Mar	14 Apr-21 May	–	–	30 Aug-20 Sep	3 Nov
Nakusp	2 Apr	–	–	–	–	29 Oct
Kamloops	21 Apr	1-15 May	–	–	4-20 Sep	3 Oct
Williams Lake	9 Apr	2-15 May	–	–	–	22 Oct
Prince George	21 Apr	3-10 May	–	–	8-16 Sep	6 Oct
Mackenzie	15 Apr	–	–	–	–	20 Sep
Fort St. John	17 Apr	3-18 May	–	–	24 Aug-12 Sep	11 Oct
Fort Nelson	29 Apr	10-19 May	–	–	8 Sep	19 Sep
<b>Grasshopper Sparrow</b>						
Okanagan	1 May	7-15 May	–	–	early Oct	19 Oct
<b>Le Conte's Sparrow</b>						
Fort St. John	5 May	late May	–	–	–	26 Aug
<b>Nelson's Sharp-tailed Sparrow</b>						
Fort St. John	8 Jun	16-20 Jun	–	–	–	12 Sep
<b>Fox Sparrow</b>						
Victoria	–	late Apr	14 May	21 Aug	late Sep	–
Harrison	–	–	2 May	–	–	–
Sunshine Coast	27 Apr	–	–	–	–	20 Aug
Masset	15 Mar	–	–	–	–	–
Okanagan	16 Apr	15-21 Apr	17 May	9 Aug	21-30 Sep	–
Kamloops	–	–	–	–	–	21 Oct
Williams Lake	9 Apr	26 Apr-7 May	–	–	Sep	14 Nov
Prince George	22 Apr	1 May	–	–	–	–
Mackenzie	26 Apr	5-15 May	–	–	15-30 Aug	5 Nov
Fort St. John	13 Apr	16-20 Apr	–	–	20 Aug-10 Sep	28 Sep
Fort Nelson	22 Apr	26 Apr-10 May	–	–	–	10 Sep
<b>Song Sparrow</b>						
Okanagan	5 Mar	7-15 Apr	–	10 Aug	early Oct	–
Kamloops	1 Mar	–	–	–	25 Aug-10 Sep	30 Nov
Williams Lake	26 Feb	14-24 Apr	–	–	mid-Sep	–
Prince George	28 Feb	14-18 Apr	–	–	15 Sep	29 Oct
Mackenzie	22 Apr	28 Apr-15 May	–	–	24 Aug-14 Sep	27 Sep
Fort St. John	15 Apr	20-27 Apr	–	–	–	14 Oct
<b>Lincoln's Sparrow</b>						
Victoria	–	15 Apr-10 May	3 Jun	31 Jul	Sep	–
Vancouver	8 Apr	–	3 May	4 Oct	–	25 Nov
Harrison	20 Apr	–	13 May	30 Aug	17-21 Sep	5 Oct
Masset	20 Apr	–	–	–	–	24 Sep
Okanagan	17 Apr	27 Apr	mid-May	18 Aug	early Sep	23 Oct
Nakusp	20 Apr	–	–	–	–	28 Sep
Kamloops	13 Apr	15-25 May	30 May	25 Aug	2-20 Sep	12 Oct
Williams Lake	21 Apr	1-12 May	–	–	mid-Sep	21 Oct
Prince George	27 Apr	11-22 May	–	–	–	25 Sep
Mackenzie	19 Apr	–	–	–	–	24 Sep
Fort St. John	29 Apr	10-20 May	–	–	21 Aug-7 Sep	5 Oct
Fort Nelson	7 May	10-15 May	–	–	–	–
<b>Swamp Sparrow</b>						
Prince George	3 May	14-21 May	–	–	–	29 Sep
Mackenzie	20 May	–	–	–	–	23 Sep
Fort St. John	24 Apr	4-16 May	–	–	14 Aug-3 Sep	16 Oct
Fort Nelson	13 May	19 May	–	–	25 Sep	26 Oct
<b>White-throated Sparrow</b>						
Victoria	–	late Apr	11 May	13 Sep	early Oct	–
Vancouver	–	late Apr	21 May	2 Sep	late Sept	–
Harrison	–	late Apr	4 May	–	–	–
Sunshine Coast	–	–	5 May	24 Sep	–	–
Okanagan	–	–	17 May	8 Sep	mid-Oct	–
Kamloops	–	mid-May	14 May	5 Sep	20 Sep	12 Oct
Williams Lake	–	–	29 May	8 Sep	–	–
Prince George	26 Apr	20 May	–	–	–	5 Sep



Appendix 1

	SPRING			AUTUMN		
	Early Arrival	Peak Movement	Late Departure	Early Arrival	Peak Movement	Late Departure
<b>◀ WHITE-THROATED SPARROW</b>						
Mackenzie	28 Apr	mid-May	–	–	early Sep	22 Sep
Fort St. John	1 May	11-25 May	–	–	26 Aug-7 Sep	2 Oct
Fort Nelson	2 May	6-13 May	–	–	late Aug	2 Sep
<b>Harris's Sparrow</b>						
Victoria	–	–	6 May	21 Sep	–	–
Vancouver	–	–	24 May	21 Sep	–	–
Sunshine Coast	–	–	5 May	23 Sep	–	–
Okanagan	–	–	22 May	20 Sep	–	–
Kamloops	–	–	30 Apr	1 Sep	–	–
Williams Lake	–	–	11 May	30 Aug	–	–
Prince George	–	–	22 Feb	16 Oct	–	–
Fort St. John	–	–	–	7 Sep	21 Sep-5 Oct	16 Oct
<b>White-crowned Sparrow</b>						
Harrison	29 Mar	18 Apr-10 May	–	–	–	–
Sunshine Coast	29 Mar	11-30 Apr	–	–	13 Sep-13 Oct	29 Oct
Masset	3 Mar	–	15 May	–	–	–
Okanagan	6 Apr	25 Apr-6 May	26 May	28 Aug	late Sep	–
Nakusp	15 Apr	18 Apr-14 May	2 Jun	1 Sep	5-30 Sep	11 Nov
Kamloops	15 Mar	20 Apr-10 May	21 May	28 Aug	5-20 Sep	21 Oct
Williams Lake	11 Apr	21 Apr-15 May	28 May	21 Aug	31 Aug-29 Sep	22 Nov
Prince George	14 Apr	25 Apr-8 May	19 May	27 Aug	early Sep	13 Nov
Mackenzie	16 Apr	30 Apr-10 May	–	–	20 Aug-10 Sep	6 Oct
Fort St. John	20 Apr	30 Apr-13 May	19 May	21 Aug	31 Aug-17 Sep	27 Oct
Fort Nelson	27 Apr	3-17 May	–	–	9-15 Sep	–
<b>Golden-crowned Sparrow</b>						
Victoria	–	late Apr-early May	31 May	23 Aug	early Oct	30 Oct
Vancouver	–	late Apr-early May	–	–	early Oct	–
Harrison	–	–	11 May	–	–	–
Tofino	–	–	7 May	9 Sep	–	–
Masset	19 Apr	mid-May	18 May	4 Sep	–	–
Okanagan	26 Apr	early May	27 May	3 Sep	–	18 Oct
Nakusp	4 May	–	12 May	–	–	–
Kamloops	–	mid-May	18 May	17 Aug	mid-Sep	18 Oct
Williams Lake	17 Apr	early May	22 May	21 Sep	–	6 Oct
Bella Coola	20 Apr	early May	5 May	–	–	–
Quesnel	–	–	25 May	–	–	–
Prince George	26 Apr	–	21 May	–	–	–
Mackenzie	5 May	–	–	–	–	–
Fort St. John	1 May	–	31 May	7 Sep	–	3 Oct
Fort Nelson	–	–	–	–	–	13 Sep
<b>Dark-eyed Junco</b>						
Okanagan	–	–	1 May	21 Aug	–	–
Nakusp	–	28 Mar-25 Apr	–	–	–	–
Kamloops	1 Mar	20 Mar-30 Apr	–	–	5-30 Sep	1 Nov
Prince George	10 Mar	12 Mar-4 Apr	–	–	20-30 Sep	8 Nov
Fort St. John	7 Apr	10-16 Apr	–	–	15 Sep-5 Oct	20 Dec
Fort Nelson	9 Apr	27 Apr-6 May	–	–	–	–
<b>Lapland Longspur</b>						
Victoria	–	–	24 May	20 Aug	–	–
Vancouver	–	–	31 May	7 Aug	–	–
Sunshine Coast	–	–	–	15 Sep	–	15 Oct
Tofino	19 Apr	–	–	2 Sep	mid-Oct	9 Nov
Masset	–	–	–	26 Aug	–	–
Okanagan	–	mid-Mar-7 Apr	31 May	27 Aug	mid-Sep-mid-Oct	–
Nakusp	–	–	–	2 Sep	–	22 Sep
Kamloops	1 Mar	15 Mar-10 Apr	17 Apr	2 Sep	15 Sep-15 Oct	18 Nov
Williams Lake	13 Mar	16 Mar-24 Apr	6 May	8 Sep	–	1 Nov
Quesnel	15 Mar	–	–	–	–	–
Prince George	15 Mar	late Mar	–	–	mid-Sep	22 Oct
Fort St. John	27 Mar	27 Apr-15 May	21 May	20 Aug	5-15 Sep	23 Oct
Fort Nelson	3 Apr	3-15 May	22 May	30 Aug	early Sep	–



*Migration Chronology*

	SPRING			AUTUMN		
	Early Arrival	Peak Movement	Late Departure	Early Arrival	Peak Movement	Late Departure
<b>Snow Bunting</b>						
Victoria	–	–	2 Mar	25 Sep	8 Oct-30 Nov	–
Okanagan	–	–	21 Apr	5 Oct	20 Oct-3 Nov	–
Nakusp	–	–	31 Mar	21 Oct	–	–
Kamloops	–	1-15 May	17 Apr	24 Sep	Nov	–
Williams Lake	–	10-27 Mar	5 Apr	29 Oct	Nov	–
Prince George	11 Mar	15 Mar	–	24 Oct	31 Oct	–
Fort St. John	–	Mar	15 May	6 Oct	Nov	–
Fort Nelson	17 Mar	21 Mar-5 Apr	3 May	7 Oct	17 Oct-10 Nov	22 Nov
<b>Rose-breasted Grosbeak</b>						
Fort St. John	8 May	17-22 May	–	–	21-27 Aug	4 Sep
Fort Nelson	16 May	20-25 May	–	–	22-27 Aug	2 Sep
<b>Black-headed Grosbeak</b>						
Victoria	2 May	14-25 May	–	–	–	29 Sep
Vancouver	4 May	15-25 May	–	–	5-15 Aug	21 Sep
Okanagan	9 May	–	–	–	15-25 Aug	1 Nov
<b>Lazuli Bunting</b>						
Victoria	20 May	–	–	–	–	26 Aug
Vancouver	2 May	20 May-10 Jun	–	–	–	28 Sep
Harrison	14 May	–	–	–	–	16 Aug
Sunshine Coast	9 May	20-28 May	–	–	–	6 Aug
Okanagan	21 Apr	15-21 May	–	–	late Aug	4 Oct
Nakusp	13 May	–	–	–	–	4 Sep
Kamloops	10 May	25-30 May	–	–	–	1 Sep
Williams Lake	9 May	19 May-1 Jun	–	–	late Aug	15 Sep
<b>Bobolink</b>						
Okanagan	27 Apr	15-21 May	–	–	mid-Aug	7 Sep
Nakusp	14 May	–	–	–	–	24 Aug
Kamloops	15 May	–	–	–	10-25 Aug	5 Sep
Williams Lake	8 Apr	21 May	–	–	–	10 Sep
<b>Red-winged Blackbird</b>						
Okanagan	–	early Mar	–	–	–	–
Nakusp	29 Feb	20 Mar-30 Apr	–	–	–	11 Nov
Kamloops	20 Feb	15 Mar-10 Apr	–	10 Aug	15 Aug-10 Sep	30 Nov
Williams Lake	22 Feb	6-18 Mar	–	27 Aug	19 Sep	–
Prince George	17 Mar	22-26 Mar	–	13 Aug	–	–
Fort St. John	11 Apr	13-20 Apr	–	–	5-15 Aug	9 Sep
Fort Nelson	24 Apr	4-18 May	–	–	–	–
<b>Western Meadowlark</b>						
Okanagan	4 Feb	–	–	–	–	5 Nov
Nakusp	13 Mar	–	–	–	–	28 Sep
Kamloops	1 Mar	15-30 Mar	–	–	15-30 Sep	11 Nov
Williams Lake	2 Mar	9-15 Mar	9 Apr	–	23 Sep	–
Prince George	12 Apr	15-20 Apr	–	–	–	4 Oct
Fort St. John	13 Apr	13 Apr-22 May	–	6 Sep	–	9 Sep
<b>Yellow-headed Blackbird</b>						
Vancouver	25 Feb	–	5 May	23 Aug	–	30 Nov
Okanagan	26 Mar	–	–	–	–	–
Nakusp	19 Apr	11 May-12 Jun	–	–	–	25 Sep
Kamloops	25 Mar	Apr-May	–	–	1-15 Sep	30 Nov
Williams Lake	20 Mar	7-22 Apr	13 May	–	–	–
Prince George	27 Apr	–	–	–	–	16 Oct
Fort St. John	17 Apr	22 Apr-2 May	–	–	–	11 Sep
<b>Rusty Blackbird</b>						
Victoria	–	–	9 Mar	24 Sep	–	–
Vancouver	–	–	9 Apr	19 Sep	–	–
Sunshine Coast	–	–	30 Mar	–	–	–
Tofino	–	–	22 May	1 Oct	–	–
Okanagan	–	–	1 May	–	–	–
Nakusp	–	–	27 Mar	5 Oct	–	–
Kamloops	2 Apr	–	–	–	–	11 Nov



Appendix 1

	SPRING			AUTUMN		
	Early Arrival	Peak Movement	Late Departure	Early Arrival	Peak Movement	Late Departure
<b>◀ RUSTY BLACKBIRD</b>						
Williams Lake	5 Apr	–	–	–	–	3 Nov
Bella Coola	–	–	–	28 Oct	–	–
Prince George	27 Apr	–	–	–	–	26 Oct
Mackenzie	25 Apr	–	–	–	–	28 Sep
Fort St. John	14 Apr	16-24 Apr	–	–	20 Sep-6 Oct	23 Oct
Fort Nelson	18 Feb	25-30 Apr	–	–	–	–
<b>Brewer's Blackbird</b>						
Okanagan	14 Mar	mid-Apr	–	–	early Sep	–
Nakusp	1 Apr	–	–	–	–	13 Nov
Kamloops	15 Mar	15-30 Apr	–	–	1-15 Sep	15 Nov
Williams Lake	9 Mar	9-22 Apr	29 Apr	–	–	8 Oct
Prince George	6 Apr	10-20 Apr	–	–	–	7 Oct
Mackenzie	26 Apr	–	–	–	–	29 Aug
Fort St. John	24 Apr	26-30 Apr	–	–	1-15 Sep	22 Sep
Fort Nelson	28 Apr	3-15 May	–	–	1 Sep	17 Sep
<b>Common Grackle</b>						
Fort St. John	14 Apr	14-21 Apr	–	–	15-25 Aug	29 Aug
Fort Nelson	5 May	5-13 May	–	–	–	–
<b>Brown-headed Cowbird</b>						
Sunshine Coast	28 Mar	4-13 Apr	–	–	–	20 Oct
Okanagan	5 Apr	–	–	–	–	19 Sep
Nakusp	24 Apr	15-30 May	–	–	–	12 Oct
Kamloops	27 Apr	20-30 May	–	–	late Aug	9 Sep
Williams Lake	19 Apr	6-21 May	–	–	–	21 Sep
Prince George	23 Apr	10 May	–	–	–	13 Sep
Mackenzie	29 Apr	–	–	–	–	10 Oct
Fort St. John	30 Apr	3-8 May	–	–	–	29 Aug
Fort Nelson	5 May	–	–	–	–	–
<b>Baltimore Oriole</b>						
Fort St. John	13 May	–	–	–	–	28 Aug
<b>Bullock's Oriole</b>						
Victoria	30 Apr	–	–	–	–	24 Aug
Vancouver	5 May	–	–	–	–	10 Sep
Okanagan	28 Apr	–	–	–	–	26 Aug
Kamloops	15 May	18-25 May	–	–	14-25 Aug	30 Aug
Williams Lake	9 May	18-22 May	–	–	mid-Aug	11 Sep
<b>Gray-crowned Rosy-Finch</b>						
Okanagan	–	–	28 May	7 Oct	–	–
Nakusp	–	–	11 May	25 Oct	–	–
Kamloops	–	1 Mar-10 Apr	25 Apr	15 Oct	–	–
Williams Lake	–	Mar	19 Apr	27 Oct	Dec	–
Mackenzie	–	–	14 Apr	15 Nov	–	–
<b>Pine Grosbeak</b>						
Masset	12 Jun	–	–	4 Nov	–	16 Nov
Okanagan	–	–	15 Apr	25 Sep	–	–
Nakusp	–	–	21 Mar	5 Sep	–	–
Williams Lake	–	Mar	–	24 Oct	1-9 Nov	15 Nov
Prince George	–	–	3 Mar	12 Oct	–	–
Fort St. John	–	Mar	5 May	19 Sep	27-31 Oct	–
Fort Nelson	–	–	27 Apr	15 Oct	–	–
<b>Purple Finch</b>						
Kamloops	24 May	–	–	–	–	2 Sep
Williams Lake	29 Mar	13 Apr-14 May	–	–	15 Sep-23 Oct	5 Nov
Prince George	24 Mar	15-28 Apr	–	–	–	30 Oct
Mackenzie	9 Apr	–	–	–	–	23 Oct
Fort St. John	17 Apr	24 Apr-10 May	–	–	25 Aug-1 Sep	22 Sep
Fort Nelson	25 Apr	28 Apr-14 May	–	–	–	–

## Migration Chronology

	SPRING			AUTUMN		
	Early Arrival	Peak Movement	Late Departure	Early Arrival	Peak Movement	Late Departure
<b>Cassin's Finch</b>						
Okanagan	5 Mar	early Apr	–	10 Aug	early Sep	–
Kamloops	4 Mar	–	1 May	–	1-15 Sep	9 Nov
Williams Lake	27 Mar	23 Apr-28 May	–	–	23 Sep-14 Oct	12 Nov
<b>House Finch</b>						
Prince George	29 Apr	3 May	–	–	–	–
<b>Common Redpoll</b>						
Okanagan	–	–	6 May	16 Oct	–	–
Nakusp	–	–	2 May	10 Nov	–	–
Kamloops	–	15-30 Mar	7 Apr	1 Nov	15-30 Nov	–
Williams Lake	–	14-25 Apr	10 May	15 Oct	21 Oct-25 Nov	–
Prince George	–	21 Mar-7 Apr	17 May	4 Oct	mid-Nov	–
Mackenzie	–	–	20 May	20 Oct	–	–
Fort St. John	–	Apr	28 May	2 Oct	Nov	–
Fort Nelson	–	6-16 Apr	19 May	9 Oct	10-25 Oct	–
<b>Hoary Redpoll</b>						
Mackenzie	–	–	29 Mar	13 Jan	–	–
Fort St. John	–	–	27 Apr	12 Oct	25 Oct-7 Nov	–
<b>Pine Siskin</b>						
Okanagan	–	mid-Apr	–	–	mid-Sep	–
Kamloops	–	20 Apr-30 May	–	–	1-30 Sep	–
Prince George	–	–	–	–	mid-Sep	–
Fort St. John	26 Feb	16 Apr-14 May	–	–	–	29 Oct
Fort Nelson	19 May	–	–	–	–	–
<b>American Goldfinch</b>						
Kamloops	22 Mar	–	–	–	25 Aug-15 Sep	31 Oct
Williams Lake	19 Apr	2-18 May	–	–	–	–
<b>Evening Grosbeak</b>						
Kamloops	–	5-25 May	–	–	20 Aug-20 Sep	–
Fort Nelson	19 Apr	1-11 May	–	11 Oct	–	–

## APPENDIX 2

### Summary of Christmas Bird Counts in British Columbia: 1957 through 1993

The following tables summarize, by species, the Christmas Bird Count data for wood-warblers through Old World sparrows in British Columbia. Only official Christmas Bird Counts (Fig. 2), as published in *Audubon Field Notes*, *American Birds*, and *Field Notes* from 1957 through 1993 have been used.

Highest provincial, interior, and coastal totals are the highest sums for all official counts in any one year in the province. In the tables, "Count locality" refers to the most recent name under which that count has been published. The time span of count activity for a particular location is shown under "Count years"; discontinuities can be



Figure 2. Map of British Columbia showing locations of official Christmas Bird Counts, 1957-93.

## Christmas Bird Counts

determined by comparing “Count years” with “Total counts.” “Frequency of occurrence” indicates the percentage of the counts in a locality on which a species has been recorded.

The general abundance of the species over the count periods is shown by the range of values in the last 3 columns. The highest and lowest numbers recorded are given. An asterisk following a “High” number indicates that some caution is required in interpreting the data for that count locality. Refer to the appropriate species account or to the note at the end of that species’ entry in the table.

The median has been chosen as an indicator of the “usual” value when the species does occur. The middle value of the data set, it will lie closer to the low value when the species frequently occurs in small numbers, and closer to the high value when a species rarely occurs in small numbers. In a

symmetrically distributed data set, the median is an unbiased and consistent estimate of the mean (Zar 1974). Counts of zero have not been used as the “Low” value, but they can be determined using the values under “Frequency of occurrence” and “Total counts.”

For example, there is about a 50% chance of seeing a Yellow-rumped Warbler on the Ladner Christmas Bird Count, and there is a high probability that this is an accurate estimate of the chance of seeing the bird because there is a long history of counts on which to base this estimate. Similarly, if you see the species, you are likely to see about 4 birds, but more than 39 would be exceptional.

See Fig. 2 for the locations of official Christmas Bird Counts, and Table 1 for the number of counts in each locality.

**Table 1.** Localities holding official Christmas Bird Counts in British Columbia: 1957 through 1993.

Count locality	Number of counts	Count locality	Number of counts
<b>Coastal</b>		<b>Interior</b>	
Bamfield	8	Burns Lake–Francois Lake	4
Bella Bella	1	Cranbrook	10
Campbell River	19	Creston	3
Chilliwack	20	Fauquier	10
Comox	32	Fort St. James	7
Deep Bay	19	Fort St. John	4
Dewdney	1	Kamloops	10
Duncan	24	Kelowna	9
Hecate Strait	1	Kimberley	2
Kitimat	16	Lake Windermere	6
Ladner	35	Mackenzie	1
Masset	12	Nakusp	15
Nanaimo	28	Nelson	1
North Saanich	1	North Pine	11
Parksville–Qualicum Beach	3	Oliver–Osoyoos	15
Pender Harbour	3	Penticton	18
Pender Islands	28	Prince George	5
Pitt Meadows	22	Princeton	2
Port Alberni	3	Quesnel	4
Port Clements	10	Revelstoke	13
Prince Rupert	14	Salmon Arm	5
Rose Spit	8	Shuswap Lake Park	22
Sayward	12	Smithers	17
Skidegate	12	Vaseux Lake	20
Sooke	11	Vernon	19
Squamish	13	Wells Gray Park	6
Sunshine Coast	14	Yoho National Park	5
Surrey	7		
Terrace	29		
Vancouver	37		
Victoria	36		
Whistler	3		
White Rock	23		
<b>TOTAL</b>	<b>505</b>	<b>TOTAL</b>	<b>244</b>

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Low	Range of total counts when species occurred Median	High
						Highest provincial total: 8 (1988)
						Highest interior total: 1 (1988)
						Highest coastal total: 7 (1988)
<b>Orange-crowned Warbler</b>						
<b>Coastal</b>						
Duncan	1970-93	24	13	1	1	1
Ladner	1957-93	35	23	1	1	2
Masset	1982-93	12	8	1	–	1
Port Clements	1984-93	10	10	1	–	1
Skidegate	1982-93	12	25	1	1	2
Sooke	1983-93	11	36	1	1	2
Sunshine Coast	1979-93	14	7	1	–	1
Vancouver	1957-93	37	27	1	1	2
Victoria	1958-93	36	22	1	1	3
White Rock	1971-93	23	4	1	–	1
<b>Interior</b>						
Shuswap Lake Park	1972-93	22	5	1	–	1
						Highest provincial total: 2 (1976)
						Highest interior total: Not recorded
						Highest coastal total: 2 (1976)
<b>Yellow Warbler</b>						
<b>Coastal</b>						
Vancouver	1957-93	37	3	2		2*
						Highest provincial total: 154 (1978)
						Highest interior total: 3 (1981)
						Highest coastal total: 154 (1978)
<b>Yellow-rumped Warbler</b>						
<b>Coastal</b>						
Chilliwack	1972-93	20	35	1	4	19
Comox	1961-93	32	13	1	2	5
Duncan	1970-93	24	88	1	5	34
Ladner	1957-93	35	54	1	4	39
Masset	1982-93	12	33	1	1	2
Nanaimo	1963-93	28	14	1	1	2
Pender Islands	1964-93	28	7	1	1	1
Pitt Meadows	1972-93	22	32	1	8	25
Port Alberni	1975-93	3	33	5	–	5
Port Clements	1984-93	10	10	6	–	6
Skidegate	1982-93	12	50	2	3	9
Sooke	1983-93	11	9	1	–	1
Squamish	1980-93	13	15	1	1	1
Surrey	1960-66	7	14	5	–	5
Terrace	1963-92	29	10	1	1	1
Vancouver	1957-93	37	54	1	3	90
Victoria	1958-93	36	58	1	3	25
White Rock	1971-93	23	48	1	7	15
<b>Interior</b>						
Lake Windermere	1979-84	6	17	1	–	1
Nakusp	1979-93	15	7	1	–	1
Oliver-Osoyoos	1979-93	15	13	1	1	1
Penticton	1974-93	18	6	1	–	1
Revelstoke	1981-93	13	8	1	–	1
Shuswap Lake Park	1972-93	22	5	1	–	1
Vaseux Lake	1974-93	20	5	1	–	1
Vernon	1975-93	19	21	1	1	2
						Highest provincial total: 1 (1986)
						Highest interior total: Not recorded
						Highest coastal total: 1 (1986)
<b>Black-throated Gray Warbler</b>						
<b>Coastal</b>						
White Rock	1971-93	23	4	1	–	1*

Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred			
				Low	Median	High	
<b>Townsend's Warbler</b>							
						Highest provincial total:	8 (1986)
						Highest interior total:	Not recorded
						Highest coastal total:	8 (1986)
<b>Coastal</b>							
Campbell River	1972-93	19	5	1	–	1	
Comox	1961-93	32	3	2	2		
Deep Bay	1975-93	19	5	1	–	1	
Duncan	1970-93	24	17	1	1	1	
Nanaimo	1963-93	28	4	1	–	1	
Pender Islands	1964-93	28	11	1	1	3	
Pitt Meadows	1972-93	22	5	2	–	2	
Skidegate	1982-93	12	42	1	2	5	
Sooke	1983-93	11	36	1	2	3	
Vancouver	1957-93	37	5	1	1	1	
Victoria	1958-93	36	31	1	1	3	
White Rock	1971-93	23	4	1	–	1	
<b>Palm Warbler</b>							
						Highest provincial total:	3 (1991)
						Highest interior total:	Not recorded
						Highest coastal total:	3 (1991)
<b>Coastal</b>							
Duncan	1970-93	24	4	2	–	2	
Skidegate	1982-93	12	8	3	–	3	
Vancouver	1957-93	37	3	1	–	1	
Victoria	1958-93	36	8	1	1	1	
<b>Black-and-white Warbler</b>							
						Highest provincial total:	1 (1991)
						Highest interior total:	Not recorded
						Highest coastal total:	1 (1991)
<b>Coastal</b>							
Vancouver	1957-93	37	3	1	–	1	
<b>Northern Waterthrush</b>							
						Highest provincial total:	1 (1974)
						Highest interior total:	1 (1983)
						Highest coastal total:	1 (1974)
<b>Coastal</b>							
Ladner	1957-93	35	3	1	–	1	
<b>Interior</b>							
Oliver-Osoyoos	1979-93	15	13	1	1	1	
<b>Common Yellowthroat</b>							
						Highest provincial total:	2 (1991)
						Highest interior total:	1 (1981)
						Highest coastal total:	2 (1991)
<b>Coastal</b>							
Ladner	1957-93	35	6	1	1	1	
Pitt Meadows	1972-93	22	9	1	1	1	
Vancouver	1957-93	37	5	1	1	1	
<b>Interior</b>							
Vernon	1975-93	19	5	1	–	1	
<b>Wilson's Warbler</b>							
						Highest provincial total:	2 (1979)
						Highest interior total:	Not recorded
						Highest coastal total:	2 (1979)
<b>Coastal</b>							
Ladner	1957-93	35	6	1	1	1	
Surrey	1960-66	7	14	1	–	1	
Vancouver	1957-93	37	8	1	1	1	
Victoria	1958-93	36	11	1	1	1	

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Low	Range of total counts when species occurred Median	High
						Highest provincial total: 1 (1962)
						Highest interior total: Not recorded
						Highest coastal total: 1 (1962)
<b>Western Tanager</b>						
<b>Coastal</b>						
Vancouver	1957-93	37	3	1	–	1
Victoria	1958-93	36	3	1	–	1
						Highest provincial total: 3,595 (1992)
						Highest interior total: 15 (1991)
						Highest coastal total: 3,585 (1992)
<b>Spotted Towhee</b>						
<b>Coastal</b>						
Bamfield	1986-93	8	100	5	7	11
Campbell River	1972-93	19	100	17	61	176
Chilliwack	1972-93	20	100	10	49	251
Comox	1961-93	32	100	12	86	199
Deep Bay	1975-93	19	100	19	30	49
Dewdney	1967	1	100	9	–	9
Duncan	1970-93	24	100	18	97	343
Kitimat	1974-93	16	6	1	–	1
Ladner	1957-93	35	100	11	133	496
Nanaimo	1963-93	28	100	1	61	204
North Saanich	1960	1	100	75	–	75
Parksville–Qualicum Beach	1991-93	3	100	36	77	102
Pender Harbour	1991-93	3	100	14	27	36
Pender Islands	1964-93	28	96	22	67	195
Pitt Meadows	1972-93	22	100	27	122	256
Port Alberni	1975-93	3	100	43	66	101
Sayward	1973-84	12	92	1	3	9
Sooke	1983-93	11	91	46	73	138
Squamish	1980-93	13	100	12	36	102
Sunshine Coast	1979-93	14	100	16	62	143
Surrey	1960-66	7	100	5	12	31
Vancouver	1957-93	37	100	71	274	712
Victoria	1958-93	36	100	62	192	718
Whistler	1991-93	3	67	2	4	5
White Rock	1971-93	23	100	38	200	579
<b>Interior</b>						
Kamloops	1984-93	10	30	1	1	2
Kelowna	1981-93	9	89	1	2	4
Oliver–Osoyoos	1979-93	15	33	1	1	3
Penticton	1974-93	18	61	1	4	6
Princeton	1992-93	2	50	1	–	1
Salmon Arm	1988-92	5	20	2	–	2
Vaseux Lake	1974-93	20	25	1	3	4
Vernon	1975-93	19	79	1	2	5
						Highest provincial total: 121 (1982)
						Highest interior total: 108 (1986)
						Highest coastal total: 31 (1992)
<b>American Tree Sparrow</b>						
<b>Coastal</b>						
Campbell River	1972-93	19	5	1	–	1
Chilliwack	1972-93	20	5	2	–	2
Comox	1961-93	32	3	1	–	1
Duncan	1970-93	24	13	1	1	1
Kitimat	1974-93	16	6	2	–	2
Ladner	1957-93	35	54	1	2	21
Masset	1982-93	12	17	1	1	1
Nanaimo	1963-93	28	4	1	–	1
Pitt Meadows	1972-93	22	27	1	6	24
Prince Rupert	1980-93	14	7	1	–	1
Skidegate	1982-93	12	8	1	–	1
Sooke	1983-93	11	9	1	–	1
Squamish	1980-93	13	15	1	2	2
Terrace	1963-92	29	21	1	2	5





Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
<b>◀ AMERICAN TREE SPARROW</b>						
Vancouver	1957-93	37	46	1	2	8
Victoria	1958-93	36	11	1	2	2
White Rock	1971-93	23	30	1	1	3
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	25	1	–	1
Cranbrook	1984-93	10	10	26	–	26
Fauquier	1984-92	10	10	2	–	2
Fort St. James	1987-93	7	43	1	1	6
Kamloops	1984-93	10	70	1	9	56
Kimberley	1992-93	2	50	12	–	12
Lake Windermere	1979-84	6	33	3	10	16
Nakusp	1979-93	15	20	1	2	9
Oliver-Osoyoos	1979-93	15	73	1	9	65
Penticton	1974-93	18	44	1	2	4
Prince George	1989-93	5	40	1	8	14
Revelstoke	1981-93	13	23	1	2	5
Shuswap Lake Park	1972-93	22	5	1	–	1
Smithers	1977-93	17	35	1	3	6
Vernon	1975-93	19	95	1	13	51

**Chipping Sparrow**

Highest provincial total: 7 (1973)  
 Highest interior total: 3 (1993)  
 Highest coastal total: 7 (1973)

<b>Coastal</b>						
Chilliwack	1972-93	20	10	1	4	7
Ladner	1957-93	35	3	2	–	2
Nanaimo	1963-93	28	4	1	–	1
North Saanich	1960	1	100	1	–	1
<b>Interior</b>						
Cranbrook	1984-93	10	10	3	–	3

**Clay-colored Sparrow**

Highest provincial total: 1 (1982)  
 Highest interior total: Not recorded  
 Highest coastal total: 1 (1982)

<b>Coastal</b>						
Ladner	1957-93	35	3	1	–	1

**Savannah Sparrow**

Highest provincial total: 56 (1993)  
 Highest interior total: Not recorded  
 Highest coastal total: 56 (1993)

<b>Coastal</b>						
Campbell River	1972-93	19	5	1	–	1
Chilliwack	1972-93	20	10	2	3	4
Comox	1961-93	32	28	1	2	7
Deep Bay	1975-93	19	11	1	3	4
Duncan	1970-93	24	33	1	2	6
Kitimat	1974-93	16	6	1	–	1
Ladner	1957-93	35	69	1	3	18
Masset	1982-93	12	33	1	1	2
Nanaimo	1963-93	28	7	1	1	1
Pender Harbour	1991-93	3	33	1	–	1
Pitt Meadows	1972-93	22	5	1	–	1
Sayward	1973-84	12	8	1	–	1
Skidegate	1982-93	12	58	1	2	8
Sooke	1983-93	11	18	1	3	4
Surrey	1960-66	7	14	1	–	1
Vancouver	1957-93	37	35	1	2	33
Victoria	1958-93	36	69	1	3	21
White Rock	1971-93	23	61	1	1	12

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred			
				Low	Median	High	
<b>Fox Sparrow</b>							
						Highest provincial total: 2,347	(1992)
						Highest interior total: 21	(1981)
						Highest coastal total: 2,345	(1992)
<b>Coastal</b>							
Bamfield	1986-93	8	100	3	20	50	
Campbell River	1972-93	19	100	4	19	184	
Chilliwack	1972-93	20	70	1	6	87	
Comox	1961-93	32	100	6	24	75	
Deep Bay	1975-93	19	95	2	7	66	
Dewdney	1967	1	100	5	–	5	
Duncan	1970-93	24	100	12	30	189	
Kitimat	1974-93	16	38	1	3	8	
Ladner	1957-93	35	100	1	93	281	
Masset	1982-93	12	67	1	2	4	
Nanaimo	1963-93	28	96	1	13	45	
North Saanich	1960	1	100	27	–	27	
Parksville–Qualicum Beach	1991-93	3	100	6	8	11	
Pender Harbour	1991-93	3	100	1	9	23	
Pender Islands	1964-93	28	96	2	12	72	
Pitt Meadows	1972-93	22	100	1	14	50	
Port Alberni	1975-93	3	100	33	76	85	
Port Clements	1984-93	10	60	1	1	6	
Prince Rupert	1980-93	14	79	1	4	21	
Sayward	1973-84	12	25	1	3	6	
Skidegate	1982-93	12	83	2	8	22	
Sooke	1983-93	11	100	54	130	168	
Squamish	1980-93	13	100	1	5	13	
Sunshine Coast	1979-93	14	100	2	31	72	
Surrey	1960-66	7	86	1	5	28	
Terrace	1963-92	29	24	1	2	4	
Vancouver	1957-93	37	100	14	70	465	
Victoria	1958-93	36	100	9	120	417	
Whistler	1991-93	3	67	2	2	2	
White Rock	1971-93	23	100	7	44	245	
<b>Interior</b>							
Cranbrook	1984-93	10	10	2	–	2*	
Creston	1987-89	3	67	1	1	1*	
Kelowna	1981-93	9	44	3	5	6*	
Lake Windermere	1979-84	6	67	1	5	7*	
Nakusp	1979-93	15	7	1	–	1*	
Oliver–Osoyoos	1979-93	15	20	1	1	2*	
Penticton	1974-93	18	72	1	2	13*	
Salmon Arm	1988-92	5	60	1	1	5*	
Shuswap Lake Park	1972-93	22	14	1	1	4*	
Smithers	1977-93	17	29	1	1	4*	
Vaseux Lake	1974-93	20	5	1	–	1*	
Vernon	1975-93	19	5	4	–	4*	

Highest provincial total: 8,271 (1992)  
 Highest interior total: 875 (1990)  
 Highest coastal total: 7,451 (1992)

**Song Sparrow**

<b>Coastal</b>						
Bamfield	1986-93	8	100	2	32	39
Bella Bella	1976	1	100	2	–	2
Campbell River	1972-93	19	100	25	86	198
Chilliwack	1972-93	20	100	5	106	228
Comox	1961-93	32	100	18	89	272
Deep Bay	1975-93	19	100	28	47	108
Dewdney	1967	1	100	25	–	25
Duncan	1970-93	24	100	36	137	644
Kitimat	1974-93	16	100	1	5	12
Ladner	1957-93	35	100	73	600	1,654
Masset	1982-93	12	100	12	27	69
Nanaimo	1963-93	28	100	6	67	168
North Saanich	1960	1	100	133	–	133
Parksville–Qualicum Beach	1991-93	3	100	65	82	90

Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
<b>◀ SONG SPARROW</b>						
Pender Harbour	1991-93	3	100	29	50	64
Pender Islands	1964-93	28	100	16	92	162
Pitt Meadows	1972-93	22	100	58	269	501
Port Alberni	1975-93	3	100	50	81	105
Port Clements	1984-93	10	100	1	7	11
Prince Rupert	1980-93	14	43	2	5	16
Rose Spit	1986-93	8	88	4	6	14
Sayward	1973-84	12	92	5	8	22
Skidegate	1982-93	12	100	3	16	27
Sooke	1983-93	11	100	118	173	240
Squamish	1980-93	13	100	39	103	217
Sunshine Coast	1979-93	14	100	16	130	268
Surrey	1960-66	7	100	16	64	131
Terrace	1963-92	29	72	1	2	26
Vancouver	1957-93	37	100	371	777	2,692
Victoria	1958-93	36	100	74	237	862
Whistler	1991-93	3	67	6	8	9
White Rock	1971-93	23	100	76	365	3,091
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	75	2	2	4
Cranbrook	1984-93	10	60	1	6	9
Creston	1987-89	3	67	12	21	30
Fauquier	1984-92	10	100	2	6	14
Fort St. James	1987-93	7	86	1	3	4
Kamloops	1984-93	10	100	7	31	65
Kelowna	1981-93	9	100	54	82	158
Lake Windermere	1979-84	6	50	1	2	12
Nakusp	1979-93	15	100	2	11	35
Nelson	1985	1	100	12	–	12
Oliver–Osoyoos	1979-93	15	100	49	105	313
Penticton	1974-93	18	100	23	138	231
Prince George	1989-93	5	60	3	4	4
Princeton	1992-93	2	100	2	3	3
Quesnel	1981-84	4	25	1	–	1
Revelstoke	1981-93	13	92	1	7	32
Salmon Arm	1988-92	5	100	19	34	46
Shuswap Lake Park	1972-93	22	82	1	7	31
Smithers	1977-93	17	65	1	1	4
Vaseux Lake	1974-93	20	100	14	41	79
Vernon	1975-93	19	100	34	106	188
Wells Gray Park	1984-92	6	17	1	–	1

Highest provincial total: 74 (1991)  
 Highest interior total: 1 (1982)  
 Highest coastal total: 74 (1991)

**Lincoln's Sparrow**

<b>Coastal</b>						
Chilliwack	1972-93	20	20	1	2	2
Comox	1961-93	32	6	1	1	1
Duncan	1970-93	24	58	1	2	13
Ladner	1957-93	35	51	1	4	18
Masset	1982-93	12	25	2	2	3
Nanaimo	1963-93	28	36	1	2	5
Pitt Meadows	1972-93	22	18	1	3	8
Port Clements	1984-93	10	10	3	–	3
Prince Rupert	1980-93	14	7	1	–	1
Skidegate	1982-93	12	25	1	2	3
Sooke	1983-93	11	36	1	1	1
Squamish	1980-93	13	15	1	2	2
Sunshine Coast	1979-93	14	7	1	–	1
Terrace	1963-92	29	10	1	1	1
Vancouver	1957-93	37	35	1	2	12
Victoria	1958-93	36	56	1	3	30
White Rock	1971-93	23	39	1	2	11
<b>Interior</b>						
Oliver–Osoyoos	1979-93	15	7	1	–	1
Penticton	1974-93	18	6	1	–	1

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Low	Range of total counts when species occurred Median	High
						Highest provincial total: 30 (1993)
						Highest interior total: 2 (1991)
						Highest coastal total: 30 (1993)
<b>Swamp Sparrow</b>						
<b>Coastal</b>						
Campbell River	1972-93	19	5	1	—	1
Duncan	1970-93	24	8	1	6	11
Ladner	1957-93	35	14	1	1	3
Pender Harbour	1991-93	3	33	2	—	2
Port Alberni	1975-93	3	33	6	—	6
Squamish	1980-93	13	15	1	1	1
Vancouver	1957-93	37	11	1	1	2
Victoria	1958-93	36	17	1	1	6
White Rock	1971-93	23	4	1	—	1
<b>Interior</b>						
Nakusp	1979-93	15	7	1	—	1
Revelstoke	1981-93	13	8	1	—	1
Vernon	1975-93	19	11	1	1	1
						Highest provincial total: 19 (1993)
						Highest interior total: 9 (1993)
						Highest coastal total: 10 (1993)
<b>White-throated Sparrow</b>						
<b>Coastal</b>						
Campbell River	1972-93	19	5	1	—	1
Comox	1961-93	32	13	1	1	1
Duncan	1970-93	24	29	1	2	2
Kitimat	1974-93	16	6	1	—	1
Ladner	1957-93	35	3	2	—	2
Masset	1982-93	12	17	1	1	1
Nanaimo	1963-93	28	4	1	—	1
Pitt Meadows	1972-93	22	5	1	—	1
Skidegate	1982-93	12	8	1	—	1
Sooke	1983-93	11	9	1	—	1
Squamish	1980-93	13	8	1	—	1
Sunshine Coast	1979-93	14	7	1	—	1
Vancouver	1957-93	37	11	1	1	1
Victoria	1958-93	36	58	1	2	7
White Rock	1971-93	23	13	1	1	1
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	25	1	—	1
Creston	1987-89	3	33	1	—	1
Fauquier	1984-92	10	10	1	—	1
Fort St. James	1987-93	7	29	2	2	2
Nakusp	1979-93	15	13	1	2	2
Nelson	1985	1	100	1	—	1
Penticton	1974-93	18	17	1	2	3
Prince George	1989-93	5	20	1	—	1
Revelstoke	1981-93	13	15	1	1	1
Vaseux Lake	1974-93	20	5	1	—	1
Vernon	1975-93	19	32	1	2	4
						Highest provincial total: 31 (1985)
						Highest interior total: 19 (1985)
						Highest coastal total: 16 (1972)
<b>Harris's Sparrow</b>						
<b>Coastal</b>						
Campbell River	1972-93	19	5	1	—	1
Chilliwack	1972-93	20	5	2	—	2
Comox	1961-93	32	22	1	1	1
Deep Bay	1975-93	19	5	2	—	2
Duncan	1970-93	24	13	1	1	1
Ladner	1957-93	35	26	1	2	5



Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
<b>◀ HARRIS'S SPARROW</b>						
Nanaimo	1963-93	28	4	1	–	1
Pitt Meadows	1972-93	22	14	1	1	1
Sooke	1983-93	11	9	1	–	1
Squamish	1980-93	13	15	1	1	1
Sunshine Coast	1979-93	14	7	1	–	1
Terrace	1963-92	29	17	1	2	5
Vancouver	1957-93	37	41	1	1	5
Victoria	1958-93	36	31	1	1	5
White Rock	1971-93	23	13	1	1	1
<b>Interior</b>						
Kamloops	1984-93	10	60	1	2	3
Kelowna	1981-93	9	11	2	–	2
Nakusp	1979-93	15	13	1	1	1
Nelson	1985	1	100	1	–	1
Oliver-Osoyoos	1979-93	15	20	1	1	2
Penticton	1974-93	18	33	1	2	3
Revelstoke	1981-93	13	8	2	–	2
Shuswap Lake Park	1972-93	22	5	1	–	1
Vaseux Lake	1974-93	20	5	1	–	1
Vernon	1975-93	19	63	1	3	11

Highest provincial total: 1,470 (1991)  
 Highest interior total: 421 (1988)  
 Highest coastal total: 1,281 (1991)

**White-crowned Sparrow**

<b>Coastal</b>						
Campbell River	1972-93	19	84	1	6	13
Chilliwack	1972-93	20	100	4	54	290
Comox	1961-93	32	81	1	4	27
Deep Bay	1975-93	19	37	1	2	6
Dewdney	1967	1	100	1	–	1
Duncan	1970-93	24	96	1	9	32
Kitimat	1974-93	16	6	2	–	2
Ladner	1957-93	35	97	5	239	774
Masset	1982-93	12	50	1	2	4
Nanaimo	1963-93	28	64	1	4	18
North Saanich	1960	1	100	16	–	16
Parksville–Qualicum Beach	1991-93	3	100	1	5	23
Pender Islands	1964-93	28	39	1	3	10
Pitt Meadows	1972-93	22	95	2	12	91
Port Alberni	1975-93	3	67	3	5	7
Port Clements	1984-93	10	10	1	–	1
Sayward	1973-84	12	25	1	1	2
Skidegate	1982-93	12	17	1	3	5
Sooke	1983-93	11	91	2	7	20
Squamish	1980-93	13	38	1	1	13
Sunshine Coast	1979-93	14	57	1	2	16
Surrey	1960-66	7	86	1	5	50
Terrace	1963-92	29	14	1	1	2
Vancouver	1957-93	37	100	4	66	432
Victoria	1958-93	36	100	7	26	163
White Rock	1971-93	23	100	4	62	222
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	25	1	–	1
Cranbrook	1984-93	10	10	6	–	6
Kamloops	1984-93	10	80	2	4	28
Kelowna	1981-93	9	89	2	17	54
Nakusp	1979-93	15	7	1	–	1
Oliver-Osoyoos	1979-93	15	100	16	79	198
Penticton	1974-93	18	89	16	33	152
Shuswap Lake Park	1972-93	22	5	1	–	1
Smithers	1977-93	17	6	11	–	11
Vaseux Lake	1974-93	20	100	2	22	159
Vernon	1975-93	19	74	1	2	12

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Low	Range of total counts when species occurred Median	High
Highest provincial total: 2,223 (1992) Highest interior total: 6 (1980) Highest coastal total: 2,223 (1992)						
<b>Golden-crowned Sparrow</b>						
<b>Coastal</b>						
Bamfield	1986-93	8	38	1	1	2
Campbell River	1972-93	19	68	1	13	39
Chilliwack	1972-93	20	45	1	3	7
Comox	1961-93	32	94	1	16	115
Deep Bay	1975-93	19	63	1	6	35
Dewdney	1967	1	100	4	—	4
Duncan	1970-93	24	100	3	40	335
Ladner	1957-93	35	97	2	46	267
Masset	1982-93	12	50	1	2	5
Nanaimo	1963-93	28	86	1	20	96
North Saanich	1960	1	100	100	—	100
Parksville—Qualicum Beach	1991-93	3	100	2	9	45
Pender Harbour	1991-93	3	67	4	9	14
Pender Islands	1964-93	28	82	1	5	46
Pitt Meadows	1972-93	22	86	1	11	23
Port Alberni	1975-93	3	100	9	12	27
Rose Spit	1986-93	8	25	2	3	3
Sayward	1973-84	12	8	6	—	6
Skidegate	1982-93	12	25	1	3	4
Sooke	1983-93	11	100	8	65	124
Squamish	1980-93	13	15	1	2	3
Sunshine Coast	1979-93	14	57	1	3	8
Surrey	1960-66	7	43	1	2	3
Vancouver	1957-93	37	100	2	22	186
Victoria	1958-93	36	100	35	150	1,017
White Rock	1971-93	23	91	2	16	87
<b>Interior</b>						
Oliver-Osoyoos	1979-93	15	7	1	—	1
Penticton	1974-93	18	28	1	1	6
Vaseux Lake	1974-93	20	5	1	—	1
Vernon	1975-93	19	5	1	—	1

Highest provincial total: 30,060 (1993)  
 Highest interior total: 5,781 (1993)  
 Highest coastal total: 24,279 (1993)

**Dark-eyed Junco**

<b>Coastal</b>						
Bamfield	1986-93	8	100	15	52	147
Campbell River	1972-93	19	100	27	756	1,239
Chilliwack	1972-93	20	100	196	939	1,713
Comox	1961-93	32	100	70	635	1,522
Deep Bay	1975-93	19	100	142	279	525
Dewdney	1967	1	100	69	—	69
Duncan	1970-93	24	100	235	805	2,125
Kitimat	1974-93	16	100	5	124	362
Ladner	1957-93	35	100	68	673	1,548
Masset	1982-93	12	100	74	198	387
Nanaimo	1963-93	28	100	65	498	1,087
North Saanich	1960	1	100	500	—	500
Parksville—Qualicum Beach	1991-93	3	100	275	379	794
Pender Harbour	1991-93	3	100	10	73	124
Pender Islands	1964-93	28	96	200	546	1,220
Pitt Meadows	1972-93	22	95	272	699	1,415
Port Alberni	1975-93	3	100	314	497	547
Port Clements	1984-93	10	100	18	57	225
Prince Rupert	1980-93	14	100	5	21	139
Rose Spit	1986-93	8	63	2	12	45
Sayward	1973-84	12	100	2	40	91
Skidegate	1982-93	12	100	70	209	709
Sooke	1983-93	11	100	290	633	930
Squamish	1980-93	13	100	41	306	550
Sunshine Coast	1979-93	14	100	81	455	720

Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
<b>◀ DARK-EYED JUNCO</b>						
Surrey	1960-66	7	100	19	59	159
Terrace	1963-92	29	100	6	96	719
Vancouver	1957-93	37	100	416	1,296	3,052
Victoria	1958-93	36	100	464	1,322	5,930
Whistler	1991-93	3	100	7	52	164
White Rock	1971-93	23	100	342	1,309	1,948
Yoho National Park	1975-84	5	20	6	–	6
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	75	11	23	37
Cranbrook	1984-93	10	70	1	12	21
Creston	1987-89	3	100	47	56	75
Fauquier	1984-92	10	90	1	8	26
Fort St. James	1987-93	7	100	1	7	19
Kamloops	1984-93	10	100	35	124	179
Kelowna	1981-93	9	100	239	539	1,060
Kimberley	1992-93	2	50	10	–	10
Lake Windermere	1979-84	6	100	1	10	40
Nakusp	1979-93	15	93	2	8	40
Nelson	1985	1	100	27	–	27
Oliver-Osoyoos	1979-93	15	100	84	679	1,139
Penticton	1974-93	18	100	301	756	1,481
Prince George	1989-93	5	100	13	22	59
Princeton	1992-93	2	100	1	59	117
Quesnel	1981-84	4	50	2	3	3
Revelstoke	1981-93	13	92	2	13	41
Salmon Arm	1988-92	5	100	57	83	192
Shuswap Lake Park	1972-93	22	91	3	31	135
Smithers	1977-93	17	94	3	19	86
Vaseux Lake	1974-93	20	100	53	273	555
Vernon	1975-93	19	100	252	468	868
Wells Gray Park	1984-92	6	17	1	–	1

Highest provincial total: 102 (1963)  
 Highest interior total: 6 (1986)  
 Highest coastal total: 102 (1963)

**Lapland Longspur**

<b>Coastal</b>						
Ladner	1957-93	35	17	1	29	102
Pender Islands	1964-93	28	4	1	–	1
Rose Spit	1986-93	8	13	3	–	3
Skidegate	1982-93	12	8	1	–	1
Vancouver	1957-93	37	8	1	14	20
Victoria	1958-93	36	6	1	12	22
<b>Interior</b>						
Fort St. James	1987-93	7	14	1	–	1
Nakusp	1979-93	15	7	1	–	1
North Pine	1983-93	11	9	6	–	6
Vernon	1975-93	19	5	1	–	1

Highest provincial total: 1,083 (1992)  
 Highest interior total: 1,064 (1992)  
 Highest coastal total: 71 (1985)

**Snow Bunting**

<b>Coastal</b>						
Campbell River	1972-93	19	11	1	2	2
Comox	1961-93	32	3	1	–	1
Duncan	1970-93	24	4	7	–	7
Kitimat	1974-93	16	6	30	–	30
Ladner	1957-93	35	51	1	13	44
Nanaimo	1963-93	28	4	10	–	10
Prince Rupert	1980-93	14	7	30	–	30
Rose Spit	1986-93	8	50	1	3	11
Skidegate	1982-93	12	25	1	1	16
Surrey	1960-66	7	14	1	–	1

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
<b>◀ SNOW BUNTING</b>						
Terrace	1963-92	29	3	18	–	18
Vancouver	1957-93	37	38	1	6	40
Victoria	1958-93	36	19	1	2	3
White Rock	1971-93	23	13	1	1	2
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	75	7	15	50
Cranbrook	1984-93	10	20	50	100	150
Fort St. James	1987-93	7	43	3	20	30
Fort St. John	1975-77	4	100	48	125	284
Kamloops	1984-93	10	70	2	50	620
Kelowna	1981-93	9	22	1	31	60
Kimberley	1992-93	2	50	43	–	43
Lake Windermere	1979-84	6	50	1	3	80
Nakusp	1979-93	15	7	9	–	9
North Pine	1983-93	11	91	3	92	705
Oliver–Osoyoos	1979-93	15	27	1	15	45
Penticton	1974-93	18	11	1	4	6
Princeton	1992-93	2	50	1	–	1
Shuswap Lake Park	1972-93	22	9	20	60	100
Smithers	1977-93	17	12	7	10	12
Vaseux Lake	1974-93	20	15	3	15	105
Vernon	1975-93	19	5	11	–	11
Wells Gray Park	1984-92	6	17	1	–	1
Yoho National Park	1975-84	5	40	1	3	4

Highest provincial total: 1 (1972)  
 Highest interior total: Not recorded  
 Highest coastal total: 1 (1972)

**Black-headed Grosbeak**

<b>Coastal</b>						
Chilliwack	1972-93	20	5	1	–	1*

Highest provincial total: 1 (1960)  
 Highest interior total: Not recorded  
 Highest coastal total: 1 (1960)

**Dickcissel**

<b>Coastal</b>						
Victoria	1958-93	36	3	1	–	1

Highest provincial total: 9,410 (1993)  
 Highest interior total: 3,851 (1993)  
 Highest coastal total: 6,095 (1991)

**Red-winged Blackbird**

<b>Coastal</b>						
Bamfield	1986-93	8	13	1	–	1
Campbell River	1972-93	19	84	1	44	209
Chilliwack	1972-93	20	80	2	20	904
Comox	1961-93	32	69	1	53	403
Deep Bay	1975-93	19	42	1	6	29
Dewdney	1967	1	100	5	–	5
Duncan	1970-93	24	100	2	115	364
Kitimat	1974-93	16	63	1	8	40
Ladner	1957-93	35	100	16	450	3,075
Nanaimo	1963-93	28	93	2	50	847
North Saanich	1960	1	100	40	–	40
Parksville–Qualicum Beach	1991-93	3	100	21	25	67
Pender Harbour	1991-93	3	33	10	–	10
Pender Islands	1964-93	28	36	1	4	32
Pitt Meadows	1972-93	22	100	122	800	5,090
Port Alberni	1975-93	3	100	23	45	45
Sayward	1973-84	12	33	1	2	3
Skidegate	1982-93	12	17	3	5	6
Sooke	1983-93	11	100	2	142	518
Squamish	1980-93	13	38	1	3	68



Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
<b>◀ RED-WINGED BLACKBIRD</b>						
Sunshine Coast	1979-93	14	57	1	2	6
Surrey	1960-66	7	29	2	5	7
Terrace	1963-92	29	31	1	6	60
Vancouver	1957-93	37	100	1	131	1,537
Victoria	1958-93	36	97	13	150	2,160
White Rock	1971-93	23	100	5	140	1,428
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	50	7	9	10
Cranbrook	1984-93	10	10	14	–	14
Creston	1987-89	3	33	52	–	52
Fort St. James	1987-93	7	29	1	1	1
Kamloops	1984-93	10	90	1	14	20
Kelowna	1981-93	9	100	18	200	1,027
Kimberley	1992-93	2	50	3	–	3
Nakusp	1979-93	15	20	1	2	3
Oliver-Osoyoos	1979-93	15	100	2	174	1,205
Penticton	1974-93	18	100	1	32	229
Prince George	1989-93	5	100	2	15	20
Revelstoke	1981-93	13	92	3	21	91
Salmon Arm	1988-92	5	60	20	56	60
Shuswap Lake Park	1972-93	22	27	9	28	170
Smithers	1977-93	17	53	2	7	60
Vaseux Lake	1974-93	20	90	2	90	2,250
Vernon	1975-93	19	100	29	552	1,534

Highest provincial total: 323 (1960)  
 Highest interior total: 58 (1980)  
 Highest coastal total: 323 (1960)

**Western Meadowlark**

<b>Coastal</b>						
Campbell River	1972-93	19	11	3	5	7
Chilliwack	1972-93	20	50	2	20	35
Comox	1961-93	32	38	1	7	20
Deep Bay	1975-93	19	11	1	2	3
Duncan	1970-93	24	29	1	1	11
Ladner	1957-93	35	100	1	21	153
Nanaimo	1963-93	28	36	1	1	21
North Saanich	1960	1	100	35	–	35
Parksville–Qualicum Beach	1991-93	3	33	8	–	8
Pitt Meadows	1972-93	22	68	1	18	53
Sooke	1983-93	11	36	1	1	2
Squamish	1980-93	13	15	1	1	1
Sunshine Coast	1979-93	14	29	1	2	7
Surrey	1960-66	7	29	2	3	4
Terrace	1963-92	29	7	1	1	1
Vancouver	1957-93	37	89	1	14	55
Victoria	1958-93	36	100	2	25	126
White Rock	1971-93	23	87	1	18	109
<b>Interior</b>						
Kamloops	1984-93	10	10	1	–	1
Kelowna	1981-93	9	22	1	3	5
Oliver-Osoyoos	1979-93	15	47	1	2	12
Penticton	1974-93	18	11	6	12	17
Vaseux Lake	1974-93	20	5	6	–	6
Vernon	1975-93	19	84	1	4	58

Highest provincial total: 2 (1980)  
 Highest interior total: 2 (1990)  
 Highest coastal total: 2 (1980)

**Yellow-headed Blackbird**

<b>Coastal</b>						
Ladner	1957-93	35	6	1	2	2
Victoria	1958-93	36	3	2	–	2



Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
<b>◀ YELLOW-HEADED BLACKBIRD</b>						
<b>Interior</b>						
Creston	1987-89	3	33	1	–	1
Kelowna	1981-93	9	22	1	1	1
Oliver-Osoyoos	1979-93	15	7	1	–	1
Vernon	1975-93	19	5	1	–	1

Highest provincial total: 63 (1993)  
 Highest interior total: 62 (1993)  
 Highest coastal total: 21 (1970)

**Rusty Blackbird**

<b>Coastal</b>						
Kitimat	1974-93	16	25	1	3	3
Ladner	1957-93	35	3	1	–	1
Pitt Meadows	1972-93	22	9	1	3	4
Sunshine Coast	1979-93	14	7	1	–	1
Terrace	1963-92	29	7	2	11	20
Vancouver	1957-93	37	3	1	–	1
Victoria	1958-93	36	3	1	–	1
<b>Interior</b>						
Fort St. James	1987-93	7	29	1	2	3
Kamloops	1984-93	10	10	2	–	2
Oliver-Osoyoos	1979-93	15	27	1	1	2
Prince George	1989-93	5	20	1	–	1
Revelstoke	1981-93	13	31	2	4	6
Smithers	1977-93	17	41	1	4	60
Vernon	1975-93	19	11	1	1	1

Highest provincial total: 9,770 (1960)  
 Highest interior total: 1,012 (1991)  
 Highest coastal total: 9,770 (1960)

**Brewer's Blackbird**

<b>Coastal</b>						
Bamfield	1986-93	8	13	1	–	1
Campbell River	1972-93	19	95	24	106	391
Chilliwack	1972-93	20	95	30	302	993
Comox	1961-93	32	97	2	188	1,436
Deep Bay	1975-93	19	26	1	25	108
Dewdney	1967	1	100	250	–	250
Duncan	1970-93	24	100	11	256	1,015
Kitimat	1974-93	16	50	2	14	30
Ladner	1957-93	35	100	303	1,986	6,217
Nanaimo	1963-93	28	89	1	53	348
North Saanich	1960	1	100	1,041	–	1,041
Parksville–Qualicum Beach	1991-93	3	100	22	138	177
Pender Harbour	1991-93	3	33	15	–	15
Pender Islands	1964-93	28	18	1	7	55
Pitt Meadows	1972-93	22	100	40	460	1,241
Port Alberni	1975-93	3	100	86	136	192
Sayward	1973-84	12	42	1	13	22
Sooke	1983-93	11	73	1	50	173
Squamish	1980-93	13	69	1	20	86
Sunshine Coast	1979-93	14	100	5	42	70
Surrey	1960-66	7	86	1	105	300
Terrace	1963-92	29	62	3	15	23
Vancouver	1957-93	37	100	34	397	4,796
Victoria	1958-93	36	100	84	428	1,377
Whistler	1991-93	3	33	5	–	5
White Rock	1971-93	23	100	129	694	2,287
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	100	20	27	50
Creston	1987-89	3	67	150	161	171
Fauquier	1984-92	10	10	1	–	1
Fort St. James	1987-93	7	14	1	–	1
Kamloops	1984-93	10	100	4	31	61

Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
◀ BREWER'S BLACKBIRD						
Kelowna	1981-93	9	89	3	61	203
Nakusp	1979-93	15	7	1	–	1
Oliver-Osoyoos	1979-93	15	87	1	38	340
Penticton	1974-93	18	22	1	2	3
Prince George	1989-93	5	100	109	161	241
Princeton	1992-93	2	100	2	5	7
Quesnel	1981-84	4	100	3	13	40
Revelstoke	1981-93	13	31	1	2	4
Salmon Arm	1988-92	5	40	7	33	58
Shuswap Lake Park	1972-93	22	9	6	7	8
Smithers	1977-93	17	94	11	135	316
Vaseux Lake	1974-93	20	5	1	–	1
Vernon	1975-93	19	89	2	42	370

**Common Grackle**

Highest provincial total: 1 (1989)  
 Highest interior total: 1 (1989)  
 Highest coastal total: Not recorded

**Interior**

Revelstoke	1981-93	13	8	1	–	1
------------	---------	----	---	---	---	---

**Brown-headed Cowbird**

Highest provincial total: 375 (1986)  
 Highest interior total: 6 (1986)  
 Highest coastal total: 369 (1986)

**Coastal**

Chilliwack	1972-93	20	35	1	12	109
Comox	1961-93	32	13	2	4	6
Duncan	1970-93	24	17	1	5	12
Ladner	1957-93	35	89	1	19	200
Nanaimo	1963-93	28	14	1	3	6
Pitt Meadows	1972-93	22	59	1	7	250
Terrace	1963-92	29	7	11	16	20
Vancouver	1957-93	37	57	1	4	53
Victoria	1958-93	36	39	1	4	22
White Rock	1971-93	23	83	1	10	127

**Interior**

Oliver-Osoyoos	1979-93	15	27	1	4	6
Revelstoke	1981-93	13	8	1	–	1

**Baltimore Oriole**

Highest provincial total: 1 (1971)  
 Highest interior total: Not recorded  
 Highest coastal total: 1 (1971)

**Coastal**

Victoria	1958-93	36	6	1	1	1
----------	---------	----	---	---	---	---

**Bullock's Oriole**

Highest provincial total: 1 (1991)  
 Highest interior total: 1 (1991)  
 Highest coastal total: Not recorded

**Interior**

Kelowna	1981-93	9	22	1	1	1
---------	---------	---	----	---	---	---

**Brambling**

Highest provincial total: 2 (1983)  
 Highest interior total: 1 (1989)  
 Highest coastal total: 2 (1983)

**Coastal**

Masset	1982-93	12	8	2	–	2
Skidegate	1982-93	12	17	1	2	2
Victoria	1958-93	36	3	1	–	1

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
<b>◀ BRAMBLING</b>						
<b>Interior</b>						
Revelstoke	1981-93	13	8	1	–	1
				Highest provincial total: 850 (1986)		
				Highest interior total: 850 (1986)		
				Highest coastal total: 60 (1989)		
<b>Gray-crowned Rosy-Finch</b>						
<b>Coastal</b>						
Campbell River	1972-93	19	11	1	8	14
Chilliwack	1972-93	20	5	5	–	5
Ladner	1957-93	35	3	5	–	5
Pitt Meadows	1972-93	22	14	3	5	35
Sunshine Coast	1979-93	14	7	60	–	60
Terrace	1963-92	29	3	35	–	35
Vancouver	1957-93	37	3	3	–	3
White Rock	1971-93	23	4	1	–	1
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	25	1	–	1
Creston	1987-89	3	33	2	–	2
Fort St. James	1987-93	7	43	3	4	12
Kamloops	1984-93	10	40	10	32	107
Lake Windermere	1979-84	6	17	34	–	34
Nakusp	1979-93	15	13	3	21	38
Nelson	1985	1	100	1	–	1
Oliver–Osoyoos	1979-93	15	53	35	90	347
Penticton	1974-93	18	22	30	60	600
Smithers	1977-93	17	18	1	2	15
Vaseux Lake	1974-93	20	15	38	60	395
Vernon	1975-93	19	32	8	38	50
Yoho National Park	1975-84	5	20	100	–	100
				Highest provincial total: 1,598 (1981)		
				Highest interior total: 1,326 (1992)		
				Highest coastal total: 890 (1981)		
<b>Pine Grosbeak</b>						
<b>Coastal</b>						
Campbell River	1972-93	19	11	2	27	52
Chilliwack	1972-93	20	5	34	–	34
Comox	1961-93	32	9	7	8	17
Duncan	1970-93	24	4	2	–	2
Kitimat	1974-93	16	31	2	13	20
Ladner	1957-93	35	6	3	3	3
Masset	1982-93	12	8	2	–	2
Nanaimo	1963-93	28	14	1	6	15
Pender Islands	1964-93	28	4	23	–	23
Pitt Meadows	1972-93	22	9	3	11	19
Port Clements	1984-93	10	10	3	–	3
Prince Rupert	1980-93	14	7	4	–	4
Sayward	1973-84	12	8	2	–	2
Skidegate	1982-93	12	42	4	11	32
Sooke	1983-93	11	9	1	–	1
Squamish	1980-93	13	46	1	8	16
Sunshine Coast	1979-93	14	7	741	–	741
Terrace	1963-92	29	41	2	7	124
Vancouver	1957-93	37	19	1	5	81
Victoria	1958-93	36	17	1	3	26
Whistler	1991-93	3	33	12	–	12
White Rock	1971-93	23	4	13	–	13
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	100	34	69	225
Cranbrook	1984-93	10	40	7	14	48
Creston	1987-89	3	33	34	–	34
Fauquier	1984-92	10	60	5	17	70
Fort St. James	1987-93	7	100	26	57	237

Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
◀ PINE GROSBEAK						
Fort St. John	1975-77	4	100	5	32	136
Kamloops	1984-93	10	70	9	16	63
Kelowna	1981-93	9	56	1	26	76
Kimberley	1992-93	2	50	2	–	2
Lake Windermere	1979-84	6	67	35	56	119
Mackenzie	1982	1	100	24	–	24
Nakusp	1979-93	15	73	2	16	73
Nelson	1985	1	100	8	–	8
North Pine	1983-93	11	100	2	33	158
Oliver-Osoyoos	1979-93	15	27	3	5	38
Penticton	1974-93	18	89	3	21	132
Prince George	1989-93	5	100	33	48	118
Princeton	1992-93	2	100	13	27	40
Quesnel	1981-84	4	50	3	4	4
Revelstoke	1981-93	13	77	2	17	244
Salmon Arm	1988-92	5	80	2	9	61
Shuswap Lake Park	1972-93	22	73	1	28	176
Smithers	1977-93	17	100	3	122	450
Vaseux Lake	1974-93	20	50	1	13	25
Vernon	1975-93	19	84	4	49	188
Wells Gray Park	1984-92	6	67	3	6	70
Yoho National Park	1975-84	5	60	6	10	34

Highest provincial total: 1,243 (1985)  
 Highest interior total: 28 (1980)  
 Highest coastal total: 1,243 (1985)

**Purple Finch**

**Coastal**

Bamfield	1986-93	8	63	2	14	24
Campbell River	1972-93	19	89	3	13	77
Chilliwack	1972-93	20	90	1	9	57
Comox	1961-93	32	94	1	27	145
Deep Bay	1975-93	19	74	3	11	47
Duncan	1970-93	24	100	16	86	224
Kitimat	1974-93	16	56	1	3	41
Ladner	1957-93	35	97	4	38	191
Nanaimo	1963-93	28	96	1	37	145
North Saanich	1960	1	100	12	–	12
Parksville–Qualicum Beach	1991-93	3	100	3	4	4
Pender Harbour	1991-93	3	33	13	–	13
Pender Islands	1964-93	28	96	1	32	79
Pitt Meadows	1972-93	22	100	2	21	209
Port Alberni	1975-93	3	100	9	10	13
Sayward	1973-84	12	17	1	2	3
Sooke	1983-93	11	91	7	30	110
Squamish	1980-93	13	100	1	4	36
Sunshine Coast	1979-93	14	100	1	12	38
Surrey	1960-66	7	100	1	24	64
Terrace	1963-92	29	3	8	–	8
Vancouver	1957-93	37	97	2	57	632
Victoria	1958-93	36	100	12	92	227
Whistler	1991-93	3	33	15	–	15
White Rock	1971-93	23	100	2	24	174

**Interior**

Burns Lake–Francois Lake	1990-93	4	25	4	–	4*
Cranbrook	1984-93	10	20	3	9	15*
Creston	1987-89	3	33	2	–	2*
Lake Windermere	1979-84	6	33	26	27	28*
Quesnel	1981-84	4	25	1	–	1*
Revelstoke	1981-93	13	8	21	–	21*
Salmon Arm	1988-92	5	20	2	–	2*
Smithers	1977-93	17	6	3	–	3*
Vernon	1975-93	19	5	1	–	1*

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
				Highest provincial total:	595	(1988)
				Highest interior total:	595	(1988)
				Highest coastal total:	16	(1975)
<b>Cassin's Finch</b>						
<b>Coastal</b>						
Port Alberni	1975-93	3	33	16	–	16*
<b>Interior</b>						
Creston	1987-89	3	33	7	–	7
Kamloops	1984-93	10	60	2	3	45
Kelowna	1981-93	9	89	2	20	60
Nakusp	1979-93	15	7	1	–	1
Nelson	1985	1	100	8	–	8
Oliver-Osoyoos	1979-93	15	67	1	5	47
Penticton	1974-93	18	100	2	22	235
Princeton	1992-93	2	50	12	–	12
Revelstoke	1981-93	13	46	1	6	16
Salmon Arm	1988-92	5	60	6	11	25
Shuswap Lake Park	1972-93	22	18	3	6	23
Vaseux Lake	1974-93	20	65	1	5	312
Vernon	1975-93	19	74	1	7	97
Wells Gray Park	1984-92	6	17	1	–	1
				Highest provincial total:	12,661	(1991)
				Highest interior total:	6,481	(1987)
				Highest coastal total:	6,230	(1993)
<b>House Finch</b>						
<b>Coastal</b>						
Bamfield	1986-93	8	13	2	–	2
Campbell River	1972-93	19	100	18	73	236
Chilliwack	1972-93	20	100	10	85	292
Comox	1961-93	32	100	16	92	317
Deep Bay	1975-93	19	95	1	23	52
Dewdney	1967	1	100	101	–	101
Duncan	1970-93	24	100	1	91	266
Ladner	1957-93	35	100	45	474	1,383
Nanaimo	1963-93	28	93	1	42	283
North Saanich	1960	1	100	59	–	59
Parksville–Qualicum Beach	1991-93	3	100	35	60	70
Pender Islands	1964-93	28	86	2	11	95
Pitt Meadows	1972-93	22	100	26	118	255
Port Alberni	1975-93	3	100	2	3	22
Sooke	1983-93	11	100	9	50	101
Squamish	1980-93	13	92	1	9	76
Sunshine Coast	1979-93	14	100	2	32	64
Surrey	1960-66	7	86	2	9	47
Vancouver	1957-93	37	100	226	635	1,983
Victoria	1958-93	36	100	84	299	1,196
Whistler	1991-93	3	33	3	–	3
White Rock	1971-93	23	100	121	620	1,264
<b>Interior</b>						
Cranbrook	1984-93	10	30	2	21	42
Creston	1987-89	3	100	24	163	203
Fauquier	1984-92	10	10	5	–	5
Kamloops	1984-93	10	100	76	377	587
Kelowna	1981-93	9	100	382	1,171	2,013
Nakusp	1979-93	15	27	1	2	6
Nelson	1985	1	100	4	–	4
Oliver-Osoyoos	1979-93	15	100	70	596	1,063
Penticton	1974-93	18	100	140	782	2,584
Princeton	1992-93	2	100	6	11	15
Quesnel	1981-84	4	25	3	–	3
Revelstoke	1981-93	13	23	4	4	10
Salmon Arm	1988-92	5	80	145	176	242
Shuswap Lake Park	1972-93	22	41	1	11	68
Vaseux Lake	1974-93	20	100	4	97	459
Vernon	1975-93	19	100	86	613	1,510

Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
				Highest provincial total: 4,320 (1993)		
				Highest interior total: 1,776 (1993)		
				Highest coastal total: 2,544 (1993)		
<b>Red Crossbill</b>						
<b>Coastal</b>						
Bamfield	1986-93	8	63	3	10	108
Campbell River	1972-93	19	58	3	29	184
Comox	1961-93	32	63	1	19	150
Deep Bay	1975-93	19	47	5	20	37
Duncan	1970-93	24	75	2	26	452
Kitimat	1974-93	16	31	12	20	50
Ladner	1957-93	35	51	1	5	73
Masset	1982-93	12	50	5	24	74
Nanaimo	1963-93	28	50	1	18	232
North Saanich	1960	1	100	2	–	2
Parksville–Qualicum Beach	1991-93	3	100	2	12	21
Pender Harbour	1991-93	3	67	2	3	4
Pender Islands	1964-93	28	54	1	22	109
Pitt Meadows	1972-93	22	36	1	5	32
Port Alberni	1975-93	3	100	2	4	37
Port Clements	1984-93	10	70	2	20	61
Prince Rupert	1980-93	14	14	30	32	33
Rose Spit	1986-93	8	38	2	3	15
Sayward	1973-84	12	50	10	65	191
Skidegate	1982-93	12	50	3	8	50
Sooke	1983-93	11	100	11	117	437
Squamish	1980-93	13	77	2	12	55
Sunshine Coast	1979-93	14	50	6	8	301
Terrace	1963-92	29	45	3	16	206
Vancouver	1957-93	37	59	2	17	224
Victoria	1958-93	36	92	1	74	1,830
Whistler	1991-93	3	67	2	10	17
White Rock	1971-93	23	48	1	4	94
<b>Interior</b>						
Cranbrook	1984-93	10	60	5	12	78
Fort St. James	1987-93	7	14	37	–	37
Kamloops	1984-93	10	70	4	26	66
Kelowna	1981-93	9	89	2	9	34
Kimberley	1992-93	2	100	13	42	70
Lake Windermere	1979-84	6	50	1	199	263
Nakusp	1979-93	15	53	4	14	50
Nelson	1985	1	100	1	–	1
Oliver-Osoyoos	1979-93	15	87	1	41	381
Penticton	1974-93	18	94	2	131	343
Prince George	1989-93	5	20	45	–	45
Princeton	1992-93	2	100	10	120	230
Revelstoke	1981-93	13	46	7	40	197
Shuswap Lake Park	1972-93	22	64	3	23	150
Smithers	1977-93	17	47	1	25	33
Vaseux Lake	1974-93	20	90	2	76	374
Vernon	1975-93	19	63	1	30	314
Wells Gray Park	1984-92	6	17	2	–	2
Yoho National Park	1975-84	5	20	95	–	95

Highest provincial total: 760 (1985)  
 Highest interior total: 680 (1985)  
 Highest coastal total: 174 (1991)

**White-winged Crossbill**

<b>Coastal</b>						
Comox	1961-93	32	3	20	–	20
Kitimat	1974-93	16	6	3	–	3
Ladner	1957-93	35	3	1	–	1
Masset	1982-93	12	17	35	73	110
Pender Harbour	1991-93	3	33	72	–	72
Pitt Meadows	1972-93	22	5	1	–	1
Port Clements	1984-93	10	10	30	–	30
Sayward	1973-84	12	8	4	–	4

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
<b>◀ WHITE-WINGED CROSSBILL</b>						
Squamish	1980-93	13	31	1	22	66
Sunshine Coast	1979-93	14	7	1	–	1
Terrace	1963-92	29	7	1	6	11
Vancouver	1957-93	37	5	4	10	15
Victoria	1958-93	36	3	1	–	1
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	25	43	–	43
Cranbrook	1984-93	10	30	15	28	36
Creston	1987-89	3	33	23	–	23
Fort St. James	1987-93	7	43	3	4	54
Fort St. John	1975-77	4	25	2	–	2
Kamloops	1984-93	10	30	12	20	56
Kimberley	1992-93	2	50	15	–	15
Lake Windermere	1979-84	6	33	52	105	158
Nakusp	1979-93	15	40	1	38	62
North Pine	1983-93	11	36	1	28	58
Oliver-Osoyoos	1979-93	15	40	1	27	193
Penticton	1974-93	18	28	3	5	36
Prince George	1989-93	5	20	90	–	90
Revelstoke	1981-93	13	31	33	106	200
Shuswap Lake Park	1972-93	22	5	4	–	4
Smithers	1977-93	17	41	1	19	107
Vaseux Lake	1974-93	20	40	1	6	239
Vernon	1975-93	19	32	2	19	77
Wells Gray Park	1984-92	6	83	1	6	14
Yoho National Park	1975-84	5	40	1	13	25

Highest provincial total: 6,314 (1993)  
 Highest interior total: 6,309 (1993)  
 Highest coastal total: 298 (1984)

**Common Redpoll**

<b>Coastal</b>						
Chilliwack	1972-93	20	5	12	–	12
Ladner	1957-93	35	34	1	12	129
Masset	1982-93	12	8	3	–	3
Pender Harbour	1991-93	3	33	2	–	2
Pender Islands	1964-93	28	4	2	–	2
Pitt Meadows	1972-93	22	9	3	13	22
Squamish	1980-93	13	46	2	15	106
Sunshine Coast	1979-93	14	14	25	28	30
Surrey	1960-66	7	14	3	–	3
Terrace	1963-92	29	31	3	40	184
Vancouver	1957-93	37	35	1	10	150
Whistler	1991-93	3	33	31	–	31
White Rock	1971-93	23	22	1	5	6
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	75	25	127	299
Cranbrook	1984-93	10	50	46	56	331
Creston	1987-89	3	33	25	–	25
Fauquier	1984-92	10	40	4	71	112
Fort St. James	1987-93	7	86	50	143	353
Fort St. John	1975-77	4	75	35	50	155
Kamloops	1984-93	10	80	1	44	334
Kelowna	1981-93	9	67	5	38	93
Kimberley	1992-93	2	100	34	77	119
Lake Windermere	1979-84	6	67	12	107	461
Mackenzie	1982	1	100	175	–	175
Nakusp	1979-93	15	80	30	108	991
North Pine	1983-93	11	55	7	44	172
Oliver-Osoyoos	1979-93	15	80	32	42	356
Penticton	1974-93	18	78	6	46	647
Prince George	1989-93	5	100	4	96	3,762
Princeton	1992-93	2	50	31	–	31
Quesnel	1981-84	4	50	13	19	25
Revelstoke	1981-93	13	77	1	66	502



Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
◀ COMMON REDPOLL						
Salmon Arm	1988-92	5	100	27	72	114
Shuswap Lake Park	1972-93	22	73	30	175	958
Smithers	1977-93	17	76	4	215	1,383
Vaseux Lake	1974-93	20	75	2	52	501
Vernon	1975-93	19	79	20	83	312
Wells Gray Park	1984-92	6	100	3	80	117
Yoho National Park	1975-84	5	60	35	44	175

## Hoary Redpoll

Highest provincial total: 136 (1984)  
 Highest interior total: 136 (1984)  
 Highest coastal total: Not recorded

### Interior

Fort St. John	1975-77	4	75	1	25	50
Kamloops	1984-93	10	20	2	3	3
Lake Windermere	1979-84	6	33	1	21	40
North Pine	1983-93	11	64	3	12	90
Vernon	1975-93	19	5	3	—	3

## Pine Siskin

Highest provincial total: 42,292 (1993)  
 Highest interior total: 6,729 (1993)  
 Highest coastal total: 35,563 (1993)

### Coastal

Bamfield	1986-93	8	38	4	35	60
Campbell River	1972-93	19	100	25	608	3,563
Chilliwack	1972-93	20	70	2	106	980
Comox	1961-93	32	91	14	518	3,694
Deep Bay	1975-93	19	100	20	340	1,575
Dewdney	1967	1	100	16	—	16
Duncan	1970-93	24	96	2	508	3,140
Kitimat	1974-93	16	94	1	80	1,655
Ladner	1957-93	35	100	2	266	4,141
Masset	1982-93	12	75	3	120	908
Nanaimo	1963-93	28	93	1	264	3,131
North Saanich	1960	1	100	96	—	96
Parksville—Qualicum Beach	1991-93	3	100	2	225	2,242
Pender Harbour	1991-93	3	100	24	132	196
Pender Islands	1964-93	28	93	1	283	1,369
Pitt Meadows	1972-93	22	91	2	178	2,231
Port Alberni	1975-93	3	100	714	935	1,963
Port Clements	1984-93	10	70	4	120	490
Prince Rupert	1980-93	14	64	18	40	120
Sayward	1973-84	12	50	25	231	353
Skidegate	1982-93	12	67	5	71	865
Sooke	1983-93	11	100	546	1,157	4,199
Squamish	1980-93	13	100	11	612	5,498
Sunshine Coast	1979-93	14	93	66	575	4,684
Surrey	1960-66	7	43	30	30	350
Terrace	1963-92	29	97	2	79	1,560
Vancouver	1957-93	37	100	76	1,355	7,527
Victoria	1958-93	36	100	40	940	7,998
Whistler	1991-93	3	67	5	26	46
White Rock	1971-93	23	100	24	449	2,555

### Interior

Burns Lake—Francois Lake	1990-93	4	25	2	—	2
Cranbrook	1984-93	10	50	1	15	45
Creston	1987-89	3	100	11	35	106
Fauquier	1984-92	10	90	3	101	290
Fort St. James	1987-93	7	57	9	12	150
Kamloops	1984-93	10	80	3	9	60
Kelowna	1981-93	9	100	6	21	338
Lake Windermere	1979-84	6	50	1	10	49
Mackenzie	1982	1	100	9	—	9
Nakusp	1979-93	15	80	50	269	2,060

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
◀ PINE SISKIN						
Nelson	1985	1	100	1,195	–	1,195
Oliver-Osoyoos	1979-93	15	73	1	10	61
Penticton	1974-93	18	94	1	37	504
Prince George	1989-93	5	40	25	71	116
Princeton	1992-93	2	50	275	–	275
Revelstoke	1981-93	13	77	47	414	3,277
Salmon Arm	1988-92	5	100	44	180	368
Shuswap Lake Park	1972-93	22	91	2	170	1,490
Smithers	1977-93	17	65	2	30	173
Vaseux Lake	1974-93	20	45	5	18	158
Vernon	1975-93	19	89	5	58	1,410
Wells Gray Park	1984-92	6	17	2	–	2

Highest provincial total: 2,213 (1991)  
 Highest interior total: 1,102 (1992)  
 Highest coastal total: 1,274 (1970)

**American Goldfinch**

**Coastal**

Campbell River	1972-93	19	5	6	–	6
Chilliwack	1972-93	20	15	2	12	52
Comox	1961-93	32	6	8	12	15
Duncan	1970-93	24	79	2	19	96
Ladner	1957-93	35	91	2	77	400
Nanaimo	1963-93	28	50	1	12	165
Pender Harbour	1991-93	3	33	1	–	1
Pender Islands	1964-93	28	7	4	15	25
Pitt Meadows	1972-93	22	55	2	13	150
Sooke	1983-93	11	55	1	20	37
Squamish	1980-93	13	38	1	3	34
Sunshine Coast	1979-93	14	7	6	–	6
Surrey	1960-66	7	29	1	16	30
Vancouver	1957-93	37	92	1	180	722
Victoria	1958-93	36	86	1	20	240
White Rock	1971-93	23	87	1	29	296

**Interior**

Cranbrook	1984-93	10	10	1	–	1
Creston	1987-89	3	33	24	–	24
Fauquier	1984-92	10	20	2	9	15
Kamloops	1984-93	10	100	3	25	106
Kelowna	1981-93	9	100	13	60	117
Lake Windermere	1979-84	6	17	8	–	8
Nakusp	1979-93	15	80	1	52	204
Nelson	1985	1	100	47	–	47
Oliver-Osoyoos	1979-93	15	100	7	59	378
Penticton	1974-93	18	100	8	62	177
Princeton	1992-93	2	50	15	–	15
Revelstoke	1981-93	13	77	15	61	150
Salmon Arm	1988-92	5	100	125	205	539
Shuswap Lake Park	1972-93	22	86	4	65	300
Vaseux Lake	1974-93	20	90	1	13	89
Vernon	1975-93	19	100	17	99	283

Highest provincial total: 5,195 (1990)  
 Highest interior total: 4,072 (1990)  
 Highest coastal total: 1,322 (1975)

**Evening Grosbeak**

**Coastal**

Campbell River	1972-93	19	63	1	8	219
Chilliwack	1972-93	20	70	4	36	160
Comox	1961-93	32	72	1	25	218
Deep Bay	1975-93	19	26	8	15	45
Dewdney	1967	1	100	25	–	25
Duncan	1970-93	24	92	2	29	138
Kitimat	1974-93	16	19	14	37	40
Ladner	1957-93	35	86	1	19	131

Christmas Bird Counts

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
<b>◀ EVENING GROSBEAK</b>						
Nanaimo	1963-93	28	68	2	15	82
Parksville—Qualicum Beach	1991-93	3	33	2	—	2
Pender Islands	1964-93	28	11	5	8	41
Pitt Meadows	1972-93	22	86	9	63	172
Port Alberni	1975-93	3	67	1	44	86
Sayward	1973-84	12	25	1	10	13
Sooke	1983-93	11	82	1	25	106
Squamish	1980-93	13	77	1	40	245
Sunshine Coast	1979-93	14	79	1	9	30
Surrey	1960-66	7	71	7	16	32
Terrace	1963-92	29	48	1	20	199
Vancouver	1957-93	37	92	4	153	696
Victoria	1958-93	36	78	1	10	187
Whistler	1991-93	3	67	2	10	17
White Rock	1971-93	23	96	7	160	545
<b>Interior</b>						
Burns Lake—Francois Lake	1990-93	4	50	7	99	191
Cranbrook	1984-93	10	100	4	76	284
Creston	1987-89	3	100	67	139	465
Fauquier	1984-92	10	50	1	5	18
Fort St. James	1987-93	7	86	7	114	480
Fort St. John	1975-77	4	75	7	12	15
Kamloops	1984-93	10	70	27	88	150
Kelowna	1981-93	9	100	4	33	169
Kimberley	1992-93	2	100	33	87	140
Lake Windermere	1979-84	6	100	63	139	250
Nakusp	1979-93	15	87	6	54	249
Nelson	1985	1	100	73	—	73
North Pine	1983-93	11	100	9	50	154
Oliver-Osoyoos	1979-93	15	87	1	13	80
Penticton	1974-93	18	94	1	83	281
Prince George	1989-93	5	100	10	68	510
Princeton	1992-93	2	100	1	44	86
Quesnel	1981-84	4	50	5	6	7
Revelstoke	1981-93	13	100	1	20	327
Salmon Arm	1988-92	5	100	69	103	304
Shuswap Lake Park	1972-93	22	91	12	40	224
Smithers	1977-93	17	88	1	57	995
Vaseux Lake	1974-93	20	50	1	7	53
Vernon	1975-93	19	100	20	224	1,150
Wells Gray Park	1984-92	6	50	5	9	56
Yoho National Park	1975-84	5	60	1	1	6

Highest provincial total: 9,525 (1987)  
 Highest interior total: 6,532 (1987)  
 Highest coastal total: 6,230 (1993)

**House Sparrow**

<b>Coastal</b>						
Campbell River	1972-93	19	100	10	52	97
Chilliwack	1972-93	20	100	8	50	109
Comox	1961-93	32	91	2	21	243
Deep Bay	1975-93	19	32	3	8	12
Dewdney	1967	1	100	105	—	105
Duncan	1970-93	24	100	12	47	168
Kitimat	1974-93	16	13	21	21	21
Ladner	1957-93	35	100	79	406	1,874
Nanaimo	1963-93	28	96	2	17	80
North Saanich	1960	1	100	30	—	30
Parksville—Qualicum Beach	1991-93	3	100	3	11	14
Pender Islands	1964-93	28	7	1	2	3
Pitt Meadows	1972-93	22	100	4	93	179
Port Alberni	1975-93	3	33	11	—	11
Prince Rupert	1980-93	14	21	18	38	94
Sayward	1973-84	12	8	1	—	1
Sooke	1983-93	11	100	5	23	63
Squamish	1980-93	13	92	1	8	48

Appendix 2

Count locality	Count years	Total counts	Frequency of occurrence (%)	Range of total counts when species occurred		
				Low	Median	High
◀ <i>HOUSE SPARROW</i>						
Sunshine Coast	1979-93	14	79	4	42	99
Surrey	1960-66	7	100	8	42	62
Terrace	1963-92	29	31	3	20	63
Vancouver	1957-93	37	100	365	1,099	2,339
Victoria	1958-93	36	100	134	384	2,039
Whistler	1991-93	3	100	8	14	88
White Rock	1971-93	23	100	77	272	645
<b>Interior</b>						
Burns Lake–Francois Lake	1990-93	4	100	2	14	163
Cranbrook	1984-93	10	40	57	76	175
Creston	1987-89	3	100	2	25	237
Fort St. James	1987-93	7	86	1	4	43
Fort St. John	1975-77	4	100	10	54	181
Kamloops	1984-93	10	100	99	137	585
Kelowna	1981-93	9	100	49	249	416
Kimberley	1992-93	2	50	5	–	5
Lake Windermere	1979-84	6	100	2	52	76
Mackenzie	1982	1	100	35	–	35
Nakusp	1979-93	15	27	2	5	6
Nelson	1985	1	100	265	–	265
North Pine	1983-93	11	100	5	115	146
Oliver-Osoyoos	1979-93	15	100	205	407	1,991
Penticton	1974-93	18	100	169	348	888
Prince George	1989-93	5	100	117	217	402
Princeton	1992-93	2	50	28	–	28
Quesnel	1981-84	4	100	9	35	36
Revelstoke	1981-93	13	15	2	3	4
Salmon Arm	1988-92	5	100	26	39	67
Shuswap Lake Park	1972-93	22	55	2	13	50
Smithers	1977-93	17	100	3	108	751
Vaseux Lake	1974-93	21	100	11	246	729
Vernon	1975-93	19	100	76	570	1,732
Yoho National Park	1975-84	5	100	38	178	102

## APPENDIX 3

### Summary of Breeding Bird Surveys in British Columbia: 1968 through 1994

The following tables summarize, by species, the Breeding Bird Survey data for wood-warblers through Old World sparrows in British Columbia. These summaries were compiled from data obtained from the Bird Banding Office, Canadian Wildlife Service, Ottawa.

“Survey route” refers to the most recent name under which that survey has been published (Table 2). The time span of survey activity for a particular location is shown under

“Survey years”; discontinuities can be determined by comparing “Survey years” with “Total surveys.” “Frequency of occurrence” indicates the percentage of the surveys in a locality on which a species has been recorded.

The general abundance of the species over the count periods is shown by the range of values in the last 3 columns. The highest and lowest numbers recorded are given. An asterisk following a “High” number indicates that some



Figure 3. Map of British Columbia showing locations of official Breeding Bird Surveys, 1968-94.

caution is required in interpreting the data for that survey route. Refer to the appropriate species account or to the note at the end of that species' entry in the table.

The median has been chosen as an indicator of the "usual" value when the species does occur. The middle value of the data set, it will lie closer to the low value when the species frequently occurs in small numbers, and closer to the high value when a species rarely occurs in small numbers. In a symmetrically distributed data set, the median is an unbiased and consistent estimate of the mean (Zar 1974). Surveys of zero have not been used as the "Low" value, but they can be determined using the values under "Frequency of occurrence" and "Total counts."

For example, there is about a 70% chance of seeing a Tennessee Warbler on the Ferndale Breeding Bird Survey, and there is a high probability that this is an accurate estimate of the chance of seeing the bird because there is a long history of surveys on which to base this estimate. Similarly, if you see the species, you are likely to see about 2 birds, but more than 22 would be exceptional. In British Columbia, as in most areas of North America, Breeding Bird surveys are conducted by many dedicated volunteers (Fig. 4).

See Fig. 3 for the locations of official Breeding Bird Surveys and Table 2 for the number of surveys in each locality.



**Figure 4.** R. Jerry Herzig regularly participates in Breeding Bird Surveys around Princeton in the southern interior of British Columbia (August Lake, 13 April 1999; R. Wayne Campbell).

**Table 2.** Breeding Bird Survey Routes in British Columbia: 1968 through 1994.

Survey route	Number of surveys	Survey route	Number of surveys	Survey route	Number of surveys
<b>Coastal</b>		<b>Interior</b>		Lac la Hache	11
Alberni	6	Adams Lake	6	Lavington	24
Albion	21	Alexis Creek	14	Mabel Lake	19
Campbell River	19	Ashnola	2	McLeod Lake	9
Chemainus	4	Atlin Road	1	Meadowlake	2
Chilliwack	11	Beaverdell	24	Mount Morice	5
Comox Lake	3	Bridge Lake	20	Needles	26
Coquitlam	5	Bromley	5	Nicola	2
Courtenay	2	Brookmere	10	Oliver	18
Elsie Lake	6	Canford	10	Osprey Lake	10
Gibsons Landing	10	Canoe Point	2	Pavilion	6
Kispiox	3	Cassiar	2	Pennington	4
Kitsumkalum	19	Chilkat Pass	2	Pinkut Creek	1
Kwinitsa	26	Christian Valley	2	Pleasant Valley	6
Masset	5	Chu Chua	2	Prince George	20
Meziadin	2	Columbia Lake	7	Princeton	8
Nanaimo River	22	Creighton Valley	16	Punchaw	9
Nass River	1	Creston	1	Riske Creek	11
Pemberton	18	Ferndale	15	Salmo	3
Pitt Meadows	14	Fort Nelson	5	Salmon Arm	19
Point Grey	11	Fort St. John	9	Scotch Creek	6
Port Hardy	4	Fraser Lake	5	Shalalth	4
Port Renfrew	17	Gerrard	10	Spillimacheen	17
Queen Charlotte City	3	Gnat Pass	2	Steamboat	4
Saltery Bay	3	Golden	22	Succour Creek	2
Seabird	16	Goldstream Mountain	2	Summerland	21
Squamish	9	Gosnell	4	Summit Lake	8
Victoria	17	Grand Forks	22	Syringa Creek	7
		Haines Summit	2	Tatlayoko Lake	6
		Hendrix Lake	1	Telkwa High Road	11
		Horsefly	11	Tetsa River	1
		Hudson's Hope	1	Tokay	4
		Illecilewaet	4	Tupper	6
		Kamloops	15	Wasa	19
		Kinaskan Lake	1	Williams Lake	21
		Kootenay	10	Wingdam	3
		Kuskonook	21	Zincton	22
<b>TOTAL</b>	<b>277</b>			<b>TOTAL</b>	<b>663</b>

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>Tennessee Warbler</b>						
<b>Coastal</b>						
Chilliwack	1973-94	11	9	4	–	4*
Comox Lake	1973-75	3	33	1	–	1*
Kitsumkalum	1974-94	19	11	1	1	1
Kwinita	1968-94	26	8	2	3	3
<b>Interior</b>						
Bridge Lake	1974-94	20	15	1	1	1
Chilkat Pass	1975-76	2	50	2	–	2*
Ferndale	1968-94	15	67	1	2	22
Fort Nelson	1974-80	5	100	2	11	12
Fort St. John	1974-90	9	44	1	3	6
Fraser Lake	1968-78	5	40	1	2	2
Gerrard	1976-85	10	10	1	–	1
Golden	1973-94	22	32	1	1	4
Gosnell	1969-74	4	75	5	6	11
Grand Forks	1973-94	22	9	1	2	3*
Illecilewaet	1973-83	4	25	1	–	1
Kootenay	1981-94	10	30	1	2	2
Kuskonook	1968-91	21	14	2	4	5*
Lac la Hache	1973-86	11	9	1	–	1
McLeod Lake	1968-94	9	78	1	4	37
Mount Morice	1968-75	5	80	1	5	8
Prince George	1973-94	20	25	2	4	13
Punchaw	1974-94	9	44	1	1	3
Scotch Creek	1989-94	6	17	2	–	2
Spillimacheen	1976-93	17	6	2	–	2
Steamboat	1974-80	4	100	6	14	51
Summit Lake	1972-94	8	63	1	1	4
Tupper	1974-94	6	100	1	1	9
Wasa	1973-94	19	5	4	–	4
Wingdam	1968-70	3	67	9	12	14

## Orange-crowned Warbler

<b>Coastal</b>						
Alberni	1968-79	6	100	2	13	22
Albion	1968-92	21	95	1	2	8
Campbell River	1973-93	19	100	5	20	43
Chemainus	1969-88	4	100	21	37	49
Chilliwack	1973-94	11	91	1	5	8
Comox Lake	1973-75	3	100	8	8	9
Coquitlam	1990-94	5	100	1	3	4
Courtenay	1992-93	2	100	19	19	19
Elsie Lake	1970-94	6	100	4	7	10
Gibsons Landing	1973-94	10	100	1	3	23
Kispiox	1975-94	3	100	8	13	22
Kitsumkalum	1974-94	19	100	1	23	38
Kwinita	1968-94	26	85	1	4	13
Masset	1989-94	5	100	29	32	66
Meziadin	1975-77	2	100	2	11	19
Nanaimo River	1973-94	22	100	3	15	31
Nass River	1975	1	100	6	–	6
Pemberton	1974-94	18	78	2	9	23
Pitt Meadows	1973-89	14	93	1	4	9
Point Grey	1974-92	11	100	1	2	8
Port Hardy	1982-89	4	100	15	21	25
Port Renfrew	1973-94	17	100	5	12	55
Queen Charlotte City	1989-94	3	100	18	29	56
Saltery Bay	1974-76	3	100	4	4	8
Seabird	1969-94	16	100	1	7	15
Squamish	1973-94	9	100	10	24	36
Victoria	1973-94	17	100	1	7	20

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ ORANGE-CROWNED WARBLER						
<b>Interior</b>						
Adams Lake	1989-94	6	100	5	10	13
Alexis Creek	1973-86	14	71	2	5	10
Ashnola	1973-74	2	100	1	1	1
Atlin Road	1989	1	100	1	–	1
Beaverdell	1970-94	24	92	1	7	17
Bridge Lake	1974-94	20	95	8	28	53
Bromley	1973-94	5	40	2	2	2
Brookmere	1973-92	10	90	6	10	16
Canford	1974-93	10	80	2	3	4
Canoe Point	1993-94	2	50	2	–	2
Cassiar	1972-75	2	100	1	2	2
Chilkat Pass	1975-76	2	50	15	–	15
Christian Valley	1993-94	2	100	26	28	30
Chu Chua	1993-94	2	100	4	7	10
Columbia Lake	1973-83	7	14	2	–	2
Creighton Valley	1979-94	16	100	7	10	18
Creston	1984	1	100	2	–	2
Ferndale	1968-94	15	80	4	24	43
Fort Nelson	1974-80	5	40	1	1	1
Fort St. John	1974-90	9	89	1	2	4
Fraser Lake	1968-78	5	100	1	4	11
Gerrard	1976-85	10	80	1	1	4
Gnat Pass	1975-93	2	100	3	9	14
Golden	1973-94	22	100	3	6	15
Goldstream Mountain	1993-94	2	100	7	11	15
Gosnell	1969-74	4	75	1	4	5
Grand Forks	1973-94	22	86	1	3	8
Horsefly	1974-88	11	55	1	3	10
Hudson's Hope	1976	1	100	1	–	1
Illecilewaet	1973-83	4	75	1	10	10
Kamloops	1974-94	15	47	1	2	5
Kinaskan Lake	1975	1	100	12	–	12
Kootenay	1981-94	10	90	1	4	8
Kuskonook	1968-91	21	14	2	2	6
Lac la Hache	1973-86	11	36	3	10	19
Lavington	1972-94	24	100	1	5	10
Mabel Lake	1973-94	19	79	1	3	6
McLeod Lake	1968-94	9	100	3	9	23
Mount Morice	1968-75	5	60	7	9	10
Needles	1968-94	26	100	1	7	17
Oliver	1973-94	18	83	1	5	8
Osprey Lake	1976-94	10	70	1	13	27
Pavilion	1974-94	6	33	1	1	1
Pennington	1987-91	4	75	3	8	30
Pleasant Valley	1980-93	6	100	1	4	7
Prince George	1973-94	20	60	1	3	9
Princeton	1968-94	8	75	7	14	17
Punchaw	1974-94	9	100	5	23	34
Riske Creek	1973-92	11	64	1	2	3
Salmo	1969-75	3	33	2	–	2
Salmon Arm	1968-94	19	16	1	2	3
Scotch Creek	1989-94	6	100	18	27	31
Spillimacheen	1976-93	17	100	6	15	22
Steamboat	1974-80	4	75	1	3	3
Succour Creek	1993-94	2	100	28	38	48
Summerland	1973-94	21	57	1	1	2
Summit Lake	1972-94	8	75	3	16	19
Syringa Creek	1986-93	7	100	1	2	2
Tatlayoko Lake	1989-94	6	100	1	5	6
Telkwa High Road	1974-94	11	82	1	20	36
Tokay	1968-75	4	25	4	–	4
Tupper	1974-94	6	33	2	8	13
Wasa	1973-94	19	11	1	1	1
Williams Lake	1973-93	21	86	1	2	9
Wingdam	1968-70	3	100	7	7	12
Zincton	1968-94	22	59	1	2	5



## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>Nashville Warbler</b>						
<b>Coastal</b>						
Chilliwack	1973-94	11	9	2	–	2
Kwinitsa	1968-94	26	4	1	–	1*
Pemberton	1974-94	18	6	2	–	2
<b>Interior</b>						
Adams Lake	1989-94	6	100	20	25	38
Beaverdell	1970-94	24	88	1	3	14
Brookmere	1973-92	10	50	1	1	1
Canford	1974-93	10	90	1	4	9
Canoe Point	1993-94	2	100	2	9	15
Christian Valley	1993-94	2	50	4	–	4
Chu Chua	1993-94	2	100	26	38	49
Creighton Valley	1979-94	16	94	1	2	7
Creston	1984	1	100	2	–	2
Gerrard	1976-85	10	50	1	1	4
Golden	1973-94	22	36	1	2	4
Goldstream Mountain	1993-94	2	50	2	–	2
Grand Forks	1973-94	22	41	1	4	7
Illecilewaet	1973-83	4	25	1	–	1
Kamloops	1974-94	15	7	1	–	1
Kuskonook	1968-91	21	76	1	5	21
Lavington	1972-94	24	58	1	2	9
Mabel Lake	1973-94	19	95	1	8	30
Needles	1968-94	26	69	1	4	10
Oliver	1973-94	18	89	1	3	7
Pavilion	1974-94	6	17	1	–	1
Pleasant Valley	1980-93	6	17	2	–	2
Riske Creek	1973-92	11	9	2	–	2
Salmo	1969-75	3	33	9	–	9
Salmon Arm	1968-94	19	63	1	2	15
Scotch Creek	1989-94	6	33	1	2	3
Shalalth	1968-94	4	25	5	–	5
Spillimacheen	1976-93	17	12	1	3	4
Summerland	1973-94	21	71	1	2	7
Syringa Creek	1986-93	7	86	2	10	17
Tokay	1968-75	4	25	4	–	4
Zincton	1968-94	22	68	1	2	12

## Yellow Warbler

<b>Coastal</b>						
Alberni	1968-79	6	67	3	5	12
Albion	1968-92	21	86	1	3	8
Campbell River	1973-93	19	100	7	17	30
Chemainus	1969-88	4	100	1	5	9
Chilliwack	1973-94	11	100	1	4	8
Comox Lake	1973-75	3	100	4	5	9
Coquitlam	1990-94	5	60	1	1	1
Courtenay	1992-93	2	100	10	11	11
Elsie Lake	1970-94	6	100	1	3	7
Gibsons Landing	1973-94	10	20	1	2	3
Kispiox	1975-94	3	67	5	7	9
Kitsumkalum	1974-94	19	100	1	5	11
Kwinitsa	1968-94	26	100	3	17	40
Meziadin	1975-77	2	100	12	23	34
Nanaimo River	1973-94	22	95	2	4	9
Pemberton	1974-94	18	100	2	21	44
Pitt Meadows	1973-89	14	50	1	2	3
Point Grey	1974-92	11	36	1	1	2
Port Hardy	1982-89	4	25	1	–	1
Port Renfrew	1973-94	17	41	1	1	9
Saltery Bay	1974-76	3	100	1	3	6

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>YELLOW WARBLER</i>						
Seabird	1969-94	16	94	1	4	21
Squamish	1973-94	9	100	4	13	35
Victoria	1973-94	17	35	1	2	8
<b>Interior</b>						
Adams Lake	1989-94	6	83	2	3	9
Alexis Creek	1973-86	14	100	1	10	19
Ashnola	1973-74	2	50	2	–	2
Beaverdell	1970-94	24	100	4	17	30
Bridge Lake	1974-94	20	90	1	6	15
Bromley	1973-94	5	80	3	6	7
Brookmere	1973-92	10	100	15	26	33
Canford	1974-93	10	100	6	10	24
Canoe Point	1993-94	2	100	10	11	11
Chilkat Pass	1975-76	2	100	9	15	20
Christian Valley	1993-94	2	100	8	8	8
Chu Chua	1993-94	2	100	4	5	5
Columbia Lake	1973-83	7	86	5	6	12
Creighton Valley	1979-94	16	94	2	3	11
Creston	1984	1	100	19	–	19
Ferndale	1968-94	15	93	1	3	8
Fort Nelson	1974-80	5	100	6	7	9
Fort St. John	1974-90	9	100	18	31	49
Fraser Lake	1968-78	5	100	1	6	6
Gerrard	1976-85	10	100	4	9	15
Gnat Pass	1975-93	2	50	4	–	4
Golden	1973-94	22	100	5	26	52
Goldstream Mountain	1993-94	2	100	4	20	36
Gosnell	1969-74	4	100	3	10	14
Grand Forks	1973-94	22	95	1	3	13
Haines Summit	1993-94	2	100	1	4	6
Hendrix Lake	1976	1	100	17	–	17
Horsefly	1974-88	11	91	1	3	9
Hudson's Hope	1976	1	100	53	–	53
Illecilewaet	1973-83	4	75	12	15	19
Kamloops	1974-94	15	87	2	4	5
Kootenay	1981-94	10	30	1	2	2
Kuskonook	1968-91	21	100	3	22	55
Lac la Hache	1973-86	11	82	2	5	17
Lavington	1972-94	24	100	3	9	20
Mabel Lake	1973-94	19	100	7	12	24
McLeod Lake	1968-94	9	100	2	5	12
Meadowlake	1968-70	2	50	1	–	1
Mount Morice	1968-75	5	80	1	14	18
Needles	1968-94	26	100	5	14	22
Nicola	1973-74	2	100	4	5	5
Oliver	1973-94	18	44	1	1	8
Osprey Lake	1976-94	10	90	1	2	18
Pavilion	1974-94	6	100	8	11	23
Pennington	1987-91	4	100	2	4	8
Pleasant Valley	1980-93	6	100	5	7	11
Prince George	1973-94	20	35	1	3	4
Princeton	1968-94	8	63	1	1	7
Punchaw	1974-94	9	78	1	6	26
Riske Creek	1973-92	11	91	2	8	15
Salmo	1969-75	3	100	6	9	18
Salmon Arm	1968-94	19	95	1	5	17
Scotch Creek	1989-94	6	83	2	5	8
Shalalth	1968-94	4	75	2	3	16
Spillimacheen	1976-93	17	100	2	6	11
Steamboat	1974-80	4	50	1	3	5
Succour Creek	1993-94	2	100	22	23	23
Summerland	1973-94	21	95	1	3	6
Summit Lake	1972-94	8	88	1	5	25
Syringa Creek	1986-93	7	100	25	33	41
Tatlayoko Lake	1989-94	6	83	1	3	4
Telkwa High Road	1974-94	11	45	1	3	9
Tokay	1968-75	4	75	3	6	10
Tupper	1974-94	6	100	33	47	76

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>YELLOW WARBLER</i>						
Wasa	1973-94	19	84	1	3	9
Williams Lake	1973-93	21	57	1	2	4
Wingdam	1968-70	3	100	3	11	12
Zincton	1968-94	22	100	3	12	43

### Magnolia Warbler

<b>Coastal</b>						
Kispiox	1975-94	3	100	7	38	40
Kitsumkalum	1974-94	19	53	1	1	4
Kwinitsa	1968-94	26	23	1	1	2
Meziadin	1975-77	2	50	5	–	5
Nass River	1975	1	100	12	–	12
<b>Interior</b>						
Adams Lake	1989-94	6	33	1	2	2*
Columbia Lake	1973-83	7	14	1	–	1*
Ferndale	1968-94	15	53	4	14	27
Fort Nelson	1974-80	5	60	8	9	13
Golden	1973-94	22	9	1	3	5
Gosnell	1969-74	4	75	1	6	7
Horsefly	1974-88	11	27	1	2	8
Illecilewaet	1973-83	4	50	1	1	1
McLeod Lake	1968-94	9	89	15	38	43
Mount Morice	1968-75	5	40	1	3	5
Punchaw	1974-94	9	89	3	6	11
Scotch Creek	1989-94	6	17	1	–	1*
Spillimacheen	1976-93	17	12	1	1	1
Steamboat	1974-80	4	50	2	2	2
Succour Creek	1993-94	2	100	1	2	3*
Summit Lake	1972-94	8	63	12	17	21
Telkwa High Road	1974-94	11	45	1	2	5
Tupper	1974-94	6	17	1	–	1
Wingdam	1968-70	3	67	1	2	3

### Yellow-rumped Warbler

<b>Coastal</b>						
Alberni	1968-79	6	83	3	9	36
Albion	1968-92	21	24	1	1	1
Campbell River	1973-93	19	100	9	27	40
Chemainus	1969-88	4	100	2	6	8
Chilliwack	1973-94	11	36	1	2	3
Comox Lake	1973-75	3	100	1	8	11
Courtenay	1992-93	2	100	8	11	14
Elsie Lake	1970-94	6	100	2	8	25
Gibsons Landing	1973-94	10	80	2	7	26
Kispiox	1975-94	3	100	2	18	35
Kitsumkalum	1974-94	19	105	1	12	30
Kwinitsa	1968-94	26	81	1	4	16
Meziadin	1975-77	2	100	1	2	2
Nanaimo River	1973-94	22	100	2	9	16
Nass River	1975	1	100	4	–	4
Pemberton	1974-94	18	94	1	16	29
Point Grey	1974-92	11	55	1	2	5
Port Hardy	1982-89	4	75	1	2	4
Port Renfrew	1973-94	17	29	1	1	2
Saltery Bay	1974-76	3	100	1	3	4
Seabird	1969-94	16	56	1	1	8
Squamish	1973-94	9	89	1	7	21
Victoria	1973-94	17	24	1	1	1

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ YELLOW-RUMPED WARBLER						
<b>Interior</b>						
Adams Lake	1989-94	6	100	39	49	59
Alexis Creek	1973-86	14	86	2	12	24
Beaverdell	1970-94	24	100	11	29	39
Bridge Lake	1974-94	20	100	3	13	22
Bromley	1973-94	5	80	16	23	34
Brookmere	1973-92	10	100	13	22	33
Canford	1974-93	10	100	15	20	25
Canoe Point	1993-94	2	100	23	29	35
Cassiar	1972-75	2	50	6	–	6
Chilkat Pass	1975-76	2	100	4	6	7
Christian Valley	1993-94	2	100	53	63	73
Chu Chua	1993-94	2	100	14	16	17
Columbia Lake	1973-83	7	71	1	3	9
Creighton Valley	1979-94	16	100	7	18	29
Creston	1984	1	100	5	–	5
Ferndale	1968-94	15	93	7	17	57
Fort Nelson	1974-80	5	60	1	5	5
Fort St. John	1974-90	9	33	1	1	1
Fraser Lake	1968-78	5	80	1	7	14
Gerrard	1976-85	10	100	3	7	9
Gnat Pass	1975-93	2	100	5	8	10
Golden	1973-94	22	109	1	6	20
Goldstream Mountain	1993-94	2	50	17	–	17
Gosnell	1969-74	4	100	4	6	7
Grand Forks	1973-94	22	95	1	4	15
Haines Summit	1993-94	2	100	15	35	55
Hendrix Lake	1976	1	100	6	–	6
Horsefly	1974-88	11	82	1	6	15
Hudson's Hope	1976	1	100	8	–	8
Illecilewaet	1973-83	4	75	7	10	12
Kamloops	1974-94	15	100	1	3	8
Kinaskan Lake	1975	1	100	5	–	5
Kootenay	1981-94	10	100	15	23	39
Kuskonook	1968-91	21	95	2	17	53
Lac la Hache	1973-86	11	91	1	10	17
Lavington	1972-94	24	100	2	9	12
Mabel Lake	1973-94	19	100	3	10	19
McLeod Lake	1968-94	9	100	10	22	44
Meadowlake	1968-70	2	50	2	–	2
Mount Morice	1968-75	5	100	1	4	11
Needles	1968-94	26	100	9	19	28
Nicola	1973-74	2	100	6	8	9
Oliver	1973-94	18	100	2	21	31
Osprey Lake	1976-94	10	90	1	12	30
Pavilion	1974-94	6	100	1	11	21
Pennington	1987-91	4	75	3	16	22
Pinkut Creek	1975	1	100	19	–	19
Pleasant Valley	1980-93	6	100	6	10	12
Prince George	1973-94	20	100	5	10	20
Princeton	1968-94	8	88	1	26	36
Punchaw	1974-94	9	111	2	12	39
Riske Creek	1973-92	11	82	1	5	14
Salmo	1969-75	3	100	1	5	12
Salmon Arm	1968-94	19	95	1	4	17
Scotch Creek	1989-94	6	100	22	26	35
Shalalth	1968-94	4	50	1	7	13
Spillimacheen	1976-93	17	100	5	13	20
Steamboat	1974-80	4	100	2	6	17
Succour Creek	1993-94	2	100	20	28	36
Summerland	1973-94	21	100	5	10	17
Summit Lake	1972-94	8	100	3	23	38
Syringa Creek	1986-93	7	100	2	4	10
Tatlayoko Lake	1989-94	6	100	8	18	21
Telkwa High Road	1974-94	11	91	1	5	41
Tetsa River	1974	1	200	8	8	8
Tokay	1968-75	4	50	6	9	12
Tupper	1974-94	6	67	2	5	7

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>YELLOW-RUMPED WARBLER</i>						
Wasa	1973-94	19	74	1	2	13
Williams Lake	1973-93	21	95	2	7	13
Wingdam	1968-70	3	100	10	10	11
Zincton	1968-94	22	95	1	15	38

### Black-throated Gray Warbler

<b>Coastal</b>						
Alberni	1968-79	6	50	1	2	15
Albion	1968-92	21	62	1	1	2
Campbell River	1973-93	19	79	1	2	4
Chemainus	1969-88	4	100	1	6	6
Chilliwack	1973-94	11	55	1	1	2
Coquitlam	1990-94	5	20	2	–	2
Courtenay	1992-93	2	100	7	13	19
Elsie Lake	1970-94	6	67	1	2	8
Gibsons Landing	1973-94	10	100	4	16	31
Nanaimo River	1973-94	22	73	1	4	15
Pemberton	1974-94	18	78	3	5	18
Pitt Meadows	1973-89	14	7	2	–	2
Point Grey	1974-92	11	36	1	2	3
Port Renfrew	1973-94	17	6	1	–	1
Saltery Bay	1974-76	3	67	1	7	12
Seabird	1969-94	16	94	2	8	12
Squamish	1973-94	9	89	4	12	24
Victoria	1973-94	17	12	1	1	1
<b>Interior</b>						
Kuskonook	1968-91	21	5	1	–	1*
Osprey Lake	1976-94	10	30	1	1	1*
Princeton	1968-94	8	50	9	12	21*

### Townsend's Warbler

<b>Coastal</b>						
Alberni	1968-79	6	100	3	11	33
Albion	1968-92	21	10	1	1	1
Campbell River	1973-93	19	100	7	30	40
Chemainus	1969-88	4	100	2	6	22
Chilliwack	1973-94	11	9	2	–	2
Comox Lake	1973-75	3	100	4	8	11
Courtenay	1992-93	2	100	20	22	24
Elsie Lake	1970-94	6	100	2	18	21
Gibsons Landing	1973-94	10	50	3	6	16
Kispiox	1975-94	3	33	1	–	1
Kitsumkalum	1974-94	19	84	1	8	20
Kwinitsa	1968-94	26	81	1	14	31
Masset	1989-94	5	100	36	57	74
Meziadin	1975-77	2	50	2	–	2
Nanaimo River	1973-94	22	100	4	10	18
Nass River	1975	1	100	1	–	1
Pemberton	1974-94	18	72	2	11	26
Pitt Meadows	1973-89	14	7	1	–	1
Point Grey	1974-92	11	18	1	1	1
Port Hardy	1982-89	4	100	2	2	2
Port Renfrew	1973-94	17	41	1	1	2
Queen Charlotte City	1989-94	3	100	24	25	36
Saltery Bay	1974-76	3	67	2	4	5
Seabird	1969-94	16	88	1	2	6
Squamish	1973-94	9	100	3	11	17
Victoria	1973-94	17	18	1	1	2

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Low	Range of total surveys when species occurred Median	High
<b>◀ TOWNSEND'S WARBLER</b>						
<b>Interior</b>						
Adams Lake	1989-94	6	50	2	2	2
Alexis Creek	1973-86	14	7	1	—	1
Beaverdell	1970-94	24	54	1	2	7
Bridge Lake	1974-94	20	25	1	1	2
Bromley	1973-94	5	80	1	4	7
Brookmere	1973-92	10	100	3	11	18
Canford	1974-93	10	80	1	3	9
Cassiar	1972-75	2	50	1	—	1
Chilkat Pass	1975-76	2	50	6	—	6
Christian Valley	1993-94	2	100	5	6	7
Creighton Valley	1979-94	16	100	5	12	23
Creston	1984	1	100	13	—	13
Ferndale	1968-94	15	33	1	1	2
Fraser Lake	1968-78	5	20	1	—	1
Gerrard	1976-85	10	100	1	4	6
Gnat Pass	1975-93	2	50	3	—	3
Golden	1973-94	22	5	1	—	1
Goldstream Mountain	1993-94	2	100	2	3	3
Gosnell	1969-74	4	75	1	2	3
Horsefly	1974-88	11	9	1	—	1
Illecilewaet	1973-83	4	75	12	29	30
Kinaskan Lake	1975	1	100	3	—	3
Kootenay	1981-94	10	100	9	33	44
Kuskonook	1968-91	21	76	1	5	28
Lac la Hache	1973-86	11	9	1	—	1
Lavington	1972-94	24	58	1	2	4
Mabel Lake	1973-94	19	68	1	1	8
McLeod Lake	1968-94	9	22	1	3	4
Needles	1968-94	26	92	1	9	18
Oliver	1973-94	18	89	2	5	13
Osprey Lake	1976-94	10	50	1	3	6
Pavilion	1974-94	6	17	3	—	3
Pennington	1987-91	4	25	1	—	1
Princeton	1968-94	8	100	2	12	24
Punchaw	1974-94	9	11	2	—	2
Salmon Arm	1968-94	19	11	1	2	2
Scotch Creek	1989-94	6	100	5	10	16
Shalalth	1968-94	4	25	1	—	1
Spillimacheen	1976-93	17	100	1	4	10
Succour Creek	1993-94	2	100	5	6	7
Summerland	1973-94	21	100	3	8	15
Summit Lake	1972-94	8	13	1	—	1
Syringa Creek	1986-93	7	86	1	1	3
Telkwa High Road	1974-94	11	9	1	—	1
Tokay	1968-75	4	25	1	—	1
Wasa	1973-94	19	5	1	—	1
Wingdam	1968-70	3	67	9	12	15
Zincton	1968-94	22	77	1	3	11

**Palm Warbler**

<b>Interior</b>						
Steamboat	1974-80	4	75	1	3	3

**Blackpoll Warbler**

<b>Interior</b>						
Cassiar	1972-75	2	50	5	—	5
Chilkat Pass	1975-76	2	50	1	—	1
Ferndale	1968-94	15	20	1	2	2
Gnat Pass	1975-93	2	50	4	—	4

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ BLACKPOLL WARBLER						
Gosnell	1969-74	4	25	1	–	1
Kinaskan Lake	1975	1	100	2	–	2
McLeod Lake	1968-94	9	67	1	10	20
Mount Morice	1968-75	5	80	2	3	6
Pennington	1987-91	4	100	1	6	8
Pinkut Creek	1975	1	100	9	–	9
Punchaw	1974-94	9	78	1	2	6
Summit Lake	1972-94	8	38	1	1	2
Tupper	1974-94	6	33	1	2	2
Wingdam	1968-70	3	100	3	28	34

### Black-and-white Warbler

<b>Coastal</b>						
Kispiox	1975-94	3	33	1	–	1
<b>Interior</b>						
Fort Nelson	1974-80	5	40	1	1	1
Fort St. John	1974-90	9	11	1	–	1
Steamboat	1974-80	4	50	1	1	1
Tupper	1974-94	6	17	2	–	2

### American Redstart

<b>Coastal</b>						
Kispiox	1975-94	3	100	62	96	104
Kitsumkalum	1974-94	19	84	1	6	13
Kwinitsa	1968-94	26	35	1	2	12
Meziadin	1975-77	2	100	2	15	28
Nass River	1975	1	100	17	–	17
Pemberton	1974-94	18	6	1	–	1
<b>Interior</b>						
Adams Lake	1989-94	6	100	2	8	16
Alexis Creek	1973-86	14	7	2	–	2
Beaverdell	1970-94	24	88	1	4	11
Bridge Lake	1974-94	20	30	1	2	3
Brookmere	1973-92	10	60	1	3	5
Canford	1974-93	10	30	1	2	2
Canoe Point	1993-94	2	100	4	10	16
Cassiar	1972-75	2	50	3	–	3
Christian Valley	1993-94	2	100	2	4	5
Columbia Lake	1973-83	7	43	1	2	4
Creighton Valley	1979-94	16	6	1	–	1
Creston	1984	1	100	1	–	1
Ferndale	1968-94	15	87	1	16	52
Fort Nelson	1974-80	5	20	23	–	23
Fort St. John	1974-90	9	67	1	2	4
Fraser Lake	1968-78	5	60	5	8	15
Gerrard	1976-85	10	100	2	5	8
Gnat Pass	1975-93	2	50	1	–	1
Golden	1973-94	22	91	2	4	13
Goldstream Mountain	1993-94	2	50	1	–	1
Gosnell	1969-74	4	100	7	12	14
Grand Forks	1973-94	22	32	1	2	2
Horsefly	1974-88	11	82	1	2	10
Hudson's Hope	1976	1	100	6	–	6
Illecilewaet	1973-83	4	75	4	5	6
Kuskonook	1968-91	21	81	1	2	10
Lac la Hache	1973-86	11	18	1	3	5
Lavington	1972-94	24	21	1	1	2
Mabel Lake	1973-94	19	53	1	3	7

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ AMERICAN REDSTART</b>						
McLeod Lake	1968-94	9	100	13	56	71
Mount Morice	1968-75	5	60	12	14	23
Needles	1968-94	26	96	1	3	20
Oliver	1973-94	18	22	1	1	1
Prince George	1973-94	20	100	5	10	24
Punchaw	1974-94	9	78	1	2	9
Riske Creek	1973-92	11	27	2	2	6
Salmon Arm	1968-94	19	32	1	1	5
Scotch Creek	1989-94	6	50	1	2	2
Spillimacheen	1976-93	17	82	1	2	4
Steamboat	1974-80	4	50	3	3	3
Succour Creek	1993-94	2	100	20	28	35
Summerland	1973-94	21	14	1	1	2
Summit Lake	1972-94	8	100	2	29	47
Syringa Creek	1986-93	7	100	2	6	9
Tatlayoko Lake	1989-94	6	17	1	—	1
Telkwa High Road	1974-94	11	100	2	25	55
Tokay	1968-75	4	25	16	—	16
Tupper	1974-94	6	33	3	3	3
Wasa	1973-94	19	32	1	2	3
Williams Lake	1973-93	21	5	1	—	1
Wingdam	1968-70	3	67	4	6	7
Zincton	1968-94	22	64	1	4	5

**Ovenbird**

<b>Coastal</b>						
Point Grey	1974-92	11	9	1	—	1*
<b>Interior</b>						
Fort Nelson	1974-80	5	100	5	7	11
Fort St. John	1974-90	9	67	1	2	8
Hudson's Hope	1976	1	100	3	—	3
Needles	1968-94	26	4	1	—	1
Spillimacheen	1976-93	17	12	1	1	1
Steamboat	1974-80	4	100	1	2	4
Summit Lake	1972-94	8	13	1	—	1
Tupper	1974-94	6	83	1	2	6
Zincton	1968-94	22	5	1	—	1

**Northern Waterthrush**

<b>Coastal</b>						
Kispiox	1975-94	3	100	6	9	15
Kitsumkalum	1974-94	19	16	1	3	5
Kwinitsa	1968-94	26	27	1	2	3
Meziadin	1975-77	2	50	15	—	15
Nass River	1975	1	100	6	—	6
<b>Interior</b>						
Adams Lake	1989-94	6	83	1	3	3
Alexis Creek	1973-86	14	86	1	6	11
Ashnola	1973-74	2	50	4	—	4
Beaverdell	1970-94	24	100	2	12	24
Bridge Lake	1974-94	20	90	2	9	27
Brookmere	1973-92	10	90	6	10	18
Canford	1974-93	10	50	1	2	4
Cassiar	1972-75	2	50	5	—	5
Chilkat Pass	1975-76	2	50	1	—	1
Christian Valley	1993-94	2	100	8	10	11
Chu Chua	1993-94	2	100	1	2	3
Creighton Valley	1979-94	16	100	3	8	15



## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>NORTHERN WATERTHRUSH</i>						
Creston	1984	1	100	3	–	3
Ferndale	1968-94	15	67	5	12	27
Fort Nelson	1974-80	5	80	1	3	5
Fraser Lake	1968-78	5	80	2	4	9
Gerrard	1976-85	10	100	4	10	13
Gnat Pass	1975-93	2	100	2	3	3
Golden	1973-94	22	73	2	5	10
Gosnell	1969-74	4	100	8	12	24
Grand Forks	1973-94	22	100	2	9	16
Horsefly	1974-88	11	100	1	3	10
Hudson's Hope	1976	1	100	2	–	2
Illecilewaet	1973-83	4	75	3	7	7
Kinaskan Lake	1975	1	100	1	–	1
Lac la Hache	1973-86	11	27	5	5	8
Lavington	1972-94	24	8	1	2	2
Mabel Lake	1973-94	19	74	1	2	6
McLeod Lake	1968-94	9	100	3	53	75
Mount Morice	1968-75	5	80	2	4	15
Needles	1968-94	26	96	2	5	9
Oliver	1973-94	18	83	1	2	3
Osprey Lake	1976-94	10	40	10	12	17
Pavilion	1974-94	6	17	1	–	1
Pennington	1987-91	4	25	3	–	3
Pinkut Creek	1975	1	100	14	–	14
Pleasant Valley	1980-93	6	33	1	2	2
Prince George	1973-94	20	100	3	9	15
Punchaw	1974-94	9	89	1	6	15
Riske Creek	1973-92	11	73	1	9	13
Salmon Arm	1968-94	19	21	1	2	3
Scotch Creek	1989-94	6	100	7	8	11
Spillimacheen	1976-93	17	71	1	2	4
Steamboat	1974-80	4	25	1	–	1
Succour Creek	1993-94	2	100	5	7	9
Summit Lake	1972-94	8	75	2	17	26
Syringa Creek	1986-93	7	71	2	3	3
Tatlayoko Lake	1989-94	6	100	4	8	17
Telkwa High Road	1974-94	11	91	2	3	11
Tokay	1968-75	4	25	4	–	4
Tupper	1974-94	6	83	1	2	4
Wasa	1973-94	19	63	1	1	4
Williams Lake	1973-93	21	19	1	1	2
Wingdam	1968-70	3	100	1	9	11
Zincton	1968-94	22	77	1	3	6

### Connecticut Warbler

#### Interior

Fort Nelson	1974-80	5	60	1	3	5
Fort St. John	1974-90	9	33	1	1	1
Steamboat	1974-80	4	50	2	4	5
Tupper	1974-94	6	83	1	1	6

### Mourning Warbler

#### Coastal

Albion	1968-92	21	5	1	–	1*
Campbell River	1973-93	19	5	11	–	11*
Kwinitsa	1968-94	26	4	37	–	37*
Port Hardy	1982-89	4	25	2	–	2*
Port Renfrew	1973-94	17	6	16	–	16*
Seabird	1969-94	16	6	6	–	6*

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>MOURNING WARBLER</i>						
<b>Interior</b>						
Fort Nelson	1974-80	5	60	1	6	22
Steamboat	1974-80	4	50	7	8	9
Tupper	1974-94	6	67	2	3	3

### MacGillivray's Warbler

<b>Coastal</b>						
Alberni	1968-79	6	100	1	17	21
Albion	1968-92	21	62	1	1	3
Campbell River	1973-93	19	95	7	16	26
Chemainus	1969-88	4	100	3	17	26
Chilliwack	1973-94	11	45	1	2	5
Comox Lake	1973-75	3	100	6	8	13
Coquitlam	1990-94	5	20	1	–	1
Courtenay	1992-93	2	100	10	13	15
Elsie Lake	1970-94	6	100	15	17	44
Gibsons Landing	1973-94	10	80	2	4	19
Kispiox	1975-94	3	100	22	25	25
Kitsumkalum	1974-94	19	100	9	18	39
Kwinitsa	1968-94	26	96	2	31	51
Meziadin	1975-77	2	100	9	20	30
Nanaimo River	1973-94	22	100	4	10	26
Nass River	1975	1	100	28	–	28
Pemberton	1974-94	18	89	1	16	37
Pitt Meadows	1973-89	14	14	1	1	1
Point Grey	1974-92	11	55	1	3	4
Port Hardy	1982-89	4	50	3	3	3
Port Renfrew	1973-94	17	94	3	12	32
Saltery Bay	1974-76	3	100	4	9	20
Seabird	1969-94	16	94	1	4	14
Squamish	1973-94	9	100	3	30	37
<b>Interior</b>						
Adams Lake	1989-94	6	100	10	16	28
Ashnola	1973-74	2	100	1	1	1
Beaverdell	1970-94	24	100	1	11	25
Bridge Lake	1974-94	20	55	1	1	3
Bromley	1973-94	5	20	1	–	1
Brookmere	1973-92	10	90	10	12	21
Canford	1974-93	10	100	7	12	16
Cassiar	1972-75	2	50	1	–	1
Chilkat Pass	1975-76	2	50	8	–	8
Christian Valley	1993-94	2	100	5	6	7
Chu Chua	1993-94	2	100	19	21	23
Columbia Lake	1973-83	7	14	1	–	1
Creighton Valley	1979-94	16	100	2	7	22
Creston	1984	1	100	5	–	5
Ferndale	1968-94	15	53	29	42	57
Fraser Lake	1968-78	5	60	2	4	4
Gerrard	1976-85	10	90	1	14	20
Gnat Pass	1975-93	2	100	3	4	4
Golden	1973-94	22	86	1	11	23
Goldstream Mountain	1993-94	2	100	15	24	33
Gosnell	1969-74	4	100	41	45	68
Grand Forks	1973-94	22	91	1	2	7
Hendrix Lake	1976	1	100	1	–	1
Horsefly	1974-88	11	64	1	2	2
Hudson's Hope	1976	1	100	2	–	2
Illecilewaet	1973-83	4	100	2	47	75
Kamloops	1974-94	15	27	1	1	2
Kinaskan Lake	1975	1	100	6	–	6
Kootenay	1981-94	10	50	2	2	6
Kuskonook	1968-91	21	90	1	8	17
Lac la Hache	1973-86	11	18	1	2	2

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>MACGILLIVRAY'S WARBLER</i>						
Lavington	1972-94	24	100	1	6	12
Mabel Lake	1973-94	19	100	3	12	23
McLeod Lake	1968-94	9	100	9	27	37
Mount Morice	1968-75	5	80	4	16	38
Needles	1968-94	26	96	1	15	27
Oliver	1973-94	18	89	1	3	11
Osprey Lake	1976-94	10	30	2	3	10
Pavilion	1974-94	6	50	1	3	8
Pennington	1987-91	4	50	3	3	3
Pinkut Creek	1975	1	100	2	–	2
Pleasant Valley	1980-93	6	100	2	2	4
Prince George	1973-94	20	85	1	3	12
Princeton	1968-94	8	75	1	2	3
Punchaw	1974-94	9	78	1	30	46
Riske Creek	1973-92	11	27	1	1	1
Salmo	1969-75	3	33	1	–	1
Salmon Arm	1968-94	19	37	1	3	7
Scotch Creek	1989-94	6	100	25	43	61
Shalalth	1968-94	4	50	3	4	4
Spillimacheen	1976-93	17	100	1	6	10
Succour Creek	1993-94	2	100	19	22	25
Summerland	1973-94	21	100	1	4	12
Summit Lake	1972-94	8	75	11	29	37
Syringa Creek	1986-93	7	100	2	6	17
Tatlayoko Lake	1989-94	6	50	1	1	4
Telkwa High Road	1974-94	11	82	3	10	21
Tokay	1968-75	4	25	2	–	2
Tupper	1974-94	6	17	2	–	2
Wasa	1973-94	19	11	1	2	2
Williams Lake	1973-93	21	29	1	1	2
Wingdam	1968-70	3	67	22	25	28
Zincton	1968-94	22	86	1	20	29

## Common Yellowthroat

<b>Coastal</b>						
Alberni	1968-79	6	50	1	1	4
Albion	1968-92	21	95	2	7	14
Campbell River	1973-93	19	100	2	7	15
Chemainus	1969-88	4	75	1	2	8
Chilliwack	1973-94	11	55	1	2	3
Comox Lake	1973-75	3	67	1	1	1
Coquitlam	1990-94	5	100	11	14	23
Courtenay	1992-93	2	100	1	2	3
Elsie Lake	1970-94	6	100	3	7	9
Gibsons Landing	1973-94	10	40	1	2	2
Kispiox	1975-94	3	33	3	–	3
Kitsumkalum	1974-94	19	84	1	2	5
Kwinitsa	1968-94	26	62	1	2	14
Meziadin	1975-77	2	50	1	–	1
Nanaimo River	1973-94	22	82	1	1	4
Nass River	1975	1	100	1	–	1
Pemberton	1974-94	18	100	1	4	13
Pitt Meadows	1973-89	14	100	5	10	22
Port Hardy	1982-89	4	75	1	1	4
Port Renfrew	1973-94	17	6	1	–	1
Seabird	1969-94	16	88	1	10	18
Squamish	1973-94	9	89	1	3	5
Victoria	1973-94	17	53	1	2	7
<b>Interior</b>						
Adams Lake	1989-94	6	67	1	1	2
Alexis Creek	1973-86	14	14	1	1	1
Beaverdell	1970-94	24	38	1	1	2
Bridge Lake	1974-94	20	90	1	3	5

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ COMMON YELLOWTHROAT						
Brookmere	1973-92	10	100	1	5	7
Canford	1974-93	10	50	1	1	3
Canoe Point	1993-94	2	100	2	3	4
Cassiar	1972-75	2	50	2	—	2
Chu Chua	1993-94	2	100	1	3	4
Columbia Lake	1973-83	7	14	2	—	2
Creighton Valley	1979-94	16	94	1	2	6
Ferndale	1968-94	15	73	1	3	5
Fort Nelson	1974-80	5	100	2	3	4
Fort St. John	1974-90	9	89	1	3	5
Fraser Lake	1968-78	5	40	2	4	6
Gerrard	1976-85	10	70	1	2	4
Gnat Pass	1975-93	2	100	1	2	3
Golden	1973-94	22	100	4	17	30
Goldstream Mountain	1993-94	2	50	3	—	3
Gosnell	1969-74	4	100	5	6	9
Grand Forks	1973-94	22	77	1	3	6
Horsefly	1974-88	11	82	1	3	5
Illecilewaet	1973-83	4	75	2	2	4
Kamloops	1974-94	15	47	1	1	5
Kootenay	1981-94	10	10	1	—	1
Kuskonook	1968-91	21	14	1	1	2
Lac la Hache	1973-86	11	82	1	4	20
Lavington	1972-94	24	25	1	1	4
Mabel Lake	1973-94	19	100	1	4	9
McLeod Lake	1968-94	9	100	1	7	12
Meadowlake	1968-70	2	50	2	—	2
Mount Morice	1968-75	5	20	4	—	4
Needles	1968-94	26	96	1	5	11
Nicola	1973-74	2	100	1	1	1
Osprey Lake	1976-94	10	40	1	1	3
Pavilion	1974-94	6	17	2	—	2
Pennington	1987-91	4	50	2	3	3
Pleasant Valley	1980-93	6	100	2	5	8
Prince George	1973-94	20	90	1	3	7
Punchaw	1974-94	9	89	2	6	10
Riske Creek	1973-92	11	73	1	1	4
Salmo	1969-75	3	67	2	4	5
Salmon Arm	1968-94	19	89	2	4	11
Scotch Creek	1989-94	6	17	1	—	1
Spillimacheen	1976-93	17	94	1	3	7
Steamboat	1974-80	4	50	3	4	4
Succour Creek	1993-94	2	100	21	24	27
Summerland	1973-94	21	10	1	1	1
Summit Lake	1972-94	8	75	2	3	11
Syringa Creek	1986-93	7	100	1	2	3
Telkwa High Road	1974-94	11	45	1	2	3
Tokay	1968-75	4	50	4	7	9
Tupper	1974-94	6	83	1	2	11
Wasa	1973-94	19	100	1	6	13
Williams Lake	1973-93	21	81	1	1	3
Wingdam	1968-70	3	100	2	10	14
Zincton	1968-94	22	59	1	1	3

**Wilson's Warbler**

**Coastal**

Alberni	1968-79	6	50	2	2	5
Albion	1968-92	21	100	1	3	11
Campbell River	1973-93	19	79	1	3	10
Chemainus	1969-88	4	75	3	4	11
Chilliwack	1973-94	11	55	1	2	5
Comox Lake	1973-75	3	100	1	1	2
Coquitlam	1990-94	5	20	1	—	1
Courtenay	1992-93	2	50	3	—	3

Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ WILSON'S WARBLER						
Elsie Lake	1970-94	6	17	1	–	1
Gibsons Landing	1973-94	10	40	1	2	4
Kispiox	1975-94	3	33	2	–	2
Kitsumkalum	1974-94	19	32	1	2	6
Kwinitsa	1968-94	26	31	1	5	31
Masset	1989-94	5	40	1	1	1
Meziadin	1975-77	2	100	10	12	13
Nanaimo River	1973-94	22	86	1	3	7
Nass River	1975	1	100	3	–	3
Pemberton	1974-94	18	61	1	6	35
Pitt Meadows	1973-89	14	29	1	2	3
Point Grey	1974-92	11	45	1	1	2
Port Hardy	1982-89	4	100	2	4	6
Port Renfrew	1973-94	17	100	13	26	36
Queen Charlotte City	1989-94	3	100	6	9	10
Saltery Bay	1974-76	3	100	2	4	9
Seabird	1969-94	16	81	1	2	6
Squamish	1973-94	9	89	2	3	12
Victoria	1973-94	17	35	1	1	2
<b>Interior</b>						
Alexis Creek	1973-86	14	86	1	4	9
Beaverdell	1970-94	24	54	1	3	11
Bridge Lake	1974-94	20	55	1	2	11
Bromley	1973-94	5	80	1	1	1
Brookmere	1973-92	10	80	1	3	12
Canford	1974-93	10	20	1	2	2
Canoe Point	1993-94	2	50	4	–	4
Cassiar	1972-75	2	100	1	5	8
Chilkat Pass	1975-76	2	100	53	63	73
Columbia Lake	1973-83	7	14	4	–	4
Creighton Valley	1979-94	16	100	1	8	15
Ferndale	1968-94	15	53	1	2	5
Fraser Lake	1968-78	5	80	1	8	12
Gerrard	1976-85	10	30	1	4	8
Gnat Pass	1975-93	2	50	41	–	41
Golden	1973-94	22	41	1	3	10
Goldstream Mountain	1993-94	2	100	3	3	3
Gosnell	1969-74	4	75	19	20	24
Grand Forks	1973-94	22	9	1	2	2
Haines Summit	1993-94	2	100	22	29	35
Hendrix Lake	1976	1	100	19	–	19
Horsefly	1974-88	11	55	1	2	6
Illecilewaet	1973-83	4	100	3	14	23
Kinaskan Lake	1975	1	100	18	–	18
Kootenay	1981-94	10	50	1	2	3
Kuskonook	1968-91	21	33	1	1	3
Lac la Hache	1973-86	11	64	1	3	11
Lavington	1972-94	24	33	1	2	4
Mabel Lake	1973-94	19	26	1	1	3
McLeod Lake	1968-94	9	67	1	19	28
Mount Morice	1968-75	5	100	2	5	17
Needles	1968-94	26	81	1	2	8
Oliver	1973-94	18	44	1	1	2
Osprey Lake	1976-94	10	30	2	2	20
Pavilion	1974-94	6	67	2	3	4
Pennington	1987-91	4	75	8	22	27
Pinkut Creek	1975	1	100	3	–	3
Prince George	1973-94	20	100	2	5	12
Princeton	1968-94	8	38	1	1	3
Punchaw	1974-94	9	78	1	4	8
Riske Creek	1973-92	11	45	1	1	4
Salmon Arm	1968-94	19	26	1	1	1
Scotch Creek	1989-94	6	100	4	8	12
Shalalth	1968-94	4	25	1	–	1
Spillimacheen	1976-93	17	47	1	1	4
Steamboat	1974-80	4	25	2	–	2
Succour Creek	1993-94	2	100	5	9	12

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ WILSON'S WARBLER</b>						
Summerland	1973-94	21	57	1	2	3
Summit Lake	1972-94	8	75	1	2	5
Syringa Creek	1986-93	7	57	1	2	3
Tatlayoko Lake	1989-94	6	83	1	1	7
Telkwa High Road	1974-94	11	27	1	4	4
Tetsa River	1974	1	200	3	3	3
Tokay	1968-75	4	25	1	–	1
Tupper	1974-94	6	17	3	–	3
Wasa	1973-94	19	16	1	1	2
Williams Lake	1973-93	21	33	1	1	4
Wingdam	1968-70	3	100	30	56	71
Zincton	1968-94	22	45	1	1	2

### Canada Warbler

<b>Interior</b>						
Fort Nelson	1974-80	5	40	1	3	5
Fort St. John	1974-90	9	11	1	–	1

### Yellow-breasted Chat

<b>Interior</b>						
Oliver	1973-94	18	11	1	2	2
Summerland	1973-94	21	5	2	–	2

### Western Tanager

<b>Coastal</b>						
Alberni	1968-79	6	83	2	6	20
Albion	1968-92	21	43	1	1	5
Campbell River	1973-93	19	89	1	5	15
Chemainus	1969-88	4	100	1	4	6
Chilliwack	1973-94	11	27	1	1	6
Comox Lake	1973-75	3	100	2	9	12
Courtenay	1992-93	2	100	2	3	3
Elsie Lake	1970-94	6	83	4	8	13
Gibsons Landing	1973-94	10	90	1	2	7
Kispiox	1975-94	3	100	4	7	11
Kitsumkalum	1974-94	19	79	1	2	15
Kwinitsa	1968-94	26	54	1	1	3
Meziadin	1975-77	2	50	5	–	5
Nanaimo River	1973-94	22	100	3	7	13
Nass River	1975	1	100	15	–	15
Pemberton	1974-94	18	94	1	8	20
Point Grey	1974-92	11	55	1	2	4
Port Renfrew	1973-94	17	6	1	–	1
Saltery Bay	1974-76	3	100	3	5	7
Seabird	1969-94	16	81	1	3	10
Squamish	1973-94	9	100	1	12	24
Victoria	1973-94	17	12	1	1	1
<b>Interior</b>						
Adams Lake	1989-94	6	100	19	20	26
Alexis Creek	1973-86	14	93	1	5	11
Ashnola	1973-74	2	100	1	4	7
Beaverdell	1970-94	24	100	13	22	63
Bridge Lake	1974-94	20	80	1	2	10
Bromley	1973-94	5	100	13	27	35
Brookmere	1973-92	10	90	5	13	21

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ WESTERN Tanager						
Canford	1974-93	10	100	2	27	46
Canoe Point	1993-94	2	100	18	19	19
Christian Valley	1993-94	2	100	8	9	10
Chu Chua	1993-94	2	100	35	36	37
Columbia Lake	1973-83	7	57	1	2	2
Creighton Valley	1979-94	16	81	1	2	19
Creston	1984	1	100	3	–	3
Ferndale	1968-94	15	73	1	12	32
Fort Nelson	1974-80	5	60	4	5	9
Fort St. John	1974-90	9	100	1	2	4
Fraser Lake	1968-78	5	60	2	2	4
Gerrard	1976-85	10	100	2	11	18
Gnat Pass	1975-93	2	50	18	–	18
Golden	1973-94	22	95	2	7	17
Goldstream Mountain	1993-94	2	100	10	11	12
Gosnell	1969-74	4	100	8	15	23
Grand Forks	1973-94	22	100	2	8	19
Horsefly	1974-88	11	27	1	1	2
Hudson's Hope	1976	1	100	6	–	6
Illecillewaet	1973-83	4	100	5	6	7
Kamloops	1974-94	15	87	2	4	7
Kootenay	1981-94	10	40	1	1	2
Kuskonook	1968-91	21	90	2	14	30
Lac la Hache	1973-86	11	36	1	2	10
Lavington	1972-94	24	79	1	4	12
Mabel Lake	1973-94	19	100	1	4	17
McLeod Lake	1968-94	9	89	20	27	43
Mount Morice	1968-75	5	60	1	1	2
Needles	1968-94	26	96	1	9	22
Nicola	1973-74	2	50	1	–	1
Oliver	1973-94	18	100	1	8	15
Osprey Lake	1976-94	10	50	1	7	14
Pavilion	1974-94	6	67	3	24	31
Pinkut Creek	1975	1	100	1	–	1
Pleasant Valley	1980-93	6	100	2	11	12
Prince George	1973-94	20	55	1	3	8
Princeton	1968-94	8	100	1	9	16
Punchaw	1974-94	9	56	1	14	19
Riske Creek	1973-92	11	55	1	2	4
Salmo	1969-75	3	67	1	2	3
Salmon Arm	1968-94	19	100	1	8	19
Scotch Creek	1989-94	6	100	2	6	10
Shalalth	1968-94	4	100	4	5	6
Spillimacheen	1976-93	17	100	4	14	20
Succour Creek	1993-94	2	100	13	16	18
Summerland	1973-94	21	100	2	8	12
Summit Lake	1972-94	8	88	1	15	21
Syringa Creek	1986-93	7	100	10	27	30
Tatlayoko Lake	1989-94	6	67	2	4	5
Telkwa High Road	1974-94	11	64	1	4	7
Tokay	1968-75	4	50	9	10	11
Tupper	1974-94	6	67	1	3	5
Wasa	1973-94	19	79	1	2	8
Williams Lake	1973-93	21	86	1	2	7
Wingdam	1968-70	3	67	2	6	10
Zincton	1968-94	22	82	1	10	18

## Spotted Towhee

Coastal						
Alberni	1968-79	6	100	4	6	8
Albion	1968-92	21	100	3	31	51
Campbell River	1973-93	19	100	5	14	28
Chemainus	1969-88	4	100	3	12	29
Chilliwack	1973-94	11	100	1	18	25

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ SPOTTED TOWHEE</b>						
Comox Lake	1973-75	3	100	4	6	12
Coquitlam	1990-94	5	100	25	41	49
Courtenay	1992-93	2	100	13	17	20
Elsie Lake	1970-94	6	83	1	2	9
Gibsons Landing	1973-94	10	100	26	34	52
Nanaimo River	1973-94	22	100	2	15	29
Pemberton	1974-94	18	100	2	11	21
Pitt Meadows	1973-89	14	100	10	41	52
Point Grey	1974-92	11	100	13	25	40
Port Hardy	1982-89	4	75	1	1	2
Port Renfrew	1973-94	17	94	1	3	10
Saltery Bay	1974-76	3	100	14	16	41
Seabird	1969-94	16	100	5	22	35
Squamish	1973-94	9	100	16	24	47
Victoria	1973-94	17	100	4	14	27
<b>Interior</b>						
Ashnola	1973-74	2	50	1	–	1
Beaverdell	1970-94	24	71	1	2	6
Bromley	1973-94	5	100	3	7	12
Brookmere	1973-92	10	30	1	2	6
Canford	1974-93	10	100	10	22	29
Canoe Point	1993-94	2	100	7	10	12
Chu Chua	1993-94	2	100	4	6	8
Creighton Valley	1979-94	16	6	1	–	1
Creston	1984	1	100	10	–	10
Grand Forks	1973-94	22	64	1	2	10
Horsefly	1974-88	11	18	1	1	1
Kamloops	1974-94	15	27	1	1	2
Kuskonook	1968-91	21	81	1	3	11
Lavington	1972-94	24	83	1	2	6
Mabel Lake	1973-94	19	74	1	2	3
Needles	1968-94	26	15	1	2	3
Oliver	1973-94	18	100	1	12	22
Osprey Lake	1976-94	10	50	1	1	3
Pavilion	1974-94	6	83	1	2	11
Pleasant Valley	1980-93	6	67	1	2	4
Princeton	1968-94	8	50	2	10	11
Salmo	1969-75	3	67	3	4	5
Salmon Arm	1968-94	19	79	1	2	11
Scotch Creek	1989-94	6	33	1	1	1
Shalalth	1968-94	4	25	10	–	10
Summerland	1973-94	21	95	1	3	9
Syringa Creek	1986-93	7	86	15	26	30
Tatlayoko Lake	1989-94	6	17	1	–	1
Tokay	1968-75	4	75	3	13	18
Wasa	1973-94	19	5	1	–	1
Zincton	1968-94	22	14	1	1	4

**American Tree Sparrow**

<b>Coastal</b>						
Kitsumkalum	1974-94	19	5	1	–	1
<b>Interior</b>						
Chilkat Pass	1975-76	2	100	25	26	27
Gnat Pass	1975-93	2	50	34	–	34
Haines Summit	1993-94	2	100	26	29	31
Pennington	1987-91	4	50	1	2	2
Riske Creek	1973-92	11	9	2	–	2



*Breeding Bird Surveys*

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>Chipping Sparrow</b>						
<b>Coastal</b>						
Alberni	1968-79	6	83	2	4	23
Albion	1968-92	21	24	1	3	5
Campbell River	1973-93	19	74	1	3	9
Chemainus	1969-88	4	100	2	4	18
Chilliwack	1973-94	11	27	2	2	12
Comox Lake	1973-75	3	100	1	4	10
Courtenay	1992-93	2	50	1	–	1
Elsie Lake	1970-94	6	17	5	–	5
Gibsons Landing	1973-94	10	20	5	5	5
Kispiox	1975-94	3	100	4	6	11
Kitsumkalum	1974-94	19	53	1	5	11
Kwintsa	1968-94	26	19	1	1	6
Nanaimo River	1973-94	22	95	2	6	15
Nass River	1975	1	100	3	–	3
Pemberton	1974-94	18	67	1	2	6
Pitt Meadows	1973-89	14	14	1	2	2
Port Hardy	1982-89	4	25	1	–	1
Port Renfrew	1973-94	17	47	1	1	2
Saltery Bay	1974-76	3	100	2	3	7
Seabird	1969-94	16	19	1	2	6
Squamish	1973-94	9	11	2	–	2
Victoria	1973-94	17	71	1	4	10
<b>Interior</b>						
Adams Lake	1989-94	6	100	14	19	25
Alexis Creek	1973-86	14	100	19	37	52
Ashnola	1973-74	2	100	1	6	10
Atlin Road	1989	1	100	13	–	13
Beaverdell	1970-94	24	100	11	31	51
Bridge Lake	1974-94	20	100	4	14	47
Bromley	1973-94	5	100	6	12	24
Brookmere	1973-92	10	100	11	16	31
Canford	1974-93	10	100	8	21	51
Canoe Point	1993-94	2	100	24	32	39
Cassiar	1972-75	2	100	2	8	13
Chilkat Pass	1975-76	2	50	2	–	2
Christian Valley	1993-94	2	100	11	13	14
Chu Chua	1993-94	2	100	18	20	22
Columbia Lake	1973-83	7	100	7	35	60
Creighton Valley	1979-94	16	100	6	16	26
Creston	1984	1	100	7	–	7
Ferndale	1968-94	15	100	2	19	40
Fort Nelson	1974-80	5	100	17	23	30
Fort St. John	1974-90	9	89	1	5	8
Fraser Lake	1968-78	5	80	1	5	8
Gerrard	1976-85	10	80	2	4	8
Gnat Pass	1975-93	2	100	3	21	39
Golden	1973-94	22	100	7	22	47
Goldstream Mountain	1993-94	2	100	9	13	17
Gosnell	1969-74	4	100	11	19	22
Grand Forks	1973-94	22	100	4	9	20
Haines Summit	1993-94	2	50	32	–	32
Hendrix Lake	1976	1	100	12	–	12
Horsefly	1974-88	11	100	2	10	35
Hudson's Hope	1976	1	100	7	–	7
Illecilewaet	1973-83	4	100	2	11	14
Kamloops	1974-94	15	100	4	17	20
Kinaskan Lake	1975	1	100	5	–	5
Kootenay	1981-94	10	100	5	26	49
Kuskonook	1968-91	21	95	2	6	82
Lac la Hache	1973-86	11	100	9	33	53
Lavington	1972-94	24	100	9	17	31
Mabel Lake	1973-94	19	100	7	20	41
McLeod Lake	1968-94	9	100	8	25	29
Meadowlake	1968-70	2	100	5	6	7

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ CHIPPING SPARROW						
Mount Morice	1968-75	5	60	1	2	4
Needles	1968-94	26	100	7	24	45
Nicola	1973-74	2	100	6	24	42
Oliver	1973-94	18	100	10	27	67
Osprey Lake	1976-94	10	100	2	17	34
Pavilion	1974-94	6	100	19	34	62
Pennington	1987-91	4	100	3	14	25
Pleasant Valley	1980-93	6	100	5	11	26
Prince George	1973-94	20	100	4	10	19
Princeton	1968-94	8	100	4	9	12
Punchaw	1974-94	9	89	3	20	30
Riske Creek	1973-92	11	100	11	24	36
Salmo	1969-75	3	100	8	8	15
Salmon Arm	1968-94	19	100	4	14	22
Scotch Creek	1989-94	6	100	3	12	31
Shalalth	1968-94	4	100	5	13	44
Spillimacheen	1976-93	17	100	11	33	46
Steamboat	1974-80	4	100	23	33	38
Succour Creek	1993-94	2	100	21	22	22
Summerland	1973-94	21	100	17	27	38
Summit Lake	1972-94	8	100	5	16	32
Syringa Creek	1986-93	7	100	4	8	16
Tatlayoko Lake	1989-94	6	100	15	35	43
Telkwa High Road	1974-94	11	82	1	11	23
Tetsa River	1974	1	200	4	4	4
Tokay	1968-75	4	75	14	32	40
Tupper	1974-94	6	100	1	6	12
Wasa	1973-94	19	95	3	22	50
Williams Lake	1973-93	21	100	23	40	64
Wingdam	1968-70	3	100	11	21	26
Zincton	1968-94	22	100	2	14	50

### Clay-colored Sparrow

<b>Interior</b>						
Alexis Creek	1973-86	14	7	1	–	1
Chu Chua	1993-94	2	50	4	–	4
Creighton Valley	1979-94	16	6	1	–	1
Ferndale	1968-94	15	27	1	1	2
Fort Nelson	1974-80	5	80	1	4	5
Fort St. John	1974-90	9	100	20	39	46
Gnat Pass	1975-93	2	50	3	–	3
Golden	1973-94	22	68	1	2	8
Hudson's Hope	1976	1	100	33	–	33
Kamloops	1974-94	15	13	1	1	1
Lavington	1972-94	24	33	1	1	3
McLeod Lake	1968-94	9	22	1	1	1
Pleasant Valley	1980-93	6	17	2	–	2
Prince George	1973-94	20	95	1	3	9
Riske Creek	1973-92	11	45	1	2	2
Scotch Creek	1989-94	6	17	1	–	1
Spillimacheen	1976-93	17	71	1	2	14
Steamboat	1974-80	4	50	1	2	2
Summerland	1973-94	21	5	1	–	1
Summit Lake	1972-94	8	63	4	7	11
Syringa Creek	1986-93	7	14	1	–	1
Tokay	1968-75	4	50	2	3	3
Tupper	1974-94	6	100	17	31	61
Wasa	1973-94	19	21	1	1	1
Williams Lake	1973-93	21	10	1	2	2

*Breeding Bird Surveys*

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>Brewer's Sparrow</b>						
<b>Interior</b>						
Columbia Lake	1973-83	7	14	1	–	1*
Fraser Lake	1968-78	5	20	1	–	1*
Golden	1973-94	22	5	1	–	1*
Pavilion	1974-94	6	33	1	1	1*
Summerland	1973-94	21	5	1	–	1

**Vesper Sparrow**

<b>Interior</b>						
Alexis Creek	1973-86	14	43	1	7	17
Beaverdell	1970-94	24	33	1	1	1
Bridge Lake	1974-94	20	5	1	–	1
Bromley	1973-94	5	100	2	6	12
Brookmere	1973-92	10	90	8	10	19
Canford	1974-93	10	90	7	11	16
Canoe Point	1993-94	2	100	2	8	13
Chu Chua	1993-94	2	50	3	–	3
Columbia Lake	1973-83	7	43	3	7	28
Creighton Valley	1979-94	16	50	1	2	3
Creston	1984	1	100	6	–	6
Fort St. John	1974-90	9	100	7	12	23
Gnat Pass	1975-93	2	50	14	–	14
Golden	1973-94	22	50	1	2	12
Grand Forks	1973-94	22	59	1	1	5
Horsefly	1974-88	11	9	1	–	1
Hudson's Hope	1976	1	100	15	–	15
Kamloops	1974-94	15	100	2	20	38
Kootenay	1981-94	10	50	1	1	3
Kuskonook	1968-91	21	10	1	1	1
Lac la Hache	1973-86	11	18	1	1	1
Lavington	1972-94	24	100	1	6	26
Mabel Lake	1973-94	19	100	1	4	11
Meadowlake	1968-70	2	50	17	–	17
Needles	1968-94	26	19	1	1	2
Oliver	1973-94	18	100	2	22	34
Osprey Lake	1976-94	10	50	11	15	19
Pavilion	1974-94	6	100	1	3	5
Pleasant Valley	1980-93	6	100	39	50	59
Prince George	1973-94	20	25	1	1	2
Princeton	1968-94	8	63	3	7	11
Punchaw	1974-94	9	44	2	2	3
Riske Creek	1973-92	11	91	5	12	52
Salmon Arm	1968-94	19	84	1	5	13
Spillimacheen	1976-93	17	100	5	14	22
Summerland	1973-94	21	100	25	42	55
Syringa Creek	1986-93	7	14	1	–	1
Tatlayoko Lake	1989-94	6	83	1	2	2
Telkwa High Road	1974-94	11	27	1	5	13
Tokay	1968-75	4	50	17	22	27
Tupper	1974-94	6	83	3	5	10
Wasa	1973-94	19	100	3	11	18
Williams Lake	1973-93	21	81	1	4	9

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>Lark Sparrow</b>						
<b>Interior</b>						
Columbia Lake	1973-83	7	14	1	–	1
Grand Forks	1973-94	22	5	3	–	3
Lavington	1972-94	24	4	1	–	1
Mabel Lake	1973-94	19	5	1	–	1
McLeod Lake	1968-94	9	11	1	–	1
Oliver	1973-94	18	83	1	3	8
Pavilion	1974-94	6	17	1	–	1
Summerland	1973-94	21	38	1	1	2
Tokay	1968-75	4	25	1	–	1

**Savannah Sparrow**

<b>Coastal</b>						
Alberni	1968-79	6	17	2	–	2
Albion	1968-92	21	100	2	12	48
Chemainus	1969-88	4	75	1	1	6
Chilliwack	1973-94	11	91	1	4	29
Comox Lake	1973-75	3	100	1	1	4
Coquitlam	1990-94	5	100	11	13	17
Courtenay	1992-93	2	50	2	–	2
Kispiox	1975-94	3	33	2	–	2
Kitsumkalum	1974-94	19	5	2	–	2
Kwinitza	1968-94	26	8	1	2	2
Nanaimo River	1973-94	22	95	1	4	10
Pemberton	1974-94	18	100	1	4	9
Pitt Meadows	1973-89	14	100	7	16	25
Port Renfrew	1973-94	17	6	1	–	1
Seabird	1969-94	16	100	3	12	31
Squamish	1973-94	9	67	1	2	2
Victoria	1973-94	17	94	1	5	16
<b>Interior</b>						
Alexis Creek	1973-86	14	86	1	6	24
Atlin Road	1989	1	100	2	–	2
Beaverdell	1970-94	24	13	1	1	1
Bridge Lake	1974-94	20	95	1	4	10
Bromley	1973-94	5	80	4	5	7
Brookmere	1973-92	10	90	2	4	9
Canford	1974-93	10	80	1	1	2
Canoe Point	1993-94	2	100	11	12	12
Chilkat Pass	1975-76	2	50	32	–	32
Chu Chua	1993-94	2	50	1	–	1
Columbia Lake	1973-83	7	86	1	2	9
Creighton Valley	1979-94	16	100	3	6	12
Creston	1984	1	100	23	–	23
Ferndale	1968-94	15	73	1	2	4
Fort Nelson	1974-80	5	60	1	1	2
Fort St. John	1974-90	9	100	21	44	55
Fraser Lake	1968-78	5	80	3	7	13
Gnat Pass	1975-93	2	50	3	–	3
Golden	1973-94	22	91	1	8	13
Gosnell	1969-74	4	25	2	–	2
Grand Forks	1973-94	22	82	1	2	7
Haines Summit	1993-94	2	100	69	71	73
Horsefly	1974-88	11	18	2	4	6
Hudson's Hope	1976	1	100	10	–	10
Illecilewaet	1973-83	4	25	1	–	1
Kamloops	1974-94	15	100	2	11	16
Kootenay	1981-94	10	30	2	2	2
Kuskonook	1968-91	21	10	1	1	1
Lac la Hache	1973-86	11	82	2	11	16

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ SAVANNAH SPARROW						
Lavington	1972-94	24	100	4	14	23
Mabel Lake	1973-94	19	100	3	8	16
McLeod Lake	1968-94	9	22	1	1	1
Meadowlake	1968-70	2	50	2	–	2
Needles	1968-94	26	100	2	8	16
Nicola	1973-74	2	50	1	–	1
Oliver	1973-94	18	6	3	–	3
Osprey Lake	1976-94	10	80	1	4	9
Pennington	1987-91	4	75	1	1	2
Pleasant Valley	1980-93	6	100	17	23	28
Prince George	1973-94	20	100	14	32	61
Princeton	1968-94	8	25	1	2	3
Punchaw	1974-94	9	44	1	2	3
Riske Creek	1973-92	11	100	5	16	44
Salmo	1969-75	3	33	5	–	5
Salmon Arm	1968-94	19	89	3	12	17
Scotch Creek	1989-94	6	33	1	1	1
Spillimacheen	1976-93	17	100	3	6	11
Steamboat	1974-80	4	25	1	–	1
Succour Creek	1993-94	2	50	3	–	3
Summerland	1973-94	21	14	1	1	2
Summit Lake	1972-94	8	88	6	17	22
Syringa Creek	1986-93	7	29	1	4	6
Tatlayoko Lake	1989-94	6	100	3	4	9
Telkwa High Road	1974-94	11	91	7	15	24
Tokay	1968-75	4	50	4	24	43
Tupper	1974-94	6	100	19	29	49
Wasa	1973-94	19	58	1	2	6
Williams Lake	1973-93	21	81	1	3	8
Wingdam	1968-70	3	67	3	4	4
Zincton	1968-94	22	9	1	1	1

### Grasshopper Sparrow

Interior						
Adams Lake	1989-94	6	17	1	–	1*
Christian Valley	1993-94	2	50	1	–	1
Osprey Lake	1976-94	10	20	1	2	3
Salmon Arm	1968-94	19	5	1	–	1*

### Le Conte's Sparrow

Interior						
Fort St. John	1974-90	9	33	1	2	2
Needles	1968-94	26	8	1	2	2
Tupper	1974-94	6	33	2	4	5
Zincton	1968-94	22	5	1	–	1

### Fox Sparrow

Coastal						
Campbell River	1973-93	19	11	1	1	1
Chilliwack	1973-94	11	18	1	1	1
Kwinitsa	1968-94	26	35	1	1	2
Masset	1989-94	5	100	52	65	70
Meziadin	1975-77	2	100	1	6	11
Port Hardy	1982-89	4	25	14	–	14
Port Renfrew	1973-94	17	100	8	17	59
Queen Charlotte City	1989-94	3	100	42	46	49

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ FOX SPARROW</b>						
<b>Interior</b>						
Bridge Lake	1974-94	20	5	3	–	3
Chilkat Pass	1975-76	2	100	5	8	11
Creighton Valley	1979-94	16	6	1	–	1
Ferndale	1968-94	15	20	1	1	1
Fort Nelson	1974-80	5	60	2	2	5
Fort St. John	1974-90	9	78	1	1	1
Haines Summit	1993-94	2	100	1	14	27
Horsefly	1974-88	11	18	2	3	4
Illecilewaet	1973-83	4	75	8	17	18
Kootenay	1981-94	10	10	1	–	1
McLeod Lake	1968-94	9	89	1	4	8
Pennington	1987-91	4	25	2	–	2
Prince George	1973-94	20	5	1	–	1
Punchaw	1974-94	9	11	1	–	1
Scotch Creek	1989-94	6	50	1	1	1
Succour Creek	1993-94	2	100	2	2	2
Summerland	1973-94	21	5	1	–	1
Summit Lake	1972-94	8	63	1	2	2
Syringa Creek	1986-93	7	14	1	–	1
Telkwa High Road	1974-94	11	9	1	–	1
Tupper	1974-94	6	67	2	3	5
Wingdam	1968-70	3	67	3	5	6

**Song Sparrow**

<b>Coastal</b>						
Alberni	1968-79	6	100	13	16	36
Albion	1968-92	21	100	20	33	50
Campbell River	1973-93	19	100	7	19	37
Chemainus	1969-88	4	100	16	23	38
Chilliwack	1973-94	11	100	13	21	29
Comox Lake	1973-75	3	100	7	11	14
Coquitlam	1990-94	5	100	33	40	47
Courtenay	1992-93	2	100	5	7	8
Elsie Lake	1970-94	6	100	3	15	25
Gibsons Landing	1973-94	10	90	1	5	31
Kispiox	1975-94	3	67	4	5	5
Kitsumkalum	1974-94	19	100	1	6	13
Kwinitsa	1968-94	26	88	1	6	17
Masset	1989-94	5	100	18	37	54
Meziadin	1975-77	2	100	2	3	4
Nanaimo River	1973-94	22	100	11	20	33
Nass River	1975	1	100	1	–	1
Pemberton	1974-94	18	100	1	13	24
Pitt Meadows	1973-89	14	100	29	49	66
Point Grey	1974-92	11	100	5	11	21
Port Hardy	1982-89	4	100	12	17	26
Port Renfrew	1973-94	17	100	10	19	37
Queen Charlotte City	1989-94	3	100	11	16	20
Saltery Bay	1974-76	3	100	6	7	8
Seabird	1969-94	16	100	5	15	24
Squamish	1973-94	9	100	7	16	34
Victoria	1973-94	17	100	2	14	38
<b>Interior</b>						
Adams Lake	1989-94	6	100	2	4	7
Alexis Creek	1973-86	14	100	3	7	23
Ashnola	1973-74	2	50	2	–	2
Beaverdell	1970-94	24	100	5	10	26
Bridge Lake	1974-94	20	95	1	4	11
Bromley	1973-94	5	100	1	11	13
Brookmere	1973-92	10	100	5	18	26
Canford	1974-93	10	100	7	10	20
Canoe Point	1993-94	2	100	2	5	7

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>SONG SPARROW</i>						
Christian Valley	1993-94	2	100	3	5	7
Chu Chua	1993-94	2	100	2	3	4
Columbia Lake	1973-83	7	86	21	27	40
Creighton Valley	1979-94	16	100	1	5	11
Creston	1984	1	100	9	–	9
Ferndale	1968-94	15	100	3	7	15
Fraser Lake	1968-78	5	80	3	6	6
Gerrard	1976-85	10	100	4	6	8
Gnat Pass	1975-93	2	50	5	–	5
Golden	1973-94	22	100	6	18	27
Goldstream Mountain	1993-94	2	100	1	2	2
Gosnell	1969-74	4	100	5	8	8
Grand Forks	1973-94	22	100	6	12	27
Haines Summit	1993-94	2	50	5	–	5
Hendrix Lake	1976	1	100	1	–	1
Horsefly	1974-88	11	100	1	5	13
Illecillewaet	1973-83	4	75	2	3	6
Kamloops	1974-94	15	80	1	3	9
Kootenay	1981-94	10	20	1	1	1
Kuskonook	1968-91	21	76	1	3	7
Lac la Hache	1973-86	11	100	7	11	19
Lavington	1972-94	24	96	1	2	5
Mabel Lake	1973-94	19	100	7	15	22
McLeod Lake	1968-94	9	100	2	14	22
Meadowlake	1968-70	2	100	1	1	1
Mount Morice	1968-75	5	100	3	4	16
Needles	1968-94	26	100	1	5	13
Nicola	1973-74	2	100	11	15	19
Oliver	1973-94	18	67	1	1	5
Osprey Lake	1976-94	10	100	2	15	23
Pavilion	1974-94	6	100	2	15	24
Pennington	1987-91	4	25	1	–	1
Pinkut Creek	1975	1	100	1	–	1
Pleasant Valley	1980-93	6	100	3	5	10
Prince George	1973-94	20	100	2	8	20
Princeton	1968-94	8	88	1	4	8
Punchaw	1974-94	9	89	1	7	17
Riske Creek	1973-92	11	100	3	7	23
Salmo	1969-75	3	100	5	7	11
Salmon Arm	1968-94	19	100	1	3	11
Scotch Creek	1989-94	6	100	7	11	17
Shalalth	1968-94	4	25	2	–	2
Spillimacheen	1976-93	17	100	2	5	7
Succour Creek	1993-94	2	100	17	18	19
Summerland	1973-94	21	95	1	5	7
Summit Lake	1972-94	8	88	8	15	23
Syringa Creek	1986-93	7	100	7	10	18
Tatlayoko Lake	1989-94	6	17	2	–	2
Telkwa High Road	1974-94	11	100	2	7	13
Tokay	1968-75	4	75	4	21	75
Tupper	1974-94	6	50	2	3	10
Wasa	1973-94	19	89	1	2	8
Williams Lake	1973-93	21	100	2	5	12
Wingdam	1968-70	3	100	2	4	9
Zincton	1968-94	22	95	2	6	27

## Lincoln's Sparrow

<b>Coastal</b>						
Kispiox	1975-94	3	100	2	10	11
Kitsumkalum	1974-94	19	11	1	1	1
Masset	1989-94	5	80	4	6	7
Meziadin	1975-77	2	50	2	–	2
Nass River	1975	1	100	4	–	4
Seabird	1969-94	16	6	1	–	1

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ LINCOLN'S SPARROW</b>						
<b>Interior</b>						
Adams Lake	1989-94	6	33	1	1	1
Alexis Creek	1973-86	14	21	2	3	11
Bridge Lake	1974-94	20	65	1	2	9
Brookmere	1973-92	10	50	1	1	5
Canford	1974-93	10	10	2	–	2
Canoe Point	1993-94	2	50	1	–	1
Chilkat Pass	1975-76	2	50	3	–	3
Christian Valley	1993-94	2	50	3	–	3
Creighton Valley	1979-94	16	50	1	2	2
Ferndale	1968-94	15	93	3	14	30
Fort Nelson	1974-80	5	100	23	26	38
Fort St. John	1974-90	9	100	20	33	39
Fraser Lake	1968-78	5	20	4	–	4
Gerrard	1976-85	10	20	1	2	2
Gnat Pass	1975-93	2	100	5	9	12
Golden	1973-94	22	68	2	7	14
Goldstream Mountain	1993-94	2	100	3	4	4
Gosnell	1969-74	4	100	4	11	15
Haines Summit	1993-94	2	100	2	4	6
Hendrix Lake	1976	1	100	3	–	3
Horsefly	1974-88	11	9	4	–	4
Hudson's Hope	1976	1	100	29	–	29
Illecilewaet	1973-83	4	50	1	2	2
Kinaskan Lake	1975	1	100	7	–	7
Kootenay	1981-94	10	30	1	2	2
Lac la Hache	1973-86	11	27	1	1	5
Lavington	1972-94	24	8	1	1	1
Mabel Lake	1973-94	19	16	1	1	1
McLeod Lake	1968-94	9	78	5	23	42
Mount Morice	1968-75	5	20	3	–	3
Needles	1968-94	26	46	1	1	3
Oliver	1973-94	18	28	1	1	1
Osprey Lake	1976-94	10	20	1	1	1
Pavilion	1974-94	6	17	1	–	1
Pennington	1987-91	4	50	3	3	3
Pinkut Creek	1975	1	100	3	–	3
Prince George	1973-94	20	45	1	9	23
Punchaw	1974-94	9	56	1	8	12
Riske Creek	1973-92	11	91	1	7	19
Salmon Arm	1968-94	19	16	1	2	2
Scotch Creek	1989-94	6	100	3	12	14
Spillimacheen	1976-93	17	65	1	2	5
Steamboat	1974-80	4	100	15	19	25
Succour Creek	1993-94	2	100	6	7	8
Summerland	1973-94	21	5	1	–	1
Summit Lake	1972-94	8	88	2	28	52
Syringa Creek	1986-93	7	29	1	1	1
Telkwa High Road	1974-94	11	82	8	17	41
Tetsa River	1974	1	200	2	2	2
Tupper	1974-94	6	100	18	38	77
Wasa	1973-94	19	11	1	2	3
Williams Lake	1973-93	21	86	1	2	6
Wingdam	1968-70	3	67	7	8	8
Zincton	1968-94	22	5	1	–	1

**Swamp Sparrow**

<b>Interior</b>						
Columbia Lake	1973-83	7	14	2	–	2*
Ferndale	1968-94	15	7	1	–	1
Fort Nelson	1974-80	5	60	1	2	4
Fort St. John	1974-90	9	22	1	1	1
Hudson's Hope	1976	1	100	1	–	1
McLeod Lake	1968-94	9	11	1	–	1
Punchaw	1974-94	9	44	1	2	2
Tupper	1974-94	6	17	3	–	3



## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>White-throated Sparrow</b>						
<b>Coastal</b>						
Pemberton	1974-94	18	6	6	–	6*
<b>Interior</b>						
Ferndale	1968-94	15	93	1	5	19
Fort Nelson	1974-80	5	100	19	23	35
Fort St. John	1974-90	9	100	8	13	23
Fraser Lake	1968-78	5	20	2	–	2
Hudson's Hope	1976	1	100	19	–	19
McLeod Lake	1968-94	9	89	1	3	15
Meadowlake	1968-70	2	50	14	–	14*
Prince George	1973-94	20	100	2	4	13
Punchaw	1974-94	9	11	1	–	1
Steamboat	1974-80	4	100	11	15	20
Summit Lake	1972-94	8	100	6	26	43
Telkwa High Road	1974-94	11	9	5	–	5
Tupper	1974-94	6	100	24	35	39

## White-crowned Sparrow

<b>Coastal</b>						
Alberni	1968-79	6	83	1	5	15
Albion	1968-92	21	100	3	9	17
Campbell River	1973-93	19	95	2	5	18
Chemainus	1969-88	4	100	12	18	27
Chilliwack	1973-94	11	100	2	5	11
Cornox Lake	1973-75	3	67	1	3	4
Coquitlam	1990-94	5	100	9	16	20
Elsie Lake	1970-94	6	67	1	2	12
Gibsons Landing	1973-94	10	100	1	10	17
Kispiox	1975-94	3	67	2	3	3
Nanaimo River	1973-94	22	100	6	12	18
Pemberton	1974-94	18	89	2	8	23
Pitt Meadows	1973-89	14	100	2	9	21
Point Grey	1974-92	11	100	5	13	18
Port Hardy	1982-89	4	75	5	6	6
Port Renfrew	1973-94	17	88	1	3	16
Saltery Bay	1974-76	3	100	3	7	8
Seabird	1969-94	16	100	3	9	17
Squamish	1973-94	9	100	1	18	23
Victoria	1973-94	17	94	1	6	19
<b>Interior</b>						
Alexis Creek	1973-86	14	71	1	3	7
Bridge Lake	1974-94	20	10	1	1	1
Bromley	1973-94	5	20	1	–	1
Brookmere	1973-92	10	50	1	1	2
Canford	1974-93	10	10	7	–	7
Chilkat Pass	1975-76	2	50	4	–	4
Creighton Valley	1979-94	16	19	1	2	2
Ferndale	1968-94	15	73	1	1	4
Fraser Lake	1968-78	5	40	1	1	1
Gnat Pass	1975-93	2	50	13	–	13
Golden	1973-94	22	73	1	1	6
Haines Summit	1993-94	2	100	72	83	93
Horsefly	1974-88	11	18	1	1	1
Kootenay	1981-94	10	30	2	3	4
Kuskonook	1968-91	21	5	1	–	1
Lac la Hache	1973-86	11	9	1	–	1
Mabel Lake	1973-94	19	5	1	–	1
McLeod Lake	1968-94	9	22	1	2	3
Meadowlake	1968-70	2	100	1	2	2
Needles	1968-94	26	27	1	1	2

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ WHITE-CROWNED SPARROW</b>						
Nicola	1973-74	2	100	2	7	12
Oliver	1973-94	18	6	1	–	1
Osprey Lake	1976-94	10	20	1	4	6
Pennington	1987-91	4	100	5	6	13
Prince George	1973-94	20	85	1	3	7
Princeton	1968-94	8	38	1	1	2
Punchaw	1974-94	9	11	1	–	1
Riske Creek	1973-92	11	64	1	1	2
Salmon Arm	1968-94	19	5	1	–	1
Scotch Creek	1989-94	6	100	2	4	9
Succour Creek	1993-94	8	100	6	9	12
Summit Lake	1972-94	2	50	1	2	5
Tatlayoko Lake	1989-94	6	100	1	4	8
Telkwa High Road	1974-94	11	73	1	3	9
Tokay	1968-75	4	25	1	–	1
Wasa	1973-94	19	5	1	–	1
Williams Lake	1973-93	21	24	1	1	2
Wingdam	1968-70	3	67	1	1	1

### Golden-crowned Sparrow

<b>Coastal</b>						
Pemberton	1974-94	18	17	1	2	2
Seabird	1969-94	16	6	2	–	2
<b>Interior</b>						
Atlin Road	1989	1	100	1	–	1
Chilkat Pass	1975-76	2	100	6	19	31
Ferndale	1968-94	15	7	1	–	1
Fraser Lake	1968-78	5	20	1	–	1
Gnat Pass	1975-93	2	50	1	–	1
Haines Summit	1993-94	2	100	32	32	32
Illecilewaet	1973-83	4	25	1	–	1
Summit Lake	1972-94	8	13	2	–	2

### Dark-eyed Junco

<b>Coastal</b>						
Alberni	1968-79	6	83	1	6	16
Albion	1968-92	21	19	1	1	2
Campbell River	1973-93	19	100	4	12	33
Chemainus	1969-88	4	100	14	20	41
Chilliwack	1973-94	11	100	6	9	27
Comox Lake	1973-75	3	100	1	5	14
Coquitlam	1990-94	5	20	2	–	2
Courtenay	1992-93	2	50	4	–	4
Elsie Lake	1970-94	6	100	3	6	24
Gibsons Landing	1973-94	10	10	3	–	3
Kispiox	1975-94	3	100	35	38	68
Kitsumkalum	1974-94	19	100	21	41	80
Kwinitsa	1968-94	26	100	6	15	29
Masset	1989-94	5	100	5	8	17
Meziadin	1975-77	2	100	5	7	9
Nanaimo River	1973-94	22	100	3	9	23
Nass River	1975	1	100	2	–	2
Pemberton	1974-94	18	100	3	23	33
Pitt Meadows	1973-89	14	36	1	2	9
Point Grey	1974-92	11	18	1	1	1
Port Hardy	1982-89	4	100	16	25	33
Port Renfrew	1973-94	17	82	1	4	10
Queen Charlotte City	1989-94	3	100	10	24	33
Saltery Bay	1974-76	3	100	2	3	6

*Breeding Bird Surveys*

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>DARK-EYED JUNCO</i>						
Seabird	1969-94	16	100	1	7	32
Squamish	1973-94	9	100	1	5	15
Victoria	1973-94	17	41	1	2	4
<b>Interior</b>						
Adams Lake	1989-94	6	100	20	30	53
Alexis Creek	1973-86	14	93	1	6	18
Ashnola	1973-74	2	100	1	1	1
Atlin Road	1989	1	100	13	–	13
Beaverdell	1970-94	24	100	6	17	31
Bridge Lake	1974-94	20	100	4	24	44
Bromley	1973-94	5	100	1	12	22
Brookmere	1973-92	10	100	5	16	28
Canford	1974-93	10	100	4	6	12
Canoe Point	1993-94	2	100	26	31	36
Cassiar	1972-75	2	100	15	21	26
Chilkat Pass	1975-76	2	100	1	2	3
Christian Valley	1993-94	2	100	72	80	88
Chu Chua	1993-94	2	100	18	32	45
Columbia Lake	1973-83	7	100	2	6	9
Creighton Valley	1979-94	16	100	10	26	42
Creston	1984	1	100	24	–	24
Ferndale	1968-94	15	100	6	25	44
Fort Nelson	1974-80	5	100	2	5	23
Fort St. John	1974-90	9	100	1	1	4
Fraser Lake	1968-78	5	120	1	10	14
Gerrard	1976-85	10	100	2	12	24
Gnat Pass	1975-93	2	100	17	22	26
Golden	1973-94	22	105	1	6	22
Goldstream Mountain	1993-94	2	100	39	43	47
Gosnell	1969-74	4	100	6	7	15
Grand Forks	1973-94	22	95	2	8	23
Haines Summit	1993-94	2	100	4	13	21
Hendrix Lake	1976	1	100	38	–	38
Horsefly	1974-88	11	100	6	17	26
Hudson's Hope	1976	1	100	17	–	17
Illecilewaet	1973-83	4	75	6	15	15
Kamloops	1974-94	15	93	5	9	15
Kinaskan Lake	1975	1	100	14	–	14
Kootenay	1981-94	10	100	17	24	53
Kuskonook	1968-91	21	100	1	29	63
Lac la Hache	1973-86	11	100	4	11	49
Lavington	1972-94	24	100	2	6	13
Mabel Lake	1973-94	19	105	2	13	22
McLeod Lake	1968-94	9	100	7	13	29
Meadowlake	1968-70	2	100	5	9	12
Mount Morice	1968-75	5	120	2	19	23
Needles	1968-94	26	100	3	25	48
Nicola	1973-74	2	100	29	29	29
Oliver	1973-94	18	100	4	19	56
Osprey Lake	1976-94	10	100	5	23	36
Pavilion	1974-94	6	50	1	2	9
Pennington	1987-91	4	100	31	42	63
Pinkut Creek	1975	1	100	23	–	23
Pleasant Valley	1980-93	6	100	5	7	14
Prince George	1973-94	20	100	12	23	39
Princeton	1968-94	8	100	5	34	45
Punchaw	1974-94	9	100	13	21	31
Riske Creek	1973-92	11	91	1	5	23
Salmo	1969-75	3	100	9	20	21
Salmon Arm	1968-94	19	100	4	10	17
Scotch Creek	1989-94	6	100	25	40	57
Shalalth	1968-94	4	75	1	1	8
Spillimacheen	1976-93	17	100	19	42	77
Steamboat	1974-80	4	100	9	18	40
Succour Creek	1993-94	2	100	30	41	52
Summerland	1973-94	21	100	5	14	27
Summit Lake	1972-94	8	100	8	36	47
Syringa Creek	1986-93	7	100	2	11	18

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ DARK-EYED JUNCO</b>						
Tatlayoko Lake	1989-94	6	117	2	14	25
Telkwa High Road	1974-94	11	100	4	35	69
Tetsa River	1974	1	200	31	31	31
Tokay	1968-75	4	75	1	17	23
Tupper	1974-94	6	100	3	8	23
Wasa	1973-94	19	100	14	30	53
Williams Lake	1973-93	21	95	1	11	27
Wingdam	1968-70	3	100	2	11	13
Zincton	1968-94	22	100	1	23	44

### Rose-breasted Grosbeak

<b>Interior</b>						
Fort Nelson	1974-80	5	20	7	–	7
Fort St. John	1974-90	9	67	1	2	4
Hudson's Hope	1976	1	100	2	–	2
Steamboat	1974-80	4	50	1	2	3
Tupper	1974-94	6	83	2	3	16

### Black-headed Grosbeak

<b>Coastal</b>						
Alberni	1968-79	6	33	1	2	2
Albion	1968-92	21	95	1	9	17
Campbell River	1973-93	19	42	1	1	3
Chemainus	1969-88	4	50	1	2	2
Chilliwack	1973-94	11	100	7	13	23
Coquitlam	1990-94	5	100	10	14	21
Courtenay	1992-93	2	100	1	2	2
Gibsons Landing	1973-94	10	30	1	1	3
Kitsumkalum	1974-94	19	11	2	3	3
Nanaimo River	1973-94	22	64	1	2	3
Pemberton	1974-94	18	94	2	4	14
Pitt Meadows	1973-89	14	100	7	14	21
Point Grey	1974-92	11	91	1	3	4
Port Renfrew	1973-94	17	12	2	3	4
Saltery Bay	1974-76	3	33	1	–	1
Seabird	1969-94	16	100	2	12	27
Squamish	1973-94	9	100	1	2	5
Victoria	1973-94	17	12	1	2	2
<b>Interior</b>						
Adams Lake	1989-94	6	17	2	–	2
Beaverdell	1970-94	24	21	1	1	2
Brookmere	1973-92	10	20	1	2	2
Christian Valley	1993-94	2	50	2	–	2
Chu Chua	1993-94	2	100	1	1	1
Columbia Lake	1973-83	7	14	2	–	2
Creighton Valley	1979-94	16	13	1	1	1
Creston	1984	1	100	3	–	3
Gnat Pass	1975-93	2	50	2	–	2
Golden	1973-94	22	23	1	1	2
Gosnell	1969-74	4	25	1	–	1
Grand Forks	1973-94	22	9	1	2	2
Kuskonook	1968-91	21	24	1	1	2
Lavington	1972-94	24	21	1	1	1
Mabel Lake	1973-94	19	32	1	1	6
Needles	1968-94	26	42	1	1	1
Oliver	1973-94	18	28	1	1	3
Princeton	1968-94	8	13	2	–	2
Salmo	1969-75	3	33	3	–	3
Salmon Arm	1968-94	19	11	1	1	1

*Breeding Bird Surveys*

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>BLACK-HEADED GROSBEAK</i>						
Shalalth	1968-94	4	25	1	–	1
Spillimacheen	1976-93	17	18	1	1	2
Summerland	1973-94	21	24	1	2	3
Syringa Creek	1986-93	7	100	1	2	7
Tokay	1968-75	4	25	2	–	2
Wasa	1973-94	19	21	1	1	2

## Lazuli Bunting

<b>Coastal</b>						
Albion	1968-92	21	5	3	–	3
Chilliwack	1973-94	11	45	1	1	3
Pemberton	1974-94	18	61	1	2	5
Seabird	1969-94	16	44	1	8	11
<b>Interior</b>						
Ashnola	1973-74	2	50	2	–	2
Beaverdell	1970-94	24	67	1	3	9
Bridge Lake	1974-94	20	5	1	–	1
Bromley	1973-94	5	80	2	6	9
Brookmere	1973-92	10	50	1	1	4
Canford	1974-93	10	90	4	7	9
Canoe Point	1993-94	2	100	14	20	25
Chu Chua	1993-94	2	100	12	14	15
Columbia Lake	1973-83	7	86	1	4	9
Creighton Valley	1979-94	16	25	1	1	1
Creston	1984	1	100	1	–	1
Gerrard	1976-85	10	10	2	–	2
Gnat Pass	1975-93	2	50	5	–	5*
Golden	1973-94	22	45	1	3	10
Goldstream Mountain	1993-94	2	50	1	–	1
Gosnell	1969-74	4	100	1	1	2
Grand Forks	1973-94	22	77	1	4	8
Illecilewaet	1973-83	4	25	1	–	1
Kamloops	1974-94	15	87	1	2	4
Kuskonook	1968-91	21	5	1	–	1
Lavington	1972-94	24	100	2	7	14
Mabel Lake	1973-94	19	100	3	7	21
McLeod Lake	1968-94	9	11	1	–	1
Needles	1968-94	26	100	1	8	19
Nicola	1973-74	2	50	6	–	6
Oliver	1973-94	18	83	1	4	8
Osprey Lake	1976-94	10	50	1	2	10
Pavilion	1974-94	6	83	1	4	8
Pleasant Valley	1980-93	6	67	1	2	2
Princeton	1968-94	8	13	2	–	2
Riske Creek	1973-92	11	18	1	1	1
Salmon Arm	1968-94	19	84	1	5	21
Scotch Creek	1989-94	6	17	12	–	12
Spillimacheen	1976-93	17	53	1	2	7
Summerland	1973-94	21	86	1	6	14
Syringa Creek	1986-93	7	86	2	8	11
Telkwa High Road	1974-94	11	9	1	–	1
Tokay	1968-75	4	75	5	7	8
Wasa	1973-94	19	16	1	2	2
Williams Lake	1973-93	21	100	1	6	14
Zincton	1968-94	22	95	1	2	6

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Low	Range of total surveys when species occurred Median	High
<b>Bobolink</b>						
<b>Interior</b>						
Beaverdell	1970-94	24	17	1	1	2
Canford	1974-93	10	30	1	1	1
Columbia Lake	1973-83	7	57	1	2	2
Creighton Valley	1979-94	16	38	1	2	2
Golden	1973-94	22	32	1	1	4
Grand Forks	1973-94	22	82	1	9	30
Lavington	1972-94	24	42	1	1	1
Mabel Lake	1973-94	19	84	1	2	13
Needles	1968-94	26	85	1	3	6
Osprey Lake	1976-94	10	10	3	—	3
Pleasant Valley	1980-93	6	50	3	3	4
Salmon Arm	1968-94	19	11	1	1	1
Spillimacheen	1976-93	17	71	1	3	7
Summerland	1973-94	21	5	1	—	1
Syringa Creek	1986-93	7	14	1	—	1
Wasa	1973-94	19	37	1	1	2
Zincton	1968-94	22	9	1	1	1

**Red-winged Blackbird**

<b>Coastal</b>						
Alberni	1968-79	6	50	2	2	2
Albion	1968-92	21	100	6	15	45
Campbell River	1973-93	19	11	1	1	1
Chemainus	1969-88	4	100	1	2	12
Chilliwack	1973-94	11	100	15	44	55
Coquitlam	1990-94	5	100	15	21	23
Elsie Lake	1970-94	6	17	1	—	1
Gibsons Landing	1973-94	10	30	1	1	1
Kispiox	1975-94	3	100	1	5	8
Kitsumkalum	1974-94	19	16	1	3	5
Kwinitsa	1968-94	26	23	1	1	4
Nanaimo River	1973-94	22	91	1	5	29
Nass River	1975	1	100	1	—	1
Pemberton	1974-94	18	83	1	6	72
Pitt Meadows	1973-89	14	100	5	13	22
Point Grey	1974-92	11	91	2	3	27
Seabird	1969-94	16	100	8	20	58
Squamish	1973-94	9	100	2	6	15
Victoria	1973-94	17	100	1	5	67
<b>Interior</b>						
Alexis Creek	1973-86	14	57	1	3	5
Beaverdell	1970-94	24	71	1	2	7
Bridge Lake	1974-94	20	100	9	13	23
Bromley	1973-94	5	40	1	2	3
Brookmere	1973-92	10	90	1	6	28
Canford	1974-93	10	80	1	4	8
Canoe Point	1993-94	2	100	17	23	28
Christian Valley	1993-94	2	50	1	—	1
Chu Chua	1993-94	2	100	3	5	7
Columbia Lake	1973-83	7	71	2	5	6
Creighton Valley	1979-94	16	100	2	6	13
Creston	1984	1	100	11	—	11
Ferndale	1968-94	15	73	1	4	7
Fort Nelson	1974-80	5	100	1	4	5
Fort St. John	1974-90	9	100	11	29	46
Fraser Lake	1968-78	5	80	5	8	17
Gnat Pass	1975-93	2	50	5	—	5
Golden	1973-94	22	100	21	45	79
Grand Forks	1973-94	22	100	8	36	381



## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>RED-WINGED BLACKBIRD</i>						
Horsefly	1974-88	11	100	2	6	14
Hudson's Hope	1976	1	100	7	–	7
Illecilewaet	1973-83	4	50	2	3	4
Kamloops	1974-94	15	100	4	7	21
Kinaskan Lake	1975	1	100	1	–	1
Kuskonook	1968-91	21	5	2	–	2
Lac la Hache	1973-86	11	100	11	20	37
Lavington	1972-94	24	100	6	20	34
Mabel Lake	1973-94	19	100	4	12	45
McLeod Lake	1968-94	9	100	2	4	12
Meadowlake	1968-70	2	100	2	5	7
Mount Morice	1968-75	5	40	3	4	5
Needles	1968-94	26	62	1	2	5
Nicola	1973-74	2	100	30	44	58
Oliver	1973-94	18	50	1	2	4
Osprey Lake	1976-94	10	90	1	2	8
Pavilion	1974-94	6	83	1	7	9
Pleasant Valley	1980-93	6	100	12	18	33
Prince George	1973-94	20	100	6	18	24
Princeton	1968-94	8	25	3	7	10
Punchaw	1974-94	9	100	2	5	8
Riske Creek	1973-92	11	100	9	12	49
Salmo	1969-75	3	100	4	8	20
Salmon Arm	1968-94	19	100	3	23	223
Spillimacheen	1976-93	17	100	4	7	19
Succour Creek	1993-94	2	100	3	5	6
Summerland	1973-94	21	67	1	1	5
Summit Lake	1972-94	8	100	2	6	15
Syringa Creek	1986-93	7	71	1	2	8
Telkwa High Road	1974-94	11	100	1	5	14
Tokay	1968-75	4	100	2	3	5
Tupper	1974-94	6	100	16	24	49
Wasa	1973-94	19	100	2	9	111
Williams Lake	1973-93	21	100	6	12	40
Wingdam	1968-70	3	100	6	6	25
Zincton	1968-94	22	64	1	1	2

## Western Meadowlark

<b>Coastal</b>						
Chilliwack	1973-94	11	9	2	–	2
Nanaimo River	1973-94	22	32	2	3	8
Pemberton	1974-94	18	39	1	1	5
Seabird	1969-94	16	31	1	2	3
Victoria	1973-94	17	6	1	–	1
<b>Interior</b>						
Alexis Creek	1973-86	14	100	2	6	15
Ashnola	1973-74	2	100	6	7	8
Beaverdell	1970-94	24	96	1	3	10
Bromley	1973-94	5	80	2	3	4
Brookmere	1973-92	10	40	1	2	3
Canford	1974-93	10	100	3	6	15
Canoe Point	1993-94	2	50	1	–	1
Chu Chua	1993-94	2	100	20	23	26
Columbia Lake	1973-83	7	100	9	15	54
Creighton Valley	1979-94	16	94	1	3	9
Creston	1984	1	100	7	–	7
Fort Nelson	1974-80	5	20	1	–	1
Gnat Pass	1975-93	2	50	17	–	17*
Golden	1973-94	22	82	1	2	11
Grand Forks	1973-94	22	100	5	17	27
Horsefly	1974-88	11	82	1	2	6
Kamloops	1974-94	15	100	13	30	49
Lac la Hache	1973-86	11	100	2	10	15

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ WESTERN MEADOWLARK						
Lavington	1972-94	24	100	13	39	95
Mabel Lake	1973-94	19	100	3	7	20
Meadowlake	1968-70	2	100	5	6	7
Needles	1968-94	26	100	1	6	18
Nicola	1973-74	2	100	23	28	32
Oliver	1973-94	18	100	20	60	81
Osprey Lake	1976-94	10	100	4	6	7
Pavilion	1974-94	6	100	3	6	12
Pleasant Valley	1980-93	6	100	46	64	109
Prince George	1973-94	20	5	2	—	2
Princeton	1968-94	8	38	1	2	2
Riske Creek	1973-92	11	100	9	17	25
Salmo	1969-75	3	67	1	2	2
Salmon Arm	1968-94	19	89	1	5	19
Spillimacheen	1976-93	17	100	2	12	18
Summerland	1973-94	21	100	31	52	74
Summit Lake	1972-94	8	25	1	3	4
Syringa Creek	1986-93	7	71	2	2	3
Tatlayoko Lake	1989-94	6	100	1	3	5
Tokay	1968-75	4	75	1	3	11
Wasa	1973-94	19	100	8	20	31
Williams Lake	1973-93	21	100	5	14	20
Zincton	1968-94	22	9	1	2	2

### Yellow-headed Blackbird

<b>Coastal</b>						
Point Grey	1974-92	11	9	1	—	1
Seabird	1969-94	16	13	1	1	1
<b>Interior</b>						
Alexis Creek	1973-86	14	14	1	8	14
Bridge Lake	1974-94	20	30	1	1	2
Bromley	1973-94	5	20	3	—	3
Brookmere	1973-92	10	10	1	—	1
Chu Chua	1993-94	2	50	2	—	2
Creston	1984	1	100	1	—	1
Gnat Pass	1975-93	2	50	2	—	2
Golden	1973-94	22	95	3	11	23
Grand Forks	1973-94	22	95	1	16	60
Horsefly	1974-88	11	9	1	—	1
Kamloops	1974-94	15	80	1	7	31
Kuskonook	1968-91	21	5	6	—	6
Lac la Hache	1973-86	11	55	1	3	34
Lavington	1972-94	24	4	1	—	1
Mabel Lake	1973-94	19	89	2	14	103
Meadowlake	1968-70	2	100	1	2	2
Nicola	1973-74	2	100	4	11	18
Pavilion	1974-94	6	17	3	—	3
Pleasant Valley	1980-93	6	83	1	2	12
Riske Creek	1973-92	11	64	1	2	5
Salmon Arm	1968-94	19	89	1	4	101
Spillimacheen	1976-93	17	100	2	6	26
Tokay	1968-75	4	25	1	—	1
Wasa	1973-94	19	79	1	7	20
Williams Lake	1973-93	21	90	1	4	8

### Rusty Blackbird

<b>Coastal</b>						
Kispiox	1975-94	3	33	1	—	1
Kitsumkalum	1974-94	19	11	1	1	1
Kwinitsa	1968-94	26	4	1	—	1



## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>RUSTY BLACKBIRD</i>						
<b>Interior</b>						
Alexis Creek	1973-86	14	14	2	2	2
Atlin Road	1989	1	100	2	–	2
Brookmere	1973-92	10	30	2	4	5
Cassiar	1972-75	2	50	1	–	1
Ferndale	1968-94	15	27	1	2	3
Fort Nelson	1974-80	5	60	1	2	3
Gnat Pass	1975-93	2	50	1	–	1
Golden	1973-94	22	14	1	7	7
Haines Summit	1993-94	2	50	2	–	2
Lac la Hache	1973-86	11	9	2	–	2
McLeod Lake	1968-94	9	33	2	4	5
Mount Morice	1968-75	5	20	1	–	1
Pinkut Creek	1975	1	100	3	–	3
Prince George	1973-94	20	10	2	13	24
Punchaw	1974-94	9	22	1	2	2
Steamboat	1974-80	4	25	1	–	1
Tokay	1968-75	4	25	2	–	2
Wingdam	1968-70	3	67	4	5	5

## Brewer's Blackbird

<b>Coastal</b>						
Alberni	1968-79	6	50	1	8	9
Albion	1968-92	21	95	6	25	64
Campbell River	1973-93	19	32	1	1	1
Chemainus	1969-88	4	75	3	5	15
Chilliwack	1973-94	11	91	6	15	73
Comox Lake	1973-75	3	33	2	–	2
Coquitlam	1990-94	5	80	3	10	44
Courtenay	1992-93	2	50	18	–	18
Gibsons Landing	1973-94	10	10	2	–	2
Kispiox	1975-94	3	33	4	–	4
Kitsumkalum	1974-94	19	37	1	2	4
Nanaimo River	1973-94	22	73	1	6	22
Pemberton	1974-94	18	100	1	12	63
Pitt Meadows	1973-89	14	93	1	5	17
Point Grey	1974-92	11	45	1	2	5
Saltery Bay	1974-76	3	33	8	–	8
Seabird	1969-94	16	94	2	17	92
Squamish	1973-94	9	56	1	1	2
Victoria	1973-94	17	94	1	25	69
<b>Interior</b>						
Alexis Creek	1973-86	14	93	2	8	25
Ashnola	1973-74	2	100	6	13	19
Beaverdell	1970-94	24	96	4	13	52
Bridge Lake	1974-94	20	90	1	4	20
Bromley	1973-94	5	100	5	14	23
Brookmere	1973-92	10	100	2	4	16
Canford	1974-93	10	100	3	10	25
Canoe Point	1993-94	2	100	56	57	58
Chu Chua	1993-94	2	100	10	15	19
Columbia Lake	1973-83	7	100	3	21	102
Creighton Valley	1979-94	16	94	3	7	25
Creston	1984	1	100	19	–	19
Ferndale	1968-94	15	40	1	2	5
Fort Nelson	1974-80	5	40	5	10	15
Fort St. John	1974-90	9	100	17	30	62
Fraser Lake	1968-78	5	40	2	4	5
Gnat Pass	1975-93	2	50	7	–	7
Golden	1973-94	22	91	1	12	47
Grand Forks	1973-94	22	95	9	37	95
Horsefly	1974-88	11	55	1	3	8
Hudson's Hope	1976	1	100	46	–	46

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ BREWER'S BLACKBIRD</b>						
Kamloops	1974-94	15	93	22	46	84
Kootenay	1981-94	10	10	4	–	4
Kuskonook	1968-91	21	14	1	3	5
Lac la Hache	1973-86	11	100	6	8	16
Lavinton	1972-94	24	96	12	44	99
Mabel Lake	1973-94	19	100	15	37	107
McLeod Lake	1968-94	9	11	3	–	3
Meadowlake	1968-70	2	100	2	5	8
Mount Morice	1968-75	5	20	1	–	1
Needles	1968-94	26	88	3	15	63
Nicola	1973-74	2	100	29	34	39
Oliver	1973-94	18	100	4	14	80
Osprey Lake	1976-94	10	90	1	3	36
Pavilion	1974-94	6	100	6	18	60
Pleasant Valley	1980-93	6	83	23	33	73
Prince George	1973-94	20	85	1	13	40
Princeton	1968-94	8	50	1	6	15
Punchaw	1974-94	9	22	1	2	2
Riske Creek	1973-92	11	100	8	18	39
Salmo	1969-75	3	67	22	26	30
Salmon Arm	1968-94	19	100	12	65	152
Spillimacheen	1976-93	17	76	1	3	11
Summerland	1973-94	21	90	1	11	36
Summit Lake	1972-94	8	13	16	–	16
Syringa Creek	1986-93	7	71	1	2	3
Tatlayoko Lake	1989-94	6	17	1	–	1
Telkwa High Road	1974-94	11	36	2	11	46
Tokay	1968-75	4	50	1	2	3
Tupper	1974-94	6	100	18	49	77
Wasa	1973-94	19	95	1	15	51
Williams Lake	1973-93	21	100	7	30	66
Wingdam	1968-70	3	33	7	–	7
Zincton	1968-94	22	32	1	2	11

### Common Grackle

<b>Interior</b>						
Fort St. John	1974-90	9	11	8	–	8
Tupper	1974-94	6	17	4	–	4

### Brown-headed Cowbird

<b>Coastal</b>						
Alberni	1968-79	6	100	2	4	5
Albion	1968-92	21	100	8	24	56
Campbell River	1973-93	19	74	1	3	10
Chemainus	1969-88	4	100	5	7	25
Chilliwack	1973-94	11	100	6	14	35
Comox Lake	1973-75	3	100	1	2	3
Coquitlam	1990-94	5	100	17	17	18
Courtenay	1992-93	2	50	2	–	2
Elsie Lake	1970-94	6	33	1	1	1
Gibsons Landing	1973-94	10	100	4	12	15
Kispiox	1975-94	3	100	1	2	3
Kitsumkalum	1974-94	19	5	1	–	1
Nanaimo River	1973-94	22	95	1	10	22
Pemberton	1974-94	18	78	1	3	12
Pitt Meadows	1973-89	14	100	5	19	30
Point Grey	1974-92	11	100	3	12	18
Port Renfrew	1973-94	17	12	1	1	1
Saltery Bay	1974-76	3	33	1	–	1
Seabird	1969-94	16	100	1	11	36

*Breeding Bird Surveys*

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>BROWN-HEADED COWBIRD</i>						
Squamish	1973-94	9	100	5	13	35
Victoria	1973-94	17	100	2	11	40
<b>Interior</b>						
Adams Lake	1989-94	6	67	1	3	6
Alexis Creek	1973-86	14	100	1	6	14
Beaverdell	1970-94	24	100	1	9	24
Bridge Lake	1974-94	20	100	1	6	16
Bromley	1973-94	5	80	7	17	30
Brookmere	1973-92	10	100	5	11	33
Canford	1974-93	10	100	3	8	23
Canoe Point	1993-94	2	100	20	27	34
Christian Valley	1993-94	2	100	8	9	10
Chu Chua	1993-94	2	100	6	9	12
Columbia Lake	1973-83	7	29	1	4	6
Creighton Valley	1979-94	16	100	2	7	12
Creston	1984	1	100	35	–	35
Ferndale	1968-94	15	53	1	3	14
Fort Nelson	1974-80	5	60	1	4	5
Fort St. John	1974-90	9	100	5	10	17
Fraser Lake	1968-78	5	60	3	8	17
Gerrard	1976-85	10	50	1	2	5
Gnat Pass	1975-93	2	50	3	–	3
Golden	1973-94	22	100	1	16	65
Grand Forks	1973-94	22	95	3	9	28
Haines Summit	1993-94	2	50	1	–	1
Horsefly	1974-88	11	91	2	10	32
Hudson's Hope	1976	1	100	15	–	15
Illecilewaet	1973-83	4	50	1	2	2
Kamloops	1974-94	15	100	7	12	22
Kootenay	1981-94	10	90	2	4	18
Kuskonook	1968-91	21	95	2	14	33
Lac la Hache	1973-86	11	73	2	5	19
Lavington	1972-94	24	100	4	23	96
Mabel Lake	1973-94	19	100	8	17	32
McLeod Lake	1968-94	9	78	1	3	4
Meadowlake	1968-70	2	100	3	10	17
Mount Morice	1968-75	5	20	5	–	5
Needles	1968-94	26	100	1	5	16
Nicola	1973-74	2	100	6	10	13
Oliver	1973-94	18	89	2	22	33
Osprey Lake	1976-94	10	90	1	16	22
Pavilion	1974-94	6	100	1	4	28
Pleasant Valley	1980-93	6	100	7	11	15
Prince George	1973-94	20	95	2	9	22
Princeton	1968-94	8	75	1	6	16
Punchaw	1974-94	9	56	1	1	8
Riske Creek	1973-92	11	82	2	6	20
Salmo	1969-75	3	100	15	25	35
Salmon Arm	1968-94	19	74	1	13	24
Spillimacheen	1976-93	17	100	1	11	21
Succour Creek	1993-94	2	100	4	5	6
Summerland	1973-94	21	100	4	10	30
Summit Lake	1972-94	8	100	2	10	21
Syringa Creek	1986-93	7	100	8	21	35
Tatlayoko Lake	1989-94	6	50	1	2	7
Telkwa High Road	1974-94	11	100	2	8	14
Tokay	1968-75	4	100	2	4	24
Tupper	1974-94	6	100	6	9	22
Wasa	1973-94	19	68	1	3	9
Williams Lake	1973-93	21	67	1	3	8
Zincton	1968-94	22	82	1	7	17

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Low	Range of total surveys when species occurred Median	High
--------------	--------------	---------------	-----------------------------	-----	--	------

### Baltimore Oriole

#### Interior

Fort St. John	1974-90	9	100	4	8	20
Hudson's Hope	1976	1	100	4	—	4
Tupper	1974-94	6	100	4	5	18

### Bullock's Oriole

#### Coastal

Albion	1968-92	21	67	1	2	9
Chilliwack	1973-94	11	64	1	8	15
Courtenay	1992-93	2	50	1	—	1
Pemberton	1974-94	18	17	1	1	3
Pitt Meadows	1973-89	14	7	1	—	1
Seabird	1969-94	16	56	1	2	4
Squamish	1973-94	9	11	1	—	1
Victoria	1973-94	17	12	1	2	2

#### Interior

Adams Lake	1989-94	6	17	1	—	1
Alexis Creek	1973-86	14	7	1	—	1
Ashnola	1973-74	2	50	1	—	1
Beaverdell	1970-94	24	25	1	1	2
Bromley	1973-94	5	80	2	5	8
Canford	1974-93	10	100	1	2	3
Canoe Point	1993-94	2	100	6	6	6
Chu Chua	1993-94	2	100	1	3	5
Columbia Lake	1973-83	7	14	1	—	1
Creighton Valley	1979-94	16	6	1	—	1
Creston	1984	1	100	3	—	3
Golden	1973-94	22	23	1	1	2
Grand Forks	1973-94	22	73	1	3	7
Kamloops	1974-94	15	100	1	5	6
Kuskonook	1968-91	21	10	1	1	1
Lavington	1972-94	24	100	2	9	19
Mabel Lake	1973-94	19	84	1	3	9
Needles	1968-94	26	4	2	—	2
Oliver	1973-94	18	94	1	7	13
Osprey Lake	1976-94	10	20	1	3	5
Pavilion	1974-94	6	83	1	3	3
Pleasant Valley	1980-93	6	100	2	3	7
Salmon Arm	1968-94	19	47	1	1	3
Spillimacheen	1976-93	17	18	1	2	2
Summerland	1973-94	21	81	1	2	7
Syringa Creek	1986-93	7	71	1	2	2
Williams Lake	1973-93	21	14	1	1	2

### Pine Grosbeak

#### Coastal

Kitsumkalum	1974-94	19	5	1	—	1
Masset	1989-94	5	40	2	3	3
Queen Charlotte City	1989-94	3	67	1	5	9

#### Interior

Bridge Lake	1974-94	20	20	1	1	3
Brookmere	1973-92	10	60	1	1	3
Cassiar	1972-75	2	50	1	—	1
Chilkat Pass	1975-76	2	50	1	—	1
Columbia Lake	1973-83	7	14	1	—	1

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>PINE GROSBEAK</i>						
Creighton Valley	1979-94	16	13	1	2	2
Fort Nelson	1974-80	5	20	2	–	2
Gerrard	1976-85	10	30	1	1	2
Kootenay	1981-94	10	20	1	2	2
Kuskonook	1968-91	21	10	1	1	1
Lavington	1972-94	24	4	3	–	3
McLeod Lake	1968-94	9	22	1	1	1
Mount Morice	1968-75	5	20	14	–	14
Needles	1968-94	26	23	1	2	5
Nicola	1973-74	2	50	4	–	4
Pavilion	1974-94	6	17	2	–	2
Pennington	1987-91	4	25	2	–	2
Prince George	1973-94	20	5	1	–	1
Princeton	1968-94	8	13	2	–	2
Punchaw	1974-94	9	11	8	–	8
Shalalth	1968-94	4	25	1	–	1
Summerland	1973-94	21	48	1	1	5
Telkwa High Road	1974-94	11	18	1	1	1
Wasa	1973-94	19	5	1	–	1
Wingdam	1968-70	3	100	2	2	11

## Purple Finch

<b>Coastal</b>						
Alberni	1968-79	6	33	2	3	4
Albion	1968-92	21	81	1	3	5
Campbell River	1973-93	19	89	1	3	18
Chemainus	1969-88	4	75	8	10	16
Chilliwack	1973-94	11	27	1	1	3
Comox Lake	1973-75	3	67	1	1	1
Coquitlam	1990-94	5	20	1	–	1
Courtenay	1992-93	2	100	6	10	14
Elsie Lake	1970-94	6	67	1	3	4
Gibsons Landing	1973-94	10	100	1	2	6
Kispiox	1975-94	3	67	2	3	3
Kitsumkalum	1974-94	19	5	1	–	1
Nanaimo River	1973-94	22	100	2	5	13
Pemberton	1974-94	18	56	1	1	5
Pitt Meadows	1973-89	14	57	1	2	12
Point Grey	1974-92	11	18	1	1	1
Port Hardy	1982-89	4	25	1	–	1
Port Renfrew	1973-94	17	59	1	2	3
Saltery Bay	1974-76	3	67	1	3	4
Seabird	1969-94	16	81	1	3	4
Squamish	1973-94	9	56	1	2	2
Victoria	1973-94	17	94	1	5	7
<b>Interior</b>						
Alexis Creek	1973-86	14	21	1	3	4
Bridge Lake	1974-94	20	20	1	1	2
Canford	1974-93	10	10	1	–	1
Canoe Point	1993-94	2	50	4	–	4
Columbia Lake	1973-83	7	14	8	–	8
Ferndale	1968-94	15	80	1	3	8
Fort St. John	1974-90	9	44	1	2	3
Fraser Lake	1968-78	5	20	11	–	11
Golden	1973-94	22	9	1	2	2
Grand Forks	1973-94	22	23	1	4	7
Hendrix Lake	1976	1	100	2	–	2
Horsefly	1974-88	11	36	1	2	6
Illecilewaet	1973-83	4	25	1	–	1
Kamloops	1974-94	15	7	2	–	2
Kuskonook	1968-91	21	10	4	6	8
Lac la Hache	1973-86	11	18	1	1	1
McLeod Lake	1968-94	9	78	1	2	6

### Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Low	Range of total surveys when species occurred Median	High
<b>◀ PURPLE FINCH</b>						
Mount Morice	1968-75	5	20	3	–	3
Nicola	1973-74	2	100	11	12	13
Pavilion	1974-94	6	17	2	–	2
Pinkut Creek	1975	1	100	1	–	1
Prince George	1973-94	20	95	1	4	14
Princeton	1968-94	8	13	1	–	1
Punchaw	1974-94	9	78	1	4	5
Riske Creek	1973-92	11	27	1	2	3
Steamboat	1974-80	4	25	1	–	1
Succour Creek	1993-94	2	50	3	–	3
Summit Lake	1972-94	8	88	1	3	9
Tatlayoko Lake	1989-94	6	33	1	2	3
Telkwa High Road	1974-94	11	45	1	3	12
Tupper	1974-94	6	50	1	4	5
Williams Lake	1973-93	21	29	1	1	4

### Cassin's Finch

<b>Coastal</b>						
Pemberton	1974-94	18	11	2	2	2
<b>Interior</b>						
Alexis Creek	1973-86	14	21	1	1	1
Ashnola	1973-74	2	50	3	–	3
Beaverdell	1970-94	24	67	1	2	11
Bridge Lake	1974-94	20	25	1	2	3
Bromley	1973-94	5	100	2	6	11
Brookmere	1973-92	10	100	2	7	13
Canford	1974-93	10	100	2	11	19
Canoe Point	1993-94	2	50	2	–	2
Christian Valley	1993-94	2	50	2	–	2
Chu Chua	1993-94	2	50	3	–	3
Columbia Lake	1973-83	7	29	2	5	7
Creighton Valley	1979-94	16	6	1	–	1
Grand Forks	1973-94	22	82	2	2	7
Illecilewaet	1973-83	4	25	3	–	3
Kamloops	1974-94	15	93	2	5	12
Lavington	1972-94	24	46	1	3	6
Mabel Lake	1973-94	19	37	1	1	4
Meadowlake	1968-70	2	50	3	–	3
Needles	1968-94	26	62	1	3	15
Oliver	1973-94	18	100	1	9	17
Osprey Lake	1976-94	10	70	1	2	15
Pavilion	1974-94	6	67	1	3	13
Pleasant Valley	1980-93	6	100	2	4	6
Princeton	1968-94	8	50	1	4	4
Shalalth	1968-94	4	50	1	3	5
Spillimacheen	1976-93	17	12	2	3	4
Summerland	1973-94	21	95	2	10	23
Syringa Creek	1986-93	7	43	1	2	2
Tokay	1968-75	4	25	9	–	9
Wasa	1973-94	19	5	1	–	1
Williams Lake	1973-93	21	19	1	1	2
Zintcon	1968-94	22	27	1	3	9

### House Finch

<b>Coastal</b>						
Alberni	1968-79	6	33	1	3	4
Albion	1968-92	21	100	7	17	36
Campbell River	1973-93	19	58	1	2	4
Chemainus	1969-88	4	50	4	10	16

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ HOUSE FINCH</b>						
Chilliwack	1973-94	11	100	3	24	45
Comox Lake	1973-75	3	33	1	–	1
Coquitlam	1990-94	5	100	45	51	59
Courtenay	1992-93	2	100	1	2	2
Gibsons Landing	1973-94	10	60	2	5	9
Nanaimo River	1973-94	22	77	1	4	17
Pemberton	1974-94	18	22	1	6	11
Pitt Meadows	1973-89	14	100	5	20	50
Point Grey	1974-92	11	100	6	32	45
Port Renfrew	1973-94	17	35	1	2	4
Saltery Bay	1974-76	3	33	1	–	1
Seabird	1969-94	16	88	1	3	11
Squamish	1973-94	9	33	1	1	1
Victoria	1973-94	17	100	21	50	122
<b>Interior</b>						
Ashnola	1973-74	2	100	1	2	2
Bridge Lake	1974-94	20	5	4	–	4
Bromley	1973-94	5	100	2	7	13
Canford	1974-93	10	20	1	2	2
Canoe Point	1993-94	2	50	7	–	7
Columbia Lake	1973-83	7	29	1	1	1
Kamloops	1974-94	15	100	1	21	49
Lavington	1972-94	24	100	1	9	54
Mabel Lake	1973-94	19	21	1	2	2
Oliver	1973-94	18	94	2	9	25
Osprey Lake	1976-94	10	20	1	1	1
Pavilion	1974-94	6	17	1	–	1
Pleasant Valley	1980-93	6	33	3	3	3
Salmon Arm	1968-94	19	16	1	2	3
Shalalth	1968-94	4	25	9	–	9
Summerland	1973-94	21	29	1	1	3
Syringa Creek	1986-93	7	14	1	–	1
Williams Lake	1973-93	21	5	2	–	2

## Red Crossbill

<b>Coastal</b>						
Alberni	1968-79	6	67	3	7	10
Albion	1968-92	21	10	4	55	105
Campbell River	1973-93	19	84	1	16	33
Chemainus	1969-88	4	50	16	27	37
Chilliwack	1973-94	11	9	3	–	3
Comox Lake	1973-75	3	33	11	–	11
Courtenay	1992-93	2	100	5	10	15
Elsie Lake	1970-94	6	50	3	12	15
Gibsons Landing	1973-94	10	70	2	15	61
Kispiox	1975-94	3	33	2	–	2
Kitsumkalum	1974-94	19	58	2	32	118
Kwinitsa	1968-94	26	15	4	8	15
Masset	1989-94	5	80	3	22	62
Nanaimo River	1973-94	22	68	1	13	61
Pemberton	1974-94	18	33	7	26	27
Pitt Meadows	1973-89	14	21	2	6	12
Point Grey	1974-92	11	73	1	4	38
Port Hardy	1982-89	4	100	16	25	46
Port Renfrew	1973-94	17	76	1	20	65
Queen Charlotte City	1989-94	3	100	2	5	48
Seabird	1969-94	16	6	3	–	3
Squamish	1973-94	9	33	1	2	32
Victoria	1973-94	17	76	1	12	60
<b>Interior</b>						
Adams Lake	1989-94	6	100	1	11	15
Alexis Creek	1973-86	14	64	2	3	12

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ RED CROSSBILL						
Beaverdell	1970-94	24	79	1	20	48
Bridge Lake	1974-94	20	60	1	5	34
Bromley	1973-94	5	60	6	9	13
Brookmere	1973-92	10	90	2	22	43
Canford	1974-93	10	100	8	22	63
Cassiar	1972-75	2	50	1	–	1
Christian Valley	1993-94	2	100	6	8	10
Chu Chua	1993-94	2	50	11	–	11
Columbia Lake	1973-83	7	29	2	2	2
Creighton Valley	1979-94	16	31	1	2	18
Creston	1984	1	100	5	–	5
Ferndale	1968-94	15	33	5	6	14
Fort Nelson	1974-80	5	20	1	–	1
Gerrard	1976-85	10	40	1	5	38
Gnat Pass	1975-93	2	50	10	–	10
Golden	1973-94	22	18	1	4	20
Gosnell	1969-74	4	50	3	15	26
Grand Forks	1973-94	22	73	3	10	49
Kamloops	1974-94	15	87	1	9	97
Kootenay	1981-94	10	30	2	2	4
Kuskonook	1968-91	21	33	1	2	37
Lac la Pêche	1973-86	11	36	4	12	42
Lavington	1972-94	24	42	1	3	18
Mabel Lake	1973-94	19	79	1	4	25
McLeod Lake	1968-94	9	44	1	2	7
Meadowlake	1968-70	2	50	2	–	2
Mount Morice	1968-75	5	20	2	–	2
Needles	1968-94	26	65	1	3	50
Oliver	1973-94	18	78	6	25	114
Osprey Lake	1976-94	10	40	2	3	6
Pavilion	1974-94	6	83	1	3	10
Pleasant Valley	1980-93	6	100	2	13	32
Prince George	1973-94	20	10	1	2	2
Princeton	1968-94	8	75	2	12	26
Punchaw	1974-94	9	44	1	8	30
Riske Creek	1973-92	11	45	4	6	13
Salmon Arm	1968-94	19	42	1	5	8
Scotch Creek	1989-94	6	50	2	2	3
Shalalth	1968-94	4	50	2	23	44
Spillimacheen	1976-93	17	71	1	3	22
Steamboat	1974-80	4	25	2	–	2
Summerland	1973-94	21	100	1	11	48
Summit Lake	1972-94	8	38	1	1	3
Syringa Creek	1986-93	7	57	1	1	6
Tatlayoko Lake	1989-94	6	17	2	–	2
Telkwa High Road	1974-94	11	36	5	12	14
Tokay	1968-75	4	25	6	–	6
Wasa	1973-94	19	89	1	8	35
Williams Lake	1973-93	21	24	10	14	40
Zincton	1968-94	22	36	1	3	12

**White-winged Crossbill**

<b>Interior</b>						
Brookmere	1973-92	10	10	5	–	5
Ferndale	1968-94	15	13	4	7	10
Fort Nelson	1974-80	5	60	3	6	18
Fort St. John	1974-90	9	56	1	2	18
Golden	1973-94	22	5	1	–	1
Kamloops	1974-94	15	7	5	–	5
Kootenay	1981-94	10	10	3	–	3
McLeod Lake	1968-94	9	44	1	6	11
Mount Morice	1968-75	5	20	1	–	1
Needles	1968-94	26	4	8	–	8
Punchaw	1974-94	9	33	1	4	8



## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>WHITE-WINGED CROSSBILL</i>						
Steamboat	1974-80	4	75	5	9	13
Summerland	1973-94	21	14	1	1	1
Summit Lake	1972-94	8	25	2	4	6
Tatlayoko Lake	1989-94	6	17	2	–	2
Telkwa High Road	1974-94	11	9	2	–	2
Tupper	1974-94	6	33	1	1	1
Wasa	1973-94	19	5	5	–	5

## Common Redpoll

<b>Interior</b>						
Chilkat Pass	1975-76	2	50	24	–	24
Haines Summit	1993-94	2	50	1	–	1
Pennington	1987-91	4	50	2	7	11

## Pine Siskin

<b>Coastal</b>						
Alberni	1968-79	6	83	1	9	21
Albion	1968-92	21	62	1	3	10
Campbell River	1973-93	19	95	2	8	66
Chemainus	1969-88	4	100	8	16	37
Chilliwack	1973-94	11	73	1	5	86
Comox Lake	1973-75	3	67	1	4	6
Coquitlam	1990-94	5	80	1	3	4
Courtenay	1992-93	2	100	3	8	13
Elsie Lake	1970-94	6	17	1	–	1
Gibsons Landing	1973-94	10	100	4	12	63
Kispiox	1975-94	3	100	5	32	73
Kitsumkalum	1974-94	19	95	2	24	356
Kwinitsa	1968-94	26	69	1	5	50
Masset	1989-94	5	80	1	3	7
Meziadin	1975-77	2	100	3	5	7
Nanaimo River	1973-94	22	95	1	11	28
Nass River	1975	1	100	2	–	2
Pemberton	1974-94	18	100	1	17	250
Pitt Meadows	1973-89	14	71	2	7	25
Point Grey	1974-92	11	100	2	10	38
Port Hardy	1982-89	4	25	4	–	4
Port Renfrew	1973-94	17	35	1	3	7
Queen Charlotte City	1989-94	3	67	3	3	3
Saltery Bay	1974-76	3	33	16	–	16
Seabird	1969-94	16	94	1	6	25
Squamish	1973-94	9	89	3	12	21
Victoria	1973-94	17	88	1	12	40
<b>Interior</b>						
Adams Lake	1989-94	6	100	14	34	75
Alexis Creek	1973-86	14	79	3	15	65
Ashnola	1973-74	2	50	1	–	1
Beaverdell	1970-94	24	96	9	43	198
Bridge Lake	1974-94	20	90	1	9	139
Bromley	1973-94	5	80	1	18	37
Brookmere	1973-92	10	100	10	48	69
Canford	1974-93	10	100	9	25	88
Canoe Point	1993-94	2	100	3	17	31
Cassiar	1972-75	2	100	2	8	13
Chilkat Pass	1975-76	2	100	1	33	65
Christian Valley	1993-94	2	100	6	32	57
Chu Chua	1993-94	2	100	13	17	20
Columbia Lake	1973-83	7	100	1	15	22
Creighton Valley	1979-94	16	100	11	55	91

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ PINE SISKIN						
Creston	1984	1	100	53	–	53
Ferndale	1968-94	15	100	2	26	119
Fort Nelson	1974-80	5	100	2	5	39
Fort St. John	1974-90	9	100	1	12	26
Fraser Lake	1968-78	5	100	2	9	19
Gerrard	1976-85	10	100	2	11	93
Gnat Pass	1975-93	2	100	5	6	6
Golden	1973-94	22	91	1	18	187
Goldstream Mountain	1993-94	2	50	51	–	51
Gosnell	1969-74	4	100	2	12	102
Grand Forks	1973-94	22	100	2	12	54
Haines Summit	1993-94	2	50	11	–	11
Hendrix Lake	1976	1	100	22	–	22
Horsefly	1974-88	11	82	2	5	25
Hudson's Hope	1976	1	100	77	–	77
Illecilewaet	1973-83	4	75	8	55	117
Kamloops	1974-94	15	87	5	22	64
Kinaskan Lake	1975	1	100	3	–	3
Kootenay	1981-94	10	100	7	50	100
Kuskonook	1968-91	21	95	3	18	84
Lac la Hache	1973-86	11	82	9	16	84
Lavington	1972-94	24	100	17	43	79
Mabel Lake	1973-94	19	100	12	25	91
McLeod Lake	1968-94	9	100	4	22	50
Meadowlake	1968-70	2	50	25	–	25
Mount Morice	1968-75	5	80	27	43	161
Needles	1968-94	26	96	2	21	117
Nicola	1973-74	2	100	1	3	5
Oliver	1973-94	18	100	5	33	92
Osprey Lake	1976-94	10	90	2	12	33
Pavilion	1974-94	6	100	16	34	126
Pennington	1987-91	4	75	4	6	29
Pinkut Creek	1975	1	100	22	–	22
Pleasant Valley	1980-93	6	100	4	13	20
Prince George	1973-94	20	100	3	33	299
Princeton	1968-94	8	100	1	6	26
Punchaw	1974-94	9	100	6	9	17
Riske Creek	1973-92	11	100	8	21	98
Salmo	1969-75	3	100	7	7	61
Salmon Arm	1968-94	19	84	1	11	66
Scotch Creek	1989-94	6	100	9	64	152
Shalalth	1968-94	4	50	19	23	26
Stillimacheen	1976-93	17	100	3	33	213
Steamboat	1974-80	4	100	5	10	142
Succour Creek	1993-94	2	100	20	103	185
Summerland	1973-94	21	100	3	41	100
Summit Lake	1972-94	8	100	11	33	57
Syringa Creek	1986-93	7	100	4	10	24
Tatlayoko Lake	1989-94	6	50	3	7	8
Telkwa High Road	1974-94	11	100	1	27	95
Tetsa River	1974	1	200	2	2	2
Tokay	1968-75	4	75	2	24	35
Tupper	1974-94	6	100	7	14	31
Wasa	1973-94	19	68	1	8	64
Williams Lake	1973-93	21	90	1	18	115
Wingdam	1968-70	3	100	30	40	254
Zincton	1968-94	22	100	1	15	57

**American Goldfinch**

<b>Coastal</b>						
Alberni	1968-79	6	67	3	3	26
Albion	1968-92	21	100	3	20	44
Campbell River	1973-93	19	32	1	1	3
Chemainus	1969-88	4	100	11	21	30

## Breeding Bird Surveys

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ AMERICAN GOLDFINCH</b>						
Chilliwack	1973-94	11	100	16	25	44
Comox Lake	1973-75	3	100	4	4	6
Coquitlam	1990-94	5	100	15	16	23
Courtenay	1992-93	2	100	4	5	6
Elsie Lake	1970-94	6	17	1	–	1
Gibsons Landing	1973-94	10	100	1	8	29
Nanaimo River	1973-94	22	95	1	9	34
Pemberton	1974-94	18	94	1	4	17
Pitt Meadows	1973-89	14	100	6	26	44
Point Grey	1974-92	11	100	2	4	8
Port Hardy	1982-89	4	25	1	–	1
Port Renfrew	1973-94	17	18	1	4	13
Saltery Bay	1974-76	3	100	1	2	14
Seabird	1969-94	16	100	12	19	39
Squamish	1973-94	9	100	1	5	15
Victoria	1973-94	17	94	4	10	30
<b>Interior</b>						
Ashnola	1973-74	2	50	4	–	4
Beaverdell	1970-94	24	50	1	1	2
Bromley	1973-94	5	80	1	3	9
Canford	1974-93	10	80	1	4	22
Canoe Point	1993-94	2	100	5	10	15
Chu Chua	1993-94	2	50	1	–	1
Columbia Lake	1973-83	7	14	4	–	4
Creighton Valley	1979-94	16	6	1	–	1
Creston	1984	1	100	2	–	2
Grand Forks	1973-94	22	100	3	10	32
Horsefly	1974-88	11	27	1	1	2
Illecillewaet	1973-83	4	25	1	–	1
Kamloops	1974-94	15	87	1	3	10
Kuskonook	1968-91	21	33	1	1	2
Lavington	1972-94	24	100	1	10	34
Mabel Lake	1973-94	19	95	1	8	19
Needles	1968-94	26	15	1	1	8
Oliver	1973-94	18	100	1	5	17
Osprey Lake	1976-94	10	20	2	3	4
Pavilion	1974-94	6	100	1	5	12
Pleasant Valley	1980-93	6	83	1	5	8
Princeton	1968-94	8	13	1	–	1
Salmo	1969-75	3	67	3	4	4
Salmon Arm	1968-94	19	74	1	3	10
Summerland	1973-94	21	95	1	4	9
Syringa Creek	1986-93	7	71	1	2	8
Tokay	1968-75	4	50	2	4	6
Wasa	1973-94	19	42	1	1	4
Williams Lake	1973-93	21	10	1	1	1
Zincton	1968-94	22	5	2	–	2

## Evening Grosbeak

<b>Coastal</b>						
Alberni	1968-79	6	67	4	11	20
Albion	1968-92	21	10	2	9	16
Campbell River	1973-93	19	5	4	–	4
Chemainus	1969-88	4	25	8	–	8
Chilliwack	1973-94	11	27	1	2	2
Comox Lake	1973-75	3	33	8	–	8
Gibsons Landing	1973-94	10	30	1	1	2
Kispiox	1975-94	3	67	1	2	2
Kitsumkalum	1974-94	19	5	4	–	4
Nanaimo River	1973-94	22	9	1	1	1
Pemberton	1974-94	18	89	1	7	197
Pitt Meadows	1973-89	14	7	2	–	2
Point Grey	1974-92	11	36	1	2	6

Appendix 3

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
<b>◀ EVENING GROSBEAK</b>						
Port Renfrew	1973-94	17	29	1	2	8
Seabird	1969-94	16	44	1	2	3
Squamish	1973-94	9	33	1	2	4
Victoria	1973-94	17	29	1	3	6
<b>Interior</b>						
Adams Lake	1989-94	6	67	2	21	70
Alexis Creek	1973-86	14	14	1	9	16
Beaverdell	1970-94	24	67	1	10	41
Bridge Lake	1974-94	20	35	1	2	10
Bromley	1973-94	5	60	3	8	13
Brookmere	1973-92	10	90	3	7	10
Canford	1974-93	10	90	2	9	32
Christian Valley	1993-94	2	100	2	6	10
Chu Chua	1993-94	2	100	1	4	7
Columbia Lake	1973-83	7	29	1	1	1
Creighton Valley	1979-94	16	75	1	5	49
Ferndale	1968-94	15	47	1	2	6
Fort St. John	1974-90	9	22	1	2	2
Fraser Lake	1968-78	5	20	15	–	15
Gerrard	1976-85	10	30	1	1	2
Golden	1973-94	22	68	1	2	5
Gosnell	1969-74	4	100	8	14	22
Grand Forks	1973-94	22	64	1	6	56
Illecilewaet	1973-83	4	25	1	–	1
Kamloops	1974-94	15	87	1	4	21
Kootenay	1981-94	10	40	2	2	2
Kuskonook	1968-91	21	14	1	1	3
Lac la Hache	1973-86	11	18	1	8	14
Lavington	1972-94	24	67	1	7	27
Mabel Lake	1973-94	19	42	1	5	11
McLeod Lake	1968-94	9	78	1	7	17
Mount Morice	1968-75	5	40	2	3	3
Needles	1968-94	26	50	1	2	46
Oliver	1973-94	18	89	1	15	55
Osprey Lake	1976-94	10	40	2	5	16
Pavilion	1974-94	6	83	5	7	22
Pleasant Valley	1980-93	6	67	2	10	15
Prince George	1973-94	20	20	1	3	16
Princeton	1968-94	8	50	3	4	10
Punchaw	1974-94	9	22	3	7	11
Riske Creek	1973-92	11	9	2	–	2
Salmon Arm	1968-94	19	58	1	3	17
Scotch Creek	1989-94	6	100	1	3	41
Shalalth	1968-94	4	50	3	4	5
Spillimacheen	1976-93	17	59	1	3	13
Succour Creek	1993-94	2	50	1	–	1
Summerland	1973-94	21	71	1	5	60
Summit Lake	1972-94	8	63	1	1	3
Syringa Creek	1986-93	7	29	1	1	1
Tatlayoko Lake	1989-94	6	17	6	–	6
Telkwa High Road	1974-94	11	45	1	1	2
Tokay	1968-75	4	25	3	–	3
Tupper	1974-94	6	33	1	2	2
Wasa	1973-94	19	21	1	2	4
Williams Lake	1973-93	21	43	1	5	18
Zincton	1968-94	22	32	1	1	2

**House Sparrow**

<b>Coastal</b>						
Alberni	1968-79	6	67	1	3	5
Albion	1968-92	21	100	2	13	49
Campbell River	1973-93	19	26	1	2	3
Chemainus	1969-88	4	50	2	7	12

*Breeding Bird Surveys*

Survey route	Survey years	Total surveys	Frequency of occurrence (%)	Range of total surveys when species occurred		
				Low	Median	High
◀ <i>HOUSE SPARROW</i>						
Chilliwack	1973-94	11	100	12	26	100
Comox Lake	1973-75	3	67	6	16	25
Coquitlam	1990-94	5	100	4	12	16
Courtenay	1992-93	2	50	3	–	3
Gibsons Landing	1973-94	10	60	1	1	2
Nanaimo River	1973-94	22	32	1	4	12
Pemberton	1974-94	18	17	2	2	4
Pitt Meadows	1973-89	14	100	7	23	43
Point Grey	1974-92	11	91	16	43	70
Seabird	1969-94	16	100	10	19	33
Squamish	1973-94	9	33	1	1	3
Victoria	1973-94	17	100	16	77	159
<b>Interior</b>						
Bridge Lake	1974-94	20	20	1	3	6
Bromley	1973-94	5	20	2	–	2
Canford	1974-93	10	10	1	–	1
Canoe Point	1993-94	2	100	6	7	8
Columbia Lake	1973-83	7	57	2	2	2
Creston	1984	1	100	3	–	3
Fort Nelson	1974-80	5	20	2	–	2
Fort St. John	1974-90	9	100	6	13	30
Golden	1973-94	22	27	1	14	18
Kamloops	1974-94	15	100	10	19	54
Lavington	1972-94	24	100	1	15	45
Mabel Lake	1973-94	19	79	1	3	28
Oliver	1973-94	18	100	3	15	47
Osprey Lake	1976-94	10	10	4	–	4
Pavilion	1974-94	6	33	1	2	2
Pleasant Valley	1980-93	6	50	2	5	16
Prince George	1973-94	20	100	3	17	37
Salmo	1969-75	3	67	5	13	20
Salmon Arm	1968-94	19	74	1	4	12
Spillimacheen	1976-93	17	12	1	2	2
Telkwa High Road	1974-94	11	64	1	1	4
Tokay	1968-75	4	50	4	5	5
Tupper	1974-94	6	100	3	4	5
Williams Lake	1973-93	21	29	1	3	5
Zincton	1973-93	21	29	2	–	2

## APPENDIX 4

### Examples of Bird Species Richness and Density in Old-growth Coniferous and Broad-leaf Forests of British Columbia

(SEE ALSO TABLE 29 IN BOOK)

**A** - Density of birds (all detections per 100 ha) in old lodgepole pine forests in the Sub-Boreal Pine–Spruce and Montane Spruce biogeoclimatic zones, Central Interior Ecoprovince (adapted from Waterhouse 1995).

**B** - Average density of birds (“singing” males per 100 ha) in old-growth forest on central Vancouver Island, in the Coastal Western Hemlock Biogeoclimatic Zone, Coast and Mountains Ecoprovince (adapted from Buckner et al. 1975).

**C** - Average density of birds (“singing” males per 100 ha) on Northern Vancouver Island in old-growth forest in the Coastal Western Hemlock Biogeoclimatic Zone, Coast and Mountains Ecoprovince (adapted from Buckner et al. 1975).

**D** - Comparative density of birds (“singing” males per 100 ha) in clearcuts in the Engelmann Spruce–Subalpine Fir Biogeoclimatic Zone, Sub-Boreal Interior Ecoprovince (adapted from Gyug 1997).

**E** - Density of birds (“singing” males per 100 ha) in old-growth forest in the Boreal White and Black Spruce Biogeoclimatic Zone, Taiga Plains Ecoprovince (adapted from Bennett 1998).

**F** - Density of birds (“singing” males per 100 ha) in old-growth forest in the Engelmann Spruce–Subalpine Fir Biogeoclimatic Zone, Southern Interior Ecoprovince (modified from Wetmore et al. 1985).

**G** - Density of birds (“singing” males per 100 ha) in old-growth Douglas-fir forest in the Interior Cedar–Hemlock Biogeoclimatic Zone, Southern Interior Mountains Ecoprovince (adapted from Gyug and Bennett 1995).

**H** - Density of birds (all detections per 100 ha) in mature lodgepole pine forest in the Interior Douglas-Fir Biogeoclimatic Zone, Central Interior Ecoprovince (adapted from Waterhouse and Dawson 1998).

**I** - Density of birds (“singing” males per 100 ha) in old-growth Douglas-fir forest in the Interior Douglas-Fir Biogeoclimatic Zone, Central Interior Ecoprovince (adapted from Waterhouse and Dawson 1998).

**J** - Comparative density of birds (“singing” males per 100 ha) in old-growth forest in the Engelmann Spruce–Subalpine Fir Biogeoclimatic Zone, Sub-Boreal Interior Ecoprovince (adapted from Gyug 1997).

**K** - Density of birds (“singing” males per 100 ha) in an old-growth Douglas-fir forest in the Coastal Western Hemlock Biogeoclimatic Zone, Coast and Mountains Ecoprovince (adapted from Horvath 1963).

**L** - See Table 29 and Figure 747 in book.

**M** - Density of birds (all detections per 100 ha) in the Quesnel Highland in old-growth forest in the Engelmann Spruce–Subalpine Fir Biogeoclimatic Zone, Southern Interior Mountains Ecoprovince (adapted from Davis et al. 1999).

**N** - Density of birds (“singing” males per 100 ha) in old-growth forest in the Mountain Hemlock Biogeoclimatic Zone, Coast and Mountains Ecoprovince (modified from Wetmore et al. 1985).

**O** - Density of birds (“singing” males per 100 ha) in mature trembling aspen forests in the Boreal White and Black Spruce Biogeoclimatic Zone, Taiga Plains (adapted from Erskine 1977).

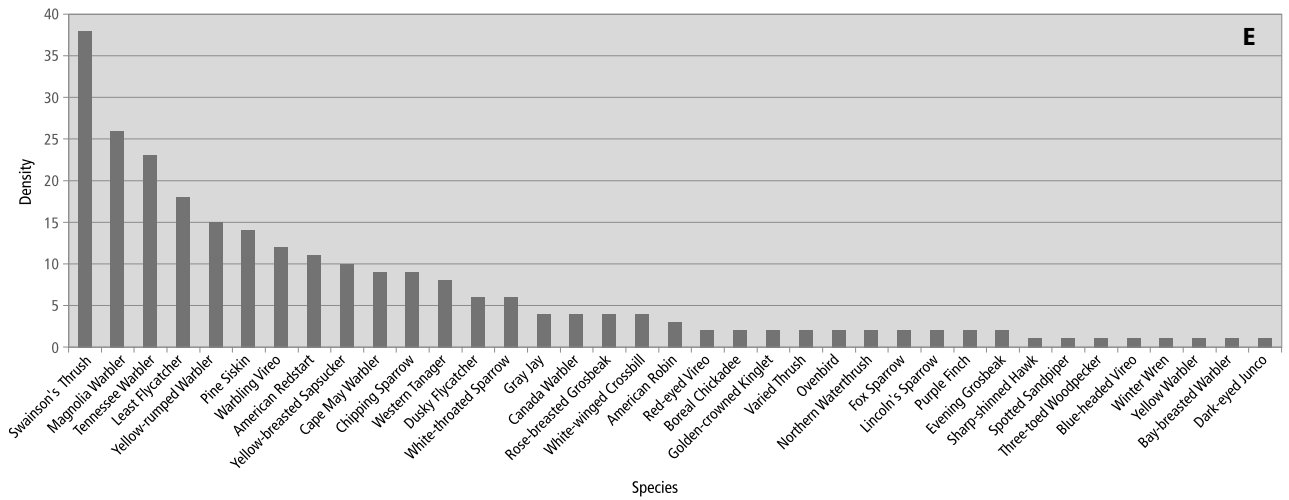
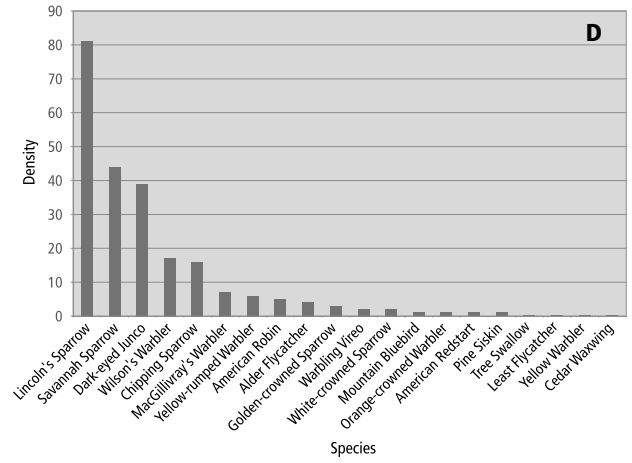
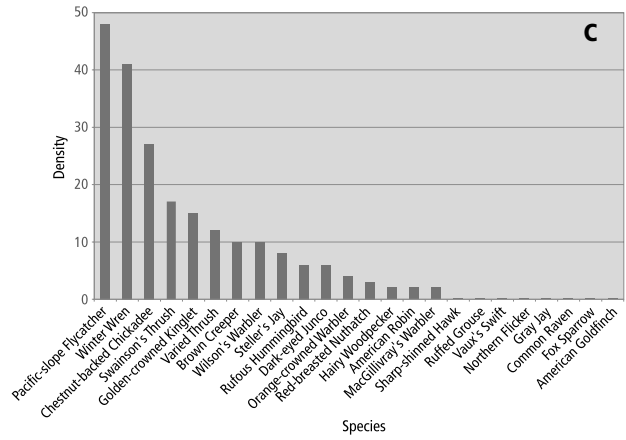
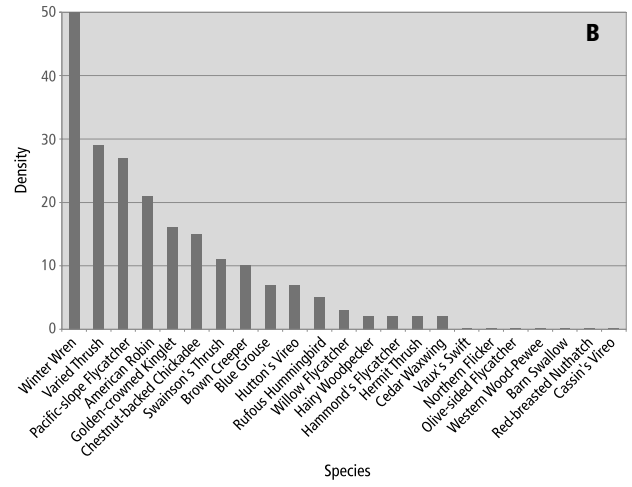
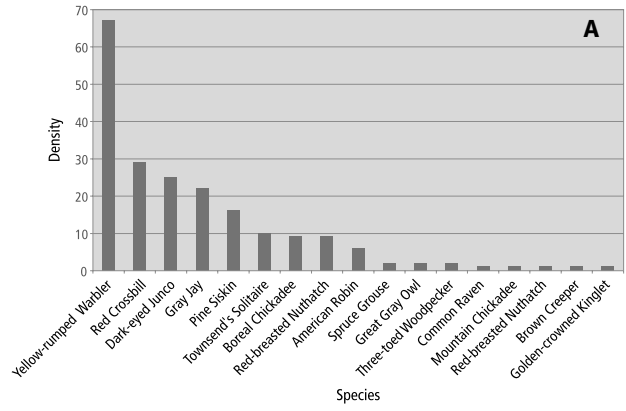
**P** - Density of birds (all detections) per 100 ha in mature trembling aspen forest in the Boreal White and Black Spruce Biogeoclimatic Zone, Boreal Plains Ecoprovince (adapted from Merkins and Booth 1998).

**Q** - Density of birds (“singing” males per 100 ha) in mature trembling aspen forests in the Sub-Boreal Spruce Biogeoclimatic Zone, Central Interior Ecoprovince (adapted from Erskine 1977).

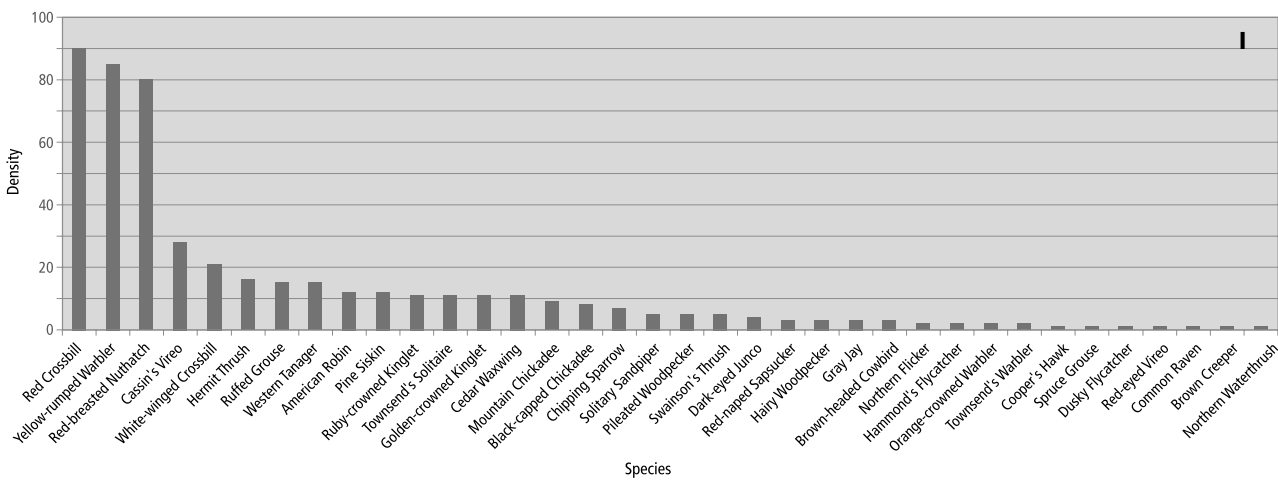
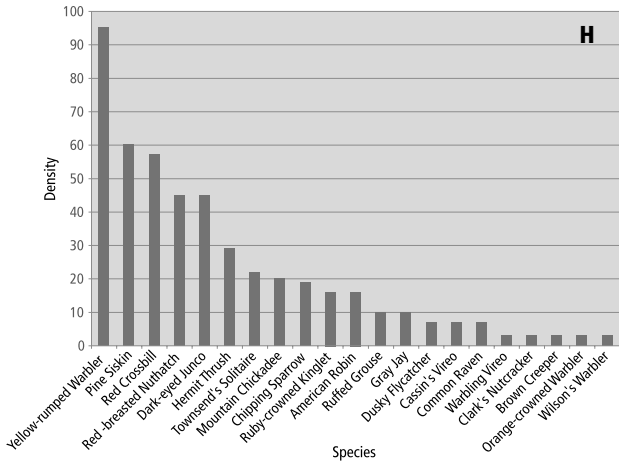
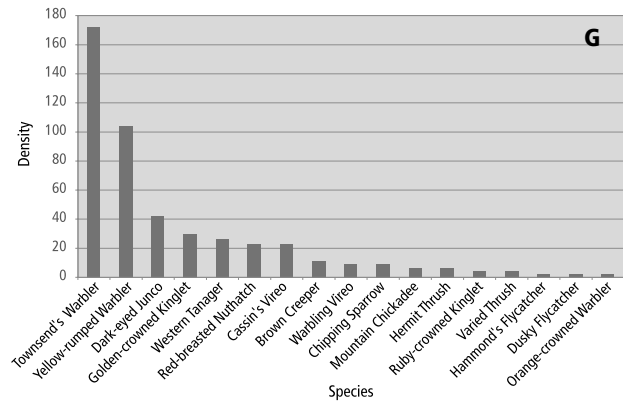
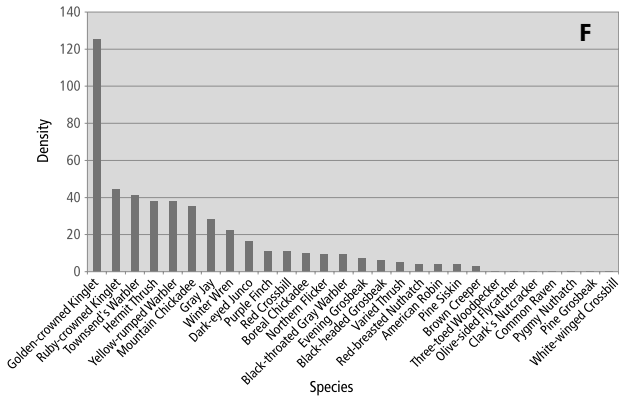
**R** - Density of birds (“singing” males per 100 ha) in mature trembling aspen forest in the Sub-Boreal Spruce Biogeoclimatic Zone, Central Interior Ecoprovince (adapted from Pojar 1995).

**S** - Density of birds (“singing” males per 100 ha) in clearcut trembling aspen forest in the Sub-Boreal Spruce Biogeoclimatic Zone, Central Interior Ecoprovince (adapted from Pojar 1995).

## Examples of Bird Species Richness and Density

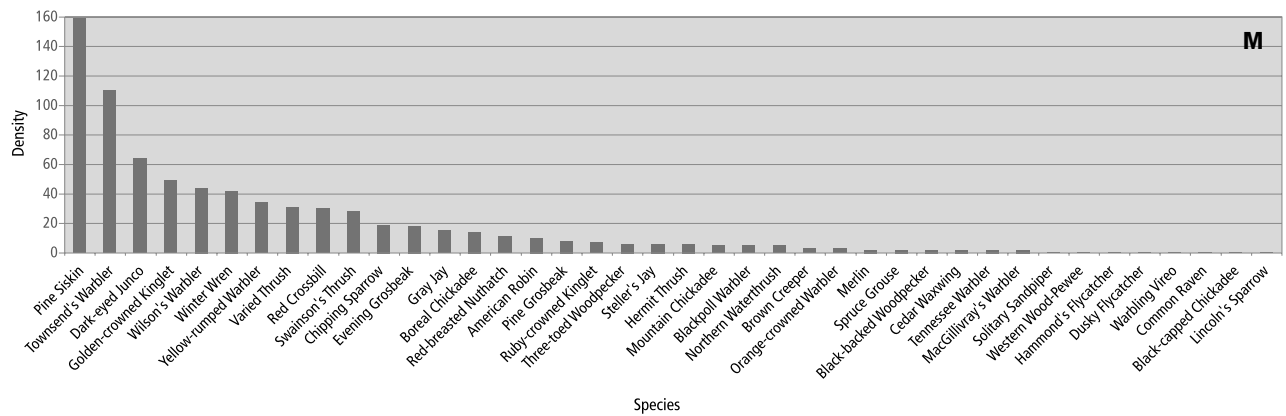
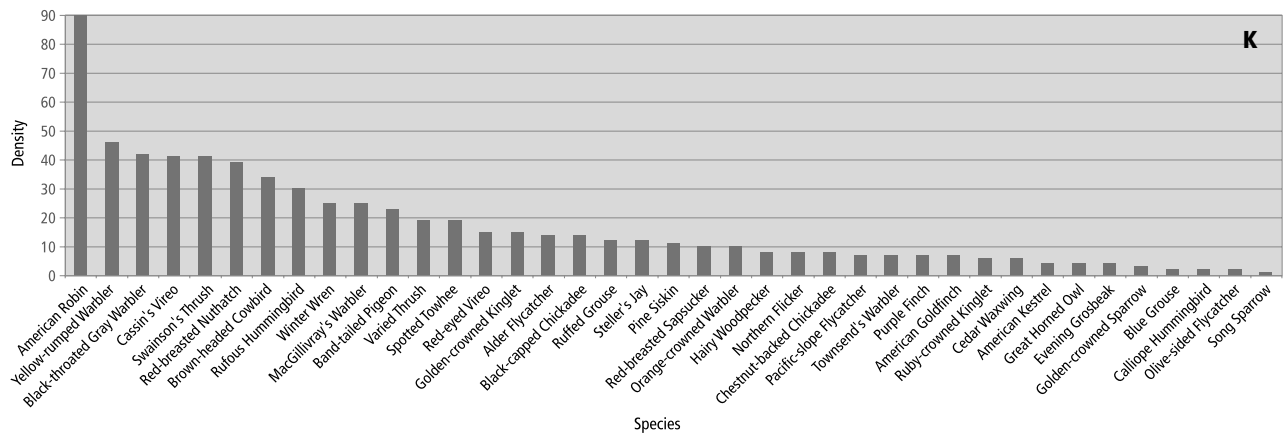
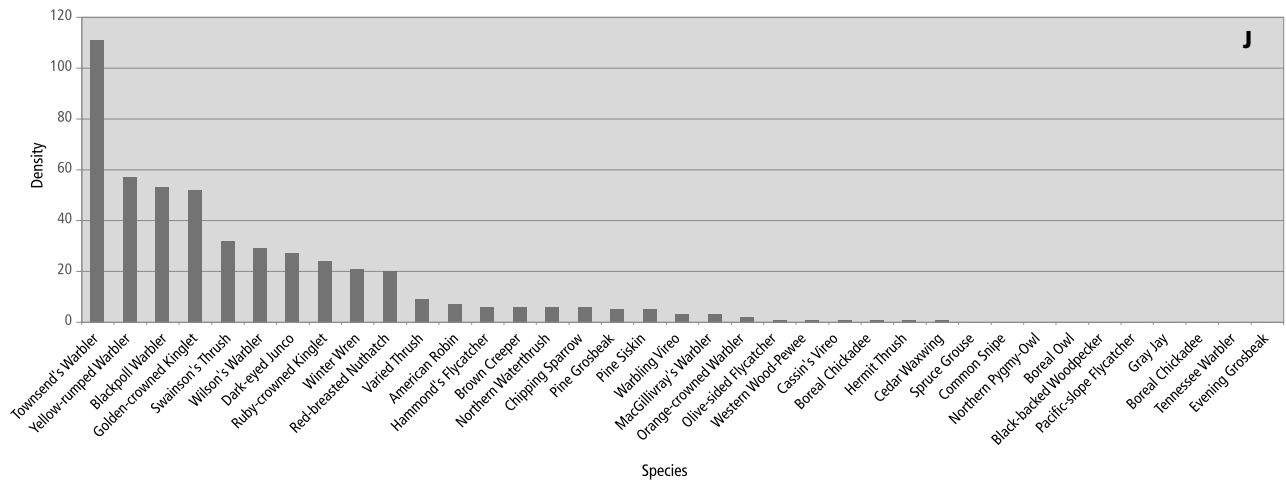


Appendix 4

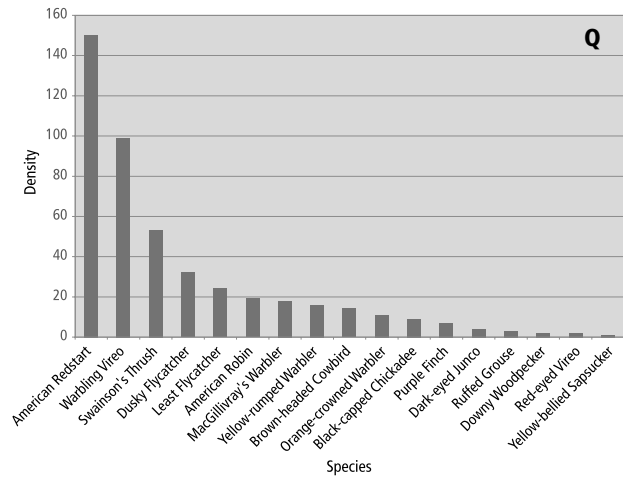
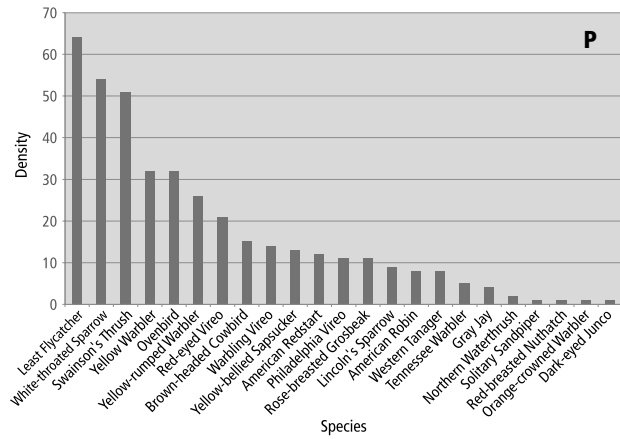
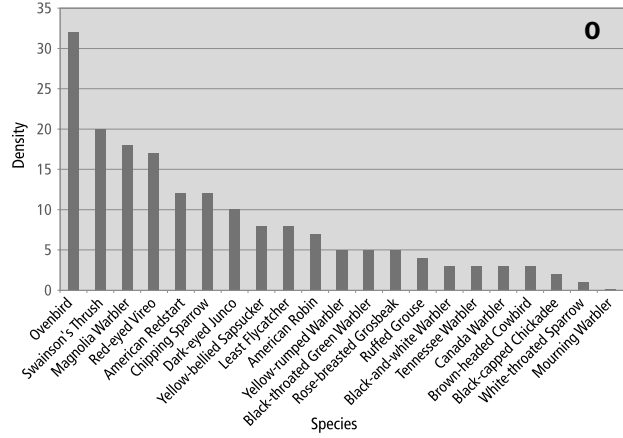
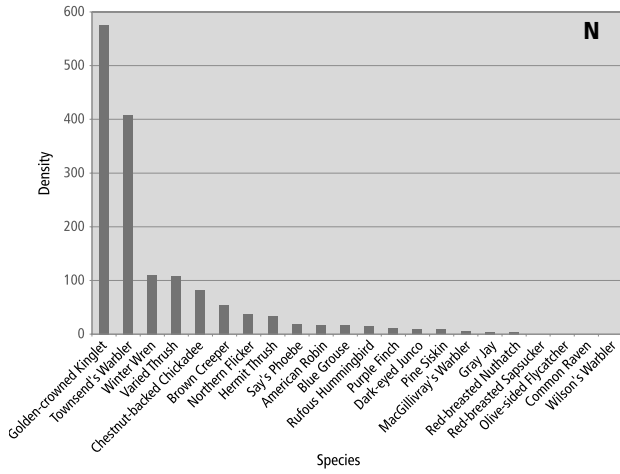




### Examples of Bird Species Richness and Density



Appendix 4



## Examples of Bird Species Richness and Density

