

# **Integrated Monitoring in Bird Conservation Regions (IMBCR) in Idaho**

**2012 Field Season Summary for Transects Funded by the  
USFS Region 1 – Idaho Panhandle National Forest, Idaho**



A cloudy day near the Canadian border within the Idaho Panhandle National Forest

*photo by Jack Stenger*

December 6, 2012

Jay Carlisle and Jessica Pollock

Idaho Bird Observatory at Boise State University, [jaycarlisle@boisestate.edu](mailto:jaycarlisle@boisestate.edu)

## SUMMARY

Between 3 June and 7 July, 2012, Idaho Bird Observatory staff conducted landbird surveys throughout the Idaho Panhandle National Forest as a part of the Integrated Monitoring in Bird Conservation Regions (IMBCR) program coordinated by Rocky Mountain Bird Observatory (RMBO) and partners. We surveyed a total of 104 transects in Idaho in 2012, 65 of which were funded by the US Forest Service Region 1, 24 by the Great Northern Landscape Conservation Cooperative (GNLCC), and 15 by the Bureau of Land Management (BLM). Here we provide an overview of the 30 transects on the Idaho Panhandle National Forest funded by the USFS Region 1.

The purpose of this document is to provide collaborating groups with an overview of completed work and birds recorded. None of the data in this report should be considered final or published. During the winter we will work with Rocky Mountain Bird Observatory and other partners to prepare a report based on 2012 data that will include density and occupancy estimates for species throughout the range of the IMBCR program. A detailed, final report containing this information will be made available during March 2013; the 2011 report (White et al. 2012) is available at: [http://www.rmbo.org/v3/Portals/0/Documents/Science/Reports/2011\\_IMBCR\\_report.pdf](http://www.rmbo.org/v3/Portals/0/Documents/Science/Reports/2011_IMBCR_report.pdf).

## PROTOCOL and SURVEY EFFORT

Transects are randomly selected and spatially balanced throughout each stratum. Transects on the Idaho Panhandle NF were stratified into two categories:

- **IP** – USFS Region 1 lands in the Idaho Panhandle National Forest with relatively good road access (i.e., roads within ~2 miles - “frontcountry”)
  - 24 transects
- **IR** – USFS Region 1 “roadless” lands in the Idaho Panhandle National Forest, “backcountry”
  - 6 transects

All National Forest land in USFS Region 1 is sub-stratified into front-country and backcountry (roadless) areas and is surveyed on an approximate 4:1 ratio of front-country to backcountry. See Figure 1 for transects surveyed in 2012.

Each transect is a square grid of 16 points separated by 250 meters. Due to terrain, weather and other factors it is often difficult to complete all 16 point during the morning survey window. To be considered a completed transect, we must complete at least 6 point counts on each transect (transects dominated by private land reduce the minimum to 4). Each point count lasts 6 minutes and surveyors record each bird detected, how it was detected, its radial distance from the observer, and the minute of the survey in which it is first detected.

Each transect has a shorthand name for quick reference. For example, ID-BCR10-IP2 is shorthand for Idaho; Bird Conservation Region 10; Idaho Panhandle National Forest Frontcountry; priority transect 2. For a detailed protocol please see last year's report (White et al. 2012).

## **BIRD DATA**

We detected 4,265 individuals of 78 bird species during surveys on Idaho Panhandle National Forest transects (Table 1). Townsend's Warbler, Swainson's Thrush, Pine Siskin, Western Tanager, and Dark-eyed Junco were the five most frequently-detected species across all transects (Table 1). The same five species were also most frequent on the **IP** transects, but in a slightly different order: Townsend's Warbler, Swainson's Thrush, Western Tanager, Dark-eyed Junco and Pine Siskin (Table 2a). For **IR** transects, the five most frequent species were Pine Siskin, Townsends' Warbler, Swainson's Thrush, Yellow-rumped Warbler and Western Tanager (Table 2b).

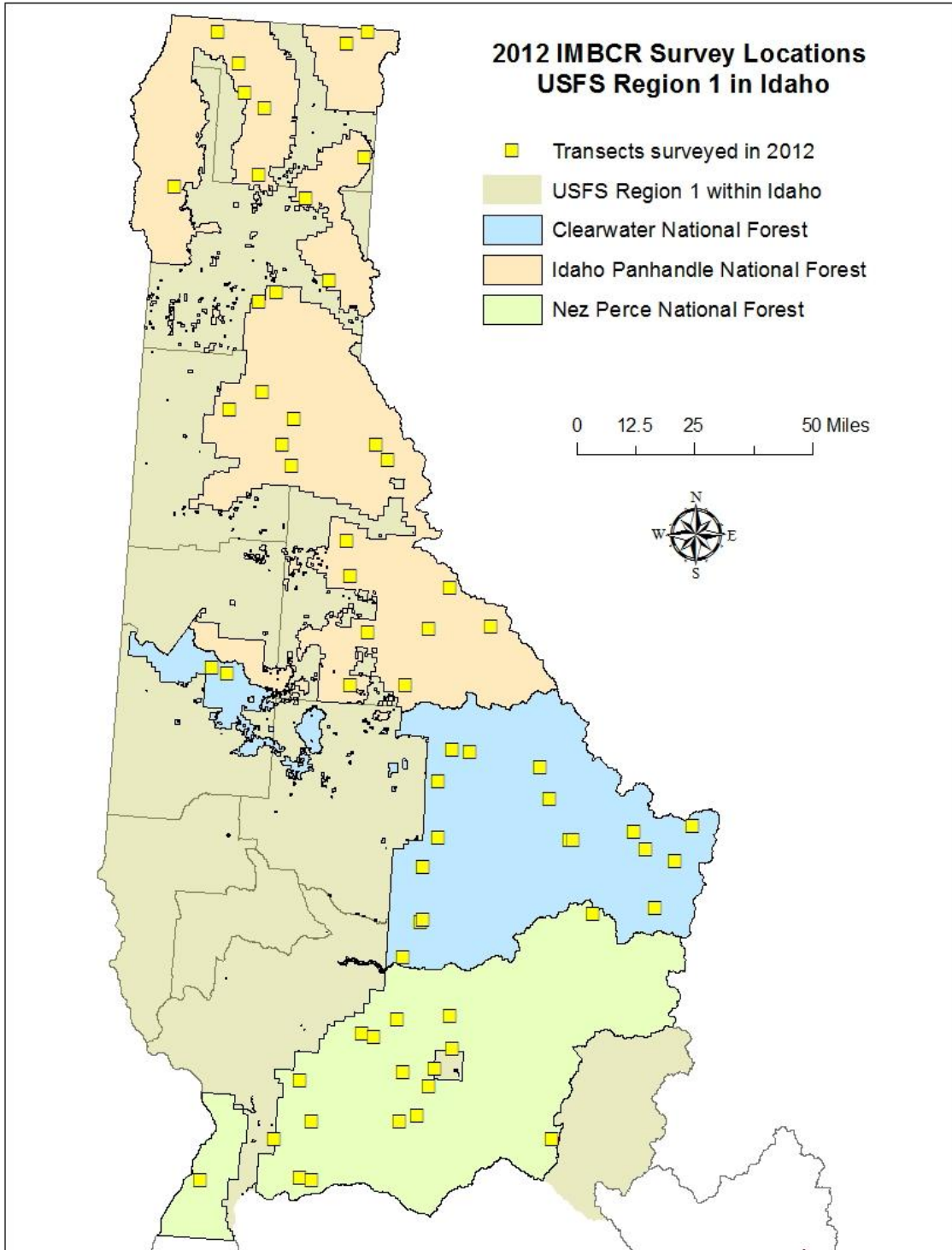
## **REFERENCES**

White, C. M., N. J. Van Lanen, D.C. Pavlacky Jr., J. A. Blakesley, R. A. Sparks, J. A. Rehm-Lorber, M. F. McLaren, J. J. Birek and D. J. Hanni. 2012. Integrated Monitoring in Bird Conservation Regions (IMBCR): 2011 Annual Report. Rocky Mountain Bird Observatory. Brighton, Colorado, USA.

## **ACKNOWLEDGMENTS**

We thank the USFS Region 1 and the Idaho Panhandle National Forest for funding support and we thanks collaborators in Montana (Catherine Wightman, Beth Hahn, and Josh Vest) for their ideas and help. Thanks to Rocky Mountain Bird Observatory for support and advice in implementing IMBCR surveys and to Kristina Smucker and the Avian Science Center for help with pre-season training. We are also very grateful to Audrey Adams, Jacob Cooper, Michael Fuss, and Aaron Spidal for conducting the bird surveys and to Liz Urban for pre-season planning assistance.

**Figure 1.** Survey locations in the USFS Region 1, including the Idaho Panhandle NF, as part of the IMBCR program in 2012.



**Table 1.** Total number of detections for each species detected during point count surveys on the Idaho Panhandle NF in Idaho as part of the IMBCR program in 2012.

<b>Species</b>	<b>Number</b>	<b>Species</b>	<b>Number</b>	<b>Species</b>	<b>Number</b>
American Goldfinch	4	Hermit Thrush	53	Song Sparrow	7
American Robin	49	House Wren	1	Spotted Towhee	12
American Three-toed Woodpecker	2	Lazuli Bunting	34	Steller's Jay	9
Black-capped Chickadee	40	Least Flycatcher	1	Swainson's Hawk	5
Black-chinned Hummingbird	1	MacGillivray's Warbler	85	Swainson's Thrush	443
Black-headed Grosbeak	42	Mountain Bluebird	4	Townsend's Solitaire	13
Boreal Chickadee	6	Mountain Chickadee	56	Townsend's Warbler	450
Brown Creeper	23	Mourning Dove	1	Unknown Bird	85
Brown-headed Cowbird	1	Nashville Warbler	25	Unknown Finch	1
Bullock's Oriole	3	Northern Flicker	26	Unknown Flycatcher	1
Calliope Hummingbird	1	Northern Goshawk	1	Unknown Grouse	1
Cassin's Finch	9	Northern Pygmy-Owl	1	Unknown Hawk	1
Cassin's Vireo	54	Northern Waterthrush	3	Unknown Hummingbird	6
Cedar Waxwing	5	Olive-sided Flycatcher	29	Unknown Woodpecker	13
Chestnut-backed Chickadee	79	Orange-crowned Warbler	43	Varied Thrush	135
Chipping Sparrow	103	Osprey	1	Vaux's Swift	13
Clark's Nutcracker	3	Pacific Wren	114	Warbling Vireo	142
Common Raven	28	Pileated Woodpecker	35	Western Flycatcher	16
Common Yellowthroat	1	Pine Grosbeak	8	Western Tanager	251
Cooper's Hawk	3	Pine Siskin	285	Western Wood-Pewee	3
Dark-eyed Junco	234	Red Crossbill	184	White-breasted Nuthatch	1
Dusky Flycatcher	55	Red-breasted Nuthatch	232	White-winged Crossbill	2
Dusky Grouse	2	Red-eyed Vireo	6	Williamson's Sapsucker	2
Evening Grosbeak	34	Red-naped Sapsucker	19	Willow Flycatcher	1
Fox Sparrow	42	Red-tailed Hawk	3	Wilson's Warbler	24
Golden-crowned Kinglet	174	Red-winged Blackbird	2	Yellow Warbler	4
Gray Jay	26	Ruby-crowned Kinglet	49	Yellow-rumped Warbler	227
Hairy Woodpecker	20	Ruffed Grouse	9	<b>Grand Total</b>	<b>4,265</b>
Hammond's Flycatcher	38	Rufous Hummingbird	5		

**Table 2a.** Number of detections per point, and total per transect, for each of the IP transects in 2012.

Species	Average Detections/Point by Species (per transect)																								Total # detections per species - all IP transects	Average species detection - all IP points	
	IP 1	IP 2	IP 3	IP 4	IP 5	IP 6	IP 7	IP 8	IP 9	IP 10	IP 11	IP 12	IP 13	IP 14	IP 15	IP 16	IP 18	IP 19	IP 20	IP 21	IP 22	IP 23	IP 25	IP 26			
<i># of points</i>	13	9	10	11	10	10	6	11	16	11	8	11	13	12	10	12	15	8	11	6	12	12	12	8	<i>Total:</i> 257	<i>Avg:</i> 10.71	
<b>American Goldfinch</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>4</b>	<b>0.02</b>	
<b>American Robin</b>	0.0	0.3	0.3	0.6	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.2	0.1	0.3	0.2	0.0	0.1	0.0	0.3	0.0	1.0	0.1	0.1	<b>46</b>	<b>0.18</b>	
<b>American Three-toed Woodpecker</b>	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>2</b>	<b>0.01</b>	
<b>Black-capped Chickadee</b>	0.6	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.4	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.8	0.0	<b>29</b>	<b>0.11</b>	
<b>Black-headed Grosbeak</b>	0.0	0.0	0.4	0.2	0.2	0.0	0.0	0.1	0.5	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.0	0.0	0.3	0.0	0.0	<b>29</b>	<b>0.11</b>	
<b>Boreal Chickadee</b>	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>4</b>	<b>0.02</b>	
<b>Brown Creeper</b>	0.2	0.0	0.0	0.4	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	<b>22</b>	<b>0.09</b>
<b>Bullock's Oriole</b>	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>3</b>	<b>0.01</b>	
<b>Cassin's Finch</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	<b>4</b>	<b>0.02</b>	
<b>Cassin's Vireo</b>	0.2	0.0	0.3	0.2	0.0	0.0	0.0	0.1	0.4	0.0	0.4	0.1	0.1	0.0	0.1	0.3	0.3	0.3	0.8	0.0	0.1	0.3	0.2	0.0	<b>48</b>	<b>0.19</b>	
<b>Cedar Waxwing</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>4</b>	<b>0.02</b>	
<b>Chestnut-backed Chickadee</b>	0.0	0.3	0.6	0.0	0.4	0.0	1.2	0.5	0.2	0.2	0.3	0.2	0.4	0.1	0.4	0.0	0.2	0.9	0.3	0.0	0.0	0.6	0.4	0.0	<b>70</b>	<b>0.27</b>	
<b>Chipping Sparrow</b>	0.1	0.0	0.2	0.3	0.4	0.0	0.0	0.7	0.3	0.2	0.1	0.4	0.3	0.1	0.1	0.4	0.8	0.3	0.2	0.0	0.2	0.2	0.3	0.3	<b>67</b>	<b>0.26</b>	
<b>Common Raven</b>	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.3	0.0	0.0	0.2	0.0	0.1	0.1	0.3	0.2	0.0	0.2	0.0	0.1	0.0	<b>23</b>	<b>0.09</b>	
<b>Dark-eyed Junco</b>	1.2	0.4	0.5	0.5	2.1	2.3	1.7	0.2	0.4	0.1	0.8	0.7	0.9	0.1	0.8	0.2	0.5	1.7	0.3	0.7	0.2	1.2	0.1	3.3	<b>201</b>	<b>0.78</b>	
<b>Dusky Flycatcher</b>	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.2	0.5	0.0	0.1	0.1	0.2	0.0	0.1	0.0	0.6	0.3	0.4	0.0	0.2	0.3	0.3	0.0	<b>48</b>	<b>0.19</b>	

Species	Average Detections/Point by Species (per transect)																								Total # detections per species - all IP transects	Average species detection - all IP points	
	IP 1	IP 2	IP 3	IP 4	IP 5	IP 6	IP 7	IP 8	IP 9	IP 10	IP 11	IP 12	IP 13	IP 14	IP 15	IP 16	IP 18	IP 19	IP 20	IP 21	IP 22	IP 23	IP 25	IP 26			
Dusky Grouse	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.01
Evening Grosbeak	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.6	2.0	0.0	0.1	0.0	0.2	0.0	34	0.13	
Fox Sparrow	0.0	0.0	0.7	0.2	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	1.2	0.1	0.0	0.0	0.1	27	0.11	
Golden-crowned Kinglet	0.8	0.4	0.4	1.5	0.2	0.1	0.8	1.1	0.2	0.5	0.5	0.8	0.4	0.9	0.5	0.8	0.2	0.4	0.6	0.0	0.0	0.6	1.0	0.1	140	0.54	
Gray Jay	0.3	0.0	0.2	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	23	0.09	
Hairy Woodpecker	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.1	0.4	0.1	0.0	0.0	0.2	0.0	0.1	17	0.07	
Hammond's Flycatcher	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.7	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.5	29	0.11	
Hermit Thrush	0.1	0.8	0.0	0.0	0.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	43	0.17	
Lazuli Bunting	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.1	0.0	0.0	0.0	20	0.08	
MacGillivray's Warbler	0.4	0.0	0.3	0.4	0.2	0.0	0.0	0.4	0.5	0.5	0.1	0.4	0.5	0.0	0.1	0.3	0.2	0.3	0.5	0.3	0.3	0.3	0.1	0.0	69	0.27	
Mountain Bluebird	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2	0.01	
Mountain Chickadee	0.0	0.4	0.2	0.0	0.3	0.1	0.2	0.2	0.1	0.3	0.4	0.5	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.5	41	0.16	
Nashville Warbler	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	18	0.07	
Northern Flicker	0.2	0.0	0.0	0.0	0.2	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.1	0.0	0.0	0.3	0.0	0.1	0.3	23	0.09	
Northern Waterthrush	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	0.01	
Olive-sided Flycatcher	0.0	0.0	0.1	0.0	0.9	0.1	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.0	0.3	22	0.09	
Orange-crowned Warbler	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.4	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.5	0.0	0.1	0.3	0.1	0.0	32	0.12	
Pacific Wren	0.5	0.1	0.0	0.7	0.9	0.3	0.2	0.1	0.2	0.9	0.3	0.7	0.5	0.2	0.6	0.6	0.1	0.1	0.4	1.0	0.2	0.7	0.0	0.3	99	0.39	
Pileated Woodpecker	0.2	0.0	0.1	0.0	0.0	0.0	0.5	0.1	0.0	0.1	0.1	0.0	0.2	0.4	0.1	0.1	0.0	0.0	0.4	0.0	0.3	0.1	0.5	0.0	34	0.13	

Species	Average Detections/Point by Species (per transect)																								Total # detections per species - all IP transects	Average species detection - all IP points	
	IP 1	IP 2	IP 3	IP 4	IP 5	IP 6	IP 7	IP 8	IP 9	IP 10	IP 11	IP 12	IP 13	IP 14	IP 15	IP 16	IP 18	IP 19	IP 20	IP 21	IP 22	IP 23	IP 25	IP 26			
Pine Grosbeak	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	<b>5</b>	<b>0.02</b>
Pine Siskin	0.6	1.4	1.8	0.3	0.8	0.4	0.3	0.5	0.2	0.7	0.5	1.8	0.5	1.2	1.1	0.1	1.0	1.6	0.7	0.3	0.9	0.1	0.5	1.1	<b>194</b>	<b>0.75</b>	
Red Crossbill	0.0	1.7	1.2	0.0	0.0	0.8	0.0	0.0	1.9	0.3	0.0	1.1	0.0	0.3	0.6	1.1	0.2	4.0	0.9	2.2	0.4	0.5	0.2	0.3	<b>177</b>	<b>0.69</b>	
Red-breasted Nuthatch	1.3	0.7	0.3	0.2	0.3	0.6	1.2	0.7	1.4	0.5	0.8	0.6	0.5	0.4	0.4	0.3	1.1	1.1	1.0	0.2	0.8	1.3	1.2	0.3	<b>190</b>	<b>0.74</b>	
Red-eyed Vireo	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>6</b>	<b>0.02</b>	
Red-naped Sapsucker	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.1	0.3	0.2	0.0	<b>18</b>	<b>0.07</b>	
Red-winged Blackbird	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>2</b>	<b>0.01</b>	
Ruby-crowned Kinglet	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.8	0.0	0.0	0.9	<b>29</b>	<b>0.11</b>	
Ruffed Grouse	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>9</b>	<b>0.04</b>	
Rufous Hummingbird	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	<b>4</b>	<b>0.02</b>	
Song Sparrow	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>7</b>	<b>0.03</b>	
Spotted Towhee	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	<b>10</b>	<b>0.04</b>	
Steller's Jay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.5	<b>9</b>	<b>0.04</b>	
Swainson's Hawk	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>5</b>	<b>0.02</b>	
Swainson's Thrush	0.7	1.0	2.2	1.1	0.1	0.0	2.8	2.5	1.1	2.5	0.8	3.4	0.1	1.8	3.2	1.3	1.3	2.8	1.4	0.0	2.0	2.6	1.7	0.0	<b>388</b>	<b>1.51</b>	
Townsend's Solitaire	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	<b>8</b>	<b>0.03</b>	
Townsend's Warbler	1.2	2.0	2.0	1.7	1.2	0.0	3.3	1.6	1.7	1.1	1.4	2.5	1.4	0.6	3.0	1.5	1.0	3.0	2.3	0.2	1.3	1.8	1.3	0.1	<b>391</b>	<b>1.52</b>	
Unknown Bird	1.1	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.4	0.0	0.3	0.0	0.3	0.2	0.0	0.3	0.5	0.0	0.9	0.0	0.3	0.0	0.2	0.1	<b>63</b>	<b>0.25</b>	
Unknown Hummingbird	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	<b>4</b>	<b>0.02</b>	
Unknown Woodpecker	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	<b>11</b>	<b>0.04</b>	
Varied Thrush	0.0	0.9	0.1	0.8	0.4	0.8	0.5	0.0	0.2	0.5	0.0	0.7	0.3	1.3	0.7	0.8	0.0	0.4	0.4	0.0	0.5	0.1	0.1	0.0	<b>99</b>	<b>0.39</b>	



Species	Average Detections/Point by Species (per transect)																								Total # detections per species - all IP transects	Average species detection - all IP points	
	IP 1	IP 2	IP 3	IP 4	IP 5	IP 6	IP 7	IP 8	IP 9	IP 10	IP 11	IP 12	IP 13	IP 14	IP 15	IP 16	IP 18	IP 19	IP 20	IP 21	IP 22	IP 23	IP 25	IP 26			
Vaux's Swift	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4	0.02
Warbling Vireo	0.0	0.1	1.0	0.2	0.2	0.1	0.7	0.7	0.8	0.8	0.0	0.7	0.3	0.0	0.6	0.3	0.3	0.6	0.6	0.2	0.3	0.8	0.0	0.1	102	0.40	
Western Flycatcher	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	13	0.05	
Western Tanager	1.2	0.2	1.2	0.5	0.3	0.0	1.7	0.8	1.1	0.2	0.4	0.9	1.1	0.8	0.5	0.4	1.5	1.4	1.3	0.0	0.8	0.6	1.0	0.9	207	0.81	
Wilson's Warbler	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.3	0.0	0.0	19	0.07	
Yellow Warbler	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	4	0.02	
Yellow-rumped Warbler	0.2	0.9	0.0	0.5	0.9	0.9	0.7	0.7	0.4	0.3	0.3	1.1	0.6	0.3	0.3	0.3	1.5	1.4	0.9	0.7	0.6	1.5	1.3	0.9	182	0.71	
<b>Total birds per transect</b>	<b>177</b>	<b>113</b>	<b>156</b>	<b>144</b>	<b>118</b>	<b>103</b>	<b>98</b>	<b>153</b>	<b>246</b>	<b>127</b>	<b>81</b>	<b>201</b>	<b>132</b>	<b>117</b>	<b>149</b>	<b>125</b>	<b>201</b>	<b>189</b>	<b>200</b>	<b>54</b>	<b>139</b>	<b>205</b>	<b>135</b>	<b>99</b>	<b>3,462</b>		
<b>Average birds per point</b>	<b>13.62</b>	<b>12.56</b>	<b>15.60</b>	<b>13.09</b>	<b>11.80</b>	<b>10.30</b>	<b>16.33</b>	<b>13.91</b>	<b>15.38</b>	<b>11.55</b>	<b>10.13</b>	<b>18.27</b>	<b>10.15</b>	<b>9.75</b>	<b>14.90</b>	<b>10.42</b>	<b>13.40</b>	<b>23.63</b>	<b>18.18</b>	<b>9.00</b>	<b>11.58</b>	<b>17.08</b>	<b>11.25</b>	<b>12.38</b>		<b>13.47</b>	

**Table 2b.** Number of detections per point, and total per transect, for each of the IR transects in 2012.

Species	Average Detections/Point by Species (per transect)						Total # detections per species - all transects	Average species detection - all IR points
	IR1	IR2	IR3	IR4	IR5	IR6		
<i># of points</i>	<i>14</i>	<i>15</i>	<i>8</i>	<i>6</i>	<i>8</i>	<i>13</i>	<i>Total: 64</i>	<i>Avg: 10.67</i>
<b>American Robin</b>	0.00	0.00	0.13	0.00	0.13	0.08	<b>3</b>	<b>0.05</b>
<b>Black-capped Chickadee</b>	0.79	0.00	0.00	0.00	0.00	0.00	<b>11</b>	<b>0.17</b>
<b>Black-headed Grosbeak</b>	0.21	0.60	0.00	0.00	0.13	0.00	<b>13</b>	<b>0.20</b>
<b>Boreal Chickadee</b>	0.00	0.00	0.00	0.00	0.25	0.00	<b>2</b>	<b>0.03</b>
<b>Brown Creeper</b>	0.07	0.00	0.00	0.00	0.00	0.00	<b>1</b>	<b>0.02</b>
<b>Cassin's Finch</b>	0.00	0.00	0.00	0.00	0.00	0.38	<b>5</b>	<b>0.08</b>
<b>Cassin's Vireo</b>	0.21	0.20	0.00	0.00	0.00	0.00	<b>6</b>	<b>0.09</b>
<b>Cedar Waxwing</b>	0.07	0.00	0.00	0.00	0.00	0.00	<b>1</b>	<b>0.02</b>
<b>Chestnut-backed Chickadee</b>	0.00	0.00	0.63	0.00	0.13	0.23	<b>9</b>	<b>0.14</b>
<b>Chipping Sparrow</b>	0.64	0.73	0.00	0.00	0.75	0.77	<b>36</b>	<b>0.56</b>
<b>Clark's Nutcracker</b>	0.00	0.00	0.00	0.33	0.00	0.00	<b>2</b>	<b>0.03</b>
<b>Common Raven</b>	0.21	0.00	0.00	0.00	0.25	0.00	<b>5</b>	<b>0.08</b>
<b>Cooper's Hawk</b>	0.00	0.13	0.00	0.00	0.00	0.00	<b>2</b>	<b>0.03</b>
<b>Dark-eyed Junco</b>	1.29	0.47	0.00	0.17	0.50	0.23	<b>33</b>	<b>0.52</b>
<b>Dusky Flycatcher</b>	0.21	0.27	0.00	0.00	0.00	0.00	<b>7</b>	<b>0.11</b>
<b>Fox Sparrow</b>	0.00	0.00	0.00	0.67	0.00	0.85	<b>15</b>	<b>0.23</b>
<b>Golden-crowned Kinglet</b>	0.43	0.20	1.13	0.17	0.75	0.69	<b>34</b>	<b>0.53</b>
<b>Gray Jay</b>	0.07	0.00	0.00	0.00	0.00	0.15	<b>3</b>	<b>0.05</b>
<b>Hairy Woodpecker</b>	0.07	0.07	0.00	0.00	0.00	0.08	<b>3</b>	<b>0.05</b>
<b>Hammond's Flycatcher</b>	0.14	0.33	0.25	0.00	0.00	0.00	<b>9</b>	<b>0.14</b>
<b>Hermit Thrush</b>	0.00	0.00	0.00	1.67	0.00	0.00	<b>10</b>	<b>0.16</b>
<b>House Wren</b>	0.00	0.00	0.00	0.00	0.00	0.08	<b>1</b>	<b>0.02</b>
<b>Lazuli Bunting</b>	0.64	0.33	0.00	0.00	0.00	0.00	<b>14</b>	<b>0.22</b>
<b>MacGillivray's Warbler</b>	0.00	1.00	0.13	0.00	0.00	0.00	<b>16</b>	<b>0.25</b>
<b>Mountain Bluebird</b>	0.00	0.07	0.00	0.00	0.00	0.08	<b>2</b>	<b>0.03</b>
<b>Mountain Chickadee</b>	0.14	0.20	0.13	1.33	0.00	0.08	<b>15</b>	<b>0.23</b>
<b>Nashville Warbler</b>	0.43	0.00	0.00	0.00	0.00	0.08	<b>7</b>	<b>0.11</b>
<b>Northern Flicker</b>	0.00	0.00	0.00	0.00	0.13	0.15	<b>3</b>	<b>0.05</b>
<b>Olive-sided Flycatcher</b>	0.00	0.20	0.00	0.17	0.00	0.23	<b>7</b>	<b>0.11</b>
<b>Orange-crowned Warbler</b>	0.21	0.40	0.00	0.00	0.25	0.00	<b>11</b>	<b>0.17</b>

Species	Average Detections/Point by Species (per transect)						Total # detections per species - all transects	Average species detection - all IR points
	IR1	IR2	IR3	IR4	IR5	IR6		
<b>Pacific Wren</b>	0.07	0.00	0.63	0.67	0.13	0.31	<b>15</b>	<b>0.23</b>
<b>Pileated Woodpecker</b>	0.00	0.00	0.00	0.17	0.00	0.00	<b>1</b>	<b>0.02</b>
<b>Pine Grosbeak</b>	0.00	0.00	0.00	0.50	0.00	0.00	<b>3</b>	<b>0.05</b>
<b>Pine Siskin</b>	1.21	0.47	0.25	1.00	1.63	3.54	<b>91</b>	<b>1.42</b>
<b>Red Crossbill</b>	0.00	0.00	0.00	0.00	0.00	0.54	<b>7</b>	<b>0.11</b>
<b>Red-breasted Nuthatch</b>	1.29	0.40	0.13	0.67	0.63	0.62	<b>42</b>	<b>0.66</b>
<b>Red-naped Sapsucker</b>	0.00	0.07	0.00	0.00	0.00	0.00	<b>1</b>	<b>0.02</b>
<b>Red-tailed Hawk</b>	0.00	0.07	0.00	0.00	0.13	0.00	<b>2</b>	<b>0.03</b>
<b>Ruby-crowned Kinglet</b>	0.00	0.80	0.00	0.67	0.00	0.31	<b>20</b>	<b>0.31</b>
<b>Rufous Hummingbird</b>	0.00	0.00	0.00	0.00	0.13	0.00	<b>1</b>	<b>0.02</b>
<b>Spotted Towhee</b>	0.00	0.13	0.00	0.00	0.00	0.00	<b>2</b>	<b>0.03</b>
<b>Swainson's Thrush</b>	0.93	0.67	1.88	0.00	0.50	1.00	<b>55</b>	<b>0.86</b>
<b>Townsend's Solitaire</b>	0.07	0.13	0.13	0.00	0.13	0.00	<b>5</b>	<b>0.08</b>
<b>Townsend's Warbler</b>	1.00	1.07	1.13	0.00	2.25	0.15	<b>59</b>	<b>0.92</b>
<b>Unknown Bird</b>	0.21	0.67	0.13	0.00	0.75	0.15	<b>22</b>	<b>0.34</b>
<b>Unknown Flycatcher</b>	0.00	0.00	0.00	0.00	0.00	0.08	<b>1</b>	<b>0.02</b>
<b>Unknown Hummingbird</b>	0.00	0.00	0.00	0.00	0.25	0.00	<b>2</b>	<b>0.03</b>
<b>Unknown Woodpecker</b>	0.14	0.00	0.00	0.00	0.00	0.00	<b>2</b>	<b>0.03</b>
<b>Varied Thrush</b>	0.14	0.00	1.25	0.83	0.00	1.46	<b>36</b>	<b>0.56</b>
<b>Vaux's Swift</b>	0.00	0.00	0.00	0.00	0.00	0.69	<b>9</b>	<b>0.14</b>
<b>Warbling Vireo</b>	0.50	1.93	0.00	0.00	0.50	0.00	<b>40</b>	<b>0.63</b>
<b>Western Flycatcher</b>	0.07	0.00	0.00	0.17	0.00	0.08	<b>3</b>	<b>0.05</b>
<b>Western Tanager</b>	0.71	0.93	0.13	0.00	2.00	0.23	<b>44</b>	<b>0.69</b>
<b>Western Wood-Pewee</b>	0.00	0.13	0.00	0.00	0.00	0.00	<b>2</b>	<b>0.03</b>
<b>White-winged Crossbill</b>	0.00	0.00	0.00	0.17	0.00	0.00	<b>1</b>	<b>0.02</b>
<b>Williamson's Sapsucker</b>	0.00	0.00	0.00	0.17	0.00	0.00	<b>1</b>	<b>0.02</b>
<b>Wilson's Warbler</b>	0.00	0.13	0.00	0.00	0.00	0.23	<b>5</b>	<b>0.08</b>
<b>Yellow-rumped Warbler</b>	0.43	0.80	0.13	2.00	0.75	0.62	<b>45</b>	<b>0.70</b>
<b>Total birds per transect</b>	<b>177</b>	<b>204</b>	<b>65</b>	<b>69</b>	<b>104</b>	<b>184</b>	<b>803</b>	
<b>Average birds per point</b>	<b>12.64</b>	<b>13.60</b>	<b>8.13</b>	<b>11.50</b>	<b>13.00</b>	<b>14.15</b>		<b>12.55</b>