

**Albert Creek Bird Observatory Final Report 2010**



***Prepared by:***

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Society of Yukon Bird Observatories  
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The 2010 operation of the Albert Creek Bird Observatory was made possible due to support and financial contributions from the following organizations.



**Ducks Unlimited Canada**  
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**ALASKA**  
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**Yukon**   
**Bird Club**  
awareness = appreciation = conservation



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Cover Photos (all taken by Jukka Jantunen):

First Row (L to R): Bay-breasted Warbler, Clay-colored Sparrow

Second Row (L to R): Magnolia Warbler, Rusty Blackbird

Third Row (L to R): Red-breasted Nuthatch, Yellow-bellied Sapsucker

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## EXECUTIVE SUMMARY

The Albert Creek Bird Observatory completed its tenth consecutive year of spring and fall migration monitoring during 2010. In spring, the field station operated for a total of 39 days from April 22 to June 6. During fall, the station operated for 49 days from July 24 to September 22. The primary method of monitoring bird migration through the study site is through the use of standardized mist netting and banding of birds captured. Mist netting resulted in the capture and banding of 2,623 birds of 46 species in spring and 1,770 birds of 48 species in fall. Encountered in high numbers in previous seasons, Yellow-rumped Warbler, Wilson's Warbler and Northern Waterthrush were once again among the top species banded during 2010. Species with a restricted range in the Yukon continue to be monitored at Albert Creek, including the following species; Magnolia Warbler, Cape May Warbler, Western Tanager, Swamp Sparrow and White-throated Sparrow. Irruptive migrants (White-winged Crossbill, Pine Siskin) were also banded and observed in relatively high numbers during 2010, primarily during the fall season. The data collected at the observatory in 2010 builds upon the database of knowledge pertaining to the birds of the Yukon. Over the long term, this data will form a crucial step in the calculation of population trend analyses for numerous bird species. The observatory continues to attract numerous volunteers to assist with day to day operations, in 2010 a total of 735 volunteer hours were tallied at the station. Numerous visitors also continue to be attract to the site; this year the station had a total of 156 visitor hours, including a Y2C2 crew

## ACKNOWLEDGEMENTS

Jukka Jantunen & Jillian Johnston were the primary Banders In Charge of the bird observatory during the 2010 season. Jukka and Jillian's excellent bird identification skills and perseverance were once again a definite asset to the quality of the data collected at the observatory. Jukka also provided many of the superb photographs presented in this report.

The following list summarizes the individuals who played a role in the 2010 operation of the Albert Creek Bird Observatory.

Jukka Jantunen	Bander In Charge, Report Editing
Jillian Johnston	Bander In Charge, Report Editing
Ted Murphy-Kelly	Station Manager, Secondary Bander In Charge, Report Editing
Ben Schonewille	Assistant Station Manager, Data Entry/Analysis/Reporting

Cameron Eckert (YG-Environment), Pam Sinclair (CWS) and Katie Aitken (CWS) provided advice and assisted with project logistics. The staff at the Yukon Department of Environment – Watson Lake Office also assisted with project logistics.

Board members of the Society of Yukon Bird Observatories helped administer the Yukon Bird Observatories. The Yukon Conservation Society (Karen Baltgalis, Georgia Greenthams) also assisted in the administration of funds for the project.

The following volunteers assisted with the operation of the observatory; over 30 days – Susan Drury, Marnie Cooke; 10 to 20 days – Jessica Condon, Megan Cohoon, 5 to 10 days – Sarah Davidson, Pam Randles, Mario Benassi, Wayne Kaye, Julie Bauer; 1 to 5 days – Deanna McArthur, Gwen Baluss, Christina Guillemette, Monica Cohoon.

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## 1.0 Introduction

The Albert Creek Bird Observatory operated during the spring and fall migration season in 2010. The observatory completed its tenth year of operation thanks to financial support from several government and non-government agencies. Although the observatory began operation during 2001, monitoring at the site became standardized and more rigorous beginning in 2004.

The goals of the Albert Creek Bird Observatory are to:

- Gather baseline information on birds and bird migration in the Liard region. including specific studies such as feather collecting for stable isotope analysis and color banding.
- Collect data to facilitate the long term monitoring (*i.e.* trend analysis) of birds in the southeast Yukon.
- Conduct and participate in specific studies such as feather collection and color banding of species of interest.
- Provide a setting for the public including school groups to learn about birds and bird migration.
- Provide employment and training opportunities for students and volunteers.
- Provide a unique tourist attraction for the community of Watson Lake

The observatory carries out research on birds which is shared through an international bird banding database (Canadian Wildlife Service's Bird Banding Office and USGS Bird Banding Laboratory), Society of Yukon Bird Observatories annual station reports, and other publications. Many of the birds banded at Albert Creek are highly migratory spending the winter months as far south as Central and South America. In addition to the potential knowledge gained from band recoveries, the observatory also continues to gather baseline data of birds (and their migration) in the Liard region, and the Yukon as a whole. Due to the large landmass of the territory, and the relatively few bird biologists and advanced birders in the Yukon, there is still a great deal to be learned regarding the bird life of the Yukon. This effect is even more pronounced in the southeast Yukon, where a number of species are at the extreme northwest of their range. A number of species are not regularly found west of Albert Creek, thus allowing the observatory to monitor the presence of these species in the territory. The observatory serves as a highly valuable research and monitoring project to better understand the distribution of many of the Yukon's bird species, many of which are considered uncommon or rare. Over the long term, the data collected at the observatory will facilitate trend analysis for a number of species. Such information will be valuable for conservation and monitoring of bird populations not only in the Yukon, but North America as a whole.

The observatory plays a role in education as a place where the public, volunteers and students can take part in a unique, community based research project. Across the Yukon (and the world), there are numerous people who have an interest in birds; however, many find it a daunting task to learn the various species. For such people, a visit to the observatory can be extremely rewarding as during banding operation they often have the opportunity to get close up views of a wide variety of bird species, many of which are difficult to observe in nature. The highly trained individuals working at the observatory have the ability to identify these species with ease and are happy to share their expertise with the public.

## 2.0 Methods

A brief summary of the field protocol is described in the following section; however, a detailed protocol document is currently being developed. The primary method of monitoring the movement of birds through the study site is the use of mist nets for the purpose of capturing and banding birds. The observatory operates with 23 standard mist nets (Figure 1). All nets are 30 mm mesh and 12 m in length, with the exception of nets 18 and 22 which are 18 m in length. The standard mist netting effort begins at official sunrise and continues for 6 hours. The full mist netting effort is achieved only on days when adequate personnel are present onsite and weather conditions are favorable. If this is not possible, the effort is reduced in the number of nets operated rather than reducing the duration of effort.

To supplement the banding data, four short “census legs” were established and used on a trial basis during 2010. Many other observatories operate a longer (1 hour) census through the count area; however, this is not possible at Albert Creek due to inconsistent numbers of qualified observers on site. The short census legs allow for a single observer to census birds without committing a full hour to this activity. On days when bird captures are relatively low, these census legs can be surveyed in combination with the mist net checks.

Incidental observations are also collected on an opportunistic manner while conducting other tasks at the observatory. All monitoring activities at the observatory can be separated into standardized and non-standardized. To facilitate long term analysis of the observatory’s data, the standardized data is collected in the same format year after year. Non standardized activities may include species specific mist nets within the count area or the collection of banding / observation data outside of the standard count period.

### 2.1 Study Site

The bird observatory is located along Albert Creek in the Liard River Valley 15 km west of the community of Watson Lake in the southeast region of the Yukon Territory. The majority of the site is composed of a regenerating forest with the marsh being the defining feature of the study site. The area is dominated by willow (*Salix* spp.), alder (*Alnus* spp.) and regenerating white birch (*Betula papyrifera*) with some mature white spruce (*Picea glauca*), trembling aspen (*Populus tremuloides*) and balsam poplar (*Populus balsamifera*) scattered throughout. The under story vegetation within the regenerating portion of the study site consists primarily of red clover (*Trifolium pretense*), fireweed (*Epilobium augustifolium*), yarrow (*Achillea millefolium*), red raspberry (*Rubus idaeus*), prickly rose (*Rosa acicularis*) as well as various grass species (*Poa* spp). Within the stands of mature white spruce, the under story is dominated by various bryophytes and cranberry (*Vaccinium vitis-idea*) with willow, alder and red osier dogwood (*Cornus stolonifera*) scattered throughout.



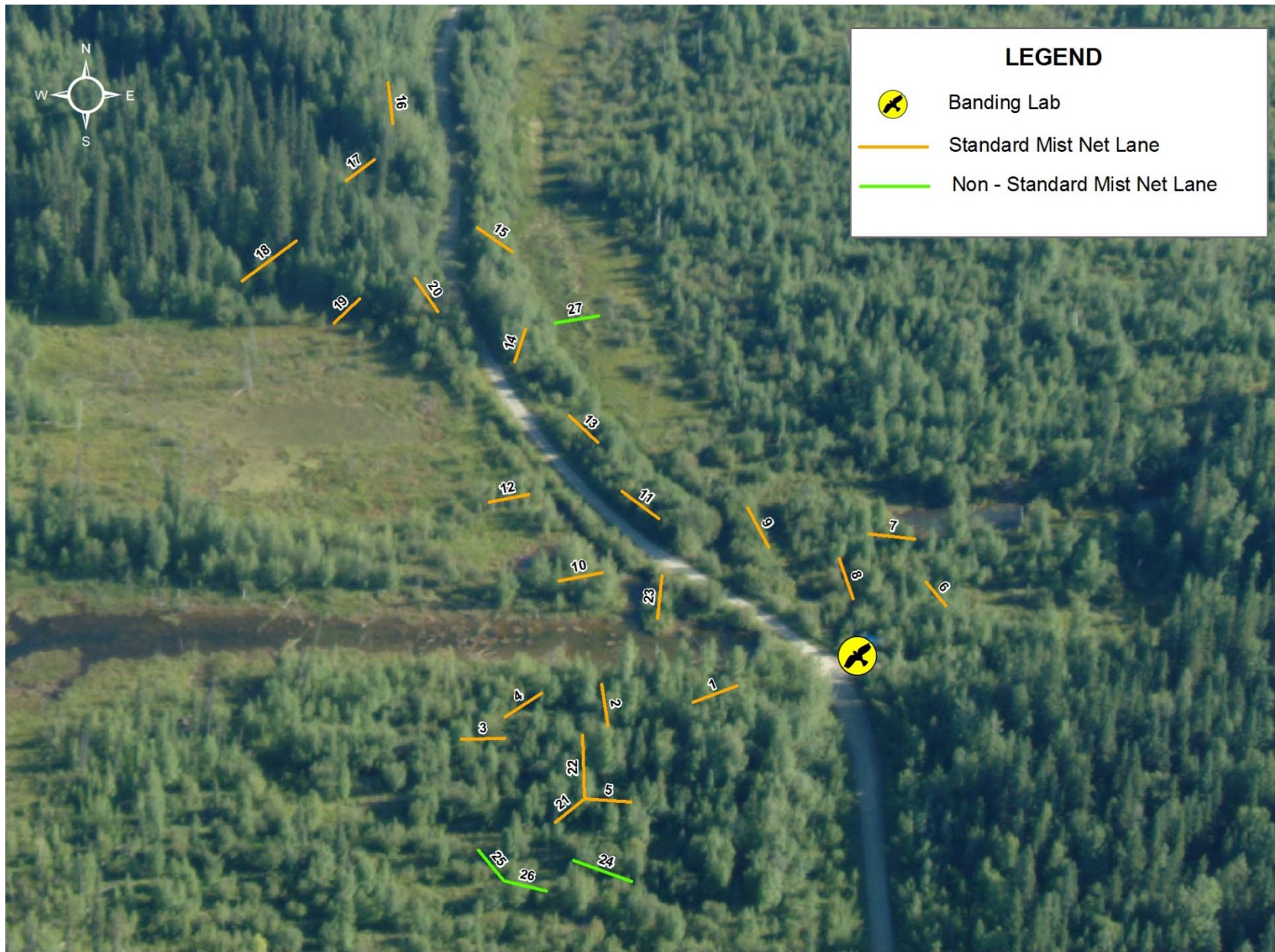


Figure 1. Overview of study area.

### 3.0 Results & Discussion

During the spring season, 2,623 birds of 46 species were banded and 110 species/forms were observed (Table 1). During the fall season, 1,770 birds of 48 species were banded and 104 species/forms were observed (Table 1). The all time total number of birds banded at Albert Creek is now 34,733 individuals of 85 species (Appendix 1). Each component of the 2010 data is summarized and presented in the following subsections; however, a detailed account of the 2010 estimated total data is shown in Appendix 2. Note that unless otherwise stated, the results presented in this report combine and summarize both standard and non-standardized data. The standardized data shall be utilized over the long term for the purposes of conducting species trend analysis. As compared to previous banding totals, the 2010 spring total was well above the 2004-2010 average and was one of the highest to date. The fall banding total was one of the lowest on record since the observatory began full scale operation in 2004 and was well below the seasonal average of 2,150 birds.

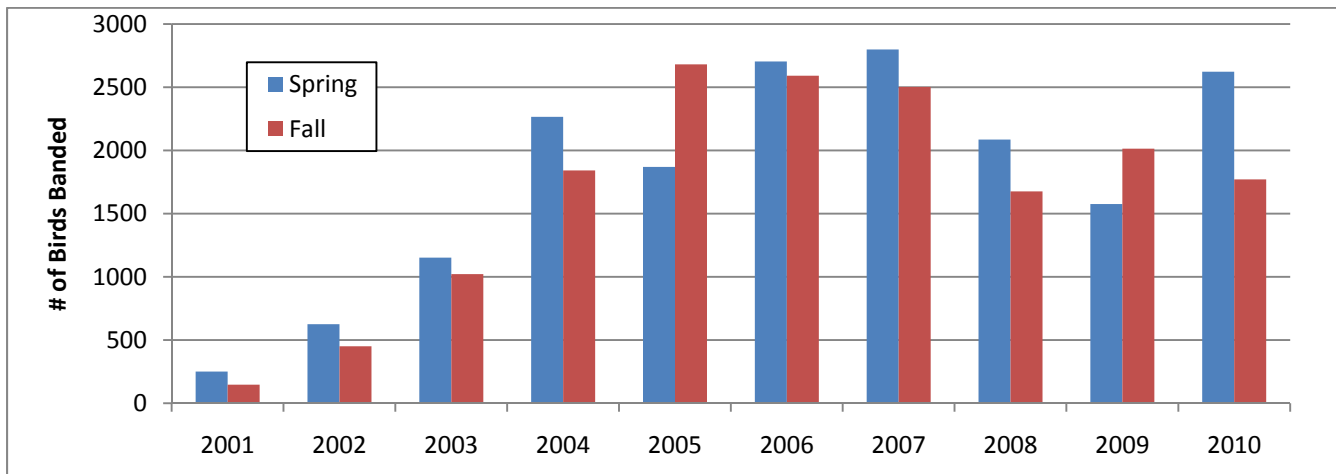


Figure 2. Summary of birds banded at Albert Creek from 2001 to 2010.

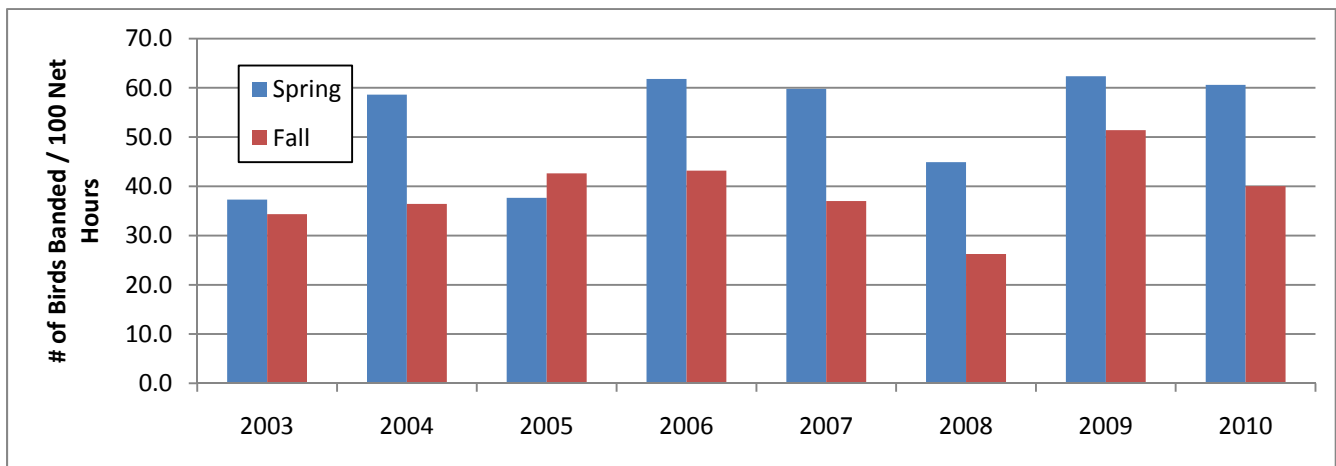


Figure 3. Summary of birds banded per 100 net hours from 2003 to 2010. Note that net effort data is not available for 2001 and 2002.

**Table 1.** Top 10 species banded during the spring of 2010, 2009, 2008, 2007 and 2006.

Species	2010		2009		2008		2007		2006	
	Rank	#	Rank	#	Rank	#	Rank	#	Rank	#
Yellow-rumped “Myrtle” Warbler	1	776	1	505	1	434	9	113	2	364
White-crowned Sparrow	2	262	7	64	5	138	6	217	26	14
Fox Sparrow	3	257	15	11	11	51	13	60	19	28
Wilson’s Warbler	4	249	2	274	4	182	1	369	1	398
Orange-crowned Warbler	5	177	3	170	2	339	5	251	5	214
American Tree Sparrow	6	136	12	28	8	74	2	345	6	196
Common Redpoll	7	127	-	0	9	54	24	12	15	46
Yellow Warbler	8	65	5	96	3	208	4	261	3	313
Northern Waterthrush	9	65	4	113	15	31	7	145	7	91
Blackpoll Warbler	10	62	6	65	6	88	14	57	12	62

**Table 2.** Top 10 species banded during the fall of 2010, 2009, 2008 and 2007.

Species	2010			2009			2008			2007		
	Rank	#	% HY	Rank	#	% HY	Rank	#	% HY	Rank	#	% HY
Northern Waterthrush	1	248	81	2	202	78	2	195	77	3	248	88
Common Yellowthroat	2	205	87	1	233	92	3	191	81	4	217	92
Tennessee Warbler	3	158	97	5	137	99	28	16	93	18	22	82
Ruby-crowned Kinglet	4	93	90	6	121	96	12	53	89	6	184	88
Wilson’s Warbler	5	90	83	3	158	88	4	146	71	7	167	82
Lincoln’s Sparrow	6	89	97	8	99	86	11	57	75	12	74	84
Yellow Warbler	7	85	81	4	157	83	6	93	67	5	214	77
Yellow-rumped “Myrtle” Warbler	8	83	82	12	90	83	5	117	72	1	262	76
Alder Flycatcher	9	78	82	11	93	79	1	202	69	2	253	83
Swainson’s Thrush	10	66	85	14	43	81	9	70	83	9	137	81

Table 3. Birds banded during the spring and fall of 2010.

Common Name	Latin Name	Spring		Fall		Common Name	Latin Name	Spring		Fall	
		# Banded	# Banded / 100 Net Hours	# Banded	# Banded / 100 Net Hours			# Banded	# Banded / 100 Net Hours	# Banded	# Banded / 100 Net Hours
Green-winged Teal	<i>Anas crecca</i>			1	0.023	Cape May Warbler	<i>Dendroica tigrina</i>			1	0.02
Sharp-shinned Hawk	<i>Accipiter striatus</i>			2	0.045	Yellow-rumped Warbler	<i>Dendroica coronata</i>	776	17.93	83	1.88
Solitary Sandpiper	<i>Tringa solitaria</i>	2	0.05			Bay-breasted Warbler	<i>Dendroica castanea</i>			1	0.02
Boreal Owl	<i>Aegolius funereus</i>			2	0.045	Blackpoll Warbler	<i>Dendroica striata</i>	62	1.43	16	0.36
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	7	0.16	16	0.362	American Redstart	<i>Setophaga ruticilla</i>	7	0.16	54	1.22
Three-toed Woodpecker	<i>Picoides dorsalis</i>			1	0.023	Northern Waterthrush	<i>Parkesia noveboracensis</i>	65	1.50	248	5.61
Olive-sided Flycatcher	<i>Contopus cooperi</i>	2	0.05	1	0.023	Common Yellowthroat	<i>Geothlypis trichas</i>	57	1.32	205	4.64
Western Wood-Pewee	<i>Contopus sordidulus</i>	2	0.05			Wilson's Warbler	<i>Wilsonia pusilla</i>	249	5.75	90	2.04
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>			1	0.023	Western Tanager	<i>Piranga ludoviciana</i>	1	0.02	2	0.05
Alder Flycatcher	<i>Empidonax alnorum</i>	7	0.16	78	1.765	American Tree Sparrow	<i>Spizella arborea</i>	136	3.14	31	0.70
Least Flycatcher	<i>Empidonax minimus</i>			15	0.339	Chipping Sparrow	<i>Spizella passerina</i>	9	0.21	2	0.05
Hammond's Flycatcher	<i>Empidonax hammondi</i>	1	0.02	16	0.362	Clay-colored Sparrow	<i>Spizella pallida</i>	1	0.02		
Warbling Vireo	<i>Vireo gilvus</i>	4	0.09	27	0.611	Savannah Sparrow	<i>Passerculus sandwichensis</i>	49	1.13	6	0.14
Gray Jay	<i>Perisoreus canadensis</i>	4	0.09	1	0.023	Fox Sparrow	<i>Passerella iliaca</i>	257	5.94	49	1.11
Tree Swallow	<i>Tachycineta bicolor</i>	4	0.09			Lincoln's Sparrow	<i>Melospiza lincolni</i>	60	1.39	89	2.01
Violet-green Swallow	<i>Tachycineta thalassina</i>	1	0.02			Swamp Sparrow	<i>Melospiza georgiana</i>	6	0.14	20	0.45
Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0.05	6	0.136	White-throated Sparrow	<i>Zonotrichia albicollis</i>	12	0.28	26	0.59
Boreal Chickadee	<i>Poecile hudsonicus</i>	5	0.12	14	0.317	White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	262	6.05	15	0.34
Red-breasted Nuthatch	<i>Sitta canadensis</i>			1	0.023	Golden-crowned Sparrow	<i>Zonotrichia atricapilla</i>	1	0.02		
Ruby-crowned Kinglet	<i>Regulus calendula</i>	42	0.97	93	2.104	Dark-eyed Junco	<i>Junco hyemalis</i>	59	1.36	53	1.20
Gray-cheeked Thrush	<i>Catharus minimus</i>	6	0.14	5	0.113	Lapland Longspur	<i>Calcarius lapponicus</i>	1	0.02	1	0.02
Swainson's Thrush	<i>Catharus ustulatus</i>	29	0.67	66	1.493	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	1	0.02		
Hermit Thrush	<i>Catharus guttatus</i>	2	0.05	10	0.226	Rusty Blackbird	<i>Euphagus carolinus</i>	3	0.07	26	0.59
American Robin	<i>Turdus migratorius</i>	17	0.39	11	0.249	Brown-headed Cowbird	<i>Molothrus ater</i>	2	0.04		
Varied Thrush	<i>Ixoreus naevius</i>	1	0.02	7	0.158	Purple Finch	<i>Carpodacus purpureus</i>	14	0.32		
Cedar Waxwing	<i>Bombycilla cedrorum</i>			4	0.090	White-winged Crossbill	<i>Loxia leucoptera</i>			10	0.23
Tennessee Warbler	<i>Oreothlypis peregrina</i>	26	0.60	158	3.575	Common Redpoll	<i>Acanthis flammea</i>	127	2.9		
Orange-crowned Warbler	<i>Oreothlypis celata</i>	177	4.09	61	1.380	Pine Siskin	<i>Spinus pinus</i>			41	0.93
Yellow Warbler	<i>Dendroica petechia</i>	65	1.50	85	1.923	<b>TOTAL INDIVIDUALS</b>		<b>2,623</b>	<b>60.61</b>	<b>1,770</b>	<b>40.05</b>
Magnolia Warbler	<i>Dendroica magnolia</i>			20	0.452	<b>TOTAL SPECIES</b>		<b>46</b>		<b>48</b>	

During the spring season, there were two notable peaks in bird migration as represented by the weekly banding totals. The first peak occurred during week 1 (22-28 Apr) when the sparrows were captured in high numbers. Species which dominated the catch during this week included the following (from greatest to least); Fox Sparrow (180), White-crowned Sparrow (142), American Tree Sparrow (109) and Common Redpoll (103). The second peak of the spring season occurred during weeks 4 and 5 (13-19 May, 20-27 May) when the neotropical migrants, including the following (from greatest to least); Yellow-rumped Warbler (629), Wilson's Warbler (221), Orange-crowned Warbler (154), Blackpoll Warbler (61), Northern Waterthrush (61) and Yellow Warbler (54).

**Table 4.** Summary statistics of the 2010 spring season.

Week	Date	Days Operated	Birds Banded				Total Species Observed
			#	Species	Net Hours	#/100 Net Hours	
1	22 – 28 Apr	7	645	17	764.8	84.4	53
2	29 Apr – 5 May	6	329	18	694.3	47.4	62
3	6 – 12 May	3	100	13	289.5	34.5	67
4	13 – 19 May	6	642	25	755.4	85.0	70
5	20 – 27 May	7	770	29	1017.6	75.7	79
6	28 May – 3 Jun	7	96	23	570.0	16.8	71
7	4 – 6 Jun	3	41	13	236.4	17.3	57
ALL		39	2,623	46	4,328	60.6	110

During the fall season, the highest weekly banding total occurred during week 1 (24-30 July); however, these capture rates may have been more of a reflection of local productivity than migration. Very high numbers of juvenile birds were captured with the following species dominating the catch during this week (from greatest to least); Tennessee Warbler (127), Common Yellowthroat (52), Northern Waterthrush (40) and Lincoln's Sparrow (28). Later during the season, the primary peak in migration took place during week 4 (14-20 Aug). Species which dominated the catch during this week included the following (from greatest to least); Common Yellowthroat (42), Northern Waterthrush (41), Alder Flycatcher (29), Yellow Warbler (27) and Wilson's Warbler (26).

**Table 5.** Summary statistics of the 2010 fall season.

Week	Date	Days Operated	Birds Banded				Total Species Observed
			#	Species	Net Hours	#/100 Net Hours	
1	24 – 30 Jul	5	425	29	355.3	119.6	69
2	31 Jul – 6 Aug	5	241	28	598.7	40.3	47
3	7 – 13 Aug	7	198	25	681.0	29.1	60
4	14 – 20 Aug	6	279	29	503.0	55.5	54
5	21 – 27 Aug	5	152	28	431.1	32.3	52
6	28 Aug – 3 Sep	4	172	24	670.9	25.6	53
7	4 – 10 Sep	7	144	22	466.2	30.9	47
8	11 – 17 Sep	6	116	22	402.3	28.8	48
9	18 – 22 Sep	4	43	9	311.8	13.8	38
ALL		49	1,770	48	4,420	40.0	104

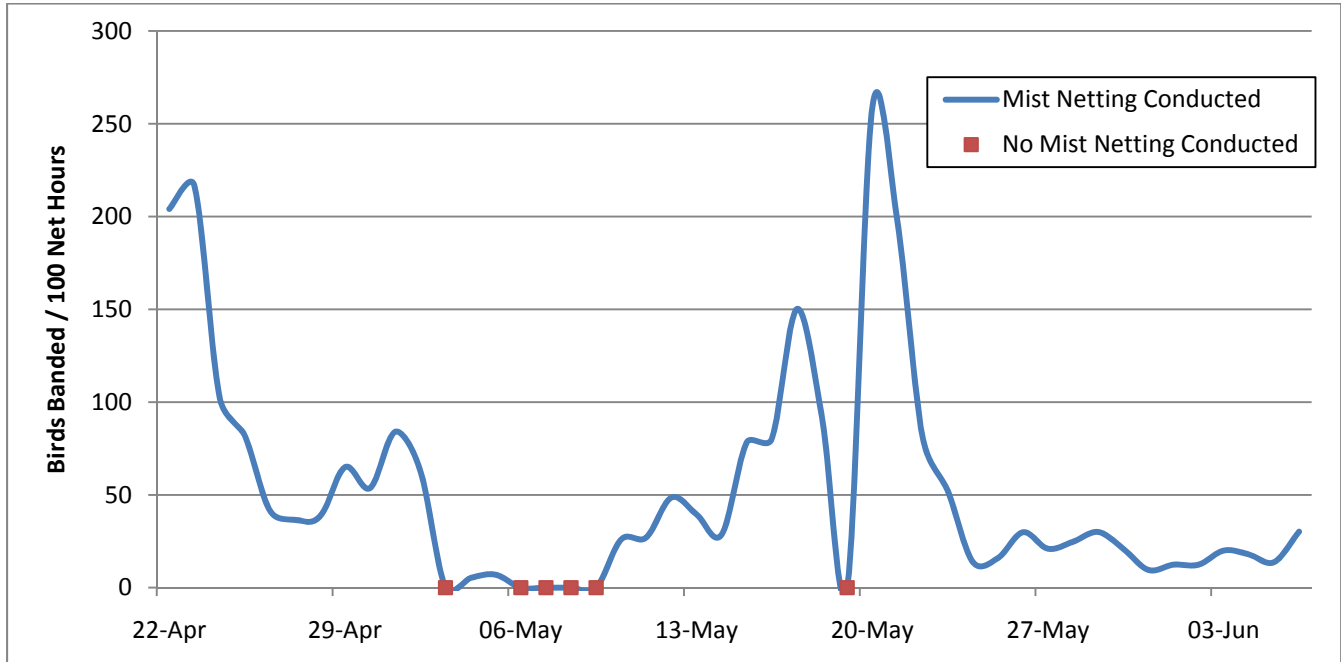


Figure 4. Summary of birds banded per 100 net hours during the spring of 2010.

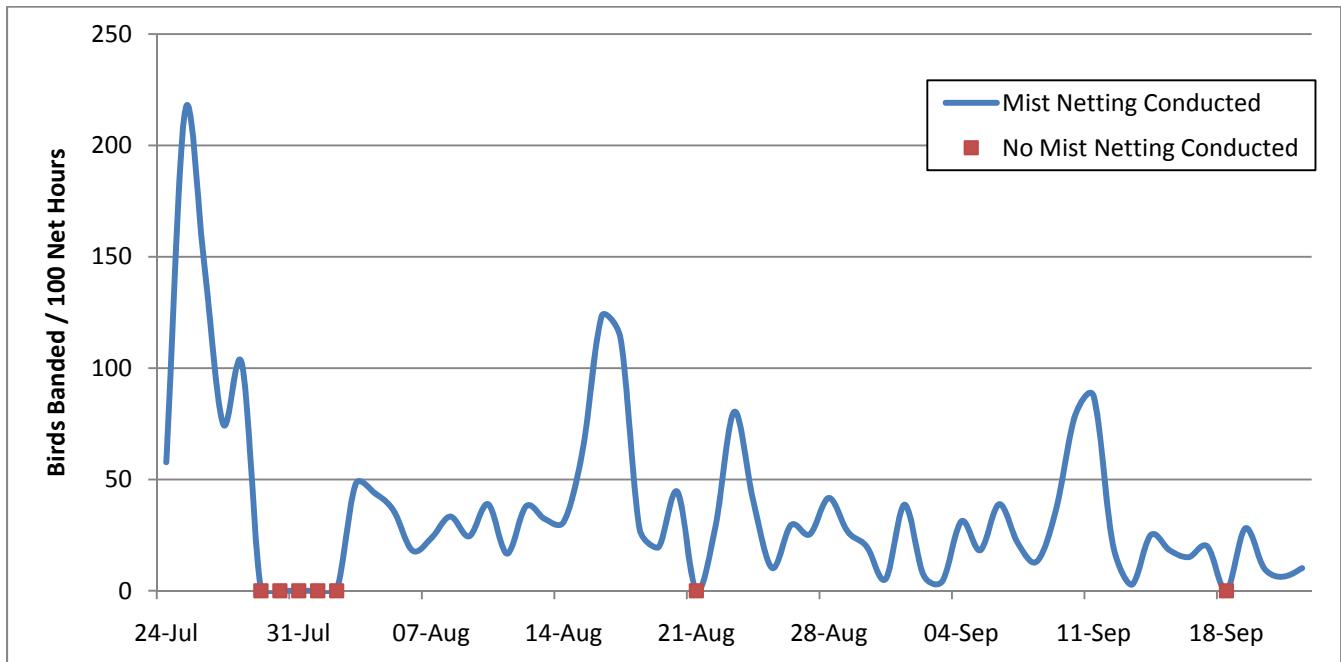


Figure 5. Summary of birds banded per 100 net hours during the fall of 2010.

The productivity of the standard mist nets indicate that the highest net captures were in nets within and adjacent to marsh habitats within the study including nets 7, 9, 15 and 23 (Figure 6). This is presumably due to the edge habitats presented by these areas which provide feeding opportunities and movement corridors within the marsh. Note that the net capture rates are lower in areas with a

higher vegetation canopy (*ie*, net 18). Although the overall captures are low for these nets, the species captured are often under represented by other nets with higher overall capture rates.

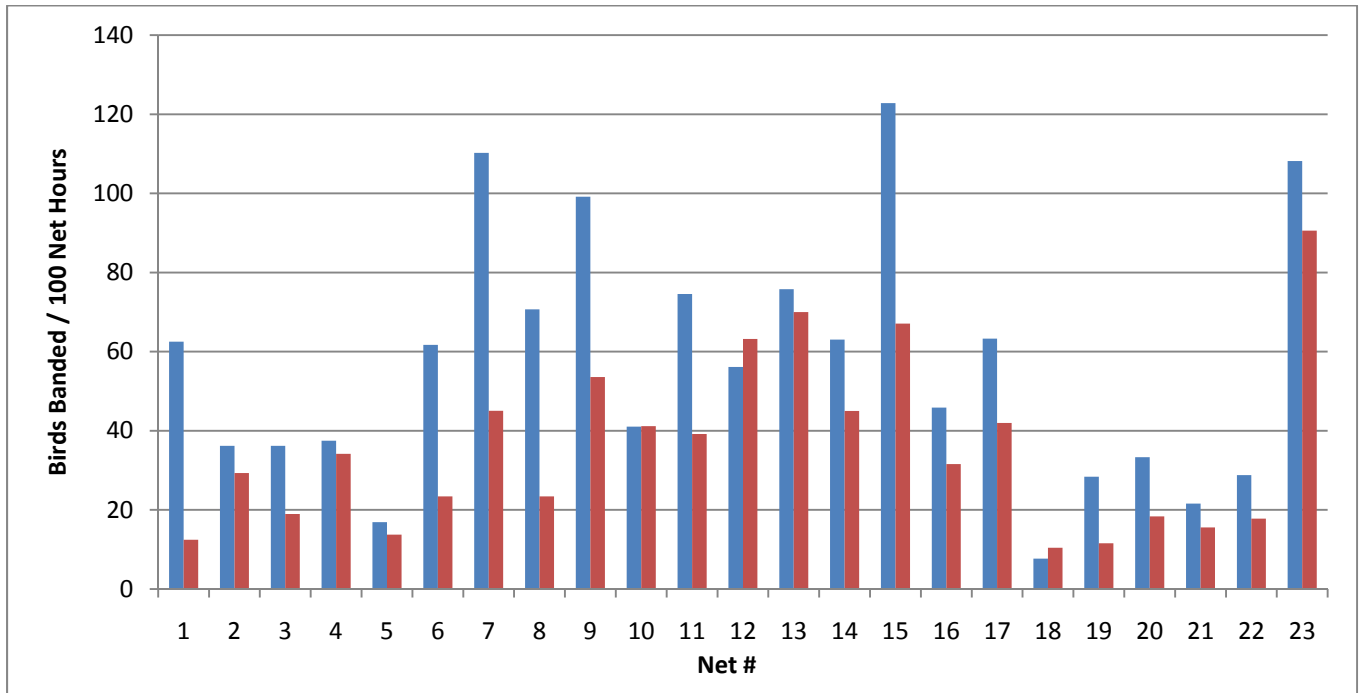


Figure 6. Number of birds banded per mist net during the spring and fall of 2010.

### 3.1 Migration Timing

As the observatory operation includes standardized mist netting on a daily basis, the bird capture data collected can be used to investigate the migration timing of numerous bird species. A summary of the 2010 spring and fall migration is presented in the following sub-sections.

#### 3.1.1 Spring

Generalized migration timing for temperate, neotropical and irruptive migrants during the spring of 2010 is presented in Figure 7. In spring, there is a notable difference in migration timing between temperate and neotropical migrants. The peak in temperate migrant capture rates was during the first week of operation. Captures of neotropical migrants gradually increased to a peak during the week of May 19, after which the captures decreased quickly.

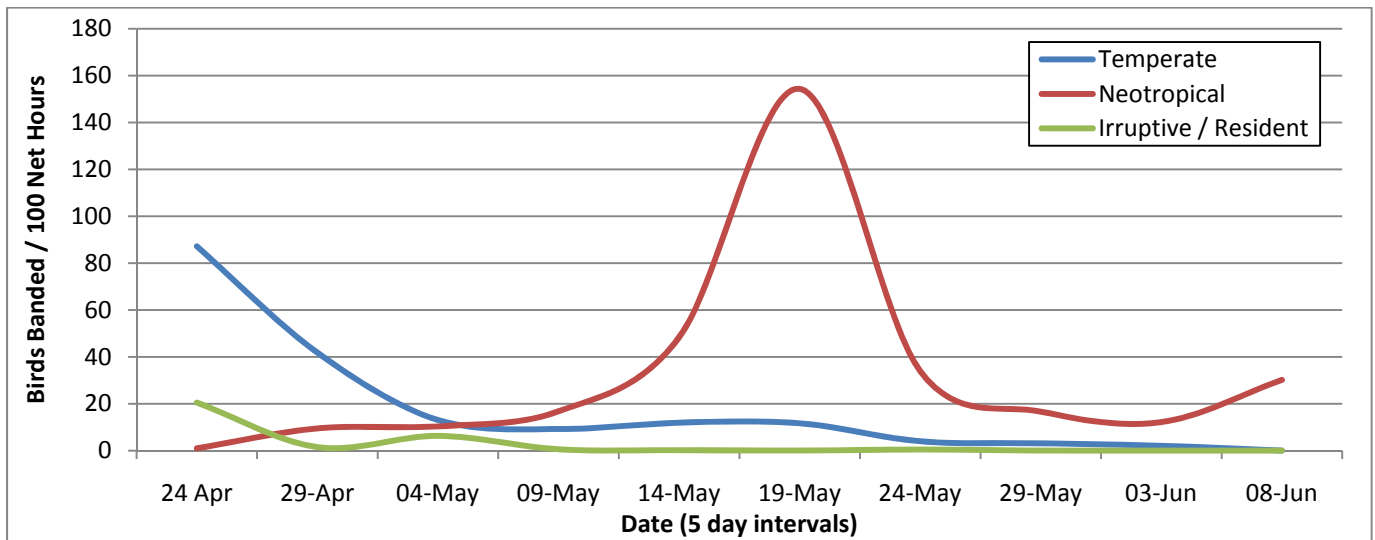


Figure 7. Migration timing for temperate, neotropical and irruptive migrants/residents banded during the spring of 2010.

For species which are encountered regularly during spring migration, it is possible to investigate arrival dates between years through a combination of available banding and general observation data (Table 6). Most species show a high degree of consistency in arrival dates between years. However, there is a small degree of variation between years which is likely a result of varying weather conditions. For example, many species were recorded relatively earlier during the spring of 2010, presumably due to the warm and early spring.

Table 6. Summary of spring arrival dates for select species at Albert Creek from 2004 to 2010.

Species	Spring Arrival Dates							2004 to 2010 Average Arrival Date
	2010	2009	2008	2007	2006	2005	2004	
<b>Station Opening Date</b>	<b>22 April</b>	<b>11 May</b>	<b>24 April</b>	<b>23 April</b>	<b>23 April</b>	<b>24 April</b>	<b>30 April</b>	
Solitary Sandpiper	10 May	-	12 May	11 May	4 May	7 May	13 May	9 May
Yellow-bellied Sapsucker	24 Apr	-	9 May	2 May	24 April	25 April	1 May	29 April
Alder Flycatcher	26 May	21 May	26 May	23 May	23 May	25 May	1 June	25 May
Least Flycatcher	29 May	4 Jun	26 May	22 May	23 May	29 May	26 May	27 May
Hammond’s Flycatcher	2 May	-	12 May	14 May	7 May	29 April	3 May	6 May
Warbling Vireo	16 May	21 May	20 May	19 May	20 May	12 May	18 May	18 May
Gray-cheeked Thrush	15 May	23 May	16 May	11 May	14 May	13 May	19 May	15 May
Swainson’s Thrush	16 May	19 May	11 May	11 May	14 May	13 May	15 May	14 May
Tennessee Warbler	24 May	26 May	25 May	24 May	23 May	22 May	26 May	24 May
Orange-crowned Warbler	24 Apr	-	3 May	28 Apr	26 April	29 April	1 May	28 April
Yellow Warbler	17 May	20 May	18 May	18 May	14 May	15 May	17 May	17 May
Cape May Warbler	30 May	26 May	26 May	28 May	1 June	1 June	8 June	30 May
Yellow-rumped Warbler	21 Apr	-	30 Apr	23 Apr	24 April	25 April	1 May	25 April
Blackpoll Warbler	15 May	23 May	9 May	16 May	14 May	16 May	17 May	15 May
American Redstart	26 May	29 May	27 May	27 May	27 May	27 May	26 May	27 May
Northern Waterthrush	10 May	-	10 May	5 May	7 May	11 May	12 May	9 May
Common Yellowthroat	13 May	20 May	10 May	11 May	15 May	14 May	21 May	14 May
Wilson’s Warbler	10 May	-	3 May	11 May	6 May	3 May	1 May	5 May
Savannah Sparrow	29 Apr	-	29 Apr	23 Apr	27 April	2 May	6 May	29 April
Swamp Sparrow	5 May	22 May	9 May	5 May	12 May	27 April	-	8 May
White-throated Sparrow	1 May	18 May	10 May	15 May	7 May	15 May	19 May	12 May
Red-winged Blackbird	27 Apr	-	3 May	3 May	28 April	27 April	5 May	30 April



### 3.1.2 Fall

Generalized migration timing for temperate, neotropical and irruptive migrants during the fall of 2010 is presented in Figure 8. The pattern of migration timing was not as distinct between temperate and neotropical migrants as compared to the spring season. A notable finding from this analysis shows that temperate migrant captures did not surpass neotropical migrants until the week of September 9.

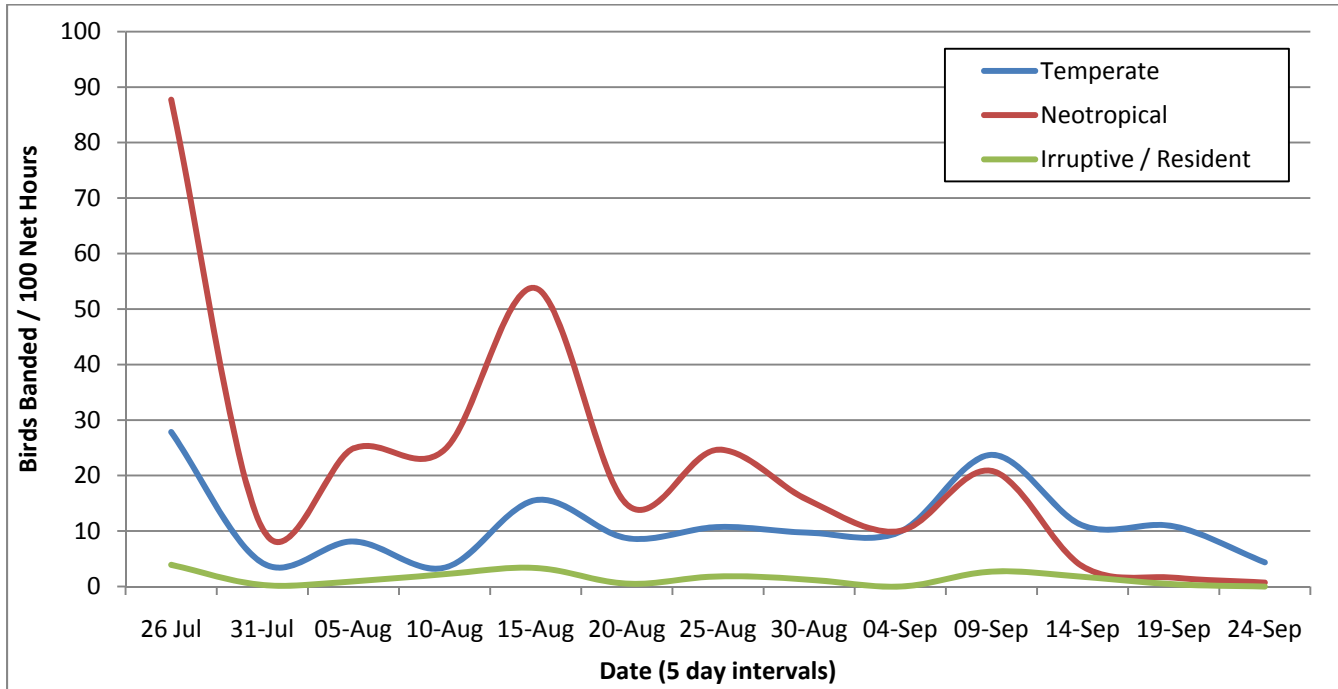


Figure 8. Migration timing for temperate, neotropical and irruptive migrants/residents banded during the fall of 2010.

A summary of fall departure dates are shown for a number of species in Table 7. A number of species are excluded from this table as they are regularly encountered at the end of the fall season.

Table 7. Summary of fall departure dates for select species at Albert Creek from 2005 to 2010.

Species	Latest Fall Dates						2004 to 2010 Average Departure Date
	2010	2009	2008	2007	2006	2005	
<b>Station Closing Date</b>	<b>22 Sep</b>	<b>22 Sep</b>	<b>23 Sep</b>	<b>22 Sep</b>	<b>23 Sep</b>	<b>23 Sep</b>	
Alder Flycatcher	17 Sep	22 Sep	18 Sep	11 Sep	22 Sep	12 Sep	17 Sep
American Redstart	6 Sep	10 Sep	15 Sep	6 Sep	12 Sep	10 Sep	9 Sep
Blackpoll Warbler	11 Sep	15 Sep	7 Sep	3 Sep	20 Sep	10 Sep	11 Sep
Least Flycatcher	24 Aug	26 Aug	22 Aug	24 Aug	29 Aug	29 Aug	25 Aug
Magnolia Warbler	24 Aug	4 Sep	30 Aug	29 Aug	3 Sep	6 Sep	31 Aug
Northern Waterthrush	16 Sep	17 Sep	18 Sep	18 Sep	15 Sep	17 Sep	16 Sep
Swainson’s Thrush	11 Sep	20 Sep	12 Sep	10 Sep	19 Sep	16 Sep	14 Sep
Tennessee Warbler	23 Aug	29 Aug	9 Sep	9 Sep	1 Sep	19 Aug	30 Aug
Warbling Vireo	28 Aug	2 Sep	2 Sep	3 Sep	2 Sep	3 Sep	1 Sep
White-throated Sparrow	20 Sep	16 Sep	21 Sep	20 Sep	18 Sep	21 Sep	19 Sep
Yellow Warbler	11 Sep	11 Sep	19 Sep	7 Sep	13 Sep	3 Sep	10 Sep

### 3.2 Band Repeats, Returns & Recoveries

The proportion of band repeats was 11.6 % and 10.7% during spring and fall, respectively (Table 8). Species which breed within the study site have a substantially higher rate of individuals recaptured, particularly during the fall season. Species which exhibit this pattern include Common Yellowthroat, Northern Waterthrush, Swamp Sparrow, Lincoln’s Sparrow and White-throated Sparrow.

**Table 8.** Summary of band repeats during the spring 2010 season.

Species	Spring		Fall	
	# of Individuals Recaptured	% of 2010 Original Bandings	# of Individuals Recaptured	% of 2010 Original Bandings
Yellow-bellied Sapsucker	1	14.3	1	6.3
Alder Flycatcher	-	-	1	1.3
Least Flycatcher	-	-	1	6.7
Hammond’s Flycatcher	-	-	2	12.5
Gray Jay	4	100	1	100.0
Black-capped Chickadee	-	-	4	66.7
Boreal Chickadee	1	20.0	1	7.1
Ruby-crowned Kinglet	-	-	2	2.2
Swainson’s Thrush	2	6.9	8	12.1
Hermit Thrush	-	-	2	20.0
American Robin	3	17.6	-	-
Varied Thrush	-	-	1	14.3
Tennessee Warbler	3	11.5	6	3.8
Orange-crowned Warbler	14	7.9	-	-
Yellow Warbler	3	4.6	9	10.6
Magnolia Warbler	-	-	3	15.0
Yellow-rumped Warbler	51	6.6	2	2.4
Blackpoll Warbler	2	3.2	-	-
American Redstart	-	-	7	13.0
Northern Waterthrush	12	18.5	39	15.7
Common Yellowthroat	8	14.0	56	27.3
Wilson’s Warbler	24	9.6	1	1.1
American Tree Sparrow	24	17.6	1	3.2
Chipping Sparrow	1	11.1	-	-
Savannah Sparrow	8	16.3	-	-
Fox Sparrow	18	7.0	1	2.0
Lincoln’s Sparrow	8	13.3	22	24.7
Swamp Sparrow	2	33.3	7	35.0
White-throated Sparrow	2	16.6	9	34.6
White-crowned Sparrow	105	40.1	-	-
Golden-crowned Sparrow	1	100	-	-
Dark-eyed Junco	6	10.5	1	1.9
White-winged Crossbill	-	-	2	20.0
ALL SPECIES	303	11.6	190	10.7

Band returns (individuals banded at the site in previous years) typically represent individuals that breed within the study site as the likelihood of re-trapping migrants is relatively low. During 2010, the observatory had 44 band returns representing 19 species (Table 9). The oldest band return was an American Robin originally banded at the site on May 20, 2004. This individual was banded as an adult female and was at least 7 years old as of the summer of 2010. Species well represented in the band returns, such as Common Yellowthroat, Northern Waterthrush, Yellow-bellied Sapsucker and Warbling Vireo are common breeding birds at Albert Creek. Based upon the date of recapture, a single Dark-eyed Junco recovered in late September was a possible migrant return. If this individual was a local breeder, it is highly likely that it would have been captured prior to September 22.

**Table 9.** Summary of band returns during the spring and fall 2010 seasons.

Species	Band Number	Banded		Recaptured
		Date	Age – Sex	Date
Alder Flycatcher	2490-54860	3 Jun 07	AHY-U	4 Jun 10
American Redstart	2480-02814	30 May 08	ASY-F	29 May 10
American Redstart	2410-36726	5 Aug 06	AHY-F	27 Jul 10
American Robin	852-55788	20 May 04	AHY-F	10 May 10
American Robin	852-55911	15 May 06	SY-M	10 May 10
American Robin	1232-23902	21 May 09	ASY-M	24 Apr 10
Chipping Sparrow	2490-47713	26 May 08	ASY-U	2 Jun 10
Common Yellowthroat	2400-24017	18 Aug 05	AHY-M	20 May 10
Common Yellowthroat	2430-39890	27 Jul 06	HY-U	21 May 10
Common Yellowthroat	2490-47903	1 Jun 08	AHY-M	25 May 10
Common Yellowthroat	2490-49392	20 May 09	ASY-M	20 May 10
Common Yellowthroat	2490-52681	31 Aug 08	AHY-F	29 May 10
Common Yellowthroat	2600-08100	26 Aug 09	AHY-M	27 May 10
Common Yellowthroat	2490-49482	6 Jun 09	SY-F	24 Aug 10
Common Yellowthroat	2490-52681	31 Aug 08	AHY-F	7 Aug 10
Common Yellowthroat	2490-52811	3 Sep 08	HY-M	4 Aug 10
Common Yellowthroat	2600-08100	26 Aug 09	AHY-M	8 Aug 10
Dark-eyed Junco	1911-42228	25 Aug 05	HY-U	22 Sep 10
Hairy Woodpecker	1232-23910	24 May 09	ATY-M	26 May 10
Hermit Thrush	2261-82608	15 May 09	SY-U	28 May 10
Lincoln's Sparrow	1911-42109	26 Jul 05	AHY-F	23 May 10
Northern Waterthrush	2400-25630	3 Aug 05	HY-U	21 May 10
Northern Waterthrush	2430-43999	31 May 06	ASY-U	18 May 10
Northern Waterthrush	2490-49323	27 May 09	ASY-U	24 May 10
Northern Waterthrush	2490-52209	8 Aug 08	AHY-U	18 May 10
Northern Waterthrush	2490-52568	26 Aug 08	AHY-U	26 May 10
Northern Waterthrush	2490-52223	9 Aug 08	HY-U	19 Aug 10
Purple Finch	1921-93171	10 May 08	ASY-M	25 May 10
Swainson's Thrush	2261-82671	11 Aug 09	HY-U	30 May 10
Swainson's Thrush	2261-82728	27 Aug 09	AHY-U	25 May 10
Tennessee Warbler	2520-34528	4 Jun 09	ASY-M	26 May 10
Varied Thrush	1232-23784	27 Aug 08	HY-M	4 May 10
Warbling Vireo	2430-39860	7 Jun 06	ASY-U	30 May 10
Warbling Vireo	2490-54559	26 May 07	ASY-U	29 May 10
Warbling Vireo	2490-47999	26 Jul 08	AHY-F	7 Aug 10

**Table 9 (continued).** Summary of band returns during the spring and fall 2010 seasons.

Species	Band Number	Banded		Recaptured
		Date	Age – Sex	Date
Warbling Vireo	2490-52005	27 Jul 08	AHY-F	25 Jul 10
White-throated Sparrow	2261-82053	22 May 07	SY-U	12 May 10
White-throated Sparrow	2261-82642	23 May 09	SY-U	16 May 10
Yellow-bellied Sapsucker	1951-49102	28 Jul 05	HY-U	12 May 10
Yellow-bellied Sapsucker	2231-21528	29 May 09	TY-M	2 Jun 10
Yellow-bellied Sapsucker	2231-21536	24 May 09	SY-M	29 Apr 10
Yellow-bellied Sapsucker	2231-21537	29 May 09	SY-M	23 May 10
Northern Flicker	1013-51134	10 May 08	ASY-M	26 May 10
Yellow Warbler	2490-49673	16 Aug 09	AHY-M	28 May 10

Foreign band recoveries are a very infrequent event; the observatory's first foreign band recovery was a hatch year male Yellow-rumped Warbler banded at the site on July 26, 2010 and recovered in Louisiana on November 2, 2010. At the time of report preparation, additional details regarding the recovery were unavailable.

### 3.3 Molt Scoring

As supplementary information, data was collected on the stage of molt for a large proportion of the birds banded. Although information on the prebasic moult (amount of juvenile plumage remaining) was collected for hatch year birds, a particular emphasis was placed upon collecting wing molt scores for molting adult individuals. Wing molt score is achieved by assigning each individual wing flight feather a score from zero (old feather remaining) to five (new feather fully grown) and adding them together. During the fall of 2010, 118 molt scores were collected from 96 individuals of 18 species.

**Table 10.** Summary of molt scores collected during the fall 2010 season.

Species	Number of Individuals Scored	Total Number of Molt Scores
American Redstart	8	10
American Robin	3	3
Blackpoll Warbler	1	1
Common Yellowthroat	20	30
Hermit Thrush	1	1
Lincoln's Sparrow	3	3
Yellow-rumped Warbler	10	10
Northern Waterthrush	9	13
Pine Siskin	7	7
Ruby-crowned Kinglet	6	6
Rusty Blackbird	5	5
Swamp Sparrow	1	1
Swainson's Thrush	5	5
Tennessee Warbler	3	4
Varied Thrush	1	1
White-throated Sparrow	3	5
White-winged Crossbill	3	3
Yellow Warbler	7	10

### 3.4 Census Legs

In an attempt to boost the observational data collected at the observatory, various methods have been used. In the spring season, set location point counts were sampled sporadically throughout the season. As an alternate method, 4 census legs were established within the count area. The rationale for short distance census legs rather than a full length census is that shorter legs are easier to complete with a limited number of qualified observers. During 2010, 58 census legs were surveyed on 32 days of the observatory's operation during the fall season. Overall, the census legs were successful in boosting the number of birds counted on a daily basis. On a number of occasions, the census legs identified species not counted using other methods. The study site is relatively large and the census legs allow the onsite observers to better sample the birds present at the site on a daily basis.

### 3.5 Captures / Observations of Rare and Uncommon Species

The vast majority of birds banded and observed at Albert Creek are species which are common and widespread north and west of the study site. As the observatory operates on a daily basis throughout the spring and fall migration seasons, there are often a number of interesting and notable species captured and/or observed at the site. The following section summarizes the interesting and/or notable captures and sightings during 2010 as well as the occurrence of the species not found farther west and north in the Yukon than Albert Creek.

#### Cinnamon Teal (*Anas cyanoptera*)

Encountered annually in small numbers in the southern Yukon, Albert Creek's first Cinnamon Teal was observed on June 1.

#### Sora (*Porzana carolina*)

Sora is the only species of rail recorded in the Yukon and it is uncommon at productive wetlands, primarily in southern portion of the territory. In 2010, this species was observed on 2 days during the spring season; 1 on May 28 and 2 on June 4. Single birds were also observed on 4 days (July 25 to 28) during the fall season.



**Photo 1.** Sora observed on 28 May (Photo: Jukka Jantunen).

**Barred Owl (*Strix varia*)**

The Yukon’s first Barred Owl was documented at Albert Creek during the spring season. It was first heard on April 20 and observed on 20 days up until June 4. Presumably the same individual was also heard on August 26.



**Photo 2.** Barred Owl observed on 1 Jun (Photo: Jukka Jantunen)

**Yellow-bellied Flycatcher (*Empidonax flaviventris*)**

Yellow-bellied Flycatcher is one of the least frequently encountered *Empidonax* flycatchers at Albert Creek. During 2010, a single individual was observed on June 5 and a single hatch year individual was banded on August 8. To date, a total of 23 individuals have been banded at the station; 5 in spring and 18 in fall. This species is a late spring migrant, the earliest individual banded was on June 4 (2007). In most years, the station does not operate later than June 6 and therefore this species is likely underrepresented in the spring data. In fall, the banding dates range from July 29 to September 3 with a median date of August 17.

**Table 11.** Summary of Yellow-bellied Flycatchers banded to date at Albert Creek.

Season	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Spring	0	1	0	2	1	0	1	0	0	0
Fall	0	4	0	1	2	0	2	2	6	1

**American Crow (*Corvus brachyrhynchos*)**

American Crow is a species which appears to be increasing in numbers in the Yukon and it is now regularly encountered at a number of locations near Albert Creek, including the town of Watson Lake, Watson Lake airport and Upper Liard. In 2010, this species was encountered on 13 days during the spring from April 22 to June 4 with a high count of 3 individuals on May 10. In fall, single birds were observed on 6 days from July 25 to September 3.

### Cedar Waxwing (*Bombycilla cedrorum*)

Unlike the more common Bohemian Waxwing, Cedar Waxwing is relatively rare in the Yukon and is encountered sporadically in the southern portion of the territory. In 2010, 4 adults were banded. Over the duration of the fall season, a total of 52 bird days were counted and the species was observed on 20 days from July 24 to August 29. The high count was 12 individuals on August 7. To date, a total of 24 individuals have been banded at the observatory, all during the fall season.

**Table 12.** Summary of Cedar Waxwings banded to date at Albert Creek.

Season	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Spring	0	0	0	0	0	0	0	0	0	0
Fall	0	0	0	8	0	0	8	3	1	4

### Magnolia Warbler (*Dendroica magnolia*)

In most of the Yukon, Magnolia Warbler is extremely rare; however, it is a regular breeding species in the southeast portion of the territory. In 2010, 2 individuals were banded in spring and 20, all hatch year birds, in the fall. To date, 283 individuals have been banded at the observatory, with the majority (259, 92%) during the fall season. In spring, the earliest individual banded was on May 28 (2007); however, the majority (64%) have been banded after June 4. In fall, individuals have been banded from July 25 to September 11; only 3% of the individuals banded have been in September.

**Table 13.** Summary of Magnolia Warblers banded to date at Albert Creek.

Season	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Spring	1	2	1	4	4	1	5	4	0	2
Fall	1	22	36	26	19	32	38	38	27	20



**Photo 3.** Second year male Magnolia Warbler banded Jun1, 2010 (left); hatch year male Magnolia Warbler banded on July 26, 2010 (right; Photos – Jukka Jantunen).

### Cape May Warbler (*Dendroica tigrina*)

Similar to Magnolia Warbler, the Cape May Warbler's Yukon range is primarily restricted to the southeast portion of the territory. In recent years, this species has become more common at Albert

Creek and local breeding is highly likely. In 2010, 1 hatch year individual was banded on August 6. Although none were banded during the spring season, the species was encountered on 7 days from May 30 to June 5, with a high count of 2 individuals on June 1, 2 and 3. Of the 14 individuals banded to the date, the earliest one was on May 26 (2008) and the latest is on September 6 (2007).

**Table 14.** Summary of Cape May Warblers banded to date at Albert Creek.

Season	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Spring	0	0	0	0	0	0	2	3	1	0
Fall	0	0	0	0	2	0	3	2	0	1



**Photo 4.** Male Cape May Warbler observed on June 2 (left; Photo - Jukka Jantunen); hatch year Cape May Warbler banded on August 6 (right; Photo – Ted Murphy-Kelly).

**Bay-breasted Warbler (*Dendroica castanea*)**

Bay-breasted Warbler is one of the Yukon’s most uncommon warbler species and it has been documented at Albert Creek on 5 occasions since the station began in 2001. In 2010, a hatch year bird was banded on July 28. This individual marked the fourth individual banded at the observatory; the previous individuals were banded on June 7, 2004, July 21, 2004 and August 12, 2006.



**Photo 5.** Hatch year Bay-breasted Warbler banded on July 28 (Photos – Jukka Jantunen).



### Western Tanager (*Piranga ludoviciana*)

Western Tanager is another species with a restricted Yukon range which is a likely local breeder at Albert Creek. In the spring of 2010, 1 individual was banded and the species was observed on 13 days from May 20 to June 5 with single birds on all days. In fall, 2 individuals were banded and the species was observed on 9 days from July 24 to August 7 with a high count of two individuals on many days. To date, the earliest and latest banding dates for this species are May 21 (2005) and August 19 (2003), respectively.

**Table 15.** Summary of Western Tanagers banded to date at Albert Creek.

Season	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Spring	0	1	0	2	1	1	1	0	3	1
Fall	0	0	1	2	3	1	2	2	0	2

### Clay-colored Sparrow (*Spizella pallid*)

Albert Creek's first Clay-colored Sparrow, a second year bird of unknown sex, was banded and photographed on June 1. This species is not observed annually in the Yukon although there were at least four reports in spring 2010 (Yukon Bird Club rare bird alerts). Interestingly, this species has been observed on a small number of occasions at Wye Lake in the community of Watson Lake, approximately 15 km east of the observatory.



**Photo 6.** Clay-colored Sparrow banded on June 1 (Photo – Jukka Jantunen).

### Swamp Sparrow (*Melospiza georgiana*)

Observed very infrequently in most of the Yukon, this species is a regular breeding species at wetlands in the southeast Yukon, including Albert Creek. In 2010, 6 individuals were banded in the spring and 20 in the fall. To date, 213 individuals have been banded at Albert Creek, of which 186 (87 %) have been in fall. The earliest banding record is April 27 (2005) and the latest is September 21 (2006). High

numbers of hatch year birds, including many in juvenile plumage, indicates that many of the individuals banded are likely local breeders and their offspring.

**Table 16.** Summary of Swamp Sparrows banded to date at Albert Creek.

Season	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Spring	0	0	4	2	1	4	5	5	0	6
Fall	4	6	9	7	33	40	21	29	17	20

### White-throated Sparrow (*Zonotrichia albicollis*)

Observed infrequently in most of the Yukon, this species is a regular breeding species in the southeast Yukon as far west as the Rancheria area. In 2010, 12 individuals were banded in the spring and 26 in the fall. To date, 318 individuals have been banded at Albert Creek, of which 189 (59 %) in fall. The earliest banding record is May 2 (2007) and the latest is September 15 (2002).

**Table 17.** Summary of White-throated Sparrows banded to date at Albert Creek.

Season	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Spring	2	19	20	9	14	18	14	14	7	12
Fall	4	6	33	30	27	22	9	10	22	26

### Rose-breasted Grosbeak (*Pheucticus ludovicianus*)

This species Yukon range is restricted to the extreme southeast; however, it has been observed on five previous occasions at Albert Creek. In 2010, a single individual was observed and photographed on June 4. This species is yet to be banded at the observatory.

**Table 18.** Summary of Rose-breasted Grosbeak sightings to date at Albert Creek.

Year	Season	Date	# Observed
2004	Fall	July 31	2
2004	Fall	August 1	2
2005	Spring	May 26	1
2005	Spring	May 27	1
2007	Spring	May 23	1

## 3.6 Rusty Blackbird

As part of an ongoing project in co-operation with Pam Sinclair (CWS-Whitehorse) and the Yukon bird observatories, all Rusty Blackbirds captured were fitted with a color band (light green) in addition to the regular band. As each Rusty Blackbird study site uses a different color, the color bands help to identify the origin of a re-sighted individual without the need to recapture it. Additionally, a feather was collected from each Rusty Blackbird captured. Feather samples will be analyzed for stable isotopes in an effort to make linkages between breeding and wintering grounds of this species. The Rusty Blackbirds banded during 2010 are summarized in the following table.

**Table 19.** Summary of Rusty Blackbirds banded at Albert Creek during 2010.

Season	After Hatch Year		Hatch Year	
	Male	Female	Male	Female
Spring	-	3	-	-
Fall	9	2	5	10

### 3.7 Owl Banding

To date, a large scale owl banding test project has not been completed at Albert Creek. Building upon a minimal effort during the fall of 2008 and 2009, a very limited amount of effort was conducted in 2010. On the evenings of August 30 and September 21, a minimal amount of effort (2.5 hours of call playback) resulted in the capture and banding of two hatch year Boreal Owls. No Northern Saw-whet Owls were observed or banded during 2010.

### 3.8 Species At Risk

Monitoring of species at risk is important throughout the species range and this is even more critical in more remote areas with limited monitoring information. During 2010, 2 designated species at risk (Table 20, Table 21) and 5 priority species for assessment (Table 22, 23).

**Table 20.** Summary of COSEWIC designated species encountered during the spring of 2010.

Species	COSEWIC Designation <sup>1</sup>	# Banded	# of Days Observed	High Count (#-date)	Total Bird Days
Olive-sided Flycatcher	Threatened	2	5	4 – 22 May	9
Rusty Blackbird	Special Concern	3	21	14 – 25 Apr	83

<sup>1</sup><http://www.cosewic.gc.ca>

**Table 21.** Summary of COSEWIC designated species encountered during the fall of 2010.

Species	COSEWIC Designation <sup>1</sup>	# Banded	# of Days Observed	High Count (#-date)	Total Bird Days
Olive-sided Flycatcher	Threatened	1	2	1 – NA	2
Rusty Blackbird	Special Concern	26	57	100 – 10 Sep	832

<sup>1</sup><http://www.cosewic.gc.ca>

**Table 22.** Summary of COSEWIC priority species encountered during the spring of 2010.

Species	Priority for COSEWIC Assessment <sup>1</sup>	# Banded	# of Days Observed	High Count (#-date)	Total Bird Days
American Kestrel	Mid	-	11	1 – NA	11
Killdeer	Low	-	4	4 – 10 May	8
Belted Kingfisher	Mid	-	22	2 – NA	25
Bank Swallow	High	-	8	100 – 4 Jun	112
Boreal Chickadee	Low	5	24	5 – 25 May	49

<sup>1</sup><http://www.cosewic.gc.ca>

**Table 23.** Summary of COSEWIC priority species encountered during the fall of 2010.

Species	Priority for COSEWIC Assessment <sup>1</sup>	# Banded	# of Days Observed	High Count (#-date)	Total Bird Days
American Kestrel	Mid	-	1	1 – NA	1
Belted Kingfisher	Mid	-	28	3 – 27 Jul	32
Bank Swallow	High	-	6	20 – 27 Jul	51
Boreal Chickadee	Low	14	38	5 – 3 Aug	73

<sup>1</sup><http://www.cosewic.gc.ca>

### 3.9 Visitors and Volunteers

Once again the observatory hosted numerous visitors and volunteers during 2010. On many days of operation, especially in spring, volunteer personnel were available onsite to provide valuable assistance with the observatory's operation. Table 24 and Table 25 summarize the number of hours spent at the observatory by visitors, volunteers and paid workers. Visitors were defined as those people who visited the observatory (often for a short time) and did not take part in activities at the observatory. Volunteers were those people which took part in the operation of the observatory (often extensively) without being financially compensated. Paid hours were spent by individuals being paid to be at the observatory. This category includes the Banders In Charge (Jukka Jantunen, Ted Murphy-Kelly and Jillian Johnston) and individuals paid by other organizations (Yukon Government, Canadian Wildlife Service, etc). Note that the values shown for "paid hours" only include those spent at the observatory and do not include the extensive amount of data entry, data analysis, report writing and other communication of the observatory's results. The Watson Lake Visitor's Center played a key role in directing visitors to the observatory, particularly those individuals travelling the Alaska Highway.

**Table 24.** Hours spent at the bird observatory by volunteers and paid individuals.

Season	Paid		Volunteer	
	# of Individuals	Hours	# of Individuals	Hours
Spring	4	387	11	574
Fall	8	482	10	161

**Table 25.** Hours spent at the bird observatory by visitors.

Season	Locals		Yukon		Canada		USA		Other International		TOTAL	
	#	Hours	#	Hours	#	Hours	#	Hours	#	Hours	#	Hours
Spring	7	5.25	5	27.25	1	1.5	12	41.5	3	9.25	28	84.75
Fall	7	3.75	7	27.25	13	25.75	14	14.5			41	71.25

## 4.0 Conclusion & Recommendations

The results from this season's operation have continued to add to the knowledge of numerous aspects of bird biology in the Yukon, including: species distribution, migration timing and local productivity. The study site has proven to be a very effective location for monitoring bird migration. The primary reason for this is the proximity to the extensive Albert Creek Marsh which is a very productive stopover and breeding area for numerous bird species. The geographic location of the observatory also allows a number of species to be monitored which are at the extreme margin of their range and cannot be found elsewhere in the Yukon.

In 2010, the observatory completed its tenth consecutive year of operation; however, the observatory's protocols were not developed until 2004. The data collected at the observatory to date have indicated a capacity to monitor bird migration during the spring and fall. The primary long term goal of the observatory is to continue migration monitoring and collect data to facilitate the calculation of long term population trends. Although a high diversity of bird species are encountered at the observatory, not all species are suitable candidates for trend analysis. This is due to inadequate sample size of less numerous species or incomplete migration season coverage. As such, the key species for monitoring are those which are relatively common and have the majority of their migration covered by the observatory's monitoring season. Results collected to date suggest that the observatory has a high potential for monitoring a variety of bird species with a primary focus on passerines, particularly species associated with wetlands. Further data collection is required; however, species trend analysis may also be possible for other groups of birds including waterfowl, waterbirds, shorebirds and raptors.

The observatory has been successful in attracting groups of students and members of the public to the observatory to learn about birds and bird migration. During 2010, a Y2C2 (Yukon Youth Conservation Corps) also visited the observatory.

## 5.0 Recommendations

For 2011, it is hoped that financial support can be secured to once again operate the observatory at full capacity (ie-daily coverage) during the spring and fall migration seasons. If possible, it would be beneficial to once again begin the spring season on April 22 and the fall season on July 23 to remain consistent with previous years of operation. Should inadequate funding be available for 2011, the spring season should be considered the priority. On an administrative level, insights from the 2010 season will be incorporated into the draft field protocol developed in early 2009.

**APPENDIX 1 –ALL TIME BANDING TOTALS**

Species	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		SPRING TOTAL	FALL TOTAL	ALL TIME TOTAL	
	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall				
American Green-winged Teal																				1		1	1	
Sharp Shinned hawk				1	1	3		3	1	2	2	6	4	1		1		4		2	8	23	31	
American Kestrel									1												1		1	
Solitary Sandpiper						1			3		12		2	9	1		2		2		22	10	32	
Spotted Sandpiper													1	1							1	1	2	
Wilson's Snipe						1			2		3	1	1	1			1				7	3	10	
Boreal Owl													2		1					2	3	2	5	
Belted Kingfisher											1		2	1							3	1	4	
Yellow-bellied Sapsucker	1	1	2	1	8	7	15	21	9	14	17	18	16	16	9	10	9	5	7	16	93	109	202	
Downy Woodpecker												1										1	1	
Hairy Woodpecker						1	1		1								1				3	1	4	
Three-toed Woodpecker					2			1						1						1	2	3	5	
Black-backed Woodpecker								1														1	1	
Yellow-shafted Nother Flicker			1				2	1	1	2		1	1	1	3	1					8	6	14	
Pileated Woodpecker									1	2											1	2	3	
Olive-sided Flycatcher							2				5			1	2				2	1	11	2	13	
Western Wood-pewee						1					4				2				2		8	1	9	
Yellow-bellied Flycatcher			1	4			2	1	1	2			2	1		2		6		1	6	17	23	
Alder Flycatcher	5	5	19	27	80	16	19	217	23	174	80	183	253	28	21	202	35	93	7	78	542	1023	1565	
Least Flycatcher	1	3	5	9	8	3		19	2	16	3	12	14	4	2	11	1	7		15	36	99	135	
Hammond's Flycatcher					2		1	2	12	14	14	8		9	2	7	2	4	1	16	34	60	94	
Dusky Flycatcher									1				1		1			2			2	3	5	
Say's Phoebe											1										1		1	
Northern Shrike				1											1	1		1			1	7	8	
Blue-headed Vireo					2			6		4		2	1								3	12	15	
Warbling Vireo	2	3	8	19	17	6	11	28	10	34	7	22	26	7	3	17	5	14	4	27	93	177	270	
Philadelphia Vireo								1														1	1	
Red-eyed Vireo							1															1	1	
Gray Jay	1		4			4	1	1	1	2		2	1	1					4	1	12	11	23	
Tree Swallow														1	13					4		17	1	18
-Violet-green Swallow															2					1		3	3	
Black-capped Chickadee		4	4	5	3		5	12	2	13		16	10			16		8	2	6	26	80	106	
Boreal Chickadee		8	5	7	7	6	1	6	1	8	3	8	13		3	6		27	5	14	38	90	128	
Red-breasted Nuhatch		3				1		1						1						1	1	6	7	
Golden-crowned Kinglet										3				3							3	3	6	
Ruby-crowned Kinglet	17		20	29	125	24	51	47	18	200	246	412	184	75	88	53		121	42	93	791	1054	1845	
Gray-cheeked Thrush			9	4	1	1	18	10	2	8	22	17	8	13	2	5	2	10	6	5	70	73	143	
Swainson's Thrush	2	1	25	7	65	21	53	104	19	133	46	93	137	55	15	70	19	43	29	66	410	593	1003	
Hermit Thrush		1	2	3	3	2	3	7	4	2	6	6	3	1	5	2	2	10	2	10	30	44	74	
American Robin	3		6		3	10	13	6	19	1	31	2	2	18	5	1	9		17	11	108	49	157	
Varied Thrush				2	3	1		3	2	2	3	7	3			5		5	1	7	12	32	44	
American Pipit			1					2			5			1				1			6	4	10	
Bohemian Waxwing						2			6		9				2		2				19	2	21	
Cedar Waxwing								8						8		3		1		4	8	16	24	
Tennessee Warbler	1	4	12	9	14	17	48	12	51	30	60	15	22	21	22	28	8	137	26	158	264	431	695	
Orange-crowned Warbler	57	12		30	52	137	286	199	105	122	214	151	152	251	339	87	170	97	177	61	1552	1147	2699	
Yellow Warbler	6	7	84	22	50	65	61	159	33	149	313	125	214	261	208	93	96	157	65	85	1130	1123	2253	

Species	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		SPRING TOTAL	FALL TOTAL	ALL TIME TOTAL
	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall			
Magnolia Warbler	1	1	2	22	36	1	4	26	4	19	1	32	38	5	4	38		27		20	90	191	
Cape May Warbler										2			3	2	3	2	1			1	7	7	14
Yellow-rumped Myrtle Warbler	73	35	9	80	86	143	268	138	91	185	364	105	262	113	434	117	505	90	776	83	2868	1089	3957
Yellow-rumped Warbler											3					1					3	1	4
Townsend's Warbler		1			3		1			3		1	1		4			2			9	7	16
Bay-breasted Warbler							1	1				1								1	1	3	4
Blackpoll Warbler	3	8	8	8	13	22	22	44	17	30	62	32	41	57	88	19	65	36	62	16	381	272	653
Black-and-white Warbler						1				1	1			1			1				2	3	5
American Redstart		1	9	19	27	7	18	35	9	54	15	48	50	10	6	90	2	38	7	54	143	356	499
Ovenbird						1						1										2	2
Northern Waterthrush	11	3	51	22	33	47	69	95	50	157	91	97	248	145	31	195	113	202	65	248	762	1211	1973
MacGillivray's Warbler							1														1		1
Common Yellowthroat	3	6	38	40	72	35	17	107	19	199	62	228	217	85	46	191	35	233	57	205	566	1329	1895
Wilson's Warbler	16	10	189	28	83	384	502	203	552	106	398	218	167	369	182	146	274	158	249	90	2612	1712	4324
Western Tanager			1		1		2	2	1	3	1	1	2	1		2	3		1	2	12	11	23
American-tree Sparrow	6	1	9	19	26	24	172	66	175	150	196	223	116	345	74	61	28	117	136	31	938	1037	1975
Chipping Sparrow			7	1	1	10	4	9	12	2	8	1	3	8	6	1	2	4	9	2	52	38	90
Clay-colored Sparrow																				1		1	1
Savannah Sparrow	4		7	3	6	27	38	19	31	7	42	13	18	70	53	7	37	28	49	6	285	180	465
Fox Sparrow	4		1	4	14	11	28	15	143	25	28	53	9	60	51	22	11	54	257	49	546	293	839
Song Sparrow										1												1	1
Lincoln's Sparrow	16	14	30	29	42	39	42	91	51	108	23	124	74	120	27	57	32	99	60	89	397	770	1167
Swamp Sparrow		4		6	9	4	2	7	1	33	4	40	21	5	5	29		17	6	20	48	165	213
White-throated Sparrow	2	4	19	6	33	20	9	30	14	27	18	22	9	14	14	10	7	22	12	26	137	181	318
White-crowned Sparrow	6	1	7	3	9	6	184	11	269	13	14	22	10	217	138	5	64	26	262	15	963	319	1282
Golden-crowned Sparrow						2	6	1	4		2		1	14	3		3		1		20	17	37
Dark-eyed "Slate-colored" Junco	3	4	15	65	39	20	194	44	42	585	70	179	81	334	48	39	15	96	57	50	564	1416	1980
Dark-eyed "Oregon" Junco														1								1	1
Dark-eyed Junco														4			1		2	3	3	7	10
Lapland Longspur							2				35			1	2		6		1		46	1	47
Red-winged Blackbird									7		8			4	2		2		1		20	4	24
Rusty Blackbird	2	2		1	10	5	5	12	37	15	81	35	31	14	47	9	1	10	3	26	217	129	346
Brown-headed Cowbird					1									4	1				2		4	4	8
Pine Grosbeak												2										2	2
Purple Finch	5		9			11	10	3	8	11	8		1	5	9		4		14		68	30	98
White-winged Crossbill										7	16		12					1		10	28	18	46
Common Redpoll							68		2		46	1		12	54	14			127		297	27	324
Pine Siskin			6	4	31	2	2	5						2						41	41	52	93
TOTAL INDIVIDUALS	251	147	625	540	1021	1152	2265	1842	1869	2681	2704	2591	2502	2799	2086	1676	1576	2013	2623	1770	17522	17211	34733
TOTAL SPECIES	26	27	35	35	40	44	46	49	48	48	50	46	52	53	50	42	39	40	46	48	77	79	85



**APPENDIX 2 –ESTIMATED TOTAL SUMMARY**

Species	Spring							Fall						
	# of Days	Bird Days	First Date	Last Date	High Count_#	High Count_Date	Median Date	# of Days	Bird Days	First Date	Last Date	High Count_#	High Count_Date	Median Date
Common Loon	9	10	13-May	05-Jun	2	29-May	21-May	32	39	24-Jul	19-Sep	2	many days	-
Greater White-fronted Goose	9	648	21-Apr	16-May	233	21-Apr	25-Apr	15	322	03-Aug	11-Sep	75	26-Aug	26-Aug
Snow Goose	1	1	01-May	-	-	-	NA	-	-	-	-	-	-	-
Canada Goose	34	271	20-Apr	06-Jun	60	22-Apr	23-Apr	8	33	14-Aug	21-Sep	12	21-Sep	22-Aug
Trumpeter Swan	11	38	22-Apr	30-May	19	29-Apr	NA	7	8	09-Aug	21-Sep	2	12-Aug	-
Tundra Swan	9	6116	21-Apr	02-May	3500	21-Apr	21-Apr							
American Wigeon	18	180	21-Apr	21-May	34	27-Apr	27-Apr	3	11	04-Aug	16-Aug	8	16-Aug	-
Mallard	40	310	21-Apr	04-Jun	40	22-Apr	27-Apr	40	179	26-Jul	23-Sep	17	26-Aug	20-Aug
Blue-winged Teal	4	7	16-May	05-Jun	3	02-Jun	NA	3	5	17-Aug	26-Aug	3	26-Aug	-
Cinnamon Teal	1	1	01-Jun	-	-	-	NA	-	-	-	-	-	-	-
Northern Shoveler	5	20	02-May	21-May	5	18-May	NA	1	2	10-Aug	-	-	-	-
Northern Pintail	9	164	21-Apr	15-May	47	27-Apr	24-Apr	-	-	-	-	-	-	-
American Green-winged Teal	29	86	24-Apr	03-Jun	11	28-Apr	16-May	14	51	26-Jul	08-Sep	11	25-Aug	05-Aug
Canvasback	2	47	01-May	14-May	41	01-May	NA	-	-	-	-	-	-	-
Ring-necked Duck	22	47	12-May	06-Jun	5	17-May	NA	2	4	24-Jul	26-Jul	3	24-Jul	-
Bufflehead	10	21	27-Apr	03-Jun	3	many days	14-May	1	1	13-Aug	-	-	-	-
Common Goldeneye	33	100	26-Apr	05-Jun	13	29-Jun	11-May	1	1	23-Aug	-	-	-	-
Common Merganser	3	3	23-May	28-May	1	all days	NA	-	-	-	-	-	-	-
Osprey	1	1	21-May	-	-	-	NA	1	1	25-Jul	-	-	-	-
Bald Eagle	9	11	21-Apr	05-Jun	3	24-May	NA	5	5	24-Jul	23-Sep	1	all days	-
Northern Harrier	13	18	22-Apr	26-May	2	many days	NA	3	3	28-Aug	16-Sep	1	all days	-
Sharp-shinned Hawk	9	12	22-Apr	05-Jun	3	27-Apr	NA	10	11	26-Jul	19-Sep	2	11-Sep	19-Aug
Northern Goshawk	2	2	01-May	26-May	1	both days	NA	1	1	19-Sep	-	-	-	-
Swainson's Hawk								1	1	20-Sep	-	-	-	-
Red-tailed Hawk	5	6	20-Apr	30-May	2	20-Apr	NA	8	8	26-Aug	19-Sep	1	all days	12-Sep
Rough-legged Hawk	1	1	27-Apr	-	-	-	NA	-	-	-	-	-	-	-
Golden Eagle								1	1	15-Sep	-	-	-	-
American Kestrel	11	11	21-Apr	02-Jun	1	all days	18-May	1	1	03-Aug	-	1	-	-
Merlin	6	6	26-Apr	23-May	1	all days	NA	1	1	30-Aug	-	-	-	-
Ruffed Grouse	38	48	20-Apr	02-Jun	3	27-Apr	NA	26	80	07-Aug	23-Sep	7	many days	-
Spruce Grouse	4	4	11-May	16-May	1	all days	NA	12	18	24-Jul	29-Aug	3	many days	-
Sora	2	3	28-May	04-Jun	2	04-Jun	NA	4	4	25-Jul	28-Jul	1	all days	-
Sandhill Crane	1	540	28-Apr	-	-	-	NA	9	525	27-Jul	19-Sep	165	14-Sep	14-Sep
Killdeer	4	8	10-May	25-May	4	10-May	NA	-	-	-	-	-	-	-
Greater Yellowlegs	21	26	21-Apr	01-Jun	2	many days	NA	1	1	26-Jul	-	-	-	-
Lesser Yellowlegs	21	94	27-Apr	03-Jun	41	01-May	01-May	5	31	24-Jul	28-Jul	23	27-Jul	27-Jul
Solitary Sandpiper	26	59	10-May	06-Jun	15	10-May	14-May	15	19	24-Jul	01-Sep	2	many days	10-Aug
Spotted Sandpiper	3	3	16-May	26-May	1	all days	NA	1	1	29-Aug	-	-	-	-
Least Sandpiper	2	2	11-May	04-Jun	1	both days	NA	1	1	27-Jul	-	-	-	-
Pectoral Sandpiper	1	17	11-May	-	-	-	NA	-	-	-	-	-	-	-
Long-billed Dowitcher								2	24	10-Sep	11-Sep	14	11-Sep	-

Species	Spring							Fall						
	# of Days	Bird Days	First Date	Last Date	High Count_#	High Count_Date	Median Date	# of Days	Bird Days	First Date	Last Date	High Count_#	High Count_Date	Median Date
Wilson`s Snipe	33	73	21-Apr	06-Jun	13	30-Apr	16-May	28	37	24-Jul	22-Sep	3	22/26 Aug	07-Sep
Mew Gull	11	30	05-May	05-Jun	2	many days	NA	2	4	24-Jul	28-Jul	2	both days	-
Herring Gull	5	10	15-May	18-May	6	16-May	NA	1	1	15-Aug	-	-	-	-
Arctic Tern								1	4	27-Jul	-	-	-	-
Great Horned Owl+A95	1	1	22-Apr	-	1	-	NA	2	2	02-Aug	10-Sep	1	both days	-
Barred Owl	20	20	20-Apr	04-Jun	1	all days	20-May	1	1	26-Aug	-	-	-	-
Boreal Owl	1	1	20-Apr	-	-	-	NA	1	2	30-Aug	-	-	-	-
Belted Kingfisher	22	25	27-Apr	06-Jun	2	many days	25-May	28	32	24-Jul	19-Sep	3	27-Jul	11-Aug
Yellow-bellied Sapsucker	32	86	24-Apr	05-Jun	5	many days	17-May	16	26	24-Jul	28-Aug	4	27-Jul	02-Aug
Downy Woodpecker	1	1	01-May	-	1	-	NA	1	1	14-Sep	-	-	-	-
Hairy Woodpecker	12	12	27-Apr	04-Jun	1	all days	NA	11	12	24-Jul	22-Sep	2	28-Aug	10-Aug
American Three-toed Woodpecker	6	8	21-Apr	29-Apr	2	28, 29 Apr	NA	7	8	24-Jul	19-Sep	2	30-Aug	-
Black-backed Woodpecker								7	8	28-Jul	26-Aug	2	28-Jul	-
Northern Flicker	39	52	21-Apr	06-Jun	2	many days	12-May	27	31	25-Jul	16-Sep	2	many days	22-Aug
Olive-sided Flycatcher	5	9	20-May	24-May	4	22-May	NA	2	2	21-Aug	27-Aug	1	both days	-
Western Wood Pewee	6	8	20-May	06-Jun	3	20-May	NA	1	1	28-Jul	-	-	-	-
Yellow-bellied Flycatcher	1	1	05-Jun	-	-	-	NA	1	1	08-Aug	-	-	-	-
Alder Flycatcher	12	27	26-May	06-Jun	4	4, 6 Jun	02-Jun	31	103	24-Jul	17-Sep	16	17-Aug	16-Aug
Least Flycatcher	1	2	29-May	05-Jun	1	both days	NA	12	21	26-Jul	24-Aug	3	4/23 Aug	06-Aug
Hammond's Flycatcher	9	9	02-May	28-May	1	all days	NA	12	27	25-Jul	22-Aug	4	25/26 Jul	02-Aug
Northern Shrike								5	5	11-Sep	22-Sep	1	all days	-
Warbling Vireo	21	63	16-May	06-Jun	6	30-May	29-May	27	94	24-Jul	28-Aug	10	25-Jul	03-Aug
Gray Jay	32	87	22-Apr	05-Jun	5	many days	NA	53	91	24-Jul	22-Sep	3	many days	-
American Crow	13	18	22-Apr	04-Jun	3	10-May	29-Apr	6	6	25-Jul	03-Sep	1	all days	-
Common Raven	41	11	21-Apr	06-Jun	8	many days	NA	51	121	24-Jul	23-Sep	14	26-Aug	-
Tree Swallow	33	313	24-Apr	06-Jun	36	16-May	20-May	7	32	26-Jul	13-Aug	15	27-Jul	-
Violet-green Swallow	11	25	13-May	04-Jun	4	24-May	24-May	1	4	24-Jul	-	-	-	-
Bank Swallow	8	112	21-May	05-Jun	100	04-Jun	04-Jun	6	51	25-Jul	14-Aug	20	27-Jul	27-Jul
Cliff Swallow	9	24	21-May	04-Jun	10	04-Jun	27-May	5	108	24-Jul	08-Aug	43	24-Jul	25-Jul
Barn Swallow	4	5	16-May	05-Jun	2	04-Jun	NA	4	5	26-Jul	17-Aug	2	17-Aug	-
Black-capped Chickadee	13	20	24-Apr	26-May	5	04-May	04-May	43	100	24-Jul	23-Sep	5	many days	22-Aug
Boreal Chickadee	24	49	24-Apr	29-May	5	25-May	05-May	38	73	24-Jul	23-Sep	5	03-Aug	-
Red-breasted Nuthatch	3	3	24-Apr	23-May	1	all days	NA	12	12	26-Jul	13-Sep	1	all days	12-Aug
Ruby-crowned Kinglet	37	156	21-Apr	02-Jun	12	02-May	29-Apr	51	195	24-Jul	22-Sep	15	11-Sep	23-Aug
Gray-cheeked Thrush	5	6	15-May	26-May	2	17-May	NA	4	6	27-Aug	10-Sep	3	27-Aug	-
Swainson`s Thrush	19	56	16-May	06-Jun	7	28-May	28-May	34	87	24-Jul	11-Sep	6	28-Aug	10-Aug
Hermit Thrush	9	10	26-Apr	02-Jun	2	30-May	NA	15	17	28-Jul	15-Sep	2	18/30 Aug	30-Aug
American Robin	41	171	21-Apr	06-Jun	20	14-May	16-May	44	121	24-Jul	22-Sep	42	19-Sep	05-Sep
Varied Thrush	32	47	22-Apr	06-Jun	2	many days	15-May	32	42	24-Jul	21-Sep	4	05-Sep	04-Sep
American Pipit	7	25	01-May	14-May	15	10-May	10-May	17	36	14-Aug	23-Sep	6	1, 3 Sep	03-Sep
Bohemian Waxwing	23	56	22-Apr	03-Jun	10	22-May	18-May	3	3	25-Jul	27-Jul	1	all days	-

Species	Spring							Fall						
	# of Days	Bird Days	First Date	Last Date	High Count_#	High Count_Date	Median Date	# of Days	Bird Days	First Date	Last Date	High Count_#	High Count_Date	Median Date
Cedar Waxwing								20	52	24-Jul	29-Aug	12	07-Aug	07-Aug
Tennessee Warbler	14	90	24-May	06-Jun	10	26, 28 May	31-May	14	205	24-Jul	23-Aug	65	25-Jul	26-Jul
Orange-crowned Warbler	23	246	24-Apr	02-Jun	42	20-May	18-May	25	74	25-Jul	22-Sep	12	11-Sep	29-Aug
Yellow Warbler	18	120	17-May	06-Jun	19	23-May	26-May	34	114	25-Jul	11-Sep	15	17-Aug	14-Aug
Magnolia Warbler	4	5	31-May	04-Jun	2	02-Jun	NA	15	24	24-Jul	24-Aug	4	04-Aug	05-Aug
Cape May Warbler	7	10	30-May	05-Jun	2	1,2,3 Jun	02-Jun	1	1	06-Aug	-	-	-	-
Yellow-rumped Warbler	39	1198	21-Apr	06-Jun	180	21-May	18-May	37	185	24-Jul	22-Sep	17	06-Sep	22-Aug
Townsend's Warbler	1	1	22-May	-	-	-	NA							
Bay-breasted Warbler								1	1	28-Jul	-	-	-	-
Blackpoll Warbler	20	100	15-May	04-Jun	23	18-May	22-May	10	19	02-Aug	11-Sep	6	16-Aug	16-Aug
American Redstart	11	27	26-May	05-Jun	4	1,4 Jun	01-Jun	21	83	24-Jul	06-Sep	10	25-Jul	02-Aug
Northern Waterthrush	27	169	10-May	06-Jun	31	17-May	21-May	47	444	24-Jul	16-Sep	23	26-Jul	12-Aug
Common Yellowthroat	21	156	13-May	06-Jun	15	20-May	27-May	57	545	24-Jul	22-Sep	30	29-Jul	14-Aug
Wilson's Warbler	24	393	10-May	06-Jun	79	20-May	20-May	34	109	02-Aug	19-Sep	12	16-Aug	16-Aug
Western Tanager	13	13	20-May	05-Jun	1	all days	30-May	9	14	24-Jul	07-Aug	2	many days	27-Jul
American Tree Sparrow	17	311	20-Apr	16-May	73	23-Apr	23-Apr	19	65	27-Aug	22-Sep	6	20, 21 Sep	12-Sep
Chipping Sparrow	15	27	21-May	06-Jun	4	25-May	29-May	3	4	24-Jul	28-Jul	2	24-Jul	-
Clay-colored Sparrow	1	1	01-Jun	-	-	-	NA	-	-	-	-	-	-	-
Savannah Sparrow	23	81	29-Apr	05-Jun	12	17-May	16-May	8	9	24-Jul	10-Sep	2	07-Sep	04-Sep
Fox Sparrow	40	521	20-Apr	05-Jun	76	25-Apr	26-Apr	28	96	13-Aug	21-Sep	11	19/20 Sep	11-Sep
Lincoln's Sparrow	38	152	22-Apr	06-Jun	11	17, 18 Jun	20-May	43	166	24-Jul	22-Sep	15	25-Jul	12-Aug
Swamp Sparrow	26	32	05-May	05-Jun	2	many days	23-May	25	40	25-Jul	19-Sep	5	25-Jul	09-Aug
White-throated Sparrow	23	66	01-May	06-Jun	5	20-May	26-May	30	88	24-Jul	20-Sep	8	07-Aug	15-Aug
White-crowned Sparrow	27	680	21-Apr	29-May	76	24-Apr	28-Apr	11	19	15-Aug	17-Sep	5	16-Aug	18-Aug
Golden-crowned Sparrow	5	6	24-Apr	21-May	2	21-May	NA	-	-	-	-	-	-	-
Dark-eyed Junco	37	212	20-Apr	04-Jun	38	23-Apr	24-Apr	37	241	26-Jul	23-Sep	50	11-Sep	11-Sep
Lapland Longspur	13	137	21-Apr	18-May	73	02-May	02-May	4	15	28-Aug	21-Sep	11	18-Sep	-
Rose-breasted Grosbeak	1	1	04-Jun	-	-	-	NA	-	-	-	-	-	-	-
Red-winged Blackbird	33	58	27-Apr	06-Jun	3	many days	24-May	7	11	24-Jul	05-Aug	3	27-Jul	28-Jul
Rusty Blackbird	21	83	22-Apr	02-Jun	14	25-Apr	30-Apr	57	832	24-Jul	23-Sep	100	10-Sep	08-Sep
Brown-headed Cowbird	20	31	17-May	06-Jun	2	many days	26-May	-	-	-	-	-	-	-
Purple Finch	36	74	22-Apr	05-Jun	4	25-May	21-May	3	6	26-Jul	28-Jul	2	all days	-
Red Crossbill	2	4	26-May	29-May	3	29-May	NA	6	18	24-Jul	09-Sep	7	09-Sep	27-Jul
White-winged Crossbill	9	19	10-May	05-Jun	4	31-May	01-Jun	56	468	24-Jul	23-Sep	31	03-Aug	29-Aug
Common Redpoll	17	2720	20-Apr	01-Jun	1212	22-Apr	22-Apr	6	12	25-Jul	10-Aug	4	09-Aug	08-Aug
Pine Siskin	2	2	10-May	22-May	1	both days	NA	48	461	24-Jul	23-Sep	65	24-Jul	09-Aug