



2010 Annual Report

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November, 2010

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2010 Executive Summary

The Lesser Slave Lake Bird Observatory (LSLBO) began conducting monitoring projects in the Lesser Slave Lake Provincial Park in 1994. 2010 marks the 17th year that the station has operated both spring and fall migration monitoring as well as participated in the Monitoring Avian Productivity and Survivorship (MAPS) program. In addition to these core monitoring programs, the LSLBO has initiated and participated in several new research and monitoring projects. Two projects were initiated by the LSLBO in 2004, the Canada Warbler Project and northern saw-whet owl fall migration monitoring. Three new projects were created in 2010 under a joint research partnership with the University of Alberta and Alberta Parks. These question driven projects are aimed at further understanding the migration trends observed at the LSLBO; 1) trends in phenology and populations of boreal breeding songbirds due to climate change, 2) determining when fall migration starts and what proportion of individuals banded are migrants versus local breeders, and 3) determining dispersal distances of ovenbirds in areas with differing disturbance histories.

Daily migration monitoring during both the spring and fall migration seasons incorporates four standardized monitoring techniques to determine daily totals, which are used to derive population trends. These techniques are a daily census, visual migration counts, incidental observations, and mistnetting. Spring migration monitoring began on April 22 and ended on June 10, for a total of 50 days of migration coverage. Weather conditions allowed mistnets to be set for 76.7% of the total possible net hours. A total of 636 birds representing 38 species were banded. Fall migration monitoring operated from July 12 to September 30 for 80 days of migration coverage. Two new aerial mistnets were tested during the fall season. Conditions allowed mistnets to be set for a total of 83.2% of the total possible net hours and 1400 birds, representing 61 species, were banded.

The LSLBO operates four MAPS stations, which are operated over the course of the breeding season. Each station was visited six times between June 11 and August 2. Banding effort from four stations combined for a total of 185 birds banded representing 24 species. The breeding status was determined for 63 species that were encountered during visits to the MAPS stations.

A total of 304 recapture records were recorded during migration monitoring and MAPS banding. All recaptured birds were originally banded at the LSLBO. The majority of the birds were banded in 2010 and recaptured later in the season. 36 birds were originally banded in 2009 and 24 birds were originally banded previous to 2009. The oldest bird recaptured was an American redstart banded in 2006 during MAPS; this bird was at least six years old.

Two new species were banded for the LSLBO, an eastern kingbird banded on September 9 and a Townsend's solitaire banded on September 23. These birds raised the LSLBO's banded species list to 101. One new species was added to the LSLBO's sightings list. A

northern rough-winged swallow was observed on August 23 and was the 250th species to be recorded at the LSLBO.

The Canada Warbler project took a new direction in 2010. In the past, the focus was on documenting breeding ecology of nesting individuals. In 2010, the LSLBO took initial steps to describe the habitat requirements of Canada warblers within the Lesser Slave Lake Provincial Park. The first step was to conduct random point counts within the Provincial Park to determine habitat usage in other locations. Five minute point counts were conducted at 96 points throughout the park. In addition, vegetation surveys were conducted at 84 plots in the existing Canada Warbler Project study site using BBIRD vegetation protocols.

Northern saw-whet owl fall migration monitoring was conducted from August 29 to October 16. Mistnets were set on 37 nights during that period for a total of 562 net hours. A total of 82 northern saw-whet owls were banded. One owl banded at the LSLBO on September 30 was recaptured on October 14 near Prince Albert, Saskatchewan.

In the first special research project, two aerial nets tested during fall migration monitoring were the initial step to determining trends in phenology of boreal breeding songbirds and climate change. These nets were also designed to determine the affects of local vegetation growth on capture rates and species diversity represented through mistnetting. Over the course of the fall, the two aerial nets combined for a total of 419 birds banded, or 30% of the total birds banded during the fall migration period.

The second research project was determining the proportion of individuals banded that are migrants versus local breeders. Four focal species were chosen, Swainson's thrush, Tennessee warbler, Myrtle warbler, and American redstart. Feathers from 361 individuals from the four species were collected from individuals captured through fall migration monitoring period. These feathers will be used for stable isotope analysis to determine the origin of each bird. This will allow the LSLBO to determine the time in the fall when local birds move out of the area and migrants originating from other areas begin to move through.

The final project, which the LSLBO assisted, was determining dispersal distances of ovenbirds in areas with differing disturbance histories, or the Ovenbird Project. This project focused on finding the origins of breeding ovenbirds within the Lesser Slave Lake Provincial Park through stable isotope feather analysis. The goal of this project was to compare the distances of origin from that of a study site in north-eastern Canada. Throughout the summer, a student from the University of Alberta and the LSLBO collected 196 feather samples from breeders, nestlings, and young during fall migration.

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Migration Monitoring

Migration monitoring is a method of population monitoring which surveys migrants passing a fixed point. The Lesser Slave Lake Bird Observatory (LSLBO) has been conducting migration monitoring during the spring and fall seasons since 1994; 2010 marks the 17th consecutive year of monitoring activities. The LSLBO's standardized monitoring protocols, which allow for consistent data collection necessary to derive accurate long-term population trends, are described in the 2003 Revised Lesser Slave Lake Bird Observatory Station Manual. Monitoring is conducted for seven hours each day during the spring and fall migration seasons, beginning one-half hour before sunrise. A half-hour census is run once each day to document bird activity through the entire study site. A five minute visual migration count is conducted every hour which focuses on actively migrating birds. All other birds observed outside the above described counts are recorded as incidental observations. The LSLBO operates twelve standard netlanes for a maximum of 84 net hours each day for the purposes of bird banding. In the fall of 2010, two new additional raised nets were tested to determine bird activity in the higher reaches of the vegetation around the existing nets. Mistnets are not set if the temperature is below 2°C, during periods of precipitation, or if the wind strength is above 3 on the Beaufort Scale.

The LSLBO has been a full member of the Canadian Migration Monitoring Network (CMMN) since 1999. This nationwide organization provides resources and support for member stations, including population trend analysis.

Spring Migration

Spring migration monitoring typically begins late April, once morning temperatures begin to warm enough for banding to take place. By this time early spring migrant species have begun to pass through the area and the LSLBO is able to monitor the migratory window for the majority of the songbird species.

In 2010, spring migration monitoring began on April 22 and ended June 10. Monitoring occurred everyday for 50 days of migration coverage. Weather conditions prevented banding on six of those days and limited the banding effort on an additional 20 days. Most of the partial mistnetting days occurred during the first two weeks of spring migration due to delaying opening until temperatures rose above freezing. Partial banding days occurred throughout the entire season because of changing weather conditions throughout the morning. The census was conducted every day the station was opened. On a full day of coverage observers completed 8 visual migration counts, but only conducted 6 on poor weather days. Overall, spring migration received excellent coverage with effort consistent with previous years (Table 1). Mistnetting coverage was slightly lower compared to previous years, which was a result of the high number of partial banding days.

Table 1. Summary of effort during spring migration monitoring at LSLBO, 2002-2010.

Spring	2002	2003	2004	2005	2006	2007	2008	2009	2010
Coverage									
First Day	19-Apr	21-Apr	19-Apr	25-Apr	24-Apr	24-Apr	26-Apr	25-Apr	22-Apr
Last Day	11-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun
Number of Days	54	50	50	43	47	48	45	46	50
Person Days	125	124	120	121	127	92	105	89	114
Banding									
First Day	20-Apr	21-Apr	20-Apr	25-Apr	24-Apr	24-Apr	27-Apr	29-Apr	22-Apr
Last Day	11-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun
Number of Days	45	39	45	43	44	47	43	42	44
Av. Daily Net Hrs	63	48.9	60.5	71.2	70.3	73.6	75.8	70.4	64.4
Census									
First Day	19-Apr	21-Apr	20-Apr	25-Apr	24-Apr	24-Apr	26-Apr	25-Apr	22-Apr
Last Day	11-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun
Number of Days	54	50	49	43	47	48	45	46	50
Vis-Mig									
First Day	19-Apr	21-Apr	20-Apr	25-Apr	24-Apr	24-Apr	26-Apr	25-Apr	22-Apr
Last Day	11-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun
Number of Days	54	50	49	43	47	48	45	46	50
Av Daily Vis-Migs	8.4	8	8.2	8	7.7	7.9	7.8	7.7	7.6

Mist nets were set for a total of 3221.87 net hours, which was 76.7% of the possible 4200 net hours for the season. A total of 636 birds were banded, which was below the spring average of 978 and the fifth lowest spring banding total on record. An additional 61 birds were recaptured and 6 birds escaped or were unbanded. The capture rate was 21.8 birds/100 net hours. The peak banding day of the spring was May 17 with 148 birds banded, followed by 68 birds on May 23 and 55 birds on May 20. Three other dates recorded banding totals over 25 birds. Banding was relatively slow before peaking in the third week of May, then became consistent through late May and early June (Figure 1).

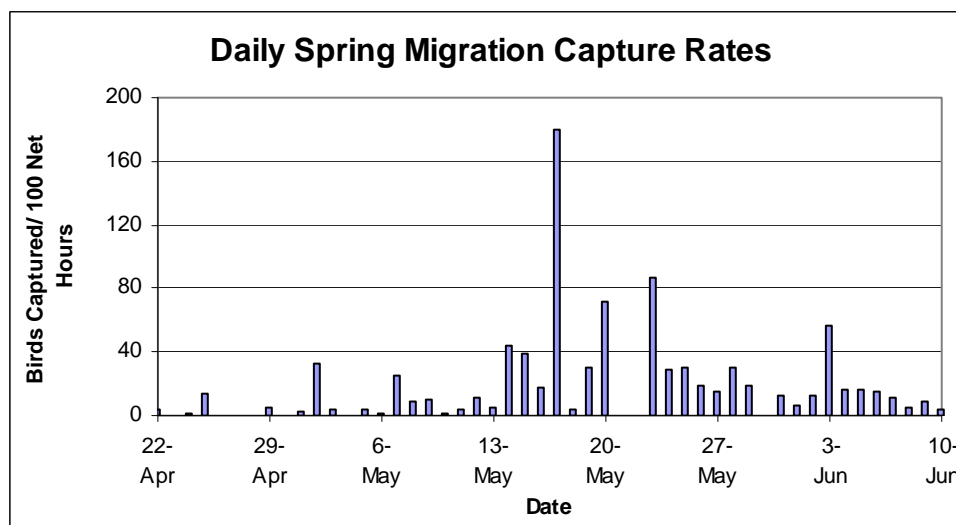


Figure 1. Capture rates through the 2010 spring migration monitoring season.

Thirty-eight different species and forms were represented through mistnetting, which was below the spring average of 45. The top five species banded were: Myrtle warbler (234), Swainson's thrush (54), white-throated sparrow (42), chipping sparrow (39), and ovenbird (31). These five species combined for 62.9% of all birds banded during the spring. Highlights of the spring banding included the first northern saw-whet owl banded during the spring and a juvenile gray jay. This was the first gray jay to be banded since 1998 and only the third banding record for the LSLBO. Banding totals for each species are listed in Appendix I.

Migrants are constantly moving through the area during the spring though there are definite peaks throughout the season. These peaks can consist of a single species or a wide variety of species moving together or in mixed flocks. The first peak occurred over several days in late April and into the first week of May. This passage consisted primarily of Myrtle warblers. Greater white-fronted geese were also moving through during this time; over 10,000 were counted on May 3. A second peak occurred in the middle of May. Once again there was a strong passage of Myrtle warblers, but other songbird species began to flock with them and overall species diversity began to increase. The busiest migration day of the spring occurred on May 17. Songbirds from a large number of species flooded past the banding lab that particular morning. Myrtle warblers, which were having a strong migration presence all season long, reached their peak numbers with 1370 counted. Several other warbler and sparrow species also reached their top daily count that day. Migration slowed considerably over the latter portion of the spring monitoring season. A total of 142 species were recorded during migration monitoring activities through the spring. No rare or unusual species were encountered. Sight records and peak days for all species are listed in Appendix II.

Fall Migration

Fall migration monitoring begins on July 12 and runs until late September. This time period covers the migratory window of the majority of songbird species monitored at the LSLBO. Although local breeders are active during mid-July, there is little evidence of migration occurring at that time. By late September, most of the active birds are winter resident species with occasional encounters of late migratory species. Late September temperatures and conditions are often poor for banding.

In 2010 fall migration monitoring occurred from July 12 until September 30 and received 80 days of coverage. One day was missed due to staff availability. The census was conducted every day that the station operated. Visual migration counts were conducted daily, with the number conducted ranging from 8 on full days of coverage to 6 on days with reduced coverage. Banding occurred on all but three days during the period due to extremely poor weather conditions. An additional 35 days received partial net coverage. The average daily net hours in the fall were increased because of two additional aerial nets that were tested during this operating period. Overall, the fall received excellent migration coverage which was consistent with previous years (Table 2).

Table 2. Summary of effort during fall migration monitoring at LSLBO, 2002-2010.

Fall	2002	2003	2004	2005	2006	2007	2008	2009	2010
Coverage									
First Day	13-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul
Last Day	04-Oct	30-Sep	30-Sep	29-Sep	29-Sep	30-Sep	2-Oct	28-Sep	30-Sep
Number of Days	84	77	78	75	77	73	76	77	80
Person-days	173	158	164	170	149	114	131	165	158
Banding									
First Day	14-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul
Last Day	04-Oct	30-Sep	30-Sep	29-Sep	29-Sep	30-Sep	2-Oct	28-Sep	30-Sep
Number of Days	78	69	73	71	73	68	74	75	77
Av. Daily Net Hrs.	62.9	73.8	69.8	76	73.9	71.9	75.7	78.9	81.5*
Census									
First Day	13-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul
Last Day	04-Oct	30-Sep	30-Sep	29-Sep	29-Sep	30-Sep	1-Oct	28-Sep	30-Sep
Number of Days	84	77	78	75	77	73	75	77	80
Vis-Migs									
First Day	13-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul
Last Day	04-Oct	30-Sep	30-Sep	29-Sep	29-Sep	30-Sep	2-Oct	28-Sep	30-Sep
Number of Days	84	77	78	75	77	73	76	77	80
Av Daily Vis-migs	7.7	7.6	7.6	7.7	7.7	7.7	7.5	7.6	7.5

*includes net hours from two non-standard aerial nets.

Fourteen mistnets were used during fall migration; the 12 standard netlanes and two aerial nets. The 12 standard netlanes received 85% coverage, set for 5711.9 of a possible 6720 net hours. The two aerial nets received 68.7% coverage, 807.9 of a possible 1176 net hours. Combined, the 14 nets were set for a total of 6519.8 of a possible 7840 net hours, or 83.2% coverage. A total of 1543 birds were captured through mistnetting effort; 1400 banded, 131 recaptures, and 12 birds escaped or released unbanded. The capture rate for the fall was 23.7 birds/100 net hours. Even with the additional nets, the 1400 birds banded was below the fall average of 1971. The peak banding day occurred on July 24 with 77 birds. Three dates had over 50 birds banded. Banding was steady throughout the entire fall. Although the busiest banding period occurred in late July through to early August, capture rates remained consistent right to the end of September (Figure 2).

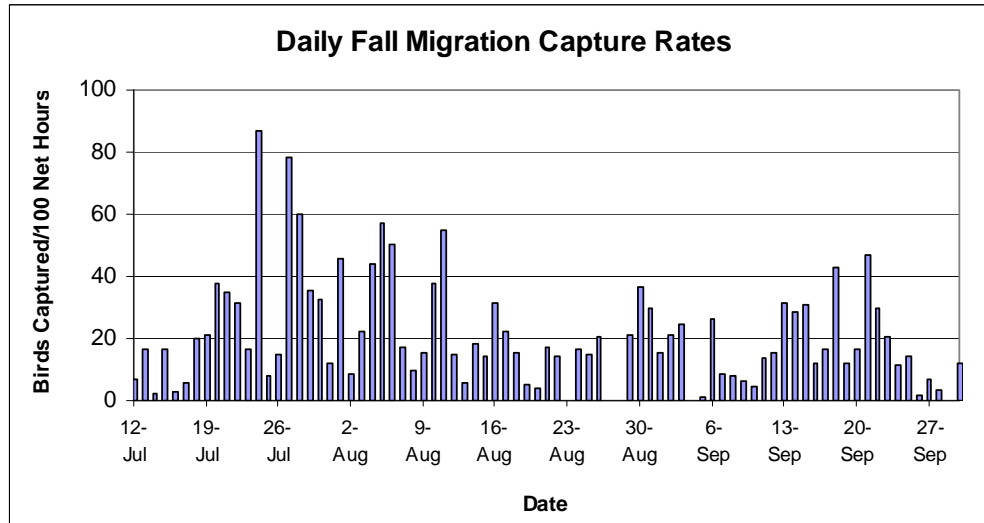


Figure 2. Capture rates through the 2010 fall migration monitoring season.

Sixty-one species and forms were represented by birds captured in the nets, which was above the fall average of 55. The top five species banded were: Swainson’s thrush (248), Myrtle warbler (209), ovenbird (103), American redstart (90), and orange-crowned warbler (83). These five species accounted for 54.3% of all fall bandings. Several highlights occurred during the fall banding. The LSLBO banded two new species, an eastern kingbird banded on September 9 and a Townsend’s solitaire banded on September 23. Even though the LSLBO target bands northern saw-whet owls at night in the fall, the LSLBO banded the very first saw-whet during normal fall migration banding. A Cooper’s hawk was banded on September 9. It was the second banding record for the observatory, the first occurring in 1998. Other interesting and infrequently banded species included white-breasted nuthatch, varied thrush, LeConte’s sparrow, and Lapland longspur. Both Swainson’s thrush and orange-crowned warblers were banded in record fall numbers. Complete banding totals for each species are provided in Appendix I.

Like the spring, migrants are accounted for almost every day during the fall period. However, there are fewer days with peak visual migration during the fall. The first evidence of active migration occurred the third week of July, however most of the accounts were through banding as only small numbers of birds were observed on visual migration counts. This trend continued into early August when the first large numbers of mixed flocks began to move through. Although a large diversity of species was present, Myrtle warblers were the most prevalent migrant. Migration activity was sporadic through much of August; most of the observed migration was very light. Steady streams of migrants were recorded over the course of several days in late August and early September. Foraging flocks of mixed species of late migrants were common throughout most of September. A total of 128 species were recorded during fall migration, including the first sighting of a northern rough-winged swallow at the station. Sight records and peak days for all species are listed in Appendix II.

Spring Migration Monitoring Summary

April

Spring migration monitoring began on April 22. The start date was a few days earlier than in previous years, but warm temperatures throughout April prompted early migration activity and ideal weather for mistnetting. The first day of spring migration monitoring was very warm although a little windy. An indication of the warm temperatures was the ice cover on Lesser Slave Lake had already begun to break up. Flocks of mallard, northern pintail, American wigeon, common goldeneye, and common merganser were taking advantage of the open water as greater yellowlegs foraged along the shoreline. Expected early spring songbirds, such as eastern phoebe, ruby-crowned kinglet, and song sparrow, were heard singing in the trees and shrubs, which had already begun to form buds. Active visual migration was underway as large flocks of American robin passed overhead. The highest single day spring migration count was observed on the opening day. Migrating Myrtle warbler, blackbirds, and northern flicker joined the robins in the sky as American pipit and northern harrier were observed moving along the lake shore. The day's migration activity also included several large flocks of tundra swan and individual Sandhill crane. Mistnetting was attempted on the opening day, but even with all the bird activity, only two eastern phoebes were banded.

Temperatures remained mild through the rest of April, but dipped below the freezing point on several mornings. The first spring sightings of a large number of species occurred during the final week of the month. On the open water of the lake common loon, red-necked grebe, green-winged teal, gadwall, long-tailed duck, and red-breasted merganser were observed. The season's first Franklin's gull, mew gull, belted kingfisher and peregrine falcon were spotted patrolling the shoreline. New songbird species appeared included yellow-bellied sapsucker, winter wren, hermit thrush, orange-crowned warbler, white-throated sparrow, white-crowned sparrow, common grackle, red-winged blackbird. It became clear that the peak migration of dark-eyed junco occurred before the banding station opened. Only three individuals of this common early spring migrant were counted. The LSLBO also missed the passage of American tree sparrow, which typically migrate with the juncos. Migration activity consisted of small but steady numbers of northern harrier, northern flicker, and blackbirds. Numbers of migrating Myrtle warbler fluctuated throughout the week, ranging from only a few individuals to several days with counts nearing 500. The first large flocks of greater-white fronted geese began to move through intermixed with sporadic small flocks of tundra swans. One swan spotted in front of the banding lab on the 24th was identified as a trumpeter swan. Cold morning temperatures and rain reduced the overall mistnetting effort through the week. It resulted with only 10 birds banded with daily totals ranging from 0 to 6 birds.

May

Overnight temperatures cooled off through the first week of May but bird activity picked up once conditions warmed up. Migration activity slowly increased as the week progressed. The week ended with several days of strong songbird migration, which included a heavy day of passage consisting of nearly 1000 Myrtle warblers. Large flocks of greater white-fronted geese became more common through the week. A massive migration of over 10,000 greater white-fronted geese and almost 700 snow geese occurred on May 3. At one point a large mixed flock of low flying geese almost collided with a flock of Sandhill crane. New species for the week included snow geese, blue-winged teal, northern shoveller, ring-necked duck, surf scoter, Say's phoebe, tree swallow, chipping sparrow, savannah sparrow, Lincoln's sparrow, and brown-headed cowbird. Banding occurred on all but one day of the week, but was delayed on most mornings because of freezing temperatures. In total, 48 birds were banded with daily banding totals ranging from 1 to 27.

Freezing temperatures greeted the banders through the start of the second week of May. By the middle of the week morning temperatures were consistently staying above the freezing mark. Limited migration occurred throughout the entire week with only a few individuals observed on most days. Migration activity increased late in the week as another pulse of Myrtle warblers were joined by a large diversity of songbird species. By this time in May most of the expected waterfowl species have arrived; the only new species observed on the lake were American white pelican and white-winged scoter. The last flocks of greater white-fronted geese and snow geese of the spring passed through. First sightings of a large number of songbird species occurred through the week, many observed late in the week with the increased migration activity. These new species included western-wood pewee, blue-headed vireo, warbling vireo, cliff swallow, barn swallow, Swainson's thrush, yellow warbler, palm warbler, black-and-white warbler, ovenbird, northern waterthrush, western tanager, and yellow-headed blackbird. Even with good mistnetting coverage, banding remained slow for most of the week. A total of 64 birds were banded with daily totals ranging from 1 to 36 birds.

The third week opened with several days of steady migration of mixed flocks of warblers and sparrows. May 17 was one of the peak days of songbird migration passage for the spring. Seemingly endless flocks of warblers passed the banding lab throughout the entire morning. Tree swallow, yellow warbler, Myrtle warbler, palm warbler, blackpoll warbler, black-and-white warbler, and chipping sparrow all reached their highest daily counts that morning. A weather system moved through bringing overcast skies and periods of rain for the remainder of the week. Although there were periods of mixed flock songbird migration, they were nowhere near the magnitude of the mid-week passage. First detections of a large number of species including a large number of wood-warblers, were made throughout the week. These included least flycatcher, eastern kingbird, Philadelphia vireo, red-eyed vireo, gray-cheeked thrush, cedar waxwing, Tennessee warbler, magnolia warbler, Cape May warbler, black-throated green warbler, blackpoll warbler, American redstart, mourning warbler, common yellowthroat, Wilson's warbler, Canada warbler, vesper sparrow, LeConte's sparrow, rose-breasted grosbeak, and Baltimore oriole. This was the busiest week of spring bird banding with a total of 263

birds banding. Daily banding totals ranged from 3 to 148 birds. The 148 birds occurred on May 17 and even though 13 species were banded, 119 of the birds were Myrtle warblers.

Migration began to slow down considerably over the last portion of May. Most days only a few individual songbirds were observed migrating through, though some day's visual migration was virtually non-existent. Wind was a factor for several days, which limited the ability to detect birds and reduced the effectiveness of mistnetting. Alder flycatchers, the last of expected regular migrants arrived at the lab. A few sightings of uncommon species were also made, including common nighthawk, mourning dove, olive-sided flycatcher, house wren, and Connecticut warbler. A total of 170 birds were banded over the week with daily totals ranging from 7 to 68 birds. Banding slowed down considerably as the end of the month approached. The most common species banded at this time were Canada warblers and Swainson's thrush. Encounters of recapturing previously banded birds increased, indicating that more birds were establishing breeding territories around the banding station.

June

Migration monitoring was conducted through the first ten days of June to account for the last remaining migrants to pass through the area. The calm and clear weather during this time was excellent for monitoring. However, visual migration was extremely quiet and only a small number of migrants were observed. Most of the observations were of likely locally breeding birds. Banding reflected the slow bird activity with 79 birds banded over the 10 days. Daily banding totals ranged from 3 to 13 birds. One of the highlight birds of the spring was banded on June 6, a juvenile gray jay. The last day of spring migration monitoring was on June 10. With only 3 birds banded and no indication of migratory activity, it was time to prepare for the MAPS project.

Fall Migration Monitoring Summary

July

Fall migration monitoring began on July 12. Although the weather looked promising early in the morning, it began to rain after a few hours and all bird activity halted. The weather on the opening day set the stage for the rest of the week with periods of rain and strong wind. Bird activity was slow for the entire week and no visual migration activity was recorded. The exception were the large groups of Franklin's gull that passed by the banding lab. These groups passed by the lab over several days with numbers ranging from 200 to nearly 1000. Overall banding effort was limited by the poor weather and a total of 29 birds were banded, with daily totals ranging from 1 to 14 birds. Though banding was slow, a juvenile varied thrush was banded, which was the first highlight species of the fall.

Weather conditions improved during the third week of July and brought sunny skies and light winds. Active migration began early in the week as small numbers of Tennessee warbler, yellow warbler, Myrtle warbler, and blackbirds began moving through. Most of the migration consisted of individuals, but occasionally mixed flocks were spotted which included black throated-green warbler, black-and-white warbler, American redstart, Canada warbler, western tanager, and chipping sparrow. Banding became busier with the increased bird activity. The highest single day banding total of the fall occurred on July 24 with 77 birds banded. Each day a variety of species were banded, but the most consistent captures were Swainson's thrush and ovenbird. A total of 217 birds were banded through the week with daily totals ranging from 14 to 77 birds. A highlight of the week was a female ruby-throated hummingbird that was captured in a mistnet, it was safely extracted and released at the net.

The last week of July began with two incredibly windy days. Although these conditions made detecting songbird activity nearly impossible, Franklin's gulls were very active in the wind as 1500 and 2000 were counted over the two days. Songbird migration resumed for the remainder of the week as the good weather returned. Most of the visual migration consisted of Myrtle warbler, but small numbers of individuals from a wide variety of species were recorded. Banding remained steady through the week with 199 birds banded and daily totals ranging from 6 to 51 birds. Though the diversity of species banded remained high, there was good representation of Swainson's thrush, American redstart, ovenbird, and Canada warbler.

August

The first week of August was primarily sunny and calm, but a couple of extremely windy days occurred mid-week. Visual migration activity increased dramatically as a large number of songbirds passed through over the course of several days. The majority of the migrants were Myrtle warblers. Their daily totals ranged from 400 to 600 at this time. Many of the other common migrant warbler species, such as Tennessee warbler, yellow

warbler, and American redstart, were also observed in good numbers. Mixed flocks also contained some of the more infrequently encountered warbler species, including Cape May warbler, palm warbler, blackpoll warbler, bay-breasted warbler, and Wilson's warbler. The first sharp-shinned hawks of the fall were observed chasing the various warblers. These birds add excitement to the daily counts and banding. With the increased bird activity, banding remained steady, but not overly busy. A total of 214 birds were banded with daily totals ranging from 5 to 54 birds. The majority of the species banded were wood-warblers.

Overall migration slowed down during the second week of August. Weather conditions were not ideal throughout the week with several days with high winds and rain showers. Only two days saw active migration similar to the previous week, with a strong passage of Myrtle warbler joined by smaller numbers of a large diversity of wood-warbler species. During the periods of poor weather, there was little active migration occurring, but sporadic mixed flocks of wood-warblers were observed foraging in the trees and shrubs. The first recorded sightings of northern rough-winged swallows at the LSLBO occurred on August 13 as a pair was spotted during the morning census. These swallows represented the 250th species to be recorded at the LSLBO. Banding was generally slower than the previous week with a total of 131 birds banded and daily totals ranging from 5 to 51 birds.

The overall weather through the third week of August was generally calm and sunny, with the exception of two very windy days late in the week. Even though weather was ideal for monitoring, active migration was very slow. Visual migration was limited to individuals, though occasionally small groups of migrating Myrtle warblers were observed. Late in the week the first flocks of American pipit began moving along the shoreline in front of the banding lab. A long-eared owl was spotted on the 16th during census as it was mobbed by a large number of songbirds. It was spotted the following day closer to the banding lab and there was evidence that it escaped from a net later in the morning. A total of 93 birds were banded through the week, with daily totals ranging from 1 to 27 birds. Swainson's thrush and ovenbird were the top banded species.

A weather system moved in during the fourth week of August bringing several days of rain and heavy wind. Active migration occurred on the only two calm days of the week; most of the migrants were Myrtle warblers with a fair number of sharp-shinned hawks also observed. The only fall sightings of Say's phoebe were observed during the week. Flocks of various species of sandpipers, including Baird's and least sandpipers, were observed moving along the shoreline. Far out on the lake the first fall flocks of greater-white fronted geese were spotted. Typically there is a transition of species diversity at the LSLBO by late August. Many of the common species observed earlier in the fall, such as Tennessee warbler, yellow warbler, black-and-white warbler, and Canada warbler have reached the tail end of their fall migratory window and become rare encounters while the first late fall migrants typically begin to move through the area. Banding effort was limited because of the weather and mistnetting occurred on four days. As a result 54 birds were banded, with banding totals ranging from 12 to 15 birds on days that nets were set. Swainson's thrush remained one of the top species banded.

The final days of August faced overcast skies and cooler temperatures, but the wind and rain stayed away and the endless Myrtle warbler migration resumed. Steady streams of Myrtle warbler passed through each day and were joined by a small numbers of other species. These included the first orange-crowned warbler, dark-eyed junco, and Lapland longspur of the fall as well as the last fall observations of Say's phoebe, Tennessee warbler, Cape May warbler, mourning warbler, Canada warbler, and rose-breasted grosbeak. Over the final three days of August, 80 birds were banded, with daily totals ranging from 16 to 35 birds. Swainson's thrush and Myrtle warbler were the top banded species.

September

September opened with spectacular fall weather and several consecutive days of strong migration passage. Myrtle warblers continued a strong migration presence and they reached their peak fall daily total on the 3rd with 932 counted. Rain and heavy wind moved in through the second half of the week which limited observations and banding attempts, but some Myrtle warblers and orange-crowned warblers continued moving despite the wet weather. The week brought the first fall sightings of white-crowned sparrow, but last sightings of Franklin's gull, yellow-bellied sapsucker, western tanager and chipping sparrow. A total of 87 birds were banded through the week with daily totals ranging from 0 to 23 birds. Orange-crowned warblers, Myrtle warblers, and Swainson's thrush were the top banded species.

The second week of September opened with drizzly and cold weather, which turned pleasant late in the week. Migrants were observed through the entire week, but most of the eastern kingbird, Myrtle warbler, orange-crowned warbler, sparrows, and dark-eyed junco were observed in small numbers. Flocks of greater white-fronted geese increased in size and frequency; their fall numbers peaked on the 14th with over 5000 counted. The last fall observations of alder flycatcher, eastern phoebe, eastern kingbird, yellow warbler, black-and-white warbler, clay-coloured sparrow, and savannah sparrow were made over the week. A total of 97 birds were banded, with daily totals ranging from 1 to 31 birds. Two highlight species were banded on the 9th. The first was the first eastern kingbird to be banded at the LSLBO, which represented the 100th species to be banded at the station. In the same net was a Cooper's hawk, only the second one to be banded at the station. Also banded was the first gray-cheeked thrush and fox sparrow of the fall.

The last two weeks of September were very productive in terms of banding. Myrtle warbler, orange-crowned warbler, and dark-eyed junco remained the most active species in both observations and bandings. A total of 199 birds were banded through the last half of September, with a peak banding day of 45 birds on the 21st. The first Townsend's solitaire for the LSLBO was banded on the 23rd, and represented the 101st species to be banded at the station. Through the final week of September, bird activity diminished with the majority of the activity being black-capped chickadee and waterfowl on the lake. The 2010 banding season ended on a gorgeous fall day on the 30th with a black-capped chickadee being the final bird banded of the season.

Monitoring Avian Productivity and Survivorship (MAPS)

Monitoring Avian Productivity and Survivorship (MAPS) is a long-term monitoring program coordinated by the Institute for Bird Populations. The primary focus of MAPS is to monitor populations on the breeding grounds. The LSLBO has participated in the MAPS program since 1994 and it remains one of the organizations core monitoring projects. 2010 marks the 17th consecutive year that the LSLBO has contributed to the MAPS program.

The LSLBO currently operates four MAPS stations: Far-and-Away (FAWA), Fern Gully (FEGU), Roadside (ROAD), and Residence (RESI). Three stations, FAWA, FEGU, and ROAD, are located in the forest bordering the migration monitoring station, while RESI is located near the Boreal Centre for Bird Conservation. FAWA and ROAD have operated for all 17 years. FEGU operated from 1994 to 2000. It has since been operated for 8 consecutive years after reopening in 2003. RESI was established in 2000 and celebrated its 10th year of operation this year. Each station is visited once every 10 day period throughout the breeding season and follows operating protocols described in the MAPS Manual. The LSLBO operates through 6 of the periods, the dates that each station was visited in 2010 were:

	FAWA	FEGU	ROAD	RESI
Period 5 (Jun 10 – 19)	June 12	June 13	June 13	June 11
Period 6 (Jun 20 – 29)	June 21	June 22	June 23	June 20
Period 7 (Jun 30 – Jul 9)	June 30	July 3	July 3	July 2
Period 8 (Jul 10 - Jul 19)	July 12	July 11	July 11	July 10
Period 9 (Jul 20 – 29)	July 21	July 22	July 23	July 20
Period 10 (Jul 30 – Aug 8)	July 31	August 1	August 2	July 30

MAPS Banding

Each MAPS station operates 10 mistnets and can achieve a maximum of 360 net hours during the season. RESI, FAWA, and ROAD received maximum net coverage. Weather conditions prevented a small amount of banding during one period at FEGU, which received 345 net hours of coverage.

In total, 299 birds were captured during the 2010 MAPS banding season; 185 banded, 112 recaptures, and 2 unbanded. 27 species and forms were represented during MAPS banding. FEGU had the highest capture total of the stations with 53 birds banded and 36 recaptures from 14 species (Table 3). It received its first banding record of a Lincoln's sparrow. RESI had the second highest capture total with 61 banded. It had the highest species diversity of the stations, with representation of 20 species captured, and included the first banding record of a cedar waxwing for this station (Table 4). FAWA had 45 birds banded and an additional 27 recaptures from 13 species (Table 5). This station typically has lower banding totals than the previous two sites. ROAD had the slowest banding of the four stations with 26 bandings and 25 recorded recaptures from 14 species (Table 6).

Table 3. Captures at the Fern Gulley (FEGU) MAPS station.

Species	2010		Previous Years' Total Captures				
	Banded	Recap	94-99	03-06	2007	2008	2009
Sharp-shinned Hawk						1	
Northern Saw-whet Owl			1				
Yellow-bellied Sapsucker		1		1		1	1
Three-toed Woodpecker						1	
Alder Flycatcher			6	2	1	2	1
Least Flycatcher			2	6			
Blue-headed Vireo			2	1			
Red-eyed Vireo	1	1	4	3	1		
Blue Jay						1	
Black-capped Chickadee			7	3			
Red-breasted Nuthatch			4				
Brown Creeper						3	
Winter Wren			3	2	1		1
Swainson's Thrush		1	50	29	4	5	9
Hermit Thrush			1	2		1	1
American Robin			4	1			1
Cedar Waxwing				2			
Tennessee Warbler			30	49	3	3	25
Orange-crowned Warbler			1				
Yellow Warbler	1		13	7	3		
Chestnut-sided Warbler			2				
Magnolia Warbler			17	6			3
Yellow-rumped Warbler	5	1	26	10		5	2
Black-throated Green Warbler			1			1	
Bay-breasted Warbler				1			
Black-and-white Warbler	1		12	11		1	7
American Redstart	12	10	237	135	12	23	19
Ovenbird	3	2	41	50	8	17	18
Northern Waterthrush			1	1			
Mourning Warbler	3	2	51	20	3	1	12
Common Yellowthroat				1	1		
Wilson's Warbler						1	
Canada Warbler	15	12	112	80	18	17	20
Western Tanager	2		1	3			1
Chipping Sparrow			2	1			1
Song Sparrow			5				
Swamp Sparrow	1		2				
Lincoln's Sparrow	1						
White-throated Sparrow	8	6	102	59	13	16	8
Rose-breasted Grosbeak						1	
Pine Siskin			2				
Total	53	36	742	324	68	101	130

Table 4. Captures at the Residence (RESI) MAPS station.

Species	2010		Previous Years' Total Captures					
	Banded	Recap	'00-04	2005	2006	2007	2008	2009
Sharp-shinned Hawk			1		1			1
Ruby-throated Hummingbird			2					
Yellow-bellied Sapsucker		1	15	2		2	2	2
Downy Woodpecker							1	
Northern Flicker			1					
Western Wood-Pewee			1					
Alder Flycatcher			1					
Least Flycatcher			44			1	4	
Black-capped Chickadee			15		8	2		
Red-breasted Nuthatch			3				1	
Brown Creeper	1		2				1	
Winter Wren			4		1		8	
Ruby-crowned Kinglet			3	1				
Swainson's Thrush	5	3	40	8	10	4	13	13
Hermit Thrush			11	7	6	3		
American Robin	4		5		1		2	2
Red-eyed Vireo	1		8			4	5	
Philadelphia Vireo			2				1	
Warbling Vireo			2					
Blue-headed Vireo	1		3					
Cedar Waxwing	1							
Tennessee Warbler	2		146	5	5	12	12	10
Orange-crowned Warbler			1					
Yellow Warbler			15			4	3	2
Magnolia Warbler	1		27	3		4	3	5
Cape May Warbler						1		
Yellow-rumped Warbler	4	3	116	5		9	6	12
Black-throated Green Warbler			5					3
Bay-breasted Warbler			6					
Blackpoll Warbler			2					
Black-and-white Warbler	2		9			3	6	4
American Redstart	5	1	72	5	7	15	7	7
Ovenbird	10	4	26	23	14	13	11	18
Northern Waterthrush			1					
Mourning Warbler	5	1	9	1	1	2	4	9
Common Yellowthroat	1		2		1		1	1
Canada Warbler	5	3	25	2	2	12	11	2
Western Tanager			3					
Rose-breasted Grosbeak	2		7				1	1
Chipping Sparrow	1		11		1	2		6
Clay-colored Sparrow			1					
Lincoln's Sparrow	1		3	1	3	9	1	10
Swamp Sparrow								1
White-throated Sparrow	9	8	84	11	7	13	18	9
Purple Finch			1					2
Pine Siskin			1					
Total	61	24	739	74	76	115	122	120

Table 6. Captures at the Far Away (FAWA) MAPS station.

Species	2010		Previous Years' Total Captures					
	Banded	Recap	94-'04	2005	2006	2007	2008	2009
Sharp-shinned Hawk								1
Yellow-bellied Sapsucker	2	1	1		1	1	3	
Downy Woodpecker			1					
Hairy Woodpecker							1	
Least Flycatcher	6	2	15			2	1	
Winter Wren						1		
Swainson's Thrush	5	2	8	2			2	1
Hermit Thrush			2			1	2	1
American Robin	2	1	11			1	1	1
Cedar Waxwing			1					
Phialdelphia Vireo			1			1		
Red-eyed Vireo		1	6	1		1	1	
Tennessee Warbler			9	8	1	4	5	10
Yellow-warbler	2		5				1	
Chestnut-sided Warbler			1					
Magnolia Warbler			1					
Yellow-rumped Warbler	4	3	29	6	1	3	4	2
Black-and-white Warbler			2		1		2	1
American Redstart	5	2	62	2	6	3	10	4
Ovenbird	4	2	30	9	8	8	6	7
Connecticut Warbler			1					
Mourning Warbler	3	2	64	2	3	4	9	12
Common Yellowthroat			2					
Canada Warbler	3	7	102	11	4	10	12	12
Western Tanager	1	1	2					
Rose-breasted Grosbeak			1				1	
Lincoln's Sparrow					1		3	1
White-throated Sparrow	8	3	134	20	18	17	16	15
Slate-coloured Junco						1		
Total	45	27	500	61	44	58	80	68

Table 5. Captures at the Roadside (ROAD) MAPS station.

Species	2010		Previous Years Captures					
	Banded	Recap	94-'04	2005	2006	2007	2008	2009
Yellow-bellied Sapsucker			8	1			1	3
Downy Woodpecker			1					
Hairy Woodpecker			2			1		
Pileated Woodpecker			1					
Yellow-bellied Flycatcher			1					
Alder Flycatcher			6					
Least Flycatcher			10	1				
Black-capped Chickadee		1	10	1				1
Red-breasted Nuthatch			1					
Brown Creeper			1			2		2
Winter Wren			4	3		5	2	6
Ruby-crowned Kinglet			3	1				
Swainson's Thrush	6	1	83	10	7	8	13	11
Hermit Thrush		1	1	1				3
American Robin	1		4	1	2	1		1
Cedar Waxwing			3					
Warbling Vireo			1					
Red-eyed Vireo			5		1	2		1
Tennessee Warbler			58	49	5	3	9	10
Orange-crowned Warbler			1					
Yellow Warbler			9					
Chestnut-sided Warbler			4	1				
Magnolia Warbler		1	110	2	2	3	1	6
Cape May Warbler			3					
Yellow-rumped Warbler		2	74	5	1	4	9	3
Black-throated Green Warbler		1	7					
Palm Warbler			1					
Blackpoll Warbler			2					
Black-and-white Warbler		1	26	2		6	3	3
American Redstart	2		196	22	13	13	14	11
Ovenbird	5	9	107	12	13	9	18	20
Northern Waterthrush			2		1			1
Mourning Warbler	1		16	1	1	1	2	4
Common Yellowthroat			2					
Canada Warbler	4	6	181	24	13	8	15	21
Western Tanager			3				1	
Rose-breasted Grosbeak			4			1		
Chipping Sparrow	1		16			3		1
Song Sparrow			2					
Lincoln's Sparrow			3				1	
Swamp Sparrow						1		
White-throated Sparrow	6	2	113	10	6	6	5	11
Purple Finch			1					
Pine Siskin			1					
Total	26	25	1088	146	67	77	94	119

Breeding Status

Breeding status was determined for the 63 species encountered at MAPS stations visits. The breeder status (B) is given to species with evidence, or strong evidence supporting breeding activity within the boundaries of the MAPS station. Likely breeders (L) were species frequently observed at a station, but lacked strong evidence of breeding activity within the station's boundaries. Transient species (T) are observed at a station, but it is unlikely that they were breeding within the station's boundaries. Observations were restricted to MAPS banding site visits only.

Table 7. Breeding Status of MAPS birds in 2010.

Species	RESI	ROAD	FEGU	FAWA	Species	RESI	ROAD	FEGU	FAWA
Common Loon	T	T			Swainson's Thrush	B	B	B	B
American White Pelican		T			Hermit Thrush	L	T	T	L
Osprey				T	American Robin	L	L	L	B
Bald Eagle		T	T	T	Cedar Waxwing	T	T	T	T
Sharp-shinned Hawk		T			Tennessee Warbler	B			
Ruffed Grouse	B	B	B	B	Yellow Warbler	L	B	B	B
Common Snipe	T				Magnolia Warbler	L	B	B	
Franklin's Gull		T	T	T	Yellow-rump'd Warb.	B	B	B	B
Ring-billed Gull				T	Black-thrt'd Grn Warb.	L	L	T	T
Ruby-thrt'd Hummingbird		T			Black-and-white Warb.	B	B	L	L
Barred Owl	T				American Redstart	B	B	B	B
Yellow-bellied Sapsucker	L	T	T	B	Ovenbird	B	B	B	B
Downy Woodpecker	L				Northern Waterthrush	T	T		
Hairy Woodpecker	T		T	T	Mourning Warbler	B	L	B	B
Northern Flicker	T	T	T		Common Yellowthroat	B		L	
Pileated Woodpecker	T		T	T	Canada Warbler	B	B	B	B
Alder Flycatcher	L	T	T		Western Tanager	L	B	B	T
Least Flycatcher	B	T	L	B	Chipping Sparrow	L	L		
Blue-headed Vireo	B			L	Clay-colored Sparrow		T		
Warbling Vireo	T		T		Song Sparrow			L	T
Philadelphia Vireo	L	T	T	T	Lincoln's Sparrow	L		T	T
Red-eyed Vireo	B	B	B	B	Swamp Sparrow			T	
Gray Jay	T				White-thrt'd Sparrow	B	B	B	B
Blue Jay	T	T	T		Rose-breast'd Grosbeak	L	L	B	T
American Magpie		B	T		Red-winged Blackbird				T
American Crow	T	T	T	T	Brown-headed Cowbird	T			T
Common Raven				T	White-winged Crossbill	T	T		
Tree Swallow				T	Purple Finch	T			T
Black-capped Chickadee	L	L	L	B	American Goldfinch	T			
Red-breasted Nuthatch	L	T	B	T	Pine Siskin	T	T	T	T
Brown Creeper	L				Evening Grosbeak	T	T	T	T
Winter Wren	B								
						RESI	ROAD	FEGU	FAWA
					Total sp. Breeder (B)	15	13	14	14
					Total sp. Likely (L)	16	6	6	3
					Total sp Transient (T)	18	21	19	22
					Total sp.	49	40	39	39

Recaptures

The LSLBO recorded 304 recapture records during the 2010 banding season: 61 during spring migration, 112 during MAPS, and 131 during fall migration. All recaptures were birds originally banded at the LSLBO, no foreign recoveries were encountered. The recapture records represented 201 individuals, some of which were caught multiple times throughout the banding season. Of these, 141 were birds banded during the 2010 monitoring activities and recaptured later in the season. 36 birds were originally banded during the 2009 season. Another 24 birds were banded previous to 2009 and represent the older known aged birds encountered (Table 8).

Table 8. Age of recaptured birds originally banded at the LSLBO before 2009.

Species	Band Number	Original Banding			Recapture		Age
		Date	Location	Age	Date	Location	
Ovenbird	1741-02646	Aug 6, 08	Mig	HY	Jun 12, 10	FAWA	2 years
Canada Warbler	2450-46021	Jul 22, 08	FEGU	HY	May 27, 10	Mig	2 years
Yellow-bellied Sapsucker	8051-95133	May 16, 08	Mig	SY	May 29, 10	Mig	3 years
Myrtle Warbler	2450-46537	May 25, 08	Mig	SY	May 21, 10	FAWA	3 years
Canada Warbler	2350-49959	Jun 13, 08	ROAD	SY	Jun 22, 10	FEGU	3 years
American Redstart	2470-89365	Aug 8, 07	Mig	HY	Jul 29, 10	Mig	3 years
Myrtle Warbler	2450-46008	Jul 12, 08	FAWA	AHY	Jun 21, 10	FAWA	3+ years
Myrtle Warbler	2450-46597	Jul 12, 08	Mig	AHY	May 28, 10	Mig	3+ years
Ovenbird	1741-02027	Jul 10, 08	RESI	AHY	Jul 2, 10	RESI	3+ years
Ovenbird	1741-02030	Jul 11, 08	FEGU	AHY	May 20, 10	Mig	3+ years
Ovenbird	1741-02050	Jul 23, 08	ROAD	AHY	Jul 23, 10	Mig	3+ years
Canada Warbler	2450-46637	Jul 16, 08	Mig	AHY	Jun 13, 10	FEGU	3+ years
Canada Warbler	2160-63480	Jun 14, 07	ROAD	SY	May 27, 10	Mig	4 years
Ovenbird	1741-02214	Jul 20, 07	Mig	AHY	Jun 9, 10	Mig	4+ years
Myrtle Warbler	2350-50482	May 18, 07	Mig	SY	May 17, 10	Mig	5 years
Black-and-white Warbler	2350-49274	May 17, 06	Mig	SY	May 20, 10	Mig	5 years
Canada Warbler	2350-49332	May 29, 06	Mig	SY	Jun 23, 10	ROAD	5 years
Canada Warbler	2160-63423	Jun 14, 06	ROAD	SY	Aug 14, 10	Mig	5 years
Myrtle Warbler	2350-50525	May 22, 07	Mig	ASY	Jun 1, 10	Mig	5+ years
American Redstart	2330-37491	Jun 20, 07	FEGU	ASY	Jun 11, 10	RESI	5+ years
American Redstart	2330-39827	Aug 23, 06	Mig	AHY	May 28, 10	Mig	5+ years
White-throated Sparrow	1721-63308	May 6, 07	Mig	ASY	Jun 2, 10	RESI	5+ years
White-throated Sparrow	1871-65136	Jun 12, 07	FAWA	ASY	Jun 21, 10	FAWA	5+ years
American Redstart	2330-37457	Jun 23, 06	ROAD	ASY	Jun 13, 10	FEGU	6+ years

Northern Saw-whet Owl Monitoring

The LSLBO completed the seventh consecutive year of northern saw-whet owl banding in 2010. This project started in 2004 with the objective of monitoring the fall migratory passage of northern saw-whet owls through banding. Monitoring began on August 29 and ended on October 16. Monitoring occurred on 37 nights during that period and nets were set for a total of 562 net hours. A total of 82 northern saw-whet owls were banded and an additional 3 recaptures of owls banded at the LSLBO earlier in the season. The busiest saw-whet banding night occurred on September 18 with 7 owls banded, followed by August 31 and September 30, both with 6 owls banded.

The proportion of saw-whets aged as hatch-year (HY) was higher than the average (Table 9). A high proportion of saw-whets were aged as female using wing/ weight ratios, but it was within the average for the LSLBO (Table 10).

Table 9. Number and proportion of northern saw-whet owls banded by age class.

Year	HY	AHY	SY	ASY	Total
2010	68 (83%)	2 (2%)	8 (10%)	4 (5%)	82
Total (2004-2010)	556 (72%)	7 (1%)	146 (19%)	65 (8%)	774

Table 10. Number and proportion of northern saw-whet owls banded by sex class.

Year	Male	Female	Unknown	Total
2010	5 (6%)	61 (74%)	16 (20%)	82
Total (2004-2010)	29(4%)	565 (73%)	180 (23%)	774

There was one report of an owl recovery this year. An after-second year female was banded at the LSLBO on the evening of September 30. It was recaptured two weeks later, on October 14, by an owl bander near Prince Albert, Saskatchewan.

Combining seven years of banding data, from 2004 to 2010, provides a picture of the migratory patterns of northern saw-whet owls moving through the LSLBO (Figure 3). Owls begin to move through during the last week of August and owls are being captured on a nightly basis by early September. Peak migration timing occurs through the second and third week of September. Capture rates begin to decrease by late September. Monitoring typically ends between October 15 and 21, however, there appears to be owls still moving through, which may justify continuing the owl banding into November.

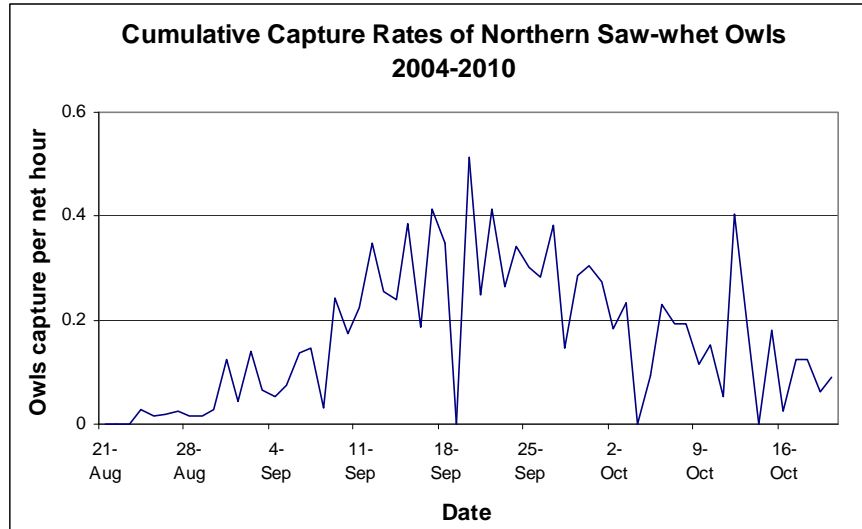


Figure 3. Cumulative capture rates of northern saw-whet owls at the LSLBO, 2004-2010.

Canada Warbler Project

The objective of the Canada Warbler Project, which began in 2004, is to study aspects of the breeding ecology of Canada warblers. Limited information exists on this species ecology and breeding habitat requirements. Canada warblers are a confirmed local breeder, and breed in densities that allow for various studies to be conducted at the LSLBO. Due to significantly declining populations, the Canada warbler was listed as Threatened on the federal Species at Risk Act in February 2010. This listing requires that the species habitats are protected and recovery plans are developed to ensure that populations do not experience further decline. Because of the timing of the listing, the LSLBO was unable to obtain the necessary permitting required to directly work with this species at risk this summer.

As an alternative, the LSLBO focused resources into gathering the baseline habitat data required for this project. The first stage was to explore the Lesser Slave Lake Provincial Park to locate other areas with concentrations of breeding Canada warblers. Alberta Sustainable Resource Development provided a map with 100 random plots for point count surveys (Figure 4). Observers surveyed 96 plots between June 18 and June 27 with a 5 minute silent listening period. All birds encountered were recorded. A general site description, including vegetation cover and dominate species, was completed at each site. Incidental encounters of Canada warblers outside of the point count plots were recorded.

The second part of the project was to conduct extensive vegetation surveys within the established Canada warbler study site. A total of 84 plots were surveyed from August to September following the BBIRD vegetation protocols. This data will provide the framework needed to describe Canada warbler breeding habitat requirements and become the baseline for future demographic and ecology studies.

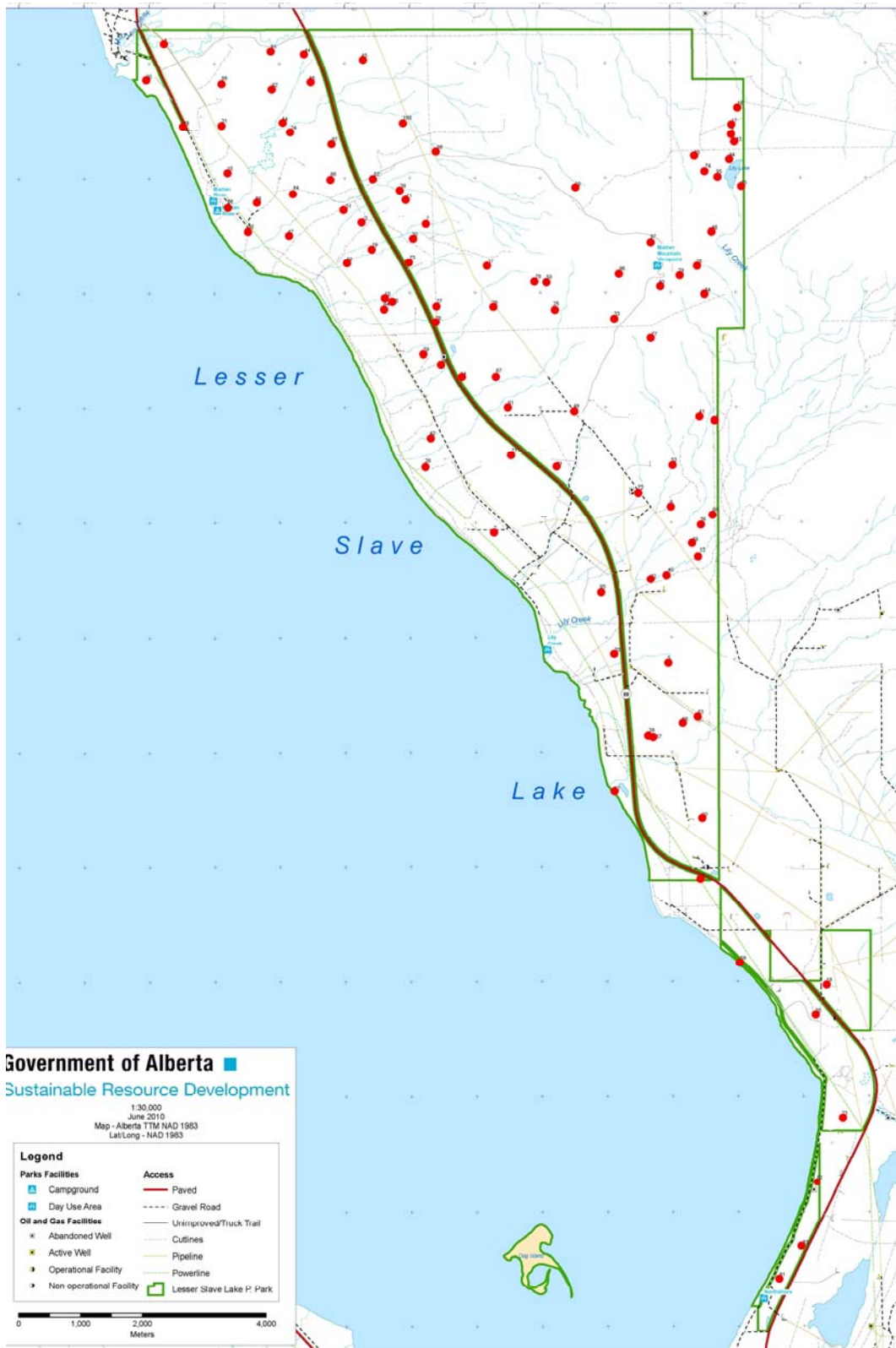


Figure 4. Map of the Lesser Slave Lake Provincial Park. Dots highlight sampling plots for Canada warbler point counts.

Aerial Nets

There has been a growing concern that the vegetation within the migration monitoring site has outgrown the height of the mistnets and it may be affecting the capture rates and species diversity represented through banding. The LSLBO does not have a habitat management protocol, and the station is not permitted to manage vegetation within the Provincial Park. To test the affects of vegetation growth, the LSLBO erected two aerial nets during fall migration. Nets were placed adjacent to existing nets to compare capture rates and species diversity. Standard net height is 2.6 meters. The aerial nets reach an area from 2.6 meters to 5.2 meters. The first net, designated 11X (or “Big X”), was placed beside net 11 along the shore. The second net, 12X, was placed adjacent to net 12 along the forest edge.

Net 12X was set for a total of 438.45 net hours and captured 125 birds, 114 banded and 11 recaptures, from 23 species. The capture rate was 28.5 birds/100 net hours. For comparison, netlane 12 was opened for 484.2 net hours and captured 51 birds, 44 banded and 7 recaptures, from 19 species. The capture rate was 9.5 birds/ 100 net hours.

Net 11X received reduced net hours due to a delayed set up and exposure to high winds throughout the season. It was set for a total of 369.45 net hours and captured 319 birds, 305 banded and 14 recaptures, representing 43 different species. In comparison, net 11, which also experience reduced net hours being exposed to winds was opened for 413.7 net hours and captured 104 birds, 93 banded and 11 recaptures, from 33 species.

The two new aerial nets were in the top four nets for capture rates and number of birds banded of the 14 nets used during fall migration (Figure 5). These nets will be used again in the spring of 2011 to test the effectiveness during spring migration. Future analysis will explore changes in capture rates over time compared with estimated vegetation growth rates. Ultimately, the LSLBO hopes to determine the magnitude that vegetation change has affected the observed banding trends.

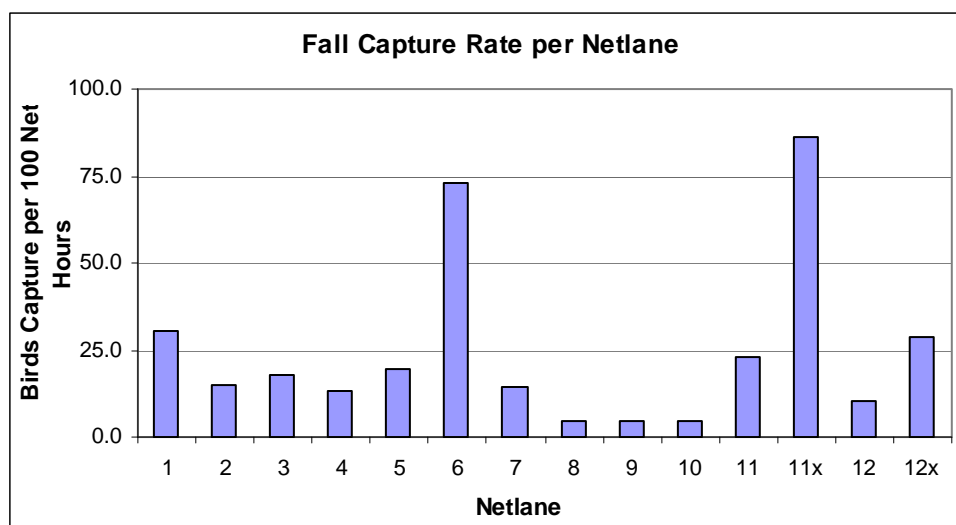


Figure 5. Capture rate per netlane for 2010 fall migration monitoring.

Determining the Timing of Fall Migration

The LSLBO begins fall migration monitoring on July 12 before there is evidence of active migration. By the third week of July, banding becomes busier and birds are beginning to actively migrate. Since the LSLBO is situated in the boreal forest and within the breeding range of many of the species the station is monitoring, it is difficult to separate local breeders from true migrants. The objective of this project is to analyze stable isotopes from feathers collected from birds captured over the course of fall migration to ascertain their origin. This will allow the LSLBO to determine the proportions of birds captured that are local versus migrants throughout the fall migration period. From this, the LSLBO can adjust data to account for true migrants, which will improve the accuracy of our population trends.

This is a joint project with the University of Alberta and Alberta Parks. For the 2010 fall season, four focal species were selected by various criteria: Swainson's thrush, Tennessee warbler, Myrtle warbler, and American redstart. Feathers were collected from 361 individuals from the four species (Table 11). Feather analysis will be conducted over the winter of 2010/2011.

Table 11. Number of feathers collected with comparison of total number of birds banded for each species during the fall of 2010.

Species	Total Samples Collected	Total Number Banded
Swainson's thrush	125	195
Tennessee Warbler	39	40
Myrtle Warbler	123	209
American Redstart	74	89

Ovenbird Project

The Ovenbird Project is a comparative study conducted by a Ph.D. student from the University of Alberta. The objective of this project is to compare dispersal distances of ovenbirds in the boreal forest in Alberta with the Acadian forests of north-eastern Canada. It is hypothesized that ovenbirds in Alberta will have greater dispersal distances than those in north-eastern Canada because of landscape disturbance characteristics.

Feathers were collected from breeding individuals throughout the Lesser Slave Lake Provincial Park by an honors student from the University of Alberta. Stable isotopes from the feathers will be analyzed to determine their origin, which will allow for dispersal distances to be estimated. Feathers samples were also collected from nestlings and fall migrants. The role of the LSLBO was to assist by collecting feathers of ovenbirds captured during migration monitoring and MAPS banding. LSLBO staff also assisted with field assistant training, project supervision as well as nest searching.

Feather samples were collected from 196 individual ovenbirds within the Provincial Park. All aspects of the analysis will be conducted by the University of Alberta. The LSLBO may assist with this project in the future if more data is required.

Staff and Volunteers

The LSLBO operated with two full time, experienced banders during the 2010 field season. The bander-in-charge has been working at the LSLBO since 2004 and the assistant bander began banding in 2008. The banding staff was responsible for all monitoring activities and combined for a total of 229 field days for monitoring (Table 12). Assisting with the banding was a University of Alberta student (Javan Green) and LSLBO staff working at the Boreal Centre for Bird Conservation.

Volunteer support was extremely limited in 2010. Five volunteers accumulated 15 days, most during spring migration. A long term volunteer was anticipated for the majority of the summer, but she had to leave after only a short time due to unexpected circumstances. Because of the timing of her departure, the LSLBO was not able to secure other long-term volunteer support.

Table 12. Number of staff and volunteers days spent on monitoring projects in 2010.

	Spring	MAPS	Fall	Total
LSLBO Staff				
Richard Krikun	45	13	61	119
Nicole Linfoot	40	15	55	110
Javan Green	15	4	19	38
Cori Klassen			18	18
Charity Beadow	1		3	4
Total Staff Days	101	32	156	289
Volunteers				
Deborah Lawrence	9			9
Dave Cullen	2			2
Kathy Cullen	2			2
Rebecca Walsh			1	1
Morgan Prior			1	1
Total Volunteer Days	13		2	15

Visitors and Education

Education is an important component of the LSLBO's mandate. Boreal Centre for Bird Conservation and Alberta Parks programs incorporate migration monitoring, banding, and bird biology into many of their education programs. Some of these programs are run at the banding station during the migration monitoring seasons allowing visitors and school groups the opportunity to take part in hands on activities as well as the chance to see bird banding demonstrations. The programs highlight the role of population monitoring projects and stress the importance of conservation. In addition to programs, the banding lab was open to all visitors during migration monitoring. A total of 741 visitors came to the banding lab during migration monitoring in 2010 (Table 13).

Table 13. Number of visitors to the banding station in 2010.

Season	Adults	Children	Total
Spring Migration	212	213	425
Fall Migration	239	77	316
Total	451	290	741

During the spring, the LSLBO hosted 9 banding lab tours consisting of local schools and junior forest warden groups. In the fall, banding lab tours were held twice a week for campers and local visitors, with additional tours provided for Alberta Parks, Travel Alberta, and a NAIT Renewable Resources field school. All tours were provided with a history of the LSLBO, the purpose of migration monitoring, mock banding activities, and banding demonstrations.

The 16th annual Songbird Festival was held on June 5. The majority of activities were held at the Boreal Centre for Bird Conservation. Guided hikes and tours were held throughout the morning and ended at the banding lab for a chance to watch bird banding. Approximately 65 people took part in the banding lab tours during the festival.

Several programs focused on the northern saw-whet owl banding including hosting a public event, two high schools, and a NAIT Renewable Resources class. In total, 153 people attended these programs. The 3rd annual Saw-whet Social was held on October 2. This is the LSLBO's Annual General meeting. Twenty-two people came out, including LSLBO Board of Directors, staff, and members. After two years, we finally caught an owl for the event!

Recommendations

The 2010 was very successful if not busy year with the monitoring and research projects. Many of the recommendations made in the past were addressed this year, and the LSLBO is on the path to improving the quality of the monitoring data collected as well as taking the opportunity to expand research horizons with a partnership with the University of Alberta. The following sections touches upon some recommendations for the projects operated this year.

Northern Saw-whet Owl Monitoring

- The overlap period with migration monitoring in September is very tiring, so ensure that it does not interfere with the quality of migration monitoring
- If possible, extend the owl banding season into November
- If future public events are focused on owl banding, make sure there are lots of other activities to keep the visitors entertained in case the owls don't show up.

Canada Warbler Project

- Work towards a strong research plan with specific goals set out for the next five years. Narrowing the focus of the research plan will improve data collection methods and help identify the resources needed for this project.
- Work with Alberta Parks and the University of Alberta to create long-term support for the project.

Aerial Mistnets

- Continue testing the two aerial nets for the spring and fall of 2011.
- Begin to sort out the data needed to analyze capture rates over time and vegetation change.
- Make sure that there are at least two able extractors present at the banding lab when the aerial nets are set.

University of Alberta and Alberta Parks Joint Research Projects

- Results of this season will determine future collaborative projects.
- Maintain open communications with both the University of Alberta and Alberta Parks to make sure that we are able to assist in their projects to the best of our ability.

Visitors, education, and volunteers

- The banding lab tours were handled excellently this year. All visitors were given a great educational opportunity without disrupting the banding operations.
- Any changes to the existing banding lab tours should be reviewed with the bander-in-charge
- Attempt to develop local volunteer support.
- Long-term volunteer support is always preferable; make sure that volunteer skill level is appropriate for the time of year and projects being run at that time.

Acknowledgements

The 2010 banding season was the LSLBO was successful because of the contributions of the LSLBO board of directors, the staff and volunteers of the LSLBO and BCBC, Lesser Slave Lake Provincial Park, and other organizations and agencies.

We would like to thank the following:

- The LSLBO Board of Directors: Bob Deacon, Ronda Groom, Terry Kristoff, Neal Knoot, Tyler Flockhart, Nelson Lutz, Cindy Snedden and Cherie Friesen.
- Patti Campsall, the Executive Director of the LSLBO for daily operational support.
- The Boreal Centre for Bird Conservation staff for assisting with banding and banding tours: Cori Klassen, Fawn Jackson, and Charity Beadow. Chris Dodds from Alberta Parks for his assistance with banding lab tours.
- Dr Erin Bayne and Samuel Hache from the University of Alberta for supporting many aspects of the summer research projects and Javan Green for assisting at the banding lab.
- The volunteers at the banding lab: Deborah Lawrence, Dave Cullen, Kathy Cullen, Tom Bennett, Bill Walsh, Mike Walsh, Rebecca Walsh, and Tyler Flockhart.

Further information about migration monitoring and MAPS programs can be found at:

- Canadian Migration Monitoring Network – www.bsc.org/cmmn.html
- Institute for Bird Populations – www.birdpop.org

We would like to acknowledge the long-term and financial support provided to the LSLBO monitoring programs from the following agencies:



**Government
of Alberta**

COMMUNITY SPIRIT

COMMUNITY DEVELOPMENT TRUST

CANADA SUMMER JOBS



Appendix I: Annual Banding Totals

* 2010 Projects include the northern saw-whet owl monitoring and ovenbird projects.

Species	2010 Spring Migration	2010 MAPS	2010 Fall Migration	2010 Projects*	2010 Total	Grand Total
"Audubon's" Warbler						2
Alder Flycatcher	9		33		42	1659
American Goldfinch						1
American Kestrel						1
American Magpie						1
American Pipit						18
American Redstart	28	24	90		142	6411
American Robin	2	7	14		23	307
American Tree Sparrow			11		11	408
Baltimore Oriole						5
Bay-breasted Warbler			8		8	102
Barred Owl						2
Black-and-White Warbler	19	3	55		77	1401
Blackburnian Warbler						2
Black-capped Chickadee	3		14		17	762
Blackpoll Warbler	2		1		3	293
Black-throated Green Warbler	1		3		4	111
Blue Jay			4		4	48
Blue-headed Vireo		1	5		6	74
Boreal Chickadee						25
Brown Creeper		1	3		4	37
Brown-headed Cowbird						5
Canada Warbler	24	27	57		108	2477
Cape May Warbler			15		15	121
Cedar Waxwing	2	1	1		4	108
Chestnut-sided Warbler						21
Chipping Sparrow	39	2	5		46	1804
Clay-colored Sparrow	20		6		26	815
Common Grackle						4
Common Yellowthroat	6	1	8		15	585
Connecticut Warbler						24
Cooper's Hawk			1		1	2
Downy Woodpecker			5		5	53
Eastern Kingbird			1		1	1
Eastern Phoebe	5				5	129
Evening Grosbeak						1
Fox Sparrow			6		6	62
Golden-crowned Kinglet			3		3	71
Gray Catbird						5
Gray Jay	1				1	3
Gray-cheeked Thrush			6		6	119

	2010 Spring	2010	2010 Fall	2010	2010	Grand
Species	Migration	MAPS	Migration	Projects	Total	Total
Hairy Woodpecker						20
Harris's Sparrow						6
Hermit Thrush	8		12		20	410
House Wren	1				1	24
Lapland Longspur			1		1	5
Lazuli Bunting						1
Le Conte's Sparrow			2		2	6
Least Flycatcher	13	6	25		44	1897
Lincoln's Sparrow	11	2	12		25	739
Long-eared Owl						1
MacGillivray's Warbler						2
Magnolia Warbler	4	1	13		18	874
Marsh Wren						3
Mourning Warbler	10	12	17		39	930
Nashville Warbler						3
Northern Flicker			1		1	20
Northern Goshawk						1
Northern Mockingbird						1
Northern Pygmy-Owl						2
Northern Saw-whet Owl	1		1	82	84	781
Northern Shrike						1
Northern Waterthrush	7		20		27	625
Orange-crowned Warbler	11		83		94	1032
Olive-sided Flycatcher						2
Ovenbird	31	22	103	180	336	2510
Western Palm Warbler	3		9		12	211
Philadelphia Vireo			2		2	161
Pileated Woodpecker						2
Pine Siskin						161
Purple Finch			4		4	64
Red-breasted Nuthatch			1		1	114
Red-eyed Vireo		2	11		13	612
Red-winged Blackbird						5
Rose-breasted Grosbeak		2	10		12	272
Ruby-crowned Kinglet	3		4		7	325
Savannah Sparrow	6		4		10	146
Sharp-shinned Hawk	5		24		29	379
Slate-colored Junco			65		65	1108
Song Sparrow	3		4		7	241
Swainson's Thrush	54	16	248		318	3962
Swamp Sparrow	3	1	4		8	165
Tennessee Warbler		2	40		42	4508
Three-toed Woodpecker						1
Townsend's Solitaire			1		1	1
Varied Thrush			1		1	6
Veery						7

	2010 Spring	2010	2010 Fall	2010	2010	Grand
Species	Migration	MAPS	Migration	Projects	Total	Total
Vesper Sparrow						3
Warbling Vireo						55
Western Tanager	2	3	10		15	143
Western Wood-Pewee						22
White-breasted Nuthatch			1		1	6
Gambel's White-crowned Sparrow	3		4		7	388
White-throated Sparrow	42	31	18		91	2268
White-winged Crossbill						1
Wilson's Warbler	3		6		9	483
Winter Wren						42
Yellow Warbler	15	3	72		90	3071
Yellow-bellied Flycatcher			1		1	72
Yellow-bellied Sapsucker	2	2	2		6	136
Yellow-rumped Warbler	234	13	209		456	8138
Total number of birds banded	636	185	1400	262	2483	55255
Total number of species banded	38	24	61	2	64	101

Appendix II: Species arrival and departure dates and maxima at LSLBO in 2010.

The following list includes the seasonal first and last dates, the maximum total, and the number of days that each of the 160 species was encountered in 2010. Seasonal first and last dates, maximum totals, and the number of days encounter during 2009 have been included as a comparison in dates between the two seasons. All sightings are from the LSLBO during normal migration monitoring activities.

Common Loon:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 30 - 1	May 2 - 1	Jul 12 - 1	Jul - 12
Last Sighting	Jun 10 - 2	June 10 - 2	Sep 19 - 1	Sep 25 - 1
Peak Day	May 25 - 61	May 23 - 33	Jul 13 & Aug 6 - 11	Aug 27 - 19
# of Days Sighted	38	34	45	56

Horned Grebe:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 8 - 1	May 8 - 2		Aug 31 - 1
Last Sighting				
Peak Day				
# of Days Sighted	1	1	0	1

Red-necked Grebe:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 30 - 5	May 8 - 20	Jul 20 - 2	Jul 15 - 1
Last Sighting	Jun 10 - 2	Jun 7 - 2	Sep 24 - 1	Sept 25 - 2
Peak Day	5 dates - 5		Aug 22 - 5	Aug 27 - 5
# of Days Sighted	30	18	35	32

Western Grebe:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting		May 23 - 30	Aug 29 - 2	Jul 27 - 1
Last Sighting		May 26 - 1	Sep 27 - 1	Sept 13 - 1
Peak Day			Sep 14 - 4	Aug 23 - 3
# of Days Sighted	0	2	7	4

American White Pelican:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 8 - 1	May 22 - 3	Jul 14 - 3	Jul 12 - 1
Last Sighting	Jun 7 - 2	Jun 10 - 1	Sep 23 - 3	Sept 24 - 18
Peak Day	May 23 - 10	Jun 8 - 12	Sep 16 - 28	
# of Days Sighted	12	13	50	54

Double-crested Cormorant:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 18 - 2	May 11 - 1		Sept 3 - 1
Last Sighting		May 30 - 2		
Peak Day				
# of Days Sighted	1	3	0	1

Great Blue Heron:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 28 - 1	May 11 - 1	Jul 21 - 1	Jul 13 - 1
Last Sighting	May 15 - 3	May 25 - 1	Aug 20 - 1	Aug 12 - 1
Peak Day		May 12 & 23 - 2		5 dates - 1
# of Days Sighted	2	4	2	5

Trumpeter Swan

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 24 - 1			
Last Sighting				
Peak Day				
# of Days Sighted	1	0	0	0

Tundra Swan

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22- 25	Apr 29 - 8		Sept 27 - 13
Last Sighting	May 9 - 2	May 8 - 2		
Peak Day	Apr 24 - 169	May 7 - 26		
# of Days Sighted	10	6	0	1

Greater White-fronted Goose:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 26 - 510	May 2 - 34	Aug 26 - 17	Aug 26 - 2
Last Sighting	May 11 - 15	May 14 - 30	Sep 26 - 20	Sept 21 - 5
Peak Day	May 3 - 10625	May 8 - 6720	Sep 14 - 5075	Aug 27 - 576
# of Days Sighted	8	11	9	9

Snow Goose:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 3 - 682	May 3 - 2	Sep 26 - 1	Sept 7 - 120
Last Sighting	May 11 - 1	May 13 - 2		
Peak Day		May 8 - 224		
# of Days Sighted	4	8	1	1

Canada Goose:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 2	Apr 25 - 5	Jul 21 - 2	Aug 2 - 2
Last Sighting	Jun 10 - 7	Jun 10 - 10	Sep 27 - 12	Sept 25 - 3
Peak Day	Jun 9 - 62	May 11 - 90	Aug 11 - 40	Sept 6 - 144
# of Days Sighted	44	39	28	27

Green-winged Teal:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 28 - 3	May 1 - 2		
Last Sighting	May 15 - 3	May 26 - 1		
Peak Day	May 2 - 12	May 6 - 42		
# of Days Sighted	11	14	0	0

Mallard:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 8	Apr 25 - 7	Jul 12 - 6	Jul 13 - 11
Last Sighting	Jun 10 - 6	Jun 10 - 1	Sep 30 - 9	Sept 28 - 5
Peak Day	Apr 25 - 12	May 10 - 22	Sep 14 & 15 - 75	Sept 13 - 18
# of Days Sighted	46	44	48	42

Northern Pintail:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 12	May 2 - 4		
Last Sighting	May 6 - 12	Jun 3 - 2		
Peak Day		May 9 - 11		
# of Days Sighted	4	6	0	0

Blue-winged Teal:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 1 - 3	May 2 - 2		
Last Sighting	Jun 1 - 2	May 23 - 1		
Peak Day	May 26 - 4	May 12 - 19		
# of Days Sighted	9	9	0	0

Northern Shoveler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 1 - 1	May 3 - 8		
Last Sighting	May 18 - 1	May 15 - 5		
Peak Day	May 2 - 3	May 12 - 29		
# of Days Sighted	3	7	0	0

Gadwall:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 24 - 1	May 6 - 4		
Last Sighting	May 8 - 1	May 11 - 2		
Peak Day		May 10 - 8		
# of Days Sighted	2	5	0	0

American Wigeon:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 8	Apr 25 - 2	Jul 12 - 8	
Last Sighting	Jun 10 - 2	Jun 10 - 2	Sep 21 - 1	
Peak Day	Apr 23 - 59	May 8 - 50	Jul 26 - 45	
# of Days Sighted	44	37	4	0

Ring-necked Duck:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 1 - 1	May 6 - 16	Sep 20 - 1	
Last Sighting		May 22 - 1		
Peak Day				
# of Days Sighted	1	2	1	0

Lesser Scaup:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 2 - 10	May 6 - 2		Aug 19 - 1
Last Sighting				
Peak Day				
# of Days Sighted	1	1	0	1

Long-tailed Duck:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 30 - 12	May 8 - 10		
Last Sighting	May 20 - 6	May 29 - 10		
Peak Day	May 10 - 140	May 16 - 300		
# of Days Sighted	18	12	0	0

Surf Scoter:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 6 - 1	May 8 - 5	Sep 19 - 75	
Last Sighting	Jun 1 - 2	May 30 - 6		
Peak Day	May 16 - 390	May 16 - 108		
# of Days Sighted	22	16	1	0

White-winged Scoter:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 8 - 2	May 10 - 5	Sep 9 - 4	Aug 22 - 5
Last Sighting	Jun 8 - 5	Jun - 9	Sep 26 - 2	Sept 4 - 2
Peak Day	May 10 - 10	May 23 - 12		
# of Days Sighted	11	5	2	2

Common Goldeneye:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 26	Apr 25 - 12	Jul 12 - 2	Jun 12 - 4
Last Sighting	Jun 10 - 3	Jun 10 - 3	Sep 28 - 10	Sept 28 - 1
Peak Day	May 9 - 32	May 16 - 30	Sep 20 - 50	Sept 1 - 7
# of Days Sighted	49	46	32	23

Bufflehead:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 8 - 3	May 2 - 2	Sep 7 - 1	Sept 21 - 8
Last Sighting	May 26 - 1	May 27 - 2	Sep 30 - 4	
Peak Day	May 10 - 4	May 9 & 12 - 8	Sep 20 - 50	
# of Days Sighted	6	8	16	1

Common Merganser:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 13	Apr 26 - 3	Jul 18 - 2	Jul 17 - 3
Last Sighting	Jun 10 - 12	Jun 10 - 1	Sep 30 - 2	Sept 25 - 2
Peak Day	Jun 2 - 28	Jun 2 - 45	Sep 10 - 26	Jul 22, Aug 10 - 30
# of Days Sighted	47	41	32	38

Red-breasted Merganser:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 24 - 2	Apr 30 - 3		
Last Sighting	Jun 10 - 9	Jun 7 - 1		
Peak Day	May 7 & 9 - 10	May 19 - 9		
# of Days Sighted	14	18	0	0

Osprey:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 9 - 1	May 5 - 1	Jul 14 - 2	Jul 13 - 1
Last Sighting	May 26 - 1	Jun 6 - 1	Sept 24 - 1	Sept 15 - 1
Peak Day	All Dates - 1	May 7 - 2	3 dates - 4	Aug 24 - 3
# of Days Sighted	8	7	29	21

Bald Eagle:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 4	Apr 25 - 1	Jul 12 - 1	Jul 12 - 1
Last Sighting	Jun 1 - 1	Jun 10 - 1	Sep 30 - 1	Sept 28 - 1
Peak Day	Apr 22, May 2 - 4	May 18 - 5	Aug 26 - 4	Aug 22 - 8
# of Days Sighted	49	44	78	74

Northern Harrier:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 2	Apr 25 - 9	Jul 20 - 1	Jul 15 - 1
Last Sighting	Jun 9 - 1	Jul 1 - 1	Sept 27 - 2	Sept 28 - 1
Peak Day	May 9 - 21	May 4 - 19	Sept 14 - 6	Sept 3 & 14 - 15
# of Days Sighted	33	31	34	31

Sharp-shinned Hawk:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 9 - 1	Apr 26 - 1	Jul 26 - 1	Jul 20 - 1
Last Sighting	Jun 9 - 1	Jun 8 - 1	Sept 25 - 2	Sept 25 - 1
Peak Day	May 13 - 3	May 21 & 23 - 3	Aug 22 - 13	Sept 1 - 23
# of Days Sighted	14	23	45	50

Cooper's Hawk:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Sept 9 - 1	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Northern Goshawk:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 7 - 1	May 7 - 1	Aug 22 - 1	Aug 14 - 1
Last Sighting		May 13 - 1	Sept 25 - 1	Sept 12 - 1
Peak Day		3 dates - 1	All dates - 1	Aug 30 - 3
# of Days Sighted	1	3	3	9

Broad-winged Hawk:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 16 - 1	May 5 - 1	Aug 14 - 1	Sept 14 - 1
Last Sighting	May 18 - 1	May 29 - 1		
Peak Day		3 dates - 1		
# of Days Sighted	2	3	1	1

Red-tailed Hawk:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 27 - 2	May 4 - 2	Jul 14 - 1	Jul 17 - 1
Last Sighting	May 31 - 1	Jun 9 - 1	Sep 26 - 1	Sept 16 - 1
Peak Day			3 dates - 2	5 dates - 1
# of Days Sighted	5	5	13	5

American Kestrel:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 13 - 2	Apr 30 - 1	Sep 22 - 1	Aug 28 - 1
Last Sighting	Jun 2 - 1	May 15 - 1	Sep 25 - 1	Sept 14 - 1
Peak Day		3 dates - 1		3 dates - 1
# of Days Sighted	4	3	2	3

Merlin:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 1	Apr 25 - 1	Jul 15 - 1	Jul 12 - 1
Last Sighting	Jun 2 - 2	Jun 9 - 1	Sep 27 - 1	Sept 23 - 2
Peak Day	May 13 - 4	3 dates - 2	3 dates - 2	12 dates - 2
# of Days Sighted	21	18	23	41

Peregrine Falcon:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 29 - 1	Apr 26 - 1	Sep 8 - 1	Sept 2 - 1
Last Sighting	May 14 - 1	May 6 - 1	Sep 12 - 1	Sept 15 - 1
Peak Day	3 dates - 2	3 dates - 1	Sep 9 - 2	
# of Days Sighted	5	3	3	2

Ruffed Grouse:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 1	May 7 - 1	Jul 19 - 1	Jul 18 - 4
Last Sighting	Jun 3 - 1	Jun 10 - 2	Sep 28 - 1	Sept 24 - 1
Peak Day	5 dates - 3	Jun 6 - 3	Sep 6 & 19 - 2	Aug 3 - 6
# of Days Sighted	37	13	20	16

American Coot:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 14 - 1			
Last Sighting				
Peak Day				
# of Days Sighted	1	0	0	0

Sandhill Crane:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 1	May 3 - 385	Aug 29 - 9	Sept 13 - 53
Last Sighting	May 15 - 2	May 12 - 4	Sep 23 - 90	Sept 25 - 60
Peak Day	May 7 - 90			Sept 19 - 150
# of Days Sighted	9	5	5	3

Semipalmated Plover:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 10 - 2			
Last Sighting				
Peak Day				
# of Days Sighted	1	0	0	0

Killdeer:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 1	May 6 - 1	Jul 15 - 1	Aug 7 - 1
Last Sighting	Jun - 9	May 24 - 1	Aug 25 - 1	
Peak Day	3 dates - 2	4 dates - 1	All dates - 1	
# of Days Sighted	20	4	11	1

Greater Yellowlegs:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 1	Apr 25 - 1	Jul 31 - 4	Jul 30 - 2
Last Sighting	Jun 10 - 1	May 17 - 1	Sep 27 - 2	Aug 30 - 1
Peak Day	May 13 - 17	May 8 - 15	Aug 2 - 6	Aug 19 - 13
# of Days Sighted	29	18	24	10

Lesser Yellowlegs:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 17 - 2		Aug 25 - 1	Aug 12 - 5
Last Sighting				Aug 26 - 3
Peak Day				Aug 19 - 6
# of Days Sighted	1	0	1	3

Spotted Sandpiper:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 9 - 7	May 7 - 1	Jul 12 - 1	Jul 12 - 1
Last Sighting	Jun 10 - 2	Jun 10 - 1	Sep 10 - 1	Sept 11 - 1
Peak Day	May 12 - 12	May 14 - 24	Aug 10 - 7	Aug 7 - 16
# of Days Sighted	31	25	47	39

Semipalmated Sandpiper:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Aug 6 - 23	Aug 23 - 2
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	1

Least Sandpiper:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Aug 5 - 1	
Last Sighting			Aug 24 - 8	
Peak Day				
# of Days Sighted	0	0	3	0

Baird's Sandpiper:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Aug 24 - 16	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Common Snipe:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 9 - 1	Apr 28 - 1		
Last Sighting		May 16 - 1		
Peak Day		8 dates - 1		
# of Days Sighted	1	8	0	0

Bonaparte's Gull:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 15 - 1	May 11 - 16	Jul 28 - 1	
Last Sighting	May 24 - 8	May 28 - 1	Set 14 - 1	
Peak Day				
# of Days Sighted	3	3	2	0

Franklin's Gull:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 29 - 23	May 1 - 2	Jul 12 - 1	Jul 12 - 5
Last Sighting	Jun 10 - 2	Jun 2 - 2	Sep 3 - 10	Sept 9 - 1
Peak Day	May 7 - 175	May 15 - 128	Jul 26 - 1911	Aug 30 - 980
# of Days Sighted	28	27	36	24

Mew Gull:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 30 - 2	May 6 - 4	Aug 23 - 6	
Last Sighting	May 15 - 3	May 22 - 4		
Peak Day	May 6 - 11	May 7 - 9		
# of Days Sighted	11	7	1	0

Ring-billed Gull:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 28 - 2	Apr 29 - 1	Jul 13 - 1	Jul 13 - 14
Last Sighting	Jun 5 - 4	Jul 1 - 41	Sep 26 - 1	Sept 27 - 5
Peak Day	May 13 - 6		Aug 6 - 110	Aug 12 - 59
# of Days Sighted	11	14	33	22

California Gull:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 9 - 2	May 16 - 2		Aug 22 - 3
Last Sighting	May 18 - 1	May 28 - 1		Aug 26 - 1
Peak Day				
# of Days Sighted	2	2	0	2

Herring Gull:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 2	Apr 25 - 1	Jul 19 - 2	Jul 13 - 8
Last Sighting	May 23 - 3	Jun 6 - 1	Sep 26 - 2	Sept 24 - 2
Peak Day	May 8 - 7	May 30 - 6	Jul 23 & 26 - 5	
# of Days Sighted	17	18	22	11

Common Tern:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 19 - 8	May 6 - 2	Jul 23 - 2	Jul 12 - 2
Last Sighting	Jun 10 - 5	Jun 10 - 2	Sep 24 - 4	Sept 2 - 2
Peak Day	May 25 - 9	Jun 2 - 11	Aug 6 - 14	Jul 16 - 5
# of Days Sighted	20	17	23	42

Forster's Tern:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 18 - 8		Jul 17 - 1	Jul 18 - 1
Last Sighting	Jun 5 - 2		Aug 1 - 2	
Peak Day			3 dates - 2	
# of Days Sighted	9	0	5	1

Black Tern:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Jun 5 - 3	May 8 - 1		Sept 1 - 4
Last Sighting				
Peak Day				
# of Days Sighted	1	1	0	1

Mourning Dove:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 27 - 1			
Last Sighting				
Peak Day				
# of Days Sighted	1	0	0	0

Long-eared Owl:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Aug 16 - 1	
Last Sighting			Aug 17 - 1	
Peak Day				
# of Days Sighted	0	0	2	0

Barred Owl:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 30 - 1	May 19 - 1		Jul 21 - 1
Last Sighting	May 14 - 1	Jun 6 - 1		Jul 30 - 1
Peak Day	All dates - 1			4 dates - 1
# of Days Sighted	4	2	0	4

Northern Saw-whet Owl:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Jun 1 - 1		Sept 19 - 1	
Last Sighting			Sept 20 - 1	
Peak Day				
# of Days Sighted	1	0	2	0

Common Nighthawk:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 24 - 1			
Last Sighting	Jun 7 - 1			
Peak Day				
# of Days Sighted	2	0	0	0

Ruby-throated Hummingbird:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Jul 18 - 2	Jul 31 - 1
Last Sighting			Jul 28 - 1	Aug 3 - 1
Peak Day				
# of Days Sighted	0	0	5	2

Belted Kingfisher:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 28 - 1	Apr 29 - 1	Jul 27 - 1	Jul 17 - 2
Last Sighting	May 17 - 1	Jun 5 - 1	Sept 22 - 1	Sept 11 - 1
Peak Day	May 7 & 8 - 2	May 7 - 3	All dates - 1	Jul 18 - 3
# of Days Sighted	12	19	6	20

Yellow-bellied Sapsucker:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 24 - 1	May 1 - 1	Jul 15 - 2	Jul 12 - 5
Last Sighting	Jul 7 - 1	Jun 10 - 1	Sept 2 - 1	Aug 20 - 1
Peak Day	3 dates - 3	May 6 & 7 - 6	Aug 5 - 5	Jul 13 - 6
# of Days Sighted	32	38	9	35

Downy Woodpecker:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 29 - 1	Apr 25 - 1	Jul 13 - 1	Jul 17 - 1
Last Sighting	May 24 - 1	Jun 4 - 1	Sept 27 - 1	Sept 23 - 3
Peak Day	All dates - 1	All dates - 1	4 dates - 2	
# of Days Sighted	4	9	19	11

Hairy Woodpecker:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 27 - 1	May 5 - 1	Jul 18 - 1	Jul 15 - 1
Last Sighting	May 29 - 1	Jun 4 - 1	Sept 27 - 1	Sept 25 - 1
Peak Day	All dates - 1	4 dates - 1	2 dates - 2	5 dates - 2
# of Days Sighted	14	4	31	28

Northern Flicker:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 5	Apr 25 - 4	Jul 13 - 1	Jul 15 - 2
Last Sighting	Jun 10 - 1	Jun 10 - 1	Sept 16 - 1	Sept 23 - 1
Peak Day	Apr 24 & 27 - 6	Apr 29 - 31	Sept 2 - 3	Sept 15 - 3
# of Days Sighted	40	39	26	12

Pileated Woodpecker:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 24 - 1	Apr 25 - 1	Aug 4 - 1	Jul 12 - 1
Last Sighting	Jun 7 - 1	Jun 10 - 1	Sept 23 - 1	Sept 25 - 1
Peak Day	May 7 - 2	All dates - 1	All dates - 1	Sept 1 - 2
# of Days Sighted	12	15	17	25

Olive-sided Flycatcher:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 25 - 1	Jun 1 - 1		Aug 14 - 1
Last Sighting		Jun 7 - 1		Aug 15 - 1
Peak Day				
# of Day Sighted	1	2	0	2

Western Wood-pewee:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 12 - 1	May 23 - 1	Jul 31 - 1	Jul 15 - 1
Last Sighting	Jun 10 - 1	Jun 7 - 1	Aug 6 - 1	Aug 19 - 1
Peak Day	All dates - 1	May 30 - 4		5 dates - 1
# of Day Sighted	12	10	2	5

Yellow-bellied Flycatcher:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Aug 30 - 1	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Alder Flycatcher:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 28 - 1	May 28 - 1	Jul 12 - 1	Jul 12 - 2
Last Sighting	Jun 10 - 4	Jun 10 - 3	Sept 14 - 1	Sept 1 - 1
Peak Day	Jun 7 - 6	Jun 5 - 10	Aug 1 & 16 - 5	3 dates - 6
# of Days Sighted	11	12	36	35

Least Flycatcher:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 15 - 5	May 8 - 1	Jul 13 - 1	Jul 12 - 1
Last Sighting	Jun 10 - 3	Jun 8 - 3	Sept 15 - 1	Sept 9 - 1
Peak Day	May 19 - 21	May 24 - 31	Aug 10 - 6	3 dates - 7
# of Days Sighted	24	25	33	32

Eastern Phoebe:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 23	Apr 25 - 1	Jul 19 - 1	Jul 18 - 1
Last Sighting	May 27 - 1	Jun 7 - 1	Sept 14 - 1	Sept 11 - 1
Peak Day		May 15 - 4	Jul 21 - 3	5 dates - 1
# of Days Sighted	23	29	8	5

Say's Phoebe:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 3 - 1	May 1 - 1	Aug 26 - 6	Aug 20 - 2
Last Sighting	May 15 - 1	May 24 - 1	Aug 29 - 1	Sept 13 - 2
Peak Day	May 13 - 10	May 17 - 9		4 dates - 2
# of Days Sighted	3	12	2	7

Eastern Kingbird:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 18 - 2	May 28 - 3	Jul 25 - 2	Aug 14 - 1
Last Sighting	Jun 6 - 4	Jun 8 - 3	Sept 9 - 4	Sept 3 - 1
Peak Day	Jun 5 - 17		Aug 29 - 7	Aug 25 - 21
# of Days Sighted	7	5	17	14

Blue-headed Vireo:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 14 - 1	May 14 - 2	Jul 24 - 3	Jul 25 - 1
Last Sighting	Jul 1 - 1	Jun 2 - 1	Sept - 1	Sept 1 - 1
Peak Day	May 21 - 3	4 dates - 2	Jul 29 - 4	4 dates - 1
# of Days Sighted	12	10	9	4

Warbling Vireo:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 14 - 1	Jun 6 - 1	Jul 21 - 2	Jul 12 - 1
Last Sighting	Jun 7 - 1	Jun 9 - 1	Aug 11 - 1	Sept 11 - 1
Peak Day	All dates - 1			2 dates - 2
# of Days Sighted	7	2	3	10

Philadelphia Vireo:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 21 - 1	May 26 - 1	Jul 13 - 1	Jul 13 - 1
Last Sighting	Jun 9 - 1	Jun 6 - 1	Sep 20 - 1	Sept 14 - 1
Peak Day	All dates - 1	7 dates - 1	Jul 24 - 6	Aug 5 - 3
# of Days Sighted	4	7		14

Red-eyed Vireo:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 21 - 1	May 29 - 4	Jul 12 - 1	Jul 14 - 4
Last Sighting	Jun 10 - 5	Jun 10 - 3	Aug 26 - 1	Sept 2 - 1
Peak Day	May 31 - 6	4 dates - 4	Aug 1 - 8	Jul 18 & 29 - 8
# of Days Sighted	16	13	39	38

Gray Jay:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Jun 6 - 1	Jun 9 - 1		
Last Sighting		Jun 10 - 1		
Peak Day				
# of Days Sighted	1	2	0	0

Blue Jay:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 1	Apr 28 - 1	Jul 13 - 1	Jul 20 - 1
Last Sighting	Jun 7 - 1	Jun 9 - 1	Sept 27 - 3	Sept 28 - 1
Peak Day	May 17 - 3	May 23 - 4	Aug 18 - 8	2 dates - 4
# of Days Sighted	27	32	52	35

American Magpie:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 2	Apr 25 - 3	Jul 21 - 1	Jul 12 - 1
Last Sighting	Jun 10 - 2	Jun 10 - 2	Sept 30 - 1	Sept 27 - 2
Peak Day	3 dates - 6	May 31 - 6	Sept 17 - 5	Aug 6 - 7
# of Day Sighted	49	46	53	51

American Crow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 23 - 1	Apr 25 - 4	Jul 12 - 2	Jul 12 - 3
Last Sighting	Jun 10 - 3	Jun 10 - 4	Sept 20 - 1	Sept 24 - 5
Peak Day	Apr 27 - 13	May 8 - 24	Aug 6 - 20	Aug 19 - 22
# of Days Sighted	45	46	49	57

Common Raven:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 2	Apr 25 - 21	Jul 14 - 3	Jul 12 - 1
Last Sighting	Jun 10 - 1	Jun 8 - 1	Sept 30 - 2	Sept 28 - 3
Peak Day	May 24 - 6		Sept 6 - 10	Aug 24 - 8
# of Days Sighted	38	30	67	57

Horned Lark:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 23 - 2	May 20 - 1	Sept 26 - 1	Sept 15 - 2
Last Sighting	May 24 - 1	May 21 - 1		Sept 16 - 5
Peak Day				
# of Days Sighted	2	2	1	2

Tree Swallow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 2 - 2	May 1 - 34	Jul 12 - 1	Jul 13 - 9
Last Sighting	Jun 10 - 2	Jun 6 - 1	Aug 21 - 2	Aug 28 - 1
Peak Day	May 17 - 98	May 8 - 266	Jul 18 - 25	Aug 7 - 25
# of Days Sighted	28	27	12	11

Northern Rough-winged Swallow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Aug 13 - 2	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Bank Swallow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 24 - 12		Aug 11 - 1	Aug 6 - 21
Last Sighting			Aug 21 - 1	Aug 7 - 32
Peak Day				
# of Days Sighted	1	0	2	2

Cliff Swallow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 13 - 1			
Last Sighting				
Peak Day				
# of Days Sighted	0	0	0	0

Barn Swallow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 13 - 1	May 5 - 1	Jul 26 - 1	Aug 8 - 5
Last Sighting	Jun 9 - 1	Jun 3 - 1	Sept 2 - 1	Aug 31 - 1
Peak Day	Jun 8 - 2	May 24 - 3	All dates - 1	
# of Days Sighted	7	6	3	5

Black-capped Chickadee:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 2	Apr 25 - 1	Jul 12 - 2	Jul 12 - 3
Last Sighting	Jun 10 - 1	Jun 10 - 4	Sept 30 - 6	Sept 27 - 2
Peak Day	May 7 - 6		Sept 6 - 15	Sept 6 - 7
# of Days Sighted	29	15	73	50

Boreal Chickadee:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting		Apr 25 - 1	Aug 4 - 1	Jul 16 - 1
Last Sighting			Sept 23 - 1	Sept 22 - 1
Peak Day			4 dates - 2	4 dates - 1
# of Days Sighted	0	1	11	4

Red-breasted Nuthatch:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 1	Jun 5 - 1	Jul 18 - 2	Jul 15 - 1
Last Sighting	Jun 8 - 1	Jun 9 - 1	Sept 25 - 1	Sept 28 - 1
Peak Day	Apr 30 - 2	3 dates - 1	Aug 26 - 12	Sept 11 - 129
# of Days Sighted	35	3	43	36

White-breasted Nuthatch:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Sept 14 - 1	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Brown Creeper:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 29 - 1	Apr 30 - 1	Jul 30 - 1	Jul 27 - 1
Last Sighting	May 18 - 1		Sept 24 - 1	Sept 2 - 1
Peak Day	All dates - 1		All dates - 1	3 dates - 1
# of Days Sighted	5	1	3	3

House Wren:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 26 - 1			
Last Sighting	Jun 7 - 1			
Peak Day				
# of Days Sighted	2	0	0	0

Winter Wren:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 26 - 1	Apr 29 - 1		Jul 12 - 1
Last Sighting	Jul 1 - 1	Jun 10 - 1		Jul 23 - 1
Peak Day	14 dates - 2	12 dates - 2		5 dates - 1
# of Days Sighted	26	41	0	5

Golden-crowned Kinglet:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Aug 29 - 4	Aug 31 - 2
Last Sighting			Sept 30 - 1	Sept 6 - 1
Peak Day			Sept 27 - 4	
# of Days Sighted	0	0	15	3

Ruby-crowned Kinglet:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 1	Apr 25 - 1	Jul 18 - 1	Jul 31 - 1
Last Sighting	Jun 8 - 1	Jun 3 - 1	Sept 28 - 1	Sept 28 - 1
Peak Day	Apr 24 - 4	May 12 - 5	Sept 22 - 9	Sept 23 - 9
# of Days Sighted	23	25	31	26

Townsend's Solitaire:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Sept 23 - 2	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Varied Thrush:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Jul 15 - 1	Sept 23 - 2
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	1

Gray-cheeked Thrush:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 21 - 2	May 11 - 1	Sept 12 - 1	
Last Sighting		Jun 1 - 1	Sept 22 - 1	
Peak Day		May 20 - 6	Sept 14 - 3	
# of Days Sighted	1	8	7	0

Swainson's Thrush:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 14 - 2	May 6 - 1	Jul 15 - 3	Jul 12 - 1
Last Sighting	Jun 10 - 2	Jun 10 - 4	Sept 26 - 1	Sept 23 - 1
Peak Day	May 23 - 30	May 20 - 61	Sept 14 & 15 - 17	Aug 4 - 12
# of Days Sighted	27	32	66	62

Hermit Thrush:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 26 - 1	Apr 26 - 5	Jul 17 - 1	Jul 14 - 1
Last Sighting	Jun 4 - 1	Jun 4 - 1	Sept 21 - 1	Sept 27 - 1
Peak Day	May 2 & 12 - 5	May 7 - 6	Sept 17 - 4	3 dates - 4
# of Days Sighted	27	30	14	23

American Robin:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 147	Apr 25 - 1064	Jul 12 - 1	Jul 12 - 2
Last Sighting	Jun 10 - 2	Jun 10 - 4	Sept 28 - 1	Sept 28 - 1
Peak Day			Sept 23 - 17	Sept 13 - 61
# of Days Sighted	48	44	50	55

European Starling:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 2 - 6	May 4 - 3	Sept 25 - 2	
Last Sighting	May 20 - 2	May 26 - 1		
Peak Day	May 7 - 17	May 24 - 12		
# of Days Sighted	7	3	1	0

American Pipit:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 14	May 4 - 52	Aug 21 - 31	Jul 30 - 1
Last Sighting	May 25 - 2	May 26 - 4	Sept 30 - 1	Sept 27 - 2
Peak Day	May 9 - 235		Sept 7 - 156	Sept 13 - 235
# of Days Sighted	25	13	34	29

Cedar Waxwing:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 19 - 9	Jun 2 - 14	Jul 12 - 3	Jul 12 - 8
Last Sighting	Jun 10 - 15	Jun 10 - 9	Sept 19 - 5	Sept 25 - 1
Peak Day	Jun 2 - 83	Jun 8 - 24	Aug 21 - 120	Sept 11 - 159
# of Days Sighted	14	8	63	69

Tennessee Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 18 - 3	May 12 - 2	Jul 13 - 8	Jul 12 - 6
Last Sighting	May 30 - 2	Jun 10 - 10	Aug 29 - 2	Aug 31 - 1
Peak Day	May 22 - 26	May 24 - 86	Aug 11 - 79	Jul 16&Aug 20- 35
# of Days Sighted	13	23	34	39

Orange-crowned Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 30 - 1	May 4 - 2	Aug 29 - 7	Aug 23 - 1
Last Sighting	May 24 - 1	May 26 - 1	Sept 27 - 1	Sept 23 - 1
Peak Day	May 2 & 7 - 15	May 12 - 53	Sept 6 - 51	Sept 13 - 22
# of Days Sighted	19	18	27	16

Yellow Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 14 - 1	May 11 - 1	Jul 13 - 5	Jul 12 - 6
Last Sighting	Jun 10 - 2	Jun 10 - 2	Sept 14 - 1	Sept 14 - 1
Peak Day	May 17 - 119	May 24 - 49	Jul 27 - 36	Aug 20 - 50
# of Days Sighted	27	30	44	52

Magnolia Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 18 - 1	May 15 - 1	Jul 13 - 1	Jul 12 - 1
Last Sighting	Jun 10 - 1	Jun 10 - 1	Sept 22 - 1	Sept 12 - 1
Peak Day	May 23 - 5	May 30 - 5	Aug 15 - 3	Jul 27 - 3
# of Days Sighted	21	9	17	25

Cape May Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 19 - 1	May 11 - 1	Jul 21 - 1	
Last Sighting			Aug 29 - 1	
Peak Day			Aug 11 - 8	
# of Days Sighted	1	1	14	0

Yellow-rumped Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 20	Apr 25 - 4	Jul 15 - 9	Jul 12 - 6
Last Sighting	Jun 10 - 4	Jun 10 - 8	Sept 27 - 3	Sept 28 - 1
Peak Day	May 17 - 1370	May 15 - 707	Sept 3 - 932	Aug 30 - 1334
# of Days Sighted	49	44	64	70

Black-throated Green Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 17 - 2	May 20 - 1	Jul 18 - 2	Jul 25 - 2
Last Sighting	Jun 8 - 1	Jun 10 - 1	Sept 20 - 1	Aug 26 - 1
Peak Day	2 dates - 2	4 dates - 2	Jul 20 - 3	2 dates - 2
# of Days Sighted	9	14	6	6

Palm Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 14 - 1	May 11 - 1	Jul 27 - 2	Aug 1 - 1
Last Sighting	May 23 - 1	Jun 3 - 1	Sept 23 - 2	Sept 23 - 2
Peak Day	May 17 - 17	May 15 - 8	Sept 14 - 5	Sept 9 - 4
# of Days Sighted	10	10	13	11

Bay-breasted Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Jul 27 - 1	Jul 29 - 1
Last Sighting			Aug 25 - 1	Aug 20 - 2
Peak Day			Aug 5 - 6	
# of Days Sighted	0	0	7	2

Blackpoll Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 17 - 17	May 14 - 1	Aug 1 - 1	Jul 23 - 1
Last Sighting	May 22 - 1	May 31 - 1		Aug 19 - 1
Peak Day		May 15 & 24 - 2		
# of Days Sighted	3	4	1	2

Black-and-white Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 10 - 1	May 7 - 1	Jul 12 - 1	Jul 12 - 3
Last Sighting	Jun 10 - 2	Jun 10 - 1	Sept 8 - 1	Sept 11 - 1
Peak Day	May 17 - 10	May 26 - 9	Jul 20 - 14	Aug 20 - 36
# of Days Sighted	30	35	39	43

American Redstart:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 16 - 1	May 24 - 1	Jul 13 - 4	Jul 12 - 5
Last Sighting	Jun 10 - 12	Jun 10 - 11	Sept 25 - 1	Sept 16 - 1
Peak Day	May 20 - 33	May 30 - 122	Aug 10 - 33	Jul 27 - 55
# of Days Sighted	26	18	46	55

Ovenbird:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 11 - 1	May 16 - 2	Jul 12 - 1	Jul 12 - 5
Last Sighting	Jun 10 - 7	Jun 10 - 4	Sept 15 - 1	Sept 5 - 1
Peak Day	May 20 - 17	May 26 - 19	Jul 24 - 14	Jul 23 - 11
# of Days Sighted	29	22	36	49

Northern Waterthrush:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 14 - 1	May 8 - 1	Jul 15 - 2	Jul 13 - 1
Last Sighting	Jun 10 - 1	May 29 - 1	Sept 11 - 1	Sept 1 - 1
Peak Day	May 20 - 3	May 14 - 17	3 dates - 3	Aug 20 - 4
# of Days Sighted	20	10	14	21

Connecticut Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 24 - 1			Aug 20 - 1
Last Sighting	May 30 - 1			
Peak Day				
# of Days Sighted	2	0	0	1

Mourning Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 20 - 2	May 30 - 1	Jul 20 - 1	Jul 13 - 1
Last Sighting	Jun 9 - 1	Jun 9 - 3	Aug 31 - 1	Sept 6 - 1
Peak Day	Jun 14 - 7	Jun 7 - 5	Jul 30 - 3	Aug 23 - 7
# of Days Sighted	17	10	16	27

Common Yellowthroat:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 20 - 2	May 26 - 2	Jul 12 - 1	Jul 12 - 2
Last Sighting	Jun 10 - 2	Jun 10 - 3	Sept 22 - 1	Sept 13 - 1
Peak Day	7 dates - 3	May 27 - 6	Jul 21 - 3	Sept 1 - 5
# of Days Sighted	21	14	23	25

Wilson's Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 20 - 1	May 29 - 2	Aug 5 - 1	Aug 23 - 1
Last Sighting	May 23 - 4	Jun 7 - 1	Sept 23 - 1	Sept 13 - 1
Peak Day	May 22 & 23 - 4	May 30 - 5	Aug 16 - 4	Sept 12 - 4
# of Days Sighted	4	3	10	12

Canada Warbler:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 20 - 2	May 26 - 1	Jul 14 - 1	Jul 12 - 1
Last Sighting	Jun 10 - 7	Jun 10 - 4	Aug 29 - 1	Aug 31 - 1
Peak Day	3 dates - 12	Jun 8 - 13	Jul 27 - 16	4 dates - 8
# of Days Sighted	22	14	37	42

Western Tanager:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 14 - 1	May 8 - 1	Jun 15 - 1	Jul 16 - 3
Last Sighting	Jun 10 - 1	Jun 5 - 1	Sept 1 - 1	Sept 2 - 1
Peak Day	May 17 - 5	May 30 - 2	Aug 26 - 7	Aug 20 - 16
# of Days Sighted	18	17	28	27

American Tree Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting		Apr 25 - 4	Sept 18 - 1	Sept 16 - 1
Last Sighting		May 11 - 1	Sept 30 - 1	
Peak Day		Apr 30 - 41	Sept 21 - 46	
# of Days Sighted	0	12	7	1

Chipping Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 4 - 1	May 8 - 1	Jul 12 - 1	Jul 15 - 1
Last Sighting	Jun 10 - 4	Jun 10 - 3	Sept 4 - 1	Aug 30 - 2
Peak Day	May 17 - 268	May 24 - 5391	Aug 26 - 41	Aug 10 - 51
# of Days Sighted	34	33	13	16

Clay-colored Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 14 - 2	May 15 - 3	Jul 13 - 1	Jul 12 - 4
Last Sighting	Jun 7 - 4	Jun 9 - 3	Sept 14 - 1	Sept 7 - 1
Peak Day	May 19 - 34	May 24 - 649	Jul 22 - 2	Jul 16 - 7
# of Days Sighted	24	22	12	21

Vesper Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 15 - 1	May 8 - 1		
Last Sighting		May 21 - 1		
Peak Day		May 14 - 3		
# of Days Sighted	1	4	0	0

Savannah Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 2 - 1	May 7 - 5	Aug 29 - 1	Aug 23 - 2
Last Sighting	May 24 - 1	May 28 - 1	Sept 13 - 1	Sept 21 - 1
Peak Day	May 9 - 20		Sept 12 - 3	
# of Days Sighted	12	11	4	6

Le Conte's Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 19 - 1	May 14 - 1	Aug 3 - 1	
Last Sighting	May 21 - 1	Jun 2 - 1	Sept 13 - 1	
Peak Day		May 15 - 2	All dates - 1	
# of Days Sighted	2	7	4	0

Fox Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting		Apr 26 - 7	Sept 12 - 1	Sept 1 - 1
Last Sighting		May 7 - 3	Sept 30 - 1	
Peak Day		Apr 30 - 15	Sept 13 - 3	
# of Days Sighted	0	5	4	1

Song Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 3	Apr 26 - 1	Jul 12 - 2	Jul 12 - 2
Last Sighting	Jun 10 - 3	Jun 10 - 4	Aug 22 - 3	Sept 1 - 3
Peak Day	3 dates - 5	May 15 - 14	Aug 22 - 3	Aug 6 - 7
# of Days Sighted	50	45	36	42

Lincoln's Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 1 - 1	May 5 - 1	Jul 12 - 2	Jul 12 - 4
Last Sighting	Jun 10 - 2	Jul 10 - 2	Sept 25 - 1	Sept 23 - 1
Peak Day	May 22 - 10	May 12 - 10	Sept 21 - 8	3 dates - 4
# of Days Sighted	35	33	51	32

Swamp Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 15 - 1	May 23 - 1	Jul 23 - 1	Jul 20 - 1
Last Sighting	May 24 - 1	May 27 - 1	Sept 23 - 1	Sept 1 - 1
Peak Day	All dates - 1	3 dates - 1	All dates - 1	7 dates - 1
# of Days Sighted	3	3	4	7

White-throated Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 28 - 1	May 7 - 3	Jul 12 - 3	Jul 12 - 8
Last Sighting	Jun 10 - 1	Jun 10 - 8	Sept 22 - 3	Sept 18 - 3
Peak Day	May 17 - 28	May 24 - 31	Jul 18&Sept 13- 9	Jul 16 &18 - 12
# of Days Sighted	41	35	56	59

White-crowned Sparrow:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 25 - 1	May 6 - 3	Sept 2 - 1	Aug 23 - 1
Last Sighting	May 26 - 1	May 23 - 2	Sept 30 - 1	Sept 25 - 3
Peak Day	All dates - 1	May 12 - 117	Sept 12 & 26 - 4	Sept 23 - 6
# of Days Sighted	5	18	11	10

Dark-eyed Junco:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 25 - 1	Apr 25 - 37	Aug 29 - 2	Aug 1 - 1
Last Sighting	Apr 30 - 1	May 25 - 1	Sept 27 - 4	Sept 28 - 3
Peak Day	All dates - 1	Apr 30 - 591	Sept 21 - 121	Sept 23 - 10
# of Days Sighted	3	24	18	16

Lapland Longspur:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 31	Apr 25 - 2	Aug 29 - 19	Aug 23 - 1
Last Sighting	May 25 - 1	May 25 - 1	Sept 23 - 2	Sept 27 - 1
Peak Day	May 2 - 75	May 4 - 52	Sept 14 - 21	Sept 13 - 79
# of Days Sighted	8	13	19	21

Snow Bunting:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 8 - 1	May 9 - 1		Sept 18 - 55
Last Sighting				
Peak Day				
# of Days Sighted	1	1	0	1

Rose-breasted Grosbeak:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 15 - 3	May 14 - 1	Jul 18 - 1	Jul 12 - 1
Last Sighting	Jun 10 - 2	Jun 10 - 1	Aug 29 - 1	Aug 31 - 1
Peak Day	May 19 - 48	May 24 - 72	Aug 11 - 10	Aug 7 - 9
# of Days Sighted	24	21	29	33

Red-winged Blackbird:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 25 - 3	Apr 29 - 1	Jul 18 - 2	Jul 16 - 1
Last Sighting	Jun 10 - 1	Jun 9 - 4	Aug 11 - 4	Aug 31 - 1
Peak Day	May 9 - 30	May 8 - 150		Jul 25 - 19
# of Days Sighted	20	25	3	14

Yellow-headed Blackbird:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 13 - 6	May 8 - 1		Aug 7 - 10
Last Sighting	May 17 - 7	Jun 3 - 1		
Peak Day		May 30 - 2		
# of Days Sighted	3	3	0	1

Common Grackle:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 24 - 2	Apr 30 - 15	Jul 13 - 3	Jul 24 - 4
Last Sighting	Jun 7 - 3	May 26 - 1	Sept 3 - 3	Sept 16 - 2
Peak Day	May 9 - 39	May 8 - 66		2 dates - 4
# of Days Sighted	14	12	7	10

Brown-headed Cowbird:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 2 - 3	May 6 - 1	Jul 18 - 1	Jul 16 - 1
Last Sighting	Jun 10 - 2	Jun 10 - 1	Aug 11 - 1	Aug 28 - 1
Peak Day	May 17 - 39	May 8 - 49	Jul 21 - 2	3 dates - 1
# of Days Sighted	31	34	4	3

Baltimore Oriole:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 15 - 2	May 11 - 2		
Last Sighting		Jun 6 - 1		
Peak Day		May 30 - 5		
# of Days Sighted	1	4	0	0

Purple Finch:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 23 - 1	Apr 25 - 4	Jul 15 - 1	Jul 21 - 2
Last Sighting	Jun 8 - 2	May 17 - 1	Sept 12 - 1	Sept 25 - 1
Peak Day	May 8 & 9 - 3	May 8 - 9	Aug 5 - 22	Aug 21 - 25
# of Days Sighted	18	16	38	30

White-winged Crossbill:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting			Jul 12 - 2	Jul 16 - 2
Last Sighting			Sept 30 - 2	Sept 15 - 2
Peak Day			Jul 13 - 5	Jul 23 & 24 - 10
# of Days Sighted	0	0	13	25

Common Redpoll:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 25 - 1	May 6 - 4		Sept 3 - 20
Last Sighting				
Peak Day				
# of Days Sighted	1	1	0	1

Pine Siskin:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 5	Apr 25 - 1	Jul 12 - 3	Jul 12 - 3
Last Sighting	Jun 2 - 2	Jun 10 - 3	Sept 30 - 2	Sept 28 - 2
Peak Day	May 3 - 7	May 30 - 178	Aug 4 - 104	Sept 27 - 231
# of Days Sighted	31	40	60	64

American Goldfinch:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	May 6 - 5	May 27 - 1	Aug 1 - 1	Aug 2 - 1
Last Sighting	Jun 9 - 1	Jun 7 - 1	Sept 13 - 2	Aug 5 - 1
Peak Day		Jun 5 - 2		
# of Days Sighted	14	6	2	2

Evening Grosbeak:

	Spring 2010	Spring 2009	Fall 2010	Fall 2009
First sighting	Apr 22 - 2	May 1 - 14	Jul 15 - 1	Jul 15 - 2
Last Sighting	Jun 2 - 3	Jun 6 - 1	Sept 27 - 10	Sept 15 - 1
Peak Day	Apr 27 - 12	May 26 - 71	Jul 22 - 26	Aug 6 - 74
# of Days Sighted	30	30	43	40