



2009 Annual Report

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November, 2009

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2009 Executive Summary

The Lesser Slave Lake Bird Observatory (LSLBO) has been conducting monitoring projects in the Lesser Slave Lake Provincial Park since 1994. 2009 marks the 16th year the station has operated its three core projects: spring migration monitoring, fall migration monitoring, and Monitoring Avian Productivity and Survivorship (MAPS). Two side monitoring projects, the Canada Warbler Project and northern saw-whet owl fall migration monitoring, were initiated in 2004. Both have run for six years, but in a capacity limited by staff availability and commitments on the core projects.

Daily migration monitoring during both the spring and fall use four monitoring techniques; census, visual migration, incidental observations, and mistnetting. Spring migration began on April 25 and ended on June 10th for 46 days of migration coverage. Weather conditions allowed for banding to occur on 42 days and the nets were set for 82% of the total possible net hours. A total of 1117 birds from 45 different species and forms were banded. Fall migration monitoring ran from July 12th to September 28th. Migration monitoring activities took place on 77 days during that time. Mistnetting occurred on 75 days and weather allowed for 90.2% of the total possible net hours. 1194 birds were from 54 species were banded, the third lowest fall banding total on record.

The LSLBO operates four MAPS stations, each visited six times between July 11th and August 2nd. Mistnetting effort at the stations combined for a total of 303 birds banded from 28 species, the third highest total on record. The breeding status was determined for the 60 species encountered during visits to the MAPS stations.

A total of 387 birds were recaptured through migration monitoring and MAPS banding. All recaptured birds were originally banded at the LSLBO. The majority of the birds were banded in the 2009 season and recaptured later in the season. 26 birds were originally banded in 2008 and 31 were banded previous to 2008. The oldest bird encountered was an American redstart banded in 2005. This bird was at least six years old. There were no reports of LSLBO banded birds encountered elsewhere.

Mistnetts for northern saw-whet owl fall migration monitoring were set on 42 nights between August 24th and October 19th. A total of 92 northern saw-whet owls and one barred owl were banded. A northern saw-whet owl banded in Saskatchewan on October 1, 2008 was recaptured at the LSLBO on September 27. The focus of the Canada Warbler Project this year was nest searches and nest monitoring. Of the six nests located: two nests failed early in the egg stage, two nests were confirmed successful, and there was strong evidence that the final two nests were successful. Two video cameras were used to passively film nest activity. A total of 18 nestlings were banded from four nests.

The number of banded species remained at 99; no new species were banded this year. However, two species were added to the sight records list. A wandering tattler observed on May 16th and an ivory gull was spotted on May 21st; bringing the total number of species observed during monitoring at the LSLBO to 249 species.

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Migration Monitoring

Migration monitoring is a method of long-term population monitoring which focuses on migratory birds. The LSLBO has been a full member of the Canadian Migration Monitoring Network (CMMN) since 1999. The CMMN is a nationwide organization that provides support for member stations, including population trend analysis. The protocols used by the LSLBO during the spring and fall migration are set out in the 2003 Revised Lesser Slave Lake Bird Observatory Station Manual. Standardized protocols allow for consistent data collection necessary for population trend analysis and comparison of banding results and migration trends. Monitoring is conducted for seven hours each day, beginning one-half hour before sunrise. A half-hour census and hourly five minute visual migration counts are run daily. Incidental observations are recorded throughout the duration of the monitoring period. The LSLBO operates twelve standard netlanes for a maximum of 84 net hours per day. Mistnets are not set if the temperature is below 2°C, during periods of precipitation, or if the wind is above 3 on the Beaufort Scale.

Spring Migration

Spring monitoring typically begins late April once mid-morning temperatures are sustained above freezing. At this time only a few of the early migrant species have arrived. In 2009, the migration period lasted from April 25 to June 10. The station operated on all but one day for 46 days of migration coverage. Weather conditions allowed mistnetting to be conducted on all but four days that the station operated. Reduced net hours occurred on 17 days due to cold early morning temperatures or changing weather conditions during the monitoring period. The census was conducted every day that the station was operated and observers aimed for eight visual migration counts each day, although six were conducted on poor weather days. Overall, spring migration received excellent coverage and was consistent with previous years (Table 1).

Table 1. Summary of effort during spring migration monitoring at LSLBO, 2001-2009.

Spring	2001	2002	2003	2004	2005	2006	2007	2008	2009
Coverage									
First Day	16-Apr	19-Apr	21-Apr	19-Apr	25-Apr	24-Apr	24-Apr	26-Apr	25-Apr
Last Day	11-Jun	11-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun
Number of Days	57	54	50	50	43	47	48	45	46
Person Days	130	125	124	120	121	127	92	105	89
Banding									
First Day	16-Apr	20-Apr	21-Apr	20-Apr	25-Apr	24-Apr	24-Apr	27-Apr	29-Apr
Last Day	11-Jun	11-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun
Number of Days	54	45	39	45	43	44	47	43	42
Av. Daily Net Hrs	72.9	63	48.9	60.5	71.2	70.3	73.6	75.8	70.4
Census									
First Day	16-Apr	19-Apr	21-Apr	20-Apr	25-Apr	24-Apr	24-Apr	26-Apr	25-Apr
Last Day	11-Jun	11-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun
Number of Days	57	54	50	49	43	47	48	45	46
Vis-Mig									
First Day	16-Apr	19-Apr	21-Apr	20-Apr	25-Apr	24-Apr	24-Apr	26-Apr	25-Apr
Last Day	11-Jun	11-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun	10-Jun
Number of Days	57	54	50	49	43	47	48	45	46
Av Daily Vis-Migs	7.8	8.4	8	8.2	8	7.7	7.9	7.8	7.7

Mistnets were set for 82% of the total possible time, or 3167.4 of the possible 3864 net hours. Through mistnetting effort, a total of 1117 birds were banded, which is slightly above the spring banding average of 949. An additional 67 recaptures and 13 birds escaped unbanded, for a total of 1197 birds captured. The capture rate was 37.8 birds/100 net hours. The peak banding day of the spring was April 30th with 169 birds banded, followed by May 14th with 85 and May 24th with 66. Eight other dates recorded banding totals above 30 birds. Peak banding periods occurred late April, the third week of May, and late May (Appendix I).

All 45 species and forms banded during the spring are listed in Appendix II. The top five species banded were: dark-eyed junco (237), Swainson's thrush (168), white-throated sparrow (78), least flycatcher (49), and chipping sparrow (46). These five species combined for 51.7% of all birds banded during the spring. Highlights of spring banding included a record number of dark-eyed juncos. The 237 banded dwarfed the previous record of 108 banded in 2001. The first veery in six years was banded. The LSLBO banded its second vesper sparrow of the spring.

Although birds are active every day at the banding station, there are definite peaks and lows in migratory activity through the season. A late April peak consisted of a heavy passage of dark-eyed juncos, white-crowned sparrows, and American robins. Mid-May had heavy passage of a wide variety of species that lasted several days. The more abundant species during that time were Myrtle warblers, chipping sparrows, and blackbirds. The third week of May had the heaviest passage of the entire spring from a diverse number of species. May 24th was the busiest migration day of the spring with as over 5000 chipping sparrows, hundreds of clay-coloured sparrows, and a host of other species flew over the banding lab in just a few hours. The two highlight sightings during the spring were new species observed at the banding lab. A wandering tattler and ivory gull were spotted during normal migration activities and brought the LSLBO's total species sighted to 248. Sighting records and peak days sighted for all species during the spring are listed in Appendix III.

Fall Migration

Fall migration monitoring typically begins mid-July and runs daily until the end of September. This time period covers the migration window for the majority of species. Fledglings are active in mid-July, but there is little evidence of migration at that time. By the end of September most of the migrants have passed through and observations consist of mainly winter resident species. It is likely that individuals from late migratory species are still moving through the area, but cold temperatures reduce banding effort. In 2009 fall extended from July 12th to September 28th for 77 days of coverage. Two days were missed due to staff availability. Daily census was conducted every day that the station was operated. Visual migration counts were conducted everyday, with a maximum of 8 each day and 6 on days with poor weather. Banding occurred on all but two days that the station operated because extremely poor weather. 16 days had partial net coverage due to changing weather conditions throughout the monitoring period. Overall, fall migration received excellent coverage that was consistent with previous years (Table 2).

Table 2. Summary of effort during fall migration monitoring at LSLBO, 2001-2009.

Fall	2001	2002	2003	2004	2005	2006	2007	2008	2009
Coverage									
First Day	14-Jul	13-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul
Last Day	22-Sep	04-Oct	30-Sep	30-Sep	29-Sep	29-Sep	30-Sep	2-Oct	28-Sep
Number of Days	69	84	77	78	75	77	73	76	77
Person-days	192	173	158	164	170	149	114	131	165
Banding									
First Day	14-Jul	14-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul
Last Day	22-Sep	04-Oct	30-Sep	30-Sep	29-Sep	29-Sep	30-Sep	2-Oct	28-Sep
Number of Days	69	78	69	73	71	73	68	74	75
Av. Daily Net Hrs.	74.6	62.9	73.8	69.8	76	73.9	71.9	75.7	78.9
Census									
First Day	14-Jul	13-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul
Last Day	22-Sep	04-Oct	30-Sep	30-Sep	29-Sep	29-Sep	30-Sep	1-Oct	28-Sep
Number of Days	69	84	77	78	75	77	73	75	77
Vis-Migs									
First Day	14-Jul	13-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul	12-Jul
Last Day	22-Sep	04-Oct	30-Sep	30-Sep	29-Sep	29-Sep	30-Sep	2-Oct	28-Sep
Number of Days	69	84	77	78	75	77	73	76	77
Av Daily Vis-migs	7.9	7.7	7.6	7.6	7.7	7.7	7.7	7.5	7.6

Mistnets were set for 90.2% of the total possible net hours, or 5835.7 out of 6468 net hours. Despite excellent net coverage, 1194 birds were banded, which was below the fall average of 1898 and the third lowest fall banding total on record. An additional 186 birds were recaptured and 8 birds escaped or released unbanded for a total of 1388 captured birds. The capture rate through the fall was 23.8 birds/100 net hours. The peak banding date was July 22nd with 65 birds banded. Only two other dates had over 50 birds banded and banding totals were in the 40's on four days. The July portion of fall banding was not overly busy, but steady. Banding throughout August and September was extremely slow, only five days had banding totals that surpassed 20 birds. Overall banding was slow throughout the entire fall monitoring period (Appendix I).

54 different species and forms were represented by birds captured in the nets (Appendix II). The top five species banded were: Swainson's thrush (166), ovenbird (138), American redstart (135), Myrtle warbler (129), and Tennessee warbler (90). These five species accounted for 55.1% of the total birds banded. Highlights of the fall banding included a record number of sharp-shinned hawks; 40 were banded over the season, beating the previous fall high of 27. A Blackburnian warbler was banded on August 20th, it was only the second one to be banded at the LSLBO. Two varied thrush were banded on September 23rd, only 3 varied thrush had been banded in previous years.

Mistnetting was busy during the July portion of the fall period, however very few birds were observed on visual migration. Passage throughout most of August was quiet, only a few individuals of species were observed. Heavy migration did not begin until the third week of August. Myrtle warblers began to pass through in very large numbers on almost a daily basis. A wide variety of other species were observed along with the Myrtle

warblers, but all other species were observed in very low numbers. Myrtle warbler migration picked up again mid-September, a passage that lasted several days. One of the more interesting migrations was from red-breasted nuthatches. Over 100 were counted on September 11th. This species is typically only observed in very small numbers. No rare or unusual species were recorded on visual migration through the fall period. Species sight records and peak dates are listed in Appendix III.

Migration Monitoring Monthly Summary: Spring

April

The 16th year of spring migration monitoring activities began on April 25th. Standard migration counts were conducted even though freezing temperatures on the opening day prevented banding. Large numbers of American robins were observed with 1064 counted migrating overhead. Hundreds of unidentifiable blackbirds were also observed. A small number of eastern phoebes, ruby-crowned kinglets, Myrtle warblers, American tree sparrows, and dark-eyed juncos were detected. As the week progressed, visual migration detections of dark-eyed juncos and American tree sparrows and Myrtle warblers increased, while American robin migration slowed down. Steady migration of northern flickers and northern harriers occurred over the final days of April. The diversity of birds in the area slowly increased with the detections of the season's first winter wrens, hermit thrush, song sparrows, and fox sparrows. Lesser Slave Lake was frozen to the shoreline, but mallards and common goldeneye were observed flying past the lab. Temperatures warmed up enough to allow mistnetting to begin on the 29th. A large dark-eyed junco passage occurred over the last two days of April and several flocks were captured in the nets. Of the 226 birds that were banded over the days, 200 were dark-eyed juncos. 169 birds were banded on the 30th, which was the busiest banding day of the entire spring.

May

Early morning temperatures through the first week of May remained cool, but overall conditions became steadily warmer. Songbird migration was slow for most of the week as the peak migration timing of American robins, dark-eyed juncos, and American tree sparrows had passed. A strong single day passage of Myrtle warblers occurred late in the week with over 400 counted. Although songbird passage was slower, waterfowl diversity and abundance increased as the ice on the lake in front of the banding lab began to retreat from the shoreline. Increasing numbers of ducks, including northern pintail, blue-winged teal, northern shoveller, American wigeon, gadwall, green-winged teal, bufflehead, ring-necked duck, common and red-breasted merganser, took advantage of the open water. The first common loon of the year was heard calling in flight on May 2nd. Large flocks of greater white-fronted geese birds began to pass through during the week with totals ranging from 1000 to 2000 on several days. Snow geese, Sandhill cranes, and tundra swans were also seen, but in much smaller and infrequent flocks. Species diversity increased with sightings of new species throughout the week, including Franklin's gulls, common tern, killdeer, spotted sandpiper, belted kingfisher, yellow-bellied sapsuckers,

Say's phoebe, tree swallows, barn swallows, Swainson's thrush, American pipit, orange-crowned warblers, Lincoln's sparrows, and white-crowned sparrows. One of the highlight species of the week was a northern shrike observed perched on a branch in front of the banding lab on the 5th. Banding totals reflected the slower songbird migration over the week with 59 birds banded and daily banding totals ranging from 0 to 40 birds.

The second week of May began with sunny and warm temperatures and a strong Myrtle warbler migration. Daily totals of Myrtle warblers reached 600 on two separate days. Over 100 white-crowned sparrows were detected on the 13th. However, later that morning a heavy snowfall occurred causing a major reverse migration as all the birds that were counted in the morning began to retreat back south. A lighter snowfall occurred on the 14th. It grounded many songbirds, predominately Swainson's thrush, gray-cheeked thrush, and chipping sparrows. Detections of new species was high throughout the entire week as new species arrived on almost a daily basis. On the lake we detected the first groups of long-tailed ducks, surf scoters, white-winged scoters, red-necked grebes, horned grebes, double-crested cormorants and Bonaparte's gulls. In the forest, the first least flycatcher, blue-headed vireo, gray-checked thrush, Tennessee warbler, yellow warbler, Cape May warbler, palm warbler, blackpoll warbler, northern waterthrush, western tanager, chipping sparrow, vesper sparrow, savannah sparrow, white-throated sparrow, rose-breasted grosbeak and Baltimore oriole were all detected. Only small patches of ice remained in the center of the lake. Even though large numbers of waterfowl were present, most were at far distances that made identification difficult. Flocks of greater white-fronted goose continued to migrate through the area. Large flocks steadily passed by, reaching a peak of over 6500 on the 8th. Banding efforts were reduced from the snowfall, but each day received partial net coverage and a total of 170 birds were banded over the week with daily totals ranging from 7 to 85.

The third week of May began with much improved weather conditions, sunny and warm. Myrtle warblers took advantage of the weather, reaching a spring high of 707 on the 15th. By mid-week a weather front moved in which brought freezing morning temperatures, wind, and precipitation in the form of both rain and snow. A large chipping sparrow migration occurred on the 17th. It was the first rain day of the spring, but waves of chipping sparrows passed over and 2534 were counted in five hours. A third heavy snowfall occurred on the 19th, which stopped all migration activity on that day. Migration was overall slower for most of the week and only a small number of new species were detected; including: magnolia warbler, black-throated green warbler, ovenbird, and clay-coloured sparrow. Two new species were added to the LSLBO's sight records. A wandering tattler was observed on the 15th and an ivory gull was spotted flying past the banding lab on the 21st. Banding occurred on all but one day and 166 birds were banded with daily totals ranging from 11 to 55.

The remaining week and a half of May began with several days of strong migration. The busiest day of migration counts of the spring occurred on the 24th with streams of migrants moving over for the entire morning. Although the diversity of species observed was high; the most abundant species were the 5391 chipping sparrows, 634 clay-coloured sparrows, and 72 rose-breasted grosbeaks. The second half of the week was slower in terms of migration, but by weeks end migration picked up with diverse flocks of warblers. Myrtle warblers, Tennessee warblers, and yellow warblers made up the majority of the migrants. The arrivals of many of the late migrant species were observed over the remaining days of May and included American white pelican, western wood-pewee, alder flycatcher, eastern kingbird, Philadelphia vireo, red-eyed vireo, American redstart, mourning warbler, common yellowthroat, Wilson's warbler, Canada warbler, and swamp sparrow. Three pacific loons landed on the lake right in front of the banding lab on the 22nd. Even though migrant species were still moving in, it was apparent that the breeding season was close as many of the earlier arrivals had begun setting breeding territories as individuals were heard singing from the same locations during census each day. Banding totals were steady till the end of May, with 326 birds banded and totals ranged from 11 to 66.

June

Migration began to slow down in June as the visual migration of migrants dwindled. Daily capture rates remained steady and incidents of recapturing birds banded earlier in the season increased. Late spring migrant birds continued to move through such as alder flycatchers, American redstart, Canada warblers, and mourning warblers. Visual migration was limited for most of the week, and most observations were of probable breeding individuals. New species observed were olive-sided flycatcher, warbling vireo, and cedar waxwing. A total of 169 birds were banded, with daily totals ranging from 11 to 22. One highlight bird banded was a veery captured on the 2nd. The final day of spring migration monitoring was the 10th, as the nets were closed down and preparations were made to begin monitoring the breeding birds through the MAPS program.

Migration Monitoring Monthly Summary: Fall

July

Fall migration monitoring began on July 12th. It was a sunny, but windy day. A number of birds were observed fluttering in the forest as adults were busy foraging and feeding their young, but migratory activity was not detected. A large proportion of birds captured were recaptures, another sign indicating that migration had not yet begun. The remainder of the week was similar, sunny and warm with very few observations of migratory birds. Hundreds of Franklin's gulls were observed circling the area on two days, but they quickly moved on. Even though visual migration was non-existent, some local movement occurred and was detected through banding. 199 birds were banded over the week, with relatively consistent banding totals ranging from 14 to 47. The majority of the birds captured were juvenile Myrtle warblers, Tennessee warblers, and yellow warblers. A family group of five yellow-bellied sapsuckers was also banded.

The second week opened with several days of strong winds, which reduced the detections of all bird activity. Wind conditions became calm by mid-week with very warm temperatures. Visual migration increased slightly with migrating Myrtle warblers, blackbirds, and a small number of sparrows. Most of the migrants were moving individually and large flocks were not observed. The week had the busiest banding of the entire fall period, despite the lack of visual activity. July 22nd had the highest single day banding total of the fall with 65 birds banded. Myrtle warblers, American redstart, yellow warblers, and ovenbirds were the top species banded. A high diversity of species were banded on most days. For instance, the 24th had 50 birds banded from 17 species. 264 birds were banded over the week with daily totals ranging from 3 to 65.

The remainder of July remained hot. Even though the frequency of migrants from species such as Myrtle warblers, black-and-white warblers, and yellow warblers was increasing, the numbers were low and only consisted of individuals. Most of the bird activity occurred during the cooler temperatures of the early morning. Once the sun rose above the trees almost all bird activity halted. Banding remained steady, except for a few sporadic days with heavier winds and rain. 187 birds were banded with daily totals ranging from 16 to 53. American redstarts were the top banded species over the week. The first bay-breasted warbler of the year and a common grackle (only the fourth one captured at the LSLBO) were banded over the week.

August

August began with hot summer temperatures. Migration was almost non-existent for the entire week. Even in the cooler weather of the early morning, there was very little activity. Banding totals reflected the quiet activity. August 1st and 2nd were the only two days of the week that had over 20 birds banded. A total of 151 birds were banded with daily totals ranging from 14 to 39 birds. Swainson's thrush, ovenbird, and American redstart were the top banded species. A ruby-throated hummingbird was captured on the 3rd. The delicate bird was extracted and released okay.

The second week of August mirrored the previous week. The weather was a mix of hot and sunny days and extremely windy days, conditions that did not help the already slow migration. Visual migration consisted of individual birds flying past the station, but an increasing diversity of species was observed. A host of warbler and sparrow species were seen, as well as American robins, eastern kingbirds, and western tanager. Banding remained very slow. A staggering 46 birds were banded over the week, with daily totals ranging from 2 to 11 birds. An olive-sided flycatcher was banded on the 14th; the second banding record for the LSLBO.

Small and sporadic flocks of Myrtle warblers, yellow warblers, and black-and-white warblers were observed throughout the third week of August. Late in the week visual migration picked up. A single day migration push on the 20th consisted of modest sized flocks of warblers. 189 Myrtle warblers were counted as well as smaller numbers of yellow warblers, Tennessee warblers, and American redstarts. Other species observed migrating included western tanager, say's phoebe, and sharp-shinned hawks. Banding was relatively quiet throughout the entire week. 97 birds were banded with daily banding totals ranging from 1 to 38 birds. Despite the slow banding, two noteworthy birds were banded on the 20th. The juvenile blackburnian warbler was only the second banding record for the LSLBO and the Connecticut warbler was the first record since 2004.

The weather through the fourth week of August remained clear, calm, and hot. A strong passage of Myrtle warblers lasted the duration of the entire week. Flocks began to move through on the 23rd and 600 were counted. Daily totals surpassed 500 on several other days, and numbers peaked on the 28th at 873. A high diversity of other migrants were observed along with the Myrtle warblers, but the yellow warblers, American redstarts, black-and-white warblers, and sparrows were all seen in very low numbers compared to the Myrtle warblers. Individual eastern kingbirds are usually observed migrating through the area. However, 21 were spotted on the 24th, many moving in small flocks. Sharp-shinned hawk migration was steady through most of the week. Several days occurred when over 20 were counted. The first orange-crowned warbler, Wilson's warbler, and white-crown sparrow of the fall were observed on the 23rd. Despite the increase of bird activity, banding totals remained very low. Only 81 birds were banded during the week and daily banding totals ranged from 7 to 28. Swainson's thrush and ovenbirds made up the top banded species and despite the large number of Myrtle warblers observed, only 19 were banded. Five sharp-shinned hawks were banded on the 25th, this was the second highest single day sharpie banding on the LSLBO's records.

Myrtle warbler migration continued throughout the remaining days of August; 812 were counted on the 29th and 1093 on the 31st. The top Myrtle warbler day of fall was on the 30th with 1334 counted. Diversity was high, but other species were present in very small numbers. Sharp-shinned hawk migration remained steady with several days of over 20. Franklin gulls were actively passing by the observatory; 980 were counted on the 29th. Over the last three days of the month 37 birds were banded, with totals ranging from 10 to 16 birds. Ovenbirds and Swainson's thrush remained the top banded species; only one Myrtle warbler was banded. The last Tennessee warbler, black-throated green warbler, Canada warbler, and rose-breasted grosbeak of the fall were sighted over the week.

September

The heavy Myrtle warbler migration continued into the first two days of September; 546 were counted on the 1st and 1260 on the 2nd. A steady number of American pipits were also observed moving along the shoreline. The passage ended when a weather system moved in which brought several days of heavy winds and rain. Very few birds were active in this weather. Several days had partial mistnetting coverage effort and one day was missed due to very heavy rain. On the days that banding occurred, a total of 54 birds were banded with daily totals ranging from 1 to 18. The top species banded were Swainson's thrush and ovenbird. The only fox sparrow of the fall was banded on the 1st. The last fall sightings of alder flycatcher, red-eyed vireo, ovenbird, northern waterthrush, mourning warbler, western tanager, and clay-coloured sparrow occurred over the week.

The second week of September began with more wind and rain, resulting in very little songbird activity. Migration picked up on the 11th as the weather improved and 430 Myrtle warblers and 129 red-breasted nuthatches were observed on visual counts. Very few other songbird species were recorded. Another 831 Myrtle warbler were counted on the 13th along with good numbers of American pipits and Lapland longspurs. Small numbers of orange-crowned warblers, American robins, and red-breasted nuthatch were also observed. The first flocks of greater white-fronted geese of the fall were sighted on the 9th with 160. Small flocks of Sandhill cranes also were observed moving past, but these flocks were small and consisted of fewer than 100 individuals. American pipit, sharp-shinned hawk, and northern harrier passage were steady through the entire week. A total of 28 birds were banded over the week with daily banding totals ranging from 1 to 28. The week had the last fall sightings of least flycatcher, Philadelphia vireo, yellow warbler, magnolia warbler, black-and-white warbler, common yellowthroat, and Wilson's warbler.

The final two weeks of September was extremely quiet, which is typical for late September migration monitoring. Migration rates were very low, small numbers of Myrtle warblers were observed, as well as American pipits, Lapland longspurs, and white-crowned sparrows. Banding was extremely slow for this entire period. Only 50 birds were banded over the two weeks, with banding totals ranging from 0 to 21 birds. Hermit thrush and white-crowned sparrows were the top species banded. The highlights of the late September banding occurred on the 23rd. Two varied thrush were captured in the same net. Only three previous banding records have occurred at the LSLBO. Late September usually sees good numbers of American tree sparrows, dark-eyed juncos and white-crowned sparrows in the area. This fall, these three species were very scarce. Only one American tree sparrow was observed on September 16th. Both dark-eyed juncos and white-crowned sparrows were present, but in very low numbers. September 28th was the last day of migration monitoring at the LSLBO. The 2009 season ended on a low note as the nets were closed early due to heavy winds and no birds were banded.

Monitoring Avian Productivity and Survivorship (MAPS)

The Monitoring Avian Productivity and Survivorship Program (MAPS) is a long-term monitoring program coordinated by the Institute for Bird Populations. MAPS primary focus is populations on the breeding grounds. The LSLBO has participated in the MAPS program since 1994 and this program remains one of the stations core monitoring projects. 2009 marks the 16th year that the LSLBO has been contributing to the 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 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 16 consecutive years. FEGU operated from 1994 to 2000. It reopened in 2003 and has since operated for 7 consecutive years. RESI was established in 2000 and has completed its 9th consecutive year of monitoring. The MAPS operating protocol separates the breeding season into 10 day periods and each station is visited once per period. The LSLBO operates through six of the periods, the dates that each station was visited 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 23	June 23	June 20
Period 7 (Jun 30 – Jul 9)	July 1	July 2	July 2	June 30
Period 8 (Jul 10 - Jul 19)	July 12	July 11	July 11	July 10
Period 9 (Jul 20 – 29)	July 20	July 22	July 23	July 20
Period 10 (Jul 30 – Aug 8)	July 31	August 2	August 1	July 30

MAPS Banding

Each MAPS station operates 10 mistnets and can achieve a maximum of 360 net hours during the breeding season. Both ROAD and FAWA received maximum net coverage. Weather conditions prevented full net coverage at RESI and FEGU, which received 350 and 340 net hours, respectively.

In total, 441 birds were captured during the 2009 MAPS banding; 303 banded, 134 recaptures and 4 unbanded. With the four stations combined, 28 species were represented during MAPS banding. FEGU had the highest capture total of the stations with 75 banded and 55 recaptures from 17 species (Table 3). RESI had the second highest capture total with 102 banded and 18 recaptures from 21 species (Table 4). It received its first banding record of a swamp sparrow. ROAD had the second lowest capture total with 75 banded and 44 recaptures from 19 species (Table 5). FAWA had the lowest banding total with 51 birds banded and 17 recaptures from 13 species (Table 6). FAWA typically has the lowest banding total and lowest species diversity of all the stations; however, it did receive its first sharp-shinned hawk banding record this year.

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

Species	2009		Previous Years' Total Captures				
	Banded	Recap	94-99	03-05	2006	2007	2008
Sharp-shinned Hawk							1
Northern Saw-whet Owl			1				
Yellow-bellied Sapsucker		1		1			1
Three-toed Woodpecker							1
Alder Flycatcher	1		6	2		1	2
Least Flycatcher			2	6			
Blue-headed Vireo			2	1			
Red-eyed Vireo			4	3		1	
Blue Jay							1
Black-capped Chickadee			7	2	1		
Red-breasted Nuthatch			4				
Brown Creeper							3
Winter Wren	1		3	1	1	1	
Swainson's Thrush	4	5	50	25	4	4	5
Hermit Thrush	1		1		2		1
American Robin		1	4	1			
Cedar Waxwing				2			
Tennessee Warbler	17	8	30	45	4	3	3
Orange-crowned Warbler			1				
Yellow Warbler			13	5	2	3	
Chestnut-sided Warbler			2				
Magnolia Warbler	3		17	6			
Yellow-rumped Warbler	2		26	9	1		5
Black-throated Green Warbler			1				1
Bay-breasted Warbler					1		
Black-and-white Warbler	5	2	12	7	4		1
American Redstart	5	14	237	105	30	12	23
Ovenbird	11	7	41	40	10	8	17
Northern Waterthrush			1	1			
Mourning Warbler	9	3	51	17	3	3	1
Common Yellowthroat					1	1	
Wilson's Warbler							1
Canada Warbler	10	10	112	77	13	18	17
Western Tanager	1		1	3			
Chipping Sparrow	1		2		1		
Song Sparrow			5				
Swamp Sparrow			2				
White-throated Sparrow	4	4	102	40	19	13	16
Rose-breasted Grosbeak							1
Pine Siskin			2				
Total	75	55	742	230	94	68	101

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

Species	2009		Previous Years' Total Captures					
	Banded	Recap	'00-03	2004	2005	2006	2007	2008
Sharp-shinned Hawk	1		1			1		
Ruby-throated Hummingbird			2					
Yellow-bellied Sapsucker	2		15		2		2	2
Downy Woodpecker								1
Northern Flicker			1					
Western Wood-Pewee			1					
Alder Flycatcher			1					
Least Flycatcher			39	5			1	4
Black-capped Chickadee			12	3		8	2	
Red-breasted Nuthatch			3					1
Brown Creeper			2					1
Winter Wren			4			1		8
Ruby-crowned Kinglet			2	1	1			
Swainson's Thrush	11	2	33	7	8	10	4	13
Hermit Thrush			9	2	7	6	3	
American Robin	2		3	2		1		2
Red-eyed Vireo			2	6			4	5
Philadelphia Vireo			1	1				1
Warbling Vireo			2					
Blue-headed Vireo			1	2				
Tennessee Warbler	10		106	40	5	5	12	12
Orange-crowned Warbler			1					
Yellow Warbler	2		15				4	3
Magnolia Warbler	4	1	25	2	3		4	3
Cape May Warbler							1	
Yellow-rumped Warbler	12		105	11	5		9	6
Black-throated Green Warbler	3		3	2				
Bay-breasted Warbler			5	1				
Blackpoll Warbler			1	1				
Black-and-white Warbler	4		7	2			3	6
American Redstart	4	3	57	15	5	7	15	7
Ovenbird	15	3	23	3	23	14	13	11
Northern Waterthrush			1					
Mourning Warbler	6	3	8	1	1	1	2	4
Common Yellowthroat		1	1	1		1		1
Canada Warbler	2		20	5	2	2	12	11
Western Tanager			2	1				
Rose-breasted Grosbeak	1		5	2				1
Chipping Sparrow	6		11			1	2	
Clay-colored Sparrow				1				
Lincoln's Sparrow	5	5	3		1	3	9	1
Swamp Sparrow	1							
White-throated Sparrow	9		70	14	11	7	13	18
Purple Finch	2		1					
Pine Siskin			1					
Total	102	18	607	132	74	76	115	122

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

Species	2009		Previous Years Captures					
	Banded	Recap	94-'03	2004	2005	2006	2007	2008
Yellow-bellied Sapsucker	1	2	7	1	1			1
Downy Woodpecker			1					
Hairy Woodpecker			1	1			1	
Pileated Woodpecker			1					
Yellow-bellied Flycatcher			1					
Alder Flycatcher			6					
Least Flycatcher			9	1	1			
Black-capped Chickadee	1		8	2	1			
Red-breasted Nuthatch			1					
Brown Creeper	1	1	1				2	
Winter Wren	5	1	4		3		5	2
Ruby-crowned Kinglet			2	1	1			
Swainson's Thrush	10	1	77	6	10	7	8	13
Hermit Thrush	2	1		1	1			
American Robin	1		4		1	2	1	
Cedar Waxwing			3					
Warbling Vireo			1					
Red-eyed Vireo	1		4	1		1	2	
Tennessee Warbler	7	3	58		49	5	3	9
Orange-crowned Warbler			1					
Yellow Warbler			8	1				
Chestnut-sided Warbler			4		1			
Magnolia Warbler	4	2	108	2	2	2	3	1
Cape May Warbler			3					
Yellow-rumped Warbler		3	71	3	5	1	4	9
Black-throated Green Warbler			7					
Palm Warbler			1					
Blackpoll Warbler			2					
Black-and-white Warbler	2	1	25	1	2		6	3
American Redstart	6	5	189	7	22	13	13	14
Ovenbird	9	11	97	10	12	13	9	18
Northern Waterthrush	1		2			1		
Mourning Warbler	3	1	15	1	1	1	1	2
Common Yellowthroat			2					
Canada Warbler	13	8	159	22	24	13	8	15
Western Tanager			3					1
Rose-breasted Grosbeak			4				1	
Chipping Sparrow	1		16				3	
Song Sparrow			2					
Lincoln's Sparrow			2	1				1
Swamp Sparrow							1	
White-throated Sparrow	7	4	108	5	10	6	6	5
Purple Finch			1					
Pine Siskin			1					
Total	75	44	1022	66	146	67	77	94

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

Species	2009		Previous Years' Total Captures					
	Banded	Recap	94-'03	2004	2005	2006	2007	2008
Sharp-shinned Hawk	1							
Yellow-bellied Sapsucker				1		1	1	3
Downy Woodpecker			1					
Hairy Woodpecker								1
Least Flycatcher			15				2	1
Winter Wren							1	
Swainson's Thrush	1		8		2			2
Hermit Thrush	1		2				1	2
American Robin	1		10	1			1	1
Cedar Waxwing			1					
Phialdelphia Vireo			1				1	
Red-eyed Vireo			6		1		1	1
Tennessee Warbler	10		9		8	1	4	5
Yellow-warbler			5					1
Chestnut-sided Warbler			1					
Magnolia Warbler			1					
Yellow-rumped Warbler	2		27	2	6	1	3	4
Black-and-white Warbler	1		2			1		2
American Redstart	4		60	2	2	6	3	10
Ovenbird	5	2	24	6	9	8	8	6
Connecticut Warbler			1					
Mourning Warbler	8	4	61	3	2	3	4	9
Common Yellowthroat			2					
Canada Warbler	6	6	92	10	11	4	10	12
Western Tanager			2					
Rose-breasted Grosbeak			1					1
Lincoln's Sparrow	1					1		3
White-throated Sparrow	10	5	124	10	20	18	17	16
Slate-coloured Junco							1	
Total	51	17	465	35	61	44	58	80

Recaptures

The LSLBO recorded 387 recapture records during the 2009 banding season: 67 during spring migration, 134 during MAPS, and 186 during fall migration banding. All recaptures were birds originally banded at the LSLBO, there were no foreign recoveries. The recapture records represent 255 individuals, some of which were caught multiple times throughout the summer. Of these, 198 were birds banded during the 2009 monitoring activities and recaptured later in the season. 26 birds were originally banded during the 2008 season. Another 31 birds were banded previous to 2008 and represent the older known aged birds encountered (Table 8).

Table 8. Age of recaptured birds originally banded at the LSLBO before 2008.

Species	Band Number	Original Banding			Recapture		Age
		Date	Location	Age	Date	Location	
Myrtle Warbler	2350-50483	May 18, 07	Mig	SY	May 8, 09	Mig	3 years
Myrtle Warbler	2350-50687	July 12, 07	Mig	SY	Jun 3, 09	Mig	3 years
American Redstart	2330-37321	July 3, 07	ROAD	SY	June 6, 09	Mig	3 years
American Redstart	2330-39570	Aug 2, 06	Mig	HY	July 27, 09	Mig	3 years
Ovenbird	1741-02184	May 27, 07	Mig	SY	July 2, 09	FEGU	3 years
Canada Warbler	2160-63480	June 14, 07	ROAD	SY	June 7, 09	Mig	3 years
Canada Warbler	2350-49857	Aug 4, 09	Mig	HY	July 1, 09	FAWA	3 years
Canada Warbler	2350-50031	Aug 8, 06	Mig	HY	July 22, 09	FEGU	3 years
Black-and-white Warbler	2350-50875	July 26, 07	Mig	AHY	May 26, 09	Mig	3+ years
Ovenbird	1741-02234	July 23, 07	Mig	AHY	July 22, 09	Mig	3+ years
Canada Warbler	2350-49912	July 12, 07	FAWA	AHY	June 21, 09	FAWA	3+ years
Myrtle Warbler	2350-49287	May 22, 06	Mig	SY	July 11, 09	ROAD	4 years
Black-and-white Warbler	2350-49274	May 17, 06	Mig	SY	May 18, 09	Mig	4 years
Black-and-white Warbler	2350-49301	May 26, 06	Mig	SY	July 2, 09	ROAD	4 years
American Redstart	2330-37487	June 20, 06	RESI	SY	June 20, 09	RESI	4 years
Common Yellowthroat	2350-48792	July 31, 05	Mig	HY	July 21, 09	RESI	4 years
American Redstart	2330-39594	Aug 3, 06	Mig	AHY	June 6, 09	Mig	4+ years
American Redstart	2330-39827	Aug 23, 06	Mig	AHY	July 2, 09	FEGU	4+ years
American Redstart	2330-39538	July 27, 06	Mig	AHY	Aug 1, 09	Mig	4+ years
American Redstart	2330-39209	July 12, 06	Mig	AHY	Aug 6, 09	Mig	4+ years
White-throated Sparrow	1871-65136	June 12, 07	FAWA	ASY	July 1, 09	FAWA	4+ years
White-throated Sparrow	1721-63361	May 11, 07	Mig	ASY	July 12, 09	FEGU	4+ years
Myrtle Warbler	2350-48210	May 14, 05	Mig	SY	July 2, 09	ROAD	5 years
American Redstart	2330-37129	June 29, 05	FEGU	SY	July 11, 09	FEGU	5 years
White-throated Sparrow	1871-65492	May 21, 05	Mig	SY	May 29, 09	Mig	5 years
Swainson's Thrush	1871-65930	June 6, 06	Mig	ASY	June 23, 09	ROAD	5+ years
American Redstart	2330-37457	June 6, 06	ROAD	ASY	June 23, 09	FEGU	5+ years
American Redstart	2330-37459	June 30, 06	RESI	ASY	June 30, 09	RESI	5+ years
White-throated Sparrow	1871-65084	June 21, 06	FEGU	ASY	July 1, 09	FAWA	5+ years
American Redstart	2330-37762	July 13, 04	Mig	SY	Jun 13, 09	FEGU	6 years
American Redstart	2330-38558	July 25, 05	Mig	ASY	July 2, 09	ROAD	6+ years

Northern Saw-whet Owl Monitoring

The LSLBO completed its 6th year of northern saw-whet owl banding in 2009. This project started in 2004 with the objective of monitoring the migratory passage of northern saw-whet owls through banding. Monitoring began on August 24 and ended on October 19. Mistnetting was attempted on 42 nights and nets were set for a total of 622 net hours. A total of 92 northern saw-whet owls and 1 barred owl were banded. The proportion of hatch-year (HY) compared to older birds (SY and ASY) was lower than in previous years (Table 9). The proportion of owls sexed as females, using wing to weight ratios, was similar to previous years (Table 10).

Peak saw-whet banding nights occurred in mid-September, late September, and early October. The busiest nights of banding occurred on September 17 and September 19 with 9 owls each night. A barred owl was banded on October 1. It was an ASY female and the second barred owl to be banded at the LSLBO during the owl banding program.

Although songbird banding during migration and MAPS did not record any foreign recaptures, owl banding did. On September 27 a saw-whet was captured already fitted with a band which did not match any bands in the LSLBO's inventory. With some investigation it was found that this owl was banded on October 1, 2008 in the Last Mountain Lake Nation Wildlife Area, Saskatchewan. This owl marks the second foreign recapture of a northern saw-whet owl at the LSLBO.

Table 9. Number of Northern Saw-whet Owls banded based on age class with yearly proportions.

Year	HY	AHY	SY	ASY	Total
2004	65 (71.4%)	0	14 (15.4%)	12 (13.2%)	91
2005	87 (64.9%)	1 (0.7%)	33 (24.6%)	13 (9.7%)	134
2006	158 (79%)	1 (0.5%)	31 (15.5%)	10 (5%)	200
2007	82 (75.9%)	0	17 (15.8%)	9 (8.3%)	108
2008	45 (67.2%)	2 (3%)	14 (20.9%)	6 (8.9%)	67
2009	51 (55.4%)	1 (1.1%)	29 (31.5%)	11 (12%)	92
Total	488 (70.5%)	5 (0.7%)	138 (20%)	61 (8.8%)	692

Table 10. Number of Northern Saw-whet Owls banded based on sex class with yearly proportions.

Year	Male	Female	Unknown	Total
2004	5 (5.5%)	67 (73.6%)	19 (20.8%)	91
2005	5 (3.7%)	89 (66.4%)	40 (29.9%)	134
2006	8 (4%)	157 (78.5%)	35 (17.5%)	200
2007	3 (2.8%)	70 (64.8%)	35 (32.4%)	108
2008	0	48 (71.6%)	19 (28.4%)	67
2009	3 (3.3%)	73 (79.3%)	16 (17.4%)	92
Total	24 (3.5%)	504 (72.8%)	164 (23.7%)	692

Canada Warbler Project

The Canada Warbler Project, which was implemented in 2004, is a study focused on the breeding ecology of Canada warblers that nest within the vicinity of the LSLBO banding station. Habitat conditions are ideal in this area and the study site holds between 10 to 15 known breeding pairs each year. The objectives of the project is to determine the abundance of breeding pairs, estimate the size and locations of breeding territories, locate and monitor nests, and monitor nest behaviour through passive filming.

One of the major challenges to the Canada Warbler Project is the limited amount of time that the staff have available to dedicate to the study. Male Canada warblers arrive on the breeding grounds during the third week of May and females arrive a few days after. Observed nest building begins the first week of June. It was discovered that a time efficient method of nest searching is to locate females as they are actively building the nest. However, this time period overlaps with spring migration monitoring, so the time available for staff to search for females building nests is very limited as they are busy with other monitoring duties. Females take approximately three days to complete a nest then remain away from the nest until all eggs are laid before they begin incubating.

In 2009, staff focused on nest searching and monitoring and a total of six nests were located. Three nests were found during the nest building stage. The dates of these were June 5, June 8, and June 12. The eggs of two of these nests were depredated. The five eggs of the successful nest hatched approximately 11 days after the female began incubating. The chicks were banded at six days old and the nest was empty (assumed successfully fledged) when checked the next day. The fourth nest was found on June 29 and the female was incubating 5 eggs. The final two nests were found while the parents were feeding young on the same day. The young from these nests were approximately six days old, and they were banded the next day at seven days old. They began to fledge from the nest during banding. Five nestlings from the final nest hatched on July 2 and they were banded on July 7 at five days old. In total, 18 chicks from the four successful nests were banded.

Two video cameras were used to passively film nest behaviour. The videos had not been reviewed at the time of this report. Three of the nests were filmed for a total of 11 film sessions. In total, approximately 44 hours of footage was obtained.

Staff and Volunteers

The LSLBO operates with two full time banders. The bander-in-charge has been working at the station since 2004. The assistant bander worked at the BCBC in 2008, but accumulated many volunteer days at the banding station that summer. The banding staff was responsible for all monitoring activities and combined for a total of 149 field days for migration monitoring and MAPS (Table 11).

Volunteer support was limited, but the banding staff was grateful for the support received. 12 volunteers accumulated 32 field days through the summer monitoring projects. Fall migration received the highest amount of volunteer days (Table 11). Volunteers were trained to scribe during banding, extract birds, and at times repair mistnets. The lack of long-term commitments made it very difficult to train volunteers how to age and sex birds for banding.

Table 11. Number of staff and volunteers days spent on monitoring projects in 2009.

	Spring	MAPS	Fall	Total
LSLBO Staff				
Richard Krikun	46	13	70	129
Nicole Linfoot	38	18	64	120
Charity Martin	1	2	3	6
Kerry Girvan			1	1
Total Staff Days	85	33	138	256
Volunteers				
Dave Cullen	2			2
Kathy Cullen	2			2
Lester Perrott			1	1
Shannon Arnell			1	1
Jenny Arnell			1	1
Jul Wojnowski			2	2
Tyler Flockhart			2	2
Debra Jungkind			2	2
Alban Junkind			3	3
Stephan Jungkind		1	4	5
Kerin Nelson			5	5
Judy Quach			6	6
Total Volunteer Days	4	1	27	32

Visitors and Education

Education remains a very important component of the LSLBO's operation. Programs through the Boreal Centre for Bird Conservation and Alberta Parks incorporate migration monitoring, banding, and bird biology. Many of these programs are held at the migration monitoring station which allows the participants a hands on experience. Banding demonstrations and various activities allow visitors to learn details about migration, the importance of monitoring bird populations, and to see a bird up close. In addition to scheduled programs, the banding lab was opened to all visitors throughout the spring and fall monitoring periods. In total, 1170 people visited the banding station during the 2009 migration monitoring periods (Table 12).

Table 12. Number of visitors to the banding station in 2009.

Season	Adults	Children	Total
Spring Migration	355	401	756
Fall Migration	316	98	414
Total	671	499	1170

During the spring, the LSLBO hosted 11 banding lab tours from local schools. Programs focused on specific curriculum for several grades surrounding bird biology and the environment. In the fall, scheduled banding lab tours were advertised twice a week for campers and visitors. Activities for all banding lab tours included mock banding and banding demonstrations.

The 15th annual Songbird Festival was held on June 6. The majority of the activities were held at the Boreal Centre for Bird Conservation. Guided birding hikes and driving tours to the banding lab for bird watching and banding demonstrations were conducted throughout the morning. Approximately 160 people took part in the banding lab portion of the festival.

A number of special tours were held throughout the season to promote education, increase exposure of the provincial park, and highlight the LSLBO's monitoring programs. A biological sciences class from NAIT visited in early September as part of a course designed to learn more about research projects and collecting field data. Several tours were led by Travel Alberta which included travel writers from Germany and Korea.

A poster was created for the 28th Annual Meeting of the Society of Canadian Ornithologists in Edmonton for August 20-23rd. The poster was titled "15 Years of Migration Monitoring at Lesser Slave Lake". It highlighted some of the results of the 15 years of migration data collected at the LSLBO. The poster session was an opportunity to increase the exposure of the LSLBO and to share ideas with ornithologists working on a wide range of areas from across Canada.

Recommendations

The 2009 field season at the LSLBO was successful. The core monitoring projects all received excellent coverage. Even though the banding totals were not as high as in previous years, we were able to do our best and had fun. The following recommendations address issues faced at the LSLBO.

Habitat monitoring is not a new issue at the banding lab. The vegetation surrounding the netlanes has outgrown the height of the mistnets which may be affecting the capture rates and the diversity of species banded. Banding is an important component of the monitoring and some species are better monitored through banding than visual counts. Vegetation management goes against the mandate of the Lesser Slave Lake Provincial Park. A joint research project with Alberta Parks has been proposed to determine if the vegetation changes are affecting capture rates and species diversity, and to determine the magnitude of the affects. This proposal includes erecting aerial nets to cover the higher canopy in the existing netlanes and adding new nets in areas with lower vegetation heights. The project is being coordinated with a professor at the University of Alberta. It is currently projected that this project will be implemented in the 2011 field season.

One of the objectives of migration monitoring is to collect data on migratory populations of boreal nesting birds. However, the LSLBO is located in the boreal forest and it challenging to separate migrants from locally breeding individuals. Observers use probable known stopover (PKS) to help separate migrants from known stopover birds. This method is highly subjective and is susceptible to observer bias. A proposed project to deal with this issue is part of the joint research project with Alberta Parks. The LSLBO will collect feathers for stable isotope analysis during fall migration to determine the catchment areas and timing of migrants coming from these areas. The results from this study should show when local breeders move out of the area and migrants from further north begin to move through. Feather collection will begin in the 2010 fall season.

Volunteer support is an ongoing issue for the banding station. Attracting dedicated and experienced volunteers to help with our many monitoring projects has proved a difficult task. Most volunteers are new to banding and are willing to learn, but are unable to function without constant direct supervision, which is taxing on the banding staff. Long term experienced banders are ideal, but experienced short term volunteers during the busy seasons in the spring, fall, MAPS, and even Canada Warbler Project are needed. It is recommended that the volunteer policies be reviewed and highlight the expectations, duties, and timing of volunteers of all skill levels.

Professional development of the banding staff should be encouraged. Participating in banding workshops and relevant ornithological conferences allows the development of skills and knowledge. It also promotes exposure to new methods and ideas which can be incorporated into the LSLBO's projects.

Acknowledgements

The 2009 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 Knot, Tyler Flockhart, Nelson Lutz, and Cindy Snedden
- Patti Campsall, the Executive Director of the LSLBO for daily operational support.
- The Boreal Centre Centre for Bird Conservation staff for assisting with banding and banding tours: Cori Klassen, Kerry Girvan, and Charity Martin.
- Chris Dodds and Tim Landon from Alberta Parks for their assistance with banding lab tours.
- The volunteers at the banding Lab: Stephan Jungkind, Tyler Flockhart, Jul Wojnowski, Kerin Nelson, Judy Quach, Alban Jungkind, Deb Jungkind, Dave Cullen, Kathy Cullen, Lester Perrott, Jenny Arnell, and Shannon Arnell.

Further information about the projects that the LSLBO contributes data to can be found on their websites:

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

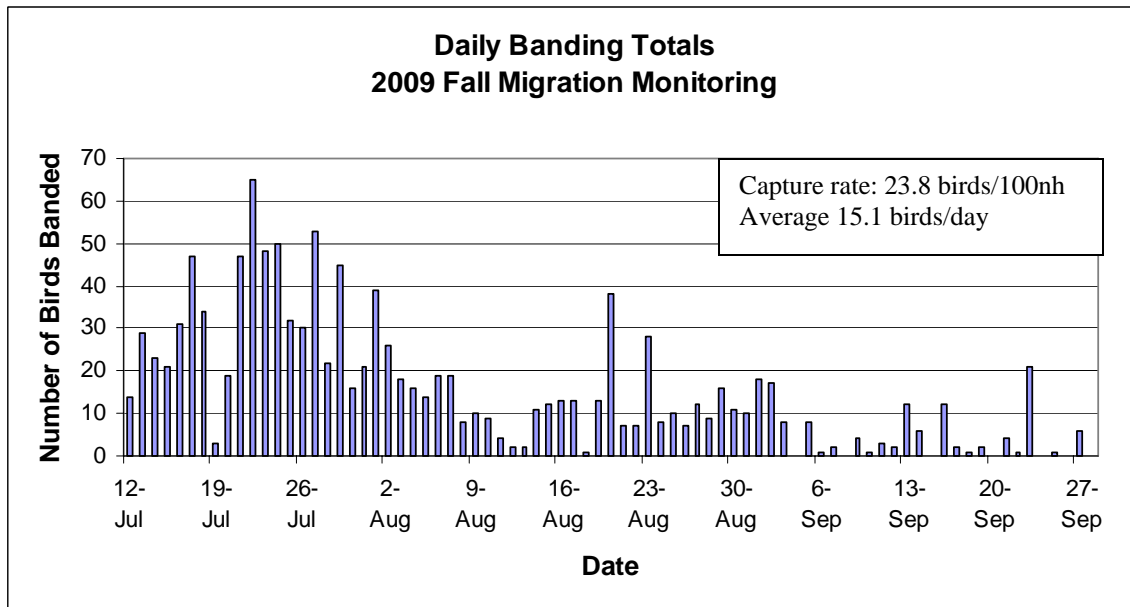
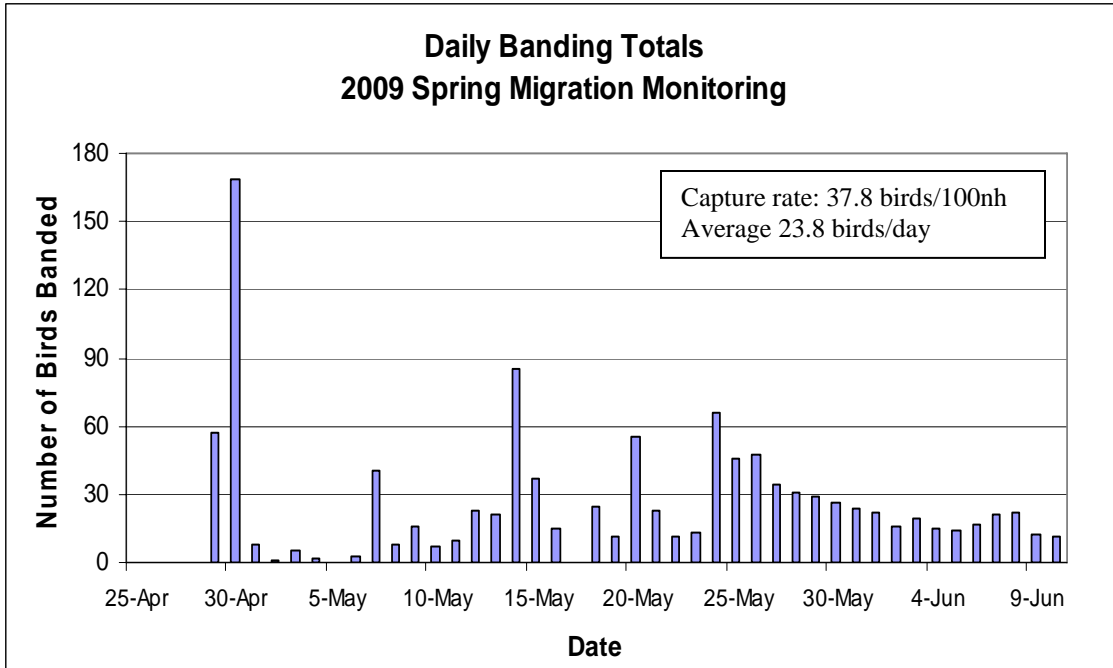
We would like to acknowledge the long-term and financial support provided to the LSLBO monitoring programs from the following agencies:



**Government
of Alberta** ■



Appendix I. 2009 daily banding totals for spring and fall migration monitoring



Appendix II: Annual Banding Totals

Species	1993-2007	2008	2009 Spring Migration	2009 MAPS	2009 Fall Migration	2009 Total	Grand Total
"Audubon's" Warbler	2						2
Alder Flycatcher	1544	31	28	1	13	42	1617
American Goldfinch	1						1
American Kestrel	1						1
American Magpie	1						1
American Pipit	18						18
American Redstart	5826	264	25	19	135	179	6269
American Robin	236	26	3	4	15	22	284
American Tree Sparrow	330	47	20			20	397
Baltimore Oriole	5						5
Bay-breasted Warbler	90	1			3	3	94
Barred Owl	1				1	1	2
Black-and-White Warbler	1141	90	19	12	62	93	1324
Blackburnian Warbler	1				1	1	2
Black-capped Chickadee	708	31	3	1	2	6	745
Blackpoll Warbler	283	3	2		2	4	290
Black-throated Green Warbler	101	1		3	2	5	107
Blue Jay	29	7	7		1	8	44
Blue-headed Vireo	67				1	1	68
Boreal Chickadee	25						25
Brown Creeper	21	8	1	1	2	4	33
Brown-headed Cowbird	4	1					5
Canada Warbler	2121	127	28	50	43	121	2369
Cape May Warbler	104	2					106
Cedar Waxwing	103	1					104
Chestnut-sided Warbler	21						21
Chipping Sparrow	1679	15	46	8	10	64	1758
Clay-colored Sparrow	733	19	33		4	37	789
Common Grackle	3				1	1	4
Common Yellowthroat	534	14	17		5	22	570
Connecticut Warbler	23				1	1	24
Cooper's Hawk	1						1
Downy Woodpecker	37	8			3	3	48
Eastern Phoebe	109	13	2			2	124
Evening Grosbeak	1						1
Fox Sparrow	37	10	8		1	9	56
Golden-crowned Kinglet	61	7					68
Gray Catbird	5						5
Gray Jay	2						2
Gray-cheeked Thrush	90	7	16			16	113

	1993-2007	2008	2009 Spring	2009	2009 Fall	2009	Grand
Species			Migration	MAPS	Migration	Total	Total
Hairy Woodpecker	14	4			2	2	20
Harris's Sparrow	5	1					6
Hermit Thrush	311	41	16	4	23	43	390
House Wren	23						23
Lapland Longspur	4						4
Lazuli Bunting	1						1
Le Conte's Sparrow	4						4
Least Flycatcher	1743	38	49		23	72	1943
Lincoln's Sparrow	605	52	38	6	13	57	714
Long-eared Owl	1						1
MacGillivray's Warbler	2						2
Magnolia Warbler	804	18	5	11	8	24	856
Marsh Wren	3						3
Mourning Warbler	769	52	10	26	34	70	891
Nashville Warbler	3						3
Northern Flicker	14	4			1	1	19
Northern Goshawk	1						1
Northern Mockingbird	1						1
Northern Pygmy-Owl	2						2
Northern Saw-whet Owl	538	67			92	92	697
Northern Shrike	1						1
Northern Waterthrush	503	47	23	1	24	48	598
Orange-crowned Warbler	875	34	23		6	29	938
Olive-sided Flycatcher	1				1	1	2
Ovenbird	1732	221	43	40	138	221	2174
Western Palm Warbler	192	4	1		2	3	199
Philadelphia Vireo	152	5			2	2	159
Pileated Woodpecker	1	1					2
Pine Siskin	153				8	8	161
Purple Finch	48	8		2	2	4	60
Red-breasted Nuthatch	106	7					113
Red-eyed Vireo	564	19		1	15	16	599
Red-winged Blackbird	5						5
Rose-breasted Grosbeak	233	17	4	1	5	10	260
Ruby-crowned Kinglet	300	10	3		5	8	318
Savannah Sparrow	121	9	3		3	6	136
Sharp-shinned Hawk	280	23	5	2	40	47	350
Slate-colored Junco	690	106	237		10	247	1043
Song Sparrow	196	21	10		7	17	234
Swainson's Thrush	3005	279	168	26	166	360	3644
Swamp Sparrow	137	9	2	1	8	11	157
Tennessee Warbler	4185	102	45	44	90	179	4466
Three-toed Woodpecker	0	1					1
Varied Thrush	3				2	2	5
Veery	6		1			1	7
Vesper Sparrow	1	1	1			1	3

	1993-2007	2008	2009 Spring	2009	2009 Fall	2009	Grand
Species			Migration	MAPS	Migration	Total	Total
Warbling Vireo	55						55
Western Tanager	122	3	1	1	1	3	128
Western Wood-Pewee	19	1	1		1	2	22
White-breasted Nuthatch	5						5
Gambel's White-crowned Sparrow	315	17	44		9	49	381
White-throated Sparrow	1897	171	78	30	21	129	2177
White-winged Crossbill	1						1
Wilson's Warbler	455	16	1		2	3	474
Winter Wren	24	10	2	6		8	42
Yellow Warbler	2789	109	3	2	78	83	2981
Yellow-bellied Flycatcher	68	3					71
Yellow-bellied Sapsucker	92	19	4	3	12	19	130
Yellow-rumped Warbler	7320	179	38	16	129	183	7682
Total number of birds banded	47584	2462	1117	322	1287	2762	52772
Total number of species banded	98	63	45	28	56	62	99

APPENDIX III. Species arrival and departure dates and maxima at LSLBO in 2009.

The following list includes the seasonal first and last dates, the maximum daily total (in bold), and the number of days that each of the 154 species was encountered in 2009. Encounter dates for 2008 have been included as a comparison in dates between the two seasons. All sightings are from the LSLBO during normal migration monitoring activities.

Pacific Loon:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 22 - 3			
Last Sighting	May 23 - 3			
Peak Day				
# of Days Sighted	2	0	0	0

Common Loon:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 2 - 1	May 2 - 1	Jul - 12	Jul 15 - 6
Last Sighting	June 10 - 2	June 6 - 3	Sep 25 - 1	Oct 1 - 1
Peak Day	May 23 - 33	5 dates - 4	Aug 27 - 19	Sept 2 - 22
# of Days Sighted	34	28	56	49

Horned Grebe:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 2		Aug 31 - 1	Sept 7 - 2
Last Sighting				
Peak Day				
# of Days Sighted	1	0	1	1

Red-necked Grebe:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 20	May 23 - 6	Jul 15 - 1	Jul 14 - 3
Last Sighting	Jun 7 - 2	Jun 9 - 1	Sept 25 - 2	Oct 1 - 1
Peak Day			Aug 27 - 5	Sept 10 - 7
# of Days Sighted	18	15	32	41

Western Grebe:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 23 - 30		Jul 27 - 1	Aug 6 - 10
Last Sighting	May 26 - 1		Sept 13 - 1	Sept 30 - 3
Peak Day			Aug 23 - 3	
# of Days Sighted	2	0	4	5

American White Pelican:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 22 - 3	May 23 - 4	Jul 12 - 1	Jul 12 - 3
Last Sighting	Jun 10 - 1	Jun 10 - 1	Sept 24 - 18	Sept 18 - 3
Peak Day	Jun 8 - 12	Jun 4 - 48		Sept 7 - 12
# of Days Sighted	13	9	54	53

Double-crested Cormorant:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 11 - 1		Sept 3 - 1	
Last Sighting	May 30 - 2			
Peak Day				
# of Days Sighted	3	0	1	0

Great Blue Heron:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 11 - 1	May 7 - 2	Jul 13 - 1	
Last Sighting	May 25 - 1	Jun 2 - 2	Aug 12 - 1	
Peak Day	May 12 & 23 - 2	3 dates - 2	5 dates - 1	
# of Days Sighted	4	6	5	0

Tundra Swan

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 29 - 8	Apr 27 - 2	Sept 27 - 13	
Last Sighting	May 8 - 2	May 19 - 30		
Peak Day	May 7 - 26	May 5 - 171		
# of Days Sighted	6	10	1	0

Greater White-fronted Goose:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 2 - 34	Apr 27 - 30	Aug 26 - 2	Sept 2 - 12
Last Sighting	May 14 - 30	May 17 - 184	Sept 21 - 5	Sept 18 - 3
Peak Day	May 8 - 6720	May 7 - 10856	Aug 27 - 576	Sept 10 - 530
# of Days Sighted	11	10	9	6

Snow Goose:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 3 - 2	Apr 30 - 30	Sept 7 - 120	Sept 14 - 70
Last Sighting	May 13 - 2	May 11 - 85		Sept 27 - 15
Peak Day	May 8 - 224	May 7 - 170		
# of Days Sighted	8	5	1	3

Canada Goose:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 5	Apr 27 - 11	Aug 2 - 2	Aug 3 - 15
Last Sighting	Jun 10 - 10	Jun 10 - 7	Sept 25 - 3	Oct 2 - 10
Peak Day	May 11 - 90	Jun 2 - 42	Sept 6 - 144	Sept 9 - 90
# of Days Sighted	39	35	27	18

Green-winged Teal:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 1 - 2	May 19 - 2		
Last Sighting	May 26 - 1	May 26 - 1		
Peak Day	May 6 - 42	May 23 - 9		
# of Days Sighted	14	4	0	0

Mallard:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 7	Apr 29 - 3	Jul 13 - 11	Jul 12 - 1
Last Sighting	Jun 10 - 1	Jun 10 - 2	Sept 28 - 5	Sept 30 - 7
Peak Day	May 10 - 22	Apr 30 - 52	Sept 13 - 18	Jul 13 - 17
# of Days Sighted	44	39	42	23

Northern Pintail:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 2 - 4	May 13 - 11		
Last Sighting	Jun 3 - 2			
Peak Day	May 9 - 11			
# of Days Sighted	6	1	0	0

Blue-winged Teal:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 2 - 2	May 7 - 5		Sept 21 - 3
Last Sighting	May 23 - 1	Jun 5 - 1		
Peak Day	May 12 - 19	May 23 - 13		
# of Days Sighted	9	10	0	1

Northern Shoveler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 3 - 8	Apr 30 - 14		
Last Sighting	May 15 - 5	May 24 - 1		
Peak Day	May 12 - 29	2 dates - 14		
# of Days Sighted	7	5	0	0

Gadwall:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 4			
Last Sighting	May 11 - 2			
Peak Day	May 10 - 8			
# of Days Sighted	5	0	0	0

American Wigeon:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 2	Apr 30 - 8		
Last Sighting	Jun 10 - 2	Jun 10 - 1		
Peak Day	May 8 - 50	May 13 - 48		
# of Days Sighted	37	31	0	0

Redhead:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 11 - 12			
Last Sighting				
Peak Day				
# of Days Sighted	1	0	0	0

Ring-necked Duck:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 16	May 12 - 1		
Last Sighting	May 22 - 1			
Peak Day				
# of Days Sighted	2	1	0	0

Greater Scaup:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 29			
Last Sighting				
Peak Day				
# of Days Sighted	1	0	0	0

Lesser Scaup:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 2		Aug 19 - 1	
Last Sighting				
Peak Day				
# of Days Sighted	1	0	1	0

Long-tailed Duck:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 10	May 18 - 70		
Last Sighting	May 29 - 10	May 25 - 56		
Peak Day	May 16 - 300	May 24 - 85		
# of Days Sighted	12	4	0	0

Surf Scoter:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 5	May 18 - 28		
Last Sighting	May 30 - 6	Jun 1 - 3		
Peak Day	May 16 - 108	May 20 - 90		
# of Days Sighted	16	9	0	0

White-winged Scoter:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 10 - 5	May 18 - 13	Aug 22 - 5	
Last Sighting	Jun - 9	Jun 2 - 1	Sept 4 - 2	
Peak Day	May 23 - 12			
# of Days Sighted	5	7	2	0

Common Goldeneye:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 12	Apr 27 - 2	Jun 12 - 4	Jul 12 - 2
Last Sighting	Jun 10 - 3	Jun 10 - 2	Sept 28 - 1	Oct 1 - 19
Peak Day	May 16 - 30	May 18 & 22 - 25	Sept 1 - 7	Sept 29 - 28
# of Days Sighted	46	41	23	23

Bufflehead:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 2 - 2	May 10 - 1	Sept 21 - 8	Sept 26 - 1
Last Sighting	May 27 - 2	Jun 8 - 1		Oct 2 - 3
Peak Day	May 9 & 12 - 8	May 24 - 4		Sept 30 - 9
# of Days Sighted	8	18	1	7

Common Merganser:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 26 - 3	Apr 29 - 8	Jul 17 - 3	Jul 16 - 3
Last Sighting	Jun 10 - 1	Jun 9 - 30	Sept 25 - 2	Oct 2 - 2
Peak Day	Jun 2 - 45	Jun 10 - 100	Jul 22, Aug 10 - 30	Aug 8 - 50
# of Days Sighted	41	34	38	32

Red-breasted Merganser:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 30 - 3	May 7 - 10		
Last Sighting	Jun 7 - 1	Jun 7 - 5		
Peak Day	May 19 - 9	May 30 - 27		
# of Days Sighted	18	22	0	0

Osprey:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 5 - 1	May 7 - 1	Jul 13 - 1	Jul 13 - 1
Last Sighting	Jun 6 - 1	Jun 8 - 1	Sept 15 - 1	Sept 19 - 1
Peak Day	May 7 - 2	Jun 7 - 2	Aug 24 - 3	All dates - 1
# of Days Sighted	7	6	21	20

Bald Eagle:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1	Apr 27 - 1	Jul 12 - 1	Jul 13 - 3
Last Sighting	Jun 10 - 1	Jun 10 - 1	Sept 28 - 1	Sept 30 - 1
Peak Day	May 18 - 5	May 4 & 20 - 4	Aug 22 - 8	Aug 10 - 8
# of Days Sighted	44	27	74	56

Northern Harrier:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 9	Apr 29 - 4	Jul 15 - 1	Jul 23 - 1
Last Sighting	Jul 1 - 1	Jun 10 - 1	Sept 28 - 1	Oct 2 - 1
Peak Day	May 4 - 19	Apr 30 - 17	Sept 3 & 14 - 15	Sept 8 - 5
# of Days Sighted	31	24	31	19

Sharp-shinned Hawk:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 26 - 1	Apr 28 - 1	Jul 20 - 1	Aug 4 - 4
Last Sighting	Jun 8 - 1	Jun 4 - 1	Sept 25 - 1	Oct 2 - 1
Peak Day	May 21 & 23 - 3	May 16 & 29 - 3	Sept 1 - 23	Sept 6 & 10 - 19
# of Days Sighted	23	10	50	46

Northern Goshawk:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 7 - 1		Aug 14 - 1	Sept 20 - 1
Last Sighting	May 13 - 1		Sept 12 - 1	
Peak Day	3 dates - 1		Aug 30 - 3	
# of Days Sighted	3	0	9	1

Broad-winged Hawk:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 5 - 1		Sept 14 - 1	
Last Sighting	May 29 - 1			
Peak Day	3 dates - 1			
# of Days Sighted	3	0	1	0

Red-tailed Hawk:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 4 - 2	Apr 28 - 1	Jul 17 - 1	Aug 7 - 1
Last Sighting	Jun 9 - 1	May 24 - 1	Sept 16 - 1	Sept 30 - 3
Peak Day		Apr 29 - 5	5 dates - 1	
# of Days Sighted	5	7	5	5

Rough-legged Hawk:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 28 - 1	Apr 29 - 1		Sept 30 - 2
Last Sighting				
Peak Day				
# of Days Sighted	1	1	0	1

American Kestrel:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 30 - 1	Apr 30 - 1	Aug 28 - 1	Jul 26 - 1
Last Sighting	May 15 - 1		Sept 14 - 1	Sept 1 - 1
Peak Day	3 dates - 1		3 dates - 1	3 dates - 1
# of Days Sighted	3	1	3	3

Merlin:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1	Apr 27 - 1	Jul 12 - 1	Jul 18 - 1
Last Sighting	Jun 9 - 1	Jun 6 - 1	Sept 23 - 2	Sept 19 - 2
Peak Day	3 dates - 2	May 4 - 2	12 dates - 2	Jul 26 - 8
# of Days Sighted	18	12	41	17

Peregrine Falcon:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 26 - 1		Sept 2 - 1	
Last Sighting	May 6 - 1		Sept 15 - 1	
Peak Day	3 dates - 1			
# of Days Sighted	3	0	2	0

Ruffed Grouse:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 7 - 1	Apr 28 - 2	Jul 18 - 4	Aug 8 - 1
Last Sighting	Jun 10 - 2	Jun 9 - 1	Sept 24 - 1	Oct 1 - 1
Peak Day	Jun 6 - 3	May 5 - 4	Aug 3 - 6	All dates - 1
# of Days Sighted	13	39	16	14

Sandhill Crane:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 3 - 385	May 29 - 17	Sept 13 - 53	Sept 14 - 53
Last Sighting	May 12 - 4	May 2 - 9	Sept 25 - 60	Sept 30 - 52
Peak Day			Sept 19 - 150	
# of Days Sighted	5	2	3	2

Killdeer:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 1	May 2 - 1	Aug 7 - 1	
Last Sighting	May 24 - 1	May 20 - 1		
Peak Day	4 dates - 1	May 3 - 2		
# of Days Sighted	4	9	1	0

Greater Yellowlegs:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1	Apr 29 - 1	Jul 30 - 2	Aug 15 - 2
Last Sighting	May 17 - 1	Jun 4 - 1	Aug 30 - 1	
Peak Day	May 8 - 15	May 4 - 32	Aug 19 - 13	
# of Days Sighted	18	15	10	1

Lesser Yellowlegs:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting			Aug 12 - 5	
Last Sighting			Aug 26 - 3	
Peak Day			Aug 19 - 6	
# of Days Sighted	0	0	3	0

Solitary Sandpiper:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 14 - 1	Apr 30 - 1	Aug 23 - 1	
Last Sighting				
Peak Day				
# of Days Sighted	1	1	1	0

Spotted Sandpiper:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 7 - 1	May 20 - 3	Jul 12 - 1	Jul 16 - 1
Last Sighting	Jun 10 - 1	Jun 10 - 1	Sept 11 - 1	Aug 24 - 2
Peak Day	May 14 - 24	May 23 - 15	Aug 7 - 16	Aug 19 - 3
# of Days Sighted	25	17	39	24

Wandering Tattler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 16 - 1			
Last Sighting				
Peak Day				
# of Days Sighted	1	0	0	0

Semipalmated Sandpiper:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting			Aug 23 - 2	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Common Snipe:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 28 - 1	May 2 - 1		
Last Sighting	May 16 - 1	May 23 - 1		
Peak Day	8 dates - 1	6 dates - 1		
# of Days Sighted	8	6	0	0

Ivory Gull:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 21 - 1			
Last Sighting				
Peak Day				
# of Days Sighted	1	0	0	0

Bonaparte's Gull:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 11 - 16			
Last Sighting	May 28 - 1			
Peak Day				
# of Days Sighted	3	0	0	0

Franklin's Gull:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 1 - 2	Apr 30 - 11	Jul 12 - 5	Jul 12 - 66
Last Sighting	Jun 2 - 2	Jun 2 - 2	Sept 9 - 1	Aug 29 - 1
Peak Day	May 15 - 128	May 15 - 114	Aug 30 - 980	Jul 13 - 1301
# of Days Sighted	27	29	24	23

Mew Gull:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 4			
Last Sighting	May 22 - 4			
Peak Day	May 7 - 9			
# of Days Sighted	7	0	0	0

Ring-billed Gull:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 29 - 1	Apr 27 - 4	Jul 13 - 14	Aug 2 - 1
Last Sighting	Jul 1 - 41	Jun 1 - 1	Sept 27 - 5	Sept 24 - 2
Peak Day		4 dates - 4	Aug 12 - 59	Sept 7 - 5
# of Days Sighted	14	11	22	8

California Gull:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 16 - 2		Aug 22 - 3	
Last Sighting	May 28 - 1		Aug 26 - 1	
Peak Day				
# of Days Sighted	2	0	2	0

Herring Gull:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1	Apr 29 - 2	Jul 13 - 8	Aug 10 - 2
Last Sighting	Jun 6 - 1	May 13 - 2	Sept 24 - 2	Sept 27 - 1
Peak Day	May 30 - 6	May 4 - 3		
# of Days Sighted	18	5	11	3

Common Tern:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 2	May 22 - 4	Jul 12 - 2	Aug 26 - 1
Last Sighting	Jun 10 - 2	Jun 5 - 1	Sept 2 - 2	Sept 7 - 16
Peak Day	Jun 2 - 11	May 23 - 8	Jul 16 - 5	Sept 6 - 18
# of Days Sighted	17	5	42	3

Forster's Tern:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting			Jul 18 - 1	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Black Tern:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 1		Sept 1 - 4	
Last Sighting				
Peak Day				
# of Days Sighted	1	0	1	0

Great-horned Owl:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting			Aug 8 - 1	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Barred Owl:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 19 - 1		Jul 21 - 1	Jul 28 - 1
Last Sighting	Jun 6 - 1		Jul 30 - 1	
Peak Day			4 dates - 1	
# of Days Sighted	2	0	4	1

Ruby-throated Hummingbird:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting			Jul 31 - 1	Aug 1 - 1
Last Sighting			Aug 3 - 1	Aug 15 - 1
Peak Day				3 dates - 1
# of Days Sighted	0	0	2	1

Belted Kingfisher:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 29 - 1	Apr 30 - 2	Jul 17 - 2	Jul 13 - 1
Last Sighting	Jun 5 - 1	Jun 10 - 1	Sept 11 - 1	Aug 23 - 1
Peak Day	May 7 - 3	May 7 & 13 - 3	Jul 18 - 3	Jul 16 - 2
# of Days Sighted	19	13	20	10

Yellow-bellied Sapsucker:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 1 - 1	Apr 30 - 9	Jul 12 - 5	Jul 12 - 2
Last Sighting	Jun 10 - 1	Jun 9 - 1	Aug 20 - 1	Sept 21 - 1
Peak Day	May 6 & 7 - 6		Jul 13 - 6	Jul 25 - 4
# of Days Sighted	38	31	35	35

Downy Woodpecker:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1	Apr 26 - 1	Jul 17 - 1	Jul 15 - 1
Last Sighting	Jun 4 - 1	May 30 - 1	Sept 23 - 3	Oct 2 - 1
Peak Day	All dates - 1	May 10 - 3		Sept 29 - 2
# of Days Sighted	9	11	11	25

Hairy Woodpecker:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 5 - 1	May 31 - 1	Jul 15 - 1	Jul 20 - 1
Last Sighting	Jun 4 - 1		Sept 25 - 1	Sept 30 - 1
Peak Day	4 dates - 1		5 dates - 2	Sept 8 - 3
# of Days Sighted	4	1	28	10

Northern Flicker:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 4	Apr 29 - 5	Jul 15 - 2	Jul 12 - 3
Last Sighting	Jun 10 - 1	Jun 10 - 1	Sept 23 - 1	Sept 21 - 1
Peak Day	Apr 29 - 31	Apr 30 - 64	Sept 15 - 3	3 dates - 3
# of Days Sighted	39	34	12	23

Pileated Woodpecker:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1	Apr 28 - 1	Jul 12 - 1	Aug 9 - 1
Last Sighting	Jun 10 - 1	Jun 10 - 1	Sept 25 - 1	Oct 1 - 1
Peak Day	All dates - 1	May 6 & 8 - 2	Sept 1 - 2	Aug 23 - 2
# of Days Sighted	15	21	25	5

Olive-sided Flycatcher:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Jun 1 - 1		Aug 14 - 1	
Last Sighting	Jun 7 - 1		Aug 15 - 1	
Peak Day				
# of Day Sighted	2	0	2	0

Western Wood-pewee:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 23 - 1	May 22 - 1	Jul 15 - 1	Aug 24 - 1
Last Sighting	Jun 7 - 1		Aug 19 - 1	
Peak Day	May 30 - 4		5 dates - 1	
# of Day Sighted	10	1	5	1

Alder Flycatcher:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 28 - 1	May 24 - 2	Jul 12 - 2	Jul 12 - 1
Last Sighting	Jun 10 - 3	Jun 10 - 2	Sept 1 - 1	Sept 10 - 1
Peak Day	Jun 5 - 10	Jun 9 - 4	3 dates - 6	Aug 9 - 7
# of Days Sighted	12	7	35	29

Least Flycatcher:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 1	May 11 - 5	Jul 12 - 1	Jul 12 - 1
Last Sighting	Jun 8 - 3	Jun 9 - 1	Sept 9 - 1	Sept 6 - 3
Peak Day	May 24 - 31	May 23 - 9	3 dates - 7	Aug 11 - 9
# of Days Sighted	25	23	32	30

Eastern Phoebe:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1	Apr 29 - 2	Jul 18 - 1	Jul 12 - 1
Last Sighting	Jun 7 - 1	Jun 10 - 3	Sept 11 - 1	Sept 2 - 1
Peak Day	May 15 - 4	May 19 - 5	5 dates - 1	Aug 15 - 2
# of Days Sighted	29	41	5	11

Say's Phoebe:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 1 - 1	Apr 30 - 1	Aug 20 - 2	Sept 5 - 2
Last Sighting	May 24 - 1	May 15 - 1	Sept 13 - 2	
Peak Day	May 17 - 9	May 4 - 3	4 dates - 2	
# of Days Sighted	12	3	7	1

Eastern Kingbird:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 28 - 3	May 18 - 3	Aug 14 - 1	Jul 26 - 1
Last Sighting	Jun 8 - 3	Jun 6 - 1	Sept 3 - 1	Aug 27 - 2
Peak Day			Aug 25 - 21	Aug 15 - 3
# of Days Sighted	5	3	14	7

Northern Shrike:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 5 - 1			
Last Sighting				
Peak Day				
# of Days Sighted	1	0	0	0

Blue-headed Vireo:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 14 - 2	May 10 - 1	Jul 25 - 1	
Last Sighting	Jun 2 - 1	Jun 10 - 1	Sept 1 - 1	
Peak Day	4 dates - 2	Jun 8 - 2	4 dates - 1	
# of Days Sighted	10	15	4	0

Philadelphia Vireo:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 26 - 1	May 24 - 1	Jul 13 - 1	Jul 14 - 3
Last Sighting	Jun 6 - 1	May 27 - 1	Sept 14 - 1	Sept 5 - 1
Peak Day	7 dates - 1		Aug 5 - 3	
# of Days Sighted	7	2	14	13

Red-eyed Vireo:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 29 - 4	May 24 - 1	Jul 14 - 4	Jul 12 - 2
Last Sighting	Jun 10 - 3	Jun 10 - 5	Sept 2 - 1	Aug 24 - 1
Peak Day	4 dates - 4	3 dates - 5	Jul 18 & 29 - 8	Aug 15 - 8
# of Days Sighted	13	18	38	35

Gray Jay:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Jun 9 - 1	May 17 - 1		Jul 27 - 2
Last Sighting	Jun 10 - 1			
Peak Day				
# of Days Sighted	2	1	0	1

Blue Jay:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 28 - 1	Apr 27 - 1	Jul 20 - 1	Jul 22 - 2
Last Sighting	Jun 9 - 1	Jun 6 - 1	Sept 28 - 1	Oct 2 - 1
Peak Day	May 23 - 4	Apr 29 & 30 - 3	2 dates - 4	Aug 1 - 10
# of Days Sighted	32	22	35	37

American Magpie:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 3	Apr 26 - 1	Jul 12 - 1	Jul 17 - 1
Last Sighting	Jun 10 - 2	Jun 3 - 1	Sept 27 - 2	Sept 30 - 1
Peak Day	May 31 - 6	Apr 28 - 14	Aug 6 - 7	Aug 22 & Sep 9 - 10
# of Day Sighted	46	15	51	40

American Crow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 4	Apr 26 - 2	Jul 12 - 3	Jul 12 - 1
Last Sighting	Jun 10 - 4	Jun 10 - 3	Sept 24 - 5	Sept 30 - 145
Peak Day	May 8 - 24	May 23 - 19	Aug 19 - 22	
# of Days Sighted	46	44	57	63

Common Raven:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 21	Apr 26 - 1	Jul 12 - 1	Jul 13 - 1
Last Sighting	Jun 8 - 1	Jun 8 - 2	Sept 28 - 3	Sept 30 - 2
Peak Day		Several dates - 2	Aug 24 - 8	Sept 12 - 8
# of Days Sighted	30	33	57	55

Horned Lark:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 20 - 1	May 23 - 1	Sept 15 - 2	
Last Sighting	May 21 - 1		Sept 16 - 5	
Peak Day				
# of Days Sighted	2	1	2	0

Tree Swallow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 1 - 34	Apr 30 - 1	Jul 13 - 9	Jul 27 - 2
Last Sighting	Jun 6 - 1	Jun 6 - 1	Aug 28 - 1	Aug 22 - 1
Peak Day	May 8 - 266	May 23 - 98	Aug 7 - 25	Aug 6 - 41
# of Days Sighted	27	16	11	9

Bank Swallow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting		May 31 - 6	Aug 6 - 21	Jul 25 - 1
Last Sighting		Jun 1 - 1	Aug 7 - 32	Jul 29 - 28
Peak Day				Jul 26 - 54
# of Days Sighted	0	2	2	3

Barn Swallow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 5 - 1	May 23 - 1	Aug 8 - 5	Jul 20 - 3
Last Sighting	Jun 3 - 1		Aug 31 - 1	
Peak Day	May 24 - 3			
# of Days Sighted	6	1	5	1

Black-capped Chickadee:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1	Apr 26 - 2	Jul 12 - 3	Jul 12 - 4
Last Sighting	Jun 10 - 4	Jun 4 - 1	Sept 27 - 2	Oct 2 - 4
Peak Day		May 3 - 6	Sept 6 - 7	Sept 30 - 39
# of Days Sighted	15	22	50	67

Boreal Chickadee:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1		Jul 16 - 1	Sept 1 - 1
Last Sighting			Sept 22 - 1	Oct 2 - 1
Peak Day			4 dates - 1	Sept 16 - 4
# of Days Sighted	1	0	4	11

Red-breasted Nuthatch:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Jun 5 - 1	Apr 26 - 2	Jul 15 - 1	Jul 12 - 1
Last Sighting	Jun 9 - 1	Jun 10 - 1	Sept 28 - 1	Oct 1 - 1
Peak Day	3 dates - 1	5 dates - 3	Sept 11 - 129	3 dates - 2
# of Days Sighted	3	42	36	20

Brown Creeper:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 30 - 1	May 8 - 1	Jul 27 - 1	Jul 22 - 1
Last Sighting		Jun 5 - 1	Sept 2 - 1	Sept 30 - 1
Peak Day		4 dates - 1	3 dates - 1	5 dates - 1
# of Days Sighted	1	4	3	5

Winter Wren:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 29 - 1	Apr 29 - 2	Jul 12 - 1	Jul 14 - 1
Last Sighting	Jun 10 - 1	Jun 10 - 1	Jul 23 - 1	Sept 14 - 1
Peak Day	12 dates - 2	Several dates - 2	5 dates - 1	3 dates - 2
# of Days Sighted	41	35	5	11

Golden-crowned Kinglet:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting			Aug 31 - 2	Aug 15 - 1
Last Sighting			Sept 6 - 1	Oct 1 - 2
Peak Day				Sept 13 - 6
# of Days Sighted	0	0	3	18

Ruby-crowned Kinglet:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1	Apr 26 - 1	Jul 31 - 1	Jul 22 - 1
Last Sighting	Jun 3 - 1	Jun 8 - 1	Sept 28 - 1	Oct 1 - 1
Peak Day	May 12 - 5	3 dates - 4	Sept 23 - 9	Sept 26 - 4
# of Days Sighted	25	41	26	13

Varied Thrush:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting			Sept 23 - 2	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Gray-checked Thrush:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 11 - 1	May 19 - 1		Sept 10 - 1
Last Sighting	Jun 1 - 1	Jun 4 - 1		Sept 21 - 1
Peak Day	May 20 - 6	5 dates - 1		
# of Days Sighted	8	5	0	2

Swainson's Thrush:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 1	May 4 - 1	Jul 12 - 1	Jul 12 - 5
Last Sighting	Jun 10 - 4	Jun 10 - 1	Sept 23 - 1	Sept 19 - 1
Peak Day	May 20 - 61	May 23 - 26	Aug 4 - 12	Aug 1 - 11
# of Days Sighted	32	30	62	56

Hermit Thrush:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 26 - 5	Apr 29 - 1	Jul 14 - 1	Jul 13 - 2
Last Sighting	Jun 4 - 1	Jun 1 - 1	Sept 27 - 1	Sept 27 - 1
Peak Day	May 7 - 6	Apr 30 - 10	3 dates - 4	Several dates - 2
# of Days Sighted	30	21	23	24

Veery:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Jun 2 - 1			
Last Sighting				
Peak Day				
# of Days Sighted	1	0	0	0

American Robin:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1064	Apr 27 - 1	Jul 12 - 2	Jul 12 - 4
Last Sighting	Jun 10 - 4	Jun 9 - 1	Sept 28 - 1	Oct 2 - 1
Peak Day		Apr 28 - 285	Sept 13 - 61	Jul 26 - 10
# of Days Sighted	44	40	55	30

European Starling:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 4 - 3	May 4 - 25		
Last Sighting	May 26 - 1	May 17 - 6		
Peak Day	May 24 - 12			
# of Days Sighted	3	5	0	0

American Pipit:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 4 - 52	May 2 - 1	Jul 30 - 1	Aug 31 - 3
Last Sighting	May 26 - 4	May 19 - 1	Sept 27 - 2	Sept 26 - 2
Peak Day		May 15 - 158	Sept 13 - 235	Sept 8 - 107
# of Days Sighted	13	11	29	22

Cedar Waxwing:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Jun 2 - 14	May 29 - 2	Jul 12 - 8	Jul 12 - 6
Last Sighting	Jun 10 - 9	Jun 10 - 4	Sept 25 - 1	Sept 24 - 2
Peak Day	Jun 8 - 24	Jun 6 - 43	Sept 11 - 159	Aug 15 - 61
# of Days Sighted	8	12	69	62

Tennessee Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 12 - 2	May 22 - 5	Jul 12 - 6	Jul 12 - 2
Last Sighting	Jun 10 - 10	Jun 10 - 12	Aug 31 - 1	Sept 18 - 1
Peak Day	May 24 - 86	May 25 - 23	Jul 16&Aug 20- 35	Jul 17 - 32
# of Days Sighted	23	20	39	19

Orange-crowned Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 4 - 2	Apr 30 - 1	Aug 23 - 1	Aug 31 - 2
Last Sighting	May 26 - 1	May 22 - 1	Sept 23 - 1	Sept 27 - 1
Peak Day	May 12 - 53	May 7 - 11	Sept 13 - 22	Sept 5 - 14
# of Days Sighted	18	19	16	19

Yellow Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 11 - 1	May 10 - 2	Jul 12 - 6	Jul 12 - 12
Last Sighting	Jun 10 - 2	Jun 10 - 3	Sept 14 - 1	Sept 5 - 5
Peak Day	May 24 - 49	May 23 - 17	Aug 20 - 50	Aug 6 - 36
# of Days Sighted	30	27	52	39

Magnolia Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 15 - 1	May 23 - 3	Jul 12 - 1	Jul 12 - 2
Last Sighting	Jun 10 - 1	Jun 7 - 1	Sept 12 - 1	Sept 14 - 1
Peak Day	May 30 - 5	May 26 - 4	Jul 27 - 3	Jul 29 - 4
# of Days Sighted	9	10	25	13

Cape May Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 11 - 1			Jul 29 - 1
Last Sighting				Aug 5 - 1
Peak Day				3 dates - 1
# of Days Sighted	1	0	0	1

Blackburnian Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting			Aug 20 - 1	
Last Sighting				
Peak Day				
# of Days Sighted	0	0	1	0

Yellow-rumped Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 4	Apr 28 - 4	Jul 12 - 6	Jul 12 - 4
Last Sighting	Jun 10 - 8	June 10 - 2	Sept 28 - 1	Sept 30 - 1
Peak Day	May 15 - 707	May 18 - 709	Aug 30 - 1334	Sept 10 - 966
# of Days Sighted	44	41	70	64

Black-throated Green Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 20 - 1	May 11 - 1	Jul 25 - 2	Jul 15 - 3
Last Sighting	Jun 10 - 1	Jun 10 - 1	Aug 26 - 1	Aug 15 - 1
Peak Day	4 dates - 2	All dates - 1	2 dates - 2	
# of Days Sighted	14	13	6	4

Palm Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 11 - 1	May 10 - 1	Aug 1 - 1	Jul 29 - 1
Last Sighting	Jun 3 - 1	May 25 - 1	Sept 23 - 2	Sept 26 - 1
Peak Day	May 15 - 8	May 11 & 23 - 3	Sept 9 - 4	Sept 1 - 2
# of Days Sighted	10	8	11	5

Bay-breasted Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting			Jul 29 - 1	Aug 3 - 1
Last Sighting			Aug 20 - 2	
Peak Day				
# of Days Sighted	0	0	2	1

Blackpoll Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 14 - 1	May 15 - 1	Jul 23 - 1	Sept 5 - 1
Last Sighting	May 31 - 1	May 23 - 1	Aug 19 - 1	Sept 6 - 2
Peak Day	May 15 & 24 - 2	2 dates - 1		
# of Days Sighted	4	2	2	2

Black-and-white Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 7 - 1	May 5 - 2	Jul 12 - 3	Jul 12 - 5
Last Sighting	Jun 10 - 1	Jun 10 - 1	Sept 11 - 1	Sept 5 - 1
Peak Day	May 26 - 9	May 18 & 23 - 9	Aug 20 - 36	Aug 6 - 14
# of Days Sighted	35	35	43	37

American Redstart:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 24 - 1	May 18 - 4	Jul 12 - 5	Jul 12 - 8
Last Sighting	Jun 10 - 11	Jun 10 - 6	Sept 16 - 1	Sept 7 - 1
Peak Day	May 30 - 122	May 24 - 26	Jul 27 - 55	Aug 6 - 62
# of Days Sighted	18	22	55	45

Ovenbird:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 16 - 2	May 13 - 2	Jul 12 - 5	Jul 12 - 1
Last Sighting	Jun 10 - 4	Jun 10 - 4	Sept 5 - 1	Sept 6 - 1
Peak Day	May 26 - 19	May 23 & 25 - 10	Jul 23 - 11	Aug 6 - 18
# of Days Sighted	22	28	49	39

Northern Waterthrush:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 1	May 9 - 1	Jul 13 - 1	Jul 15 - 2
Last Sighting	May 29 - 1	May 30 - 2	Sept 1 - 1	Sept 8 - 2
Peak Day	May 14 - 17	May 19 & 24 - 4	Aug 20 - 4	Sept 1 - 5
# of Days Sighted	10	13	21	18

Connecticut Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting		May 30 - 1	Aug 20 - 1	
Last Sighting				
Peak Day				
# of Days Sighted	0	1	0	0

Mourning Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 30 - 1	May 25 - 1	Jul 13 - 1	Jul 25 - 1
Last Sighting	Jun 9 - 3	Jun 7 - 1	Sept 6 - 1	Sept 7 - 1
Peak Day	Jun 7 - 5	Jun 3 & 5 - 4	Aug 23 - 7	Aug 9 - 4
# of Days Sighted	10	11	27	21

Common Yellowthroat:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 26 - 2	May 23 - 2	Jul 12 - 2	Jul 14 - 1
Last Sighting	Jun 10 - 3	Jun 9 - 2	Sept 13 - 1	Sept 5 - 1
Peak Day	May 27 - 6	Jun 2 - 4	Sept 1 - 5	Aug 6 - 2
# of Days Sighted	14	9	25	11

Wilson's Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 29 - 2	May 23 - 5	Aug 23 - 1	Jul 25 - 1
Last Sighting	Jun 7 - 1	Jun 9 - 1	Sept 13 - 1	Sept 26 - 1
Peak Day	May 30 - 5		Sept 12 - 4	Sept 5 - 4
# of Days Sighted	3	6	12	14

Canada Warbler:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 26 - 1	May 24 - 1	Jul 12 - 1	Jul 12 - 1
Last Sighting	Jun 10 - 4	Jun 10 - 5	Aug 31 - 1	Aug 23 - 1
Peak Day	Jun 8 - 13	Jun 5 - 10	4 dates - 8	Aug 4 - 11
# of Days Sighted	14	18	42	35

Western Tanager:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 1	May 6 - 1	Jul 16 - 3	Jul 12 - 1
Last Sighting	Jun 5 - 1	May 18 - 3	Sept 2 - 1	Aug 15 - 1
Peak Day	May 30 - 2		Aug 20 - 16	3 dates - 4
# of Days Sighted	17	4	27	15

American Tree Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 4	Apr 28 - 11	Sept 16 - 1	Sept 16 - 1
Last Sighting	May 11 - 1	May 11 - 1		Oct 2 - 1
Peak Day	Apr 30 - 41	Apr 30 - 35		Sept 26 - 7
# of Days Sighted	12	10	1	9

Chipping Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 1	May 7 - 5	Jul 15 - 1	Jul 14 - 5
Last Sighting	Jun 10 - 3	Jun 10 - 3	Aug 30 - 2	Sept 12 - 1
Peak Day	May 24 - 5391	May 18 - 579	Aug 10 - 51	Jul 26 - 43
# of Days Sighted	33	32	16	15

Clay-colored Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 15 - 3	May 14 - 1	Jul 12 - 4	Jul 12 - 3
Last Sighting	Jun 9 - 3	Jun 10 - 4	Sept 7 - 1	Sept 5 - 1
Peak Day	May 24 - 649	May 22 - 9	Jul 16 - 7	Jul 14 - 6
# of Days Sighted	22	27	21	24

Vesper Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 1	May 3 - 1		Sept 10 - 1
Last Sighting	May 21 - 1	May 11 - 1		
Peak Day	May 14 - 3	May 7 - 2		
# of Days Sighted	4	3	0	1

Savannah Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 7 - 5	May 2 - 1	Aug 23 - 2	Aug 15 - 1
Last Sighting	May 28 - 1	May 19 - 1	Sept 21 - 1	Sept 12 - 3
Peak Day		May 4 - 5		Sept 4 & 12 - 3
# of Days Sighted	11	11	6	10

Le Conte's Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 14 - 1	May 7 - 1		Jul 14 - 1
Last Sighting	Jun 2 - 1	May 27 - 1		Aug 11 - 1
Peak Day	May 15 - 2	3 dates - 1		3 dates - 1
# of Days Sighted	7	3	0	3

Fox Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 26 - 7	Apr 30 - 6	Sept 1 - 1	Sept 19 - 2
Last Sighting	May 7 - 3	May 6 - 1		
Peak Day	Apr 30 - 15	May 2 - 7		
# of Days Sighted	5	4	1	1

Song Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 26 - 1	Apr 29 - 1	Jul 12 - 2	Jul 12 - 6
Last Sighting	Jun 10 - 4	Jun 10 - 4	Sept 1 - 3	Aug 20 - 2
Peak Day	May 15 - 14	May 12 & 13 - 9	Aug 6 - 7	Jul 20 - 9
# of Days Sighted	45	42	42	37

Lincoln's Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 5 - 1	May 1 - 1	Jul 12 - 4	Jul 12 - 5
Last Sighting	Jul 10 - 2	Jun 10 - 2	Sept 23 - 1	Sept 30 - 1
Peak Day	May 12 - 10	May 23 - 8	3 dates - 4	Jul 17 - 6
# of Days Sighted	33	37	32	30

Swamp Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 23 - 1	May 23 - 2	Jul 20 - 1	Jul 23 - 1
Last Sighting	May 27 - 1	May 25 - 2	Sept 1 - 1	Sept 19 - 1
Peak Day	3 dates - 1		7 dates - 1	6 dates - 1
# of Days Sighted	3	2	7	6

White-throated Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 7 - 3	Apr 30 - 1	Jul 12 - 8	Jul 12 - 9
Last Sighting	Jun 10 - 8	Jun 10 - 9	Sept 18 - 3	Oct 2 - 1
Peak Day	May 24 - 31	May 18 - 36	Jul 16 & 18 - 12	Jul 14 & 16 - 10
# of Days Sighted	35	39	59	52

White-crowned Sparrow:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 3	May 2 - 1	Aug 23 - 1	Sept 4 - 1
Last Sighting	May 23 - 2	May 24 - 1	Sept 25 - 3	Sept 26 - 4
Peak Day	May 12 - 117	May 19 - 12	Sept 23 - 6	3 dates - 4
# of Days Sighted	18	17	10	10

Dark-eyed Junco:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 37	Apr 26 - 15	Aug 1 - 1	Aug 13 - 1
Last Sighting	May 25 - 1	May 9 - 3	Sept 28 - 3	Oct 2 - 4
Peak Day	Apr 30 - 591	Apr 29 - 320	Sept 23 - 10	Sept 19 - 113
# of Days Sighted	24	12	16	26

Lapland Longspur:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 2	May 18 - 28	Aug 23 - 1	Sept 2 - 2
Last Sighting	May 25 - 1	May 22 - 13	Sept 27 - 1	Oct 2 - 2
Peak Day	May 4 - 52		Sept 13 - 79	Sept 6 - 10
# of Days Sighted	13	2	21	10

Snow Bunting:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 9 - 1	Apr 28 - 5	Sept 18 - 55	Sept 6 - 4
Last Sighting				Sept 29 - 1
Peak Day				Sept 8 - 6
# of Days Sighted	1	1	1	7

Rose-breasted Grosbeak:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 14 - 1	May 11 - 2	Jul 12 - 1	Jul 14 - 4
Last Sighting	Jun 10 - 1	Jun 10 - 2	Aug 31 - 1	Aug 19 - 1
Peak Day	May 24 - 72	May 23 - 8	Aug 7 - 9	Jul 25&Aug 4 - 7
# of Days Sighted	21	23	33	26

Red-winged Blackbird:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 29 - 1	Apr 28 - 1	Jul 16 - 1	Jul 18 - 1
Last Sighting	Jun 9 - 4	Jun 10 - 1	Aug 31 - 1	Sept 7 - 1
Peak Day	May 8 - 150	May 15 - 66	Jul 25 - 19	Aug 20 - 9
# of Days Sighted	25	24	14	8

Yellow-headed Blackbird:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 8 - 1		Aug 7 - 10	
Last Sighting	Jun 3 - 1			
Peak Day	May 30 - 2			
# of Days Sighted	3	0	1	0

Common Grackle:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 30 - 15	May 11 - 1	Jul 24 - 4	Jul 20 - 2
Last Sighting	May 26 - 1	May 31 - 1	Sept 16 - 2	Sept 8 - 2
Peak Day	May 8 - 66	May 15 - 5	2 dates - 4	
# of Days Sighted	12	3	10	6

Brown-headed Cowbird:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 1	Apr 30 - 42	Jul 16 - 1	Jul 14 - 1
Last Sighting	Jun 10 - 1	Jun 10 - 1	Aug 28 - 1	
Peak Day	May 8 - 49		3 dates - 1	
# of Days Sighted	34	31	3	1

Baltimore Oriole:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 11 - 2			
Last Sighting	Jun 6 - 1			
Peak Day	May 30 - 5			
# of Days Sighted	4	0	0	0

Purple Finch:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 4	Apr 27 - 2	Jul 21 - 2	Jul 21 - 1
Last Sighting	May 17 - 1	May 18 - 6	Sept 25 - 1	Sept 5 - 1
Peak Day	May 8 - 9	May 7 - 12	Aug 21 - 25	Aug 15 - 7
# of Days Sighted	16	18	30	16

White-winged Crossbill:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting			Jul 16 - 2	
Last Sighting			Sept 15 - 2	
Peak Day			Jul 23 & 24 - 10	
# of Days Sighted	0	0	25	0

Common Redpoll:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 6 - 4		Sept 3 - 20	
Last Sighting				
Peak Day				
# of Days Sighted	1	0	1	0

Pine Siskin:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	Apr 25 - 1	Apr 26 - 2	Jul 12 - 3	Jul 12 - 40
Last Sighting	Jun 10 - 3	Jun 6 - 3	Sept 28 - 2	Oct 2 - 8
Peak Day	May 30 - 178	Apr 29 - 73	Sept 27 - 231	Aug 22 - 612
# of Days Sighted	40	24	64	55

American Goldfinch:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 27 - 1	May 31 - 1	Aug 2 - 1	
Last Sighting	Jun 7 - 1	Jun 10 - 1	Aug 5 - 1	
Peak Day	Jun 5 - 2	Jun 2 - 2		
# of Days Sighted	6	6	2	0

Evening Grosbeak:

	Spring 2009	Spring 2008	Fall 2009	Fall 2008
First sighting	May 1 - 14	Apr 29 - 8	Jul 15 - 2	Jul 13 - 5
Last Sighting	Jun 6 - 1	May 28 - 4	Sept 15 - 1	Oct 2 - 4
Peak Day	May 26 - 71	May 3 - 22	Aug 6 - 74	Aug 8 - 42
# of Days Sighted	30	20	40	31