

2012 Annual Report

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2012 Executive Summary

The Lesser Slave Lake Bird Observatory (LSLBO) conducted its 19th year of bird population monitoring in the Lesser Slave Lake Provincial Park in 2012. The three core monitoring projects are spring migration monitoring, fall migration monitoring, and Monitoring Avian Productivity and Survivorship (MAPS). In addition, the LSLBO was involved in several other research and monitoring projects which included; northern saw-whet owl fall migration monitoring, testing raised nets during migration to determine how vegetation change has impacted the effectiveness of the standard nets, feather collection for stable isotope analysis of migrants, and the Canada Warbler Project.

Daily migration monitoring is conducted at the LSLBO by combining four count techniques: daily census, visual migration counts, incidental observations, and mistnetting. These standardized techniques are used to derive a daily estimated total of migrants in the area, which is used to create population trends. Identical techniques are used during both the spring and fall migration seasons. Spring migration coverage lasted for 49 days from April 23 to June 10. Weather conditions allowed mistnets to be set for 84% of the possible net hours. A total of 1943 birds were banded, representing 47 species. It was the second busiest spring banding season at the LSLBO. Fall migration was conducted for 80 days from July 12 to September 29. Conditions allowed mistnets to be set for 84% of the total possible net hours. A total of 1588 birds from 56 species were banded; which was below the fall average.

A total of 166 species were encountered during migration monitoring; 153 in the spring and 127 in the fall. No new species were observed to add to the LSLBO's sighting list; keeping the all-time sightings list at 250 species. No new species were banded, keeping the LSLBO's species list at 102 birds.

MAPS monitors bird populations on the breeding grounds and the LSLBO currently operates four stations. Each station was visited six times between June 11 and August 2. A total of 167 birds from 22 species were banded during the MAPS banding. The breeding status for 64 species was determined during visits to MAPS stations.

The LSLBO recorded 298 recaptured birds during migration and MAPS bandings. All recaptures encountered were birds originally banded at the LSLBO either in the same season or in a previous year. The majority of the birds were banded in 2012 and recaptured later in the season. 41 birds were banded in 2011 and 32 birds were banded before 2011. The oldest bird encountered was an ovenbird captured during MAPS that was originally banded in 2005; this bird was at least eight years old.

Northern saw-whet owl fall migration monitoring began on August 29 and ended on October 10. Banding was attempted on 32 nights and 112 northern saw-whet owls and one barred owl were banded. Two saw-whets were later recovered east of Edmonton, Alberta several days after being banded at the LSLBO.

Two aerial nets were used during spring and fall migration. These raised nets were erected in 2010 to address concerns about changing vegetation affecting the capture rates in the standard netlanes. Overall the aerial nets accounted for approximately 30% of the birds banded during

migration monitoring. In the spring only one standard net had higher capture rate than the two aerial nets. In the fall, nets located on the shoreline, including standard and aerial nets had higher capture rates than the forest nets. The aerial net located in the forest had a lower capture rate than two of the forest standard nets. This was the first year that the aerial nets were used for an entire spring season.

The LSLBO participated in collecting feathers for stable isotope analysis to determine the timing of migration, an objective of the Joint Research Project between the University of Alberta, the LSLBO, and Alberta Parks. A total of 765 feathers were collected from four focal species (Swainson's thrush, Myrtle warbler, Tennessee warbler, and American redstart) during the year. Feathers were collected in the spring, fall, and during the breeding season. These feathers will be used to determine the origin of the birds and the timing of when birds with local isotope signatures move out of the area and migrants from other regions begin to migrate through.

The Canada Warbler Project was re-initiated in 2012 as a stand-alone, question-driven, research project. The goal of the study was to determine Canada warbler habitat use in the western boreal forest. The study involved tracking territorial males and habitat surveys within the Lesser Slave Lake Provincial Park.

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Migration Monitoring

Migration monitoring is a practice of monitoring bird populations from a fixed point. Observers combine data from a variety of survey techniques to estimate the number of migrants from each species that pass through the study area each day during spring and fall migration. These daily estimated totals are used to create annual population indices, which are then compared to previous year's to derive population trends. The Lesser Slave Lake Bird Observatory (LSLBO) has been conducting spring and fall migration monitoring since 1994; 2012 marks the 19th consecutive year of monitoring at the station. The LSLBO has been a full member of the Canadian Migration Monitoring Network (CMMN) since 1999. The CMMN coordinates migration monitoring activities across Canada and provides support and resources, including population trend analysis, to its member stations.

Migrants are constantly moving through the LSLBO during both spring and fall migration. Some manner of migratory activity is encountered almost every day. At times the passage can be light with only a few individuals observed, but a few days each season experiences a heavy migration with thousands of birds counted within a few hours. Definite peaks of migratory activity occur throughout the season and consist of large volumes of a single species or a number of species moving together in mixed flocks. Songbirds are the most commonly encountered migrant at the station, but at times good numbers of waterfowl, shorebirds, gulls, and raptors can be observed.

Migration monitoring at the LSLBO follows the standardized protocols described in the 2003 Revised Lesser Slave Lake Bird Observatory Station Manual. These protocols ensure that comparable data is collected each year, which is vital in deriving accurate population trends. The same monitoring techniques are used in both spring and fall migration. Although songbirds are the primary focus at the LSLBO, all species encountered during monitoring are recorded. Monitoring is conducted for a maximum of seven hours each day, beginning onehalf-hour before sunrise. A half-hour census is run once each day to document bird activity within the entire study site. A five minute visual migration count is conducted once every hourwhich focuses only on actively migrating birds. All other birds observed during the monitoring period outside the described counts are recorded as incidental observations. The LSLBO operates 12 standard mistnets and 2 aerial nets for a maximum of 98 net hours each day for bird banding. Mistnetting does not occur if the temperature is below 2°C, during periods of precipitation, or if the wind strength is above 3 on the Beaufort Scale.

Spring Migration

Spring migration monitoring is conducted over a period of approximately six weeks from late April until early June. This time period covers the migratory window of most species encountered at the LSLBO. The migration station opens late April, once daytime temperaturesare warm enough to allow for banding. By this time the early spring migrants have already begun to move through, but the diversity and volume varies depending on spring weather conditions. Migration intensity quickly increases in early May; the diversity of migrantspeciesrapidly increases in early May and heavy songbird migration can occur at any time during the month. Migration slowsduring the first week of June; most of the migrants have arrived and the majority of active birds are local breeders. Spring monitoring ends on June 10.

In 2012, spring migration began on April 23 and ran daily until June 10 for 49 days of coverage (Table 1). The census was conducted on all but one day. Observers aimed to run 8 visual migration counts each fair-weather day, and 6 on poor-weather days. Weather conditions did not permit any banding on 4 days and an additional 20 days received reduced net hours due to changing weather conditions throughout the day. Reduced net hours are common early in the spring because overnight temperatures drop below freezing and mistnetting is delayed a few hours in the morning until conditions warm up.

| Table 1. Summary of error during spring migration monitoring at LSLBO, 2004-2012. | | | | | | | | | |
|-----------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|---------|----------|
| Spring | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Coverage | | | | | | | | | |
| First Day | 19-Apr | 25-Apr | 24-Apr | 24-Apr | 26-Apr | 25-Apr | 22-Apr | 22-Apr | 23-Apr |
| Last Day | 10-Jun | 15- May | 10- June |
| Number of Days | 50 | 43 | 47 | 48 | 45 | 46 | 50 | 24 | 49 |
| Person Days | 120 | 121 | 127 | 92 | 105 | 89 | 114 | 55 | 96 |
| Banding | | | | | | | | | |
| First Day | 20-Apr | 25-Apr | 24-Apr | 24-Apr | 27-Apr | 29-Apr | 22-Apr | 22-Apr | 23-Apr |
| Last Day | 10-Jun | 15-May | 10-Jun |
| Number of Days | 45 | 43 | 44 | 47 | 43 | 42 | 44 | 23 | 45 |
| Av. Daily Net Hrs | 60.5 | 71.2 | 70.3 | 73.6 | 75.8 | 70.4 | 64.4 | 81.8* | 80.68* |
| Census | | | | | | | | | |
| First Day | 20-Apr | 25-Apr | 24-Apr | 24-Apr | 26-Apr | 25-Apr | 22-Apr | 22-Apr | 23-Apr |
| Last Day | 10-Jun | 15-May | 10-Jun |
| Number of Days | 49 | 43 | 47 | 48 | 45 | 46 | 50 | 24 | 48 |
| Vis-Mig | | | | | | | | | |
| First Day | 20-Apr | 25-Apr | 24-Apr | 24-Apr | 26-Apr | 25-Apr | 22-Apr | 22-Apr | 23-Apr |
| Last Day | 10-Jun | 15-May | 10-Jun |
| Number of Days | 49 | 43 | 47 | 48 | 45 | 46 | 50 | 24 | 49 |
| Av Daily Vis-Migs | 8.2 | 8 | 7.7 | 7.9 | 7.8 | 7.7 | 7.6 | 7.8 | 7.5 |

| Table 1.Summary of | offort during a com | in a maignotion m | agaitoning of I C | I DO 2004 2012 |
|---------------------|---------------------|-------------------|-------------------|-----------------|
| Table I Summary of | enori anring spr | ing migranon n | noniioring al LN | L.KU /UU4-/UT/ |
| ruble ribuinning or | chore during opri | ing ingration it | nonntoring at LD | LDO, 2001 2012. |

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

Mistnets were set for a total of 3953.31 net hours; achieving 82% of the total possible 4802 net hours for the season. The twelve standard nets were set for 3453.78 net hours and the two aerial nets were set for 499.53 net hours; achieving 84% and 73% of the possible net coverage, respectively. A total of 1943 birds were banded and 72 birds were recaptured for a capture rate of 51 birds/100 net hours. This was the second highest spring banding total at the LSLBO and above the seasonal average of 953 birds. Banding peaked several times throughout the spring but the busiest period was between May 9 and May 21 (Figure 1). The busiest banding day was May 19 with 338 birds and four other dates surpassed 100 birds: May 9 (197), April 24 (141), May 14 (118), and May 5(100).

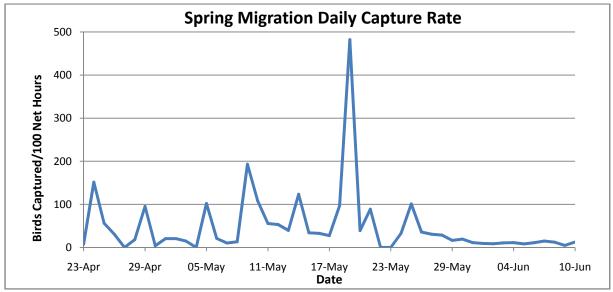


Figure 1.Daily capture rates during spring migration monitoring, 2012.

A total of 47 species were captured during spring banding, slightly above the spring average of 45 species. The top five banded species were: Myrtle warbler (509), Swainson's thrush (403), dark-eyed junco (174), American redstart (89), and Tennessee warbler (82). These five species accounted for 65% of all birds banded in the spring. Highlights of spring banding included a Nashville warbler on May 2, it was the fourth one banded at the station and first to be banded in the spring; a gray catbird on May 26, the first one captured since 2002; and an American kestrel on May 9, only the second one banded at the LSLBO. Banding totals for each speciesare listed in Appendix I.

Spring migration was heavy over the first half of the season (Figure 2). Large numbers of American robins, Myrtle warblers and dark-eyed juncos were observed during the opening two days of monitoring. April 29 was the day of strongest migration passage and included thousands of Myrtle warblers, American robins, blackbirds and hundreds of sparrows and waterfowl; overall 64 species were observed. Migration became steady through the first half of May with a

diverse number of songbird species. This period peaked on May 16 with over 7,000 birds from 84 species observed. Migration then slowed down considerably through the second half of the spring. In total, the observatory recorded 153 species (Appendix II). No new species were added to the LSLBO's sight records, but highlight sightings included a three-toed woodpecker, long-eared owl, long-billed curlew, American avocets, Nashville warbler, gray catbird, sora, and Cooper's hawk.

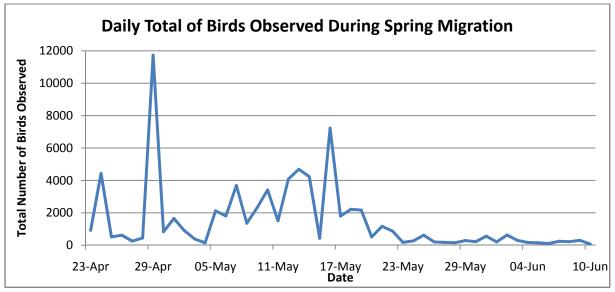


Figure 2. Total number of birds detected each day during spring migration 2012.

Fall Migration

Fall migration monitoring is conducted from July 12 until late September. This time period encompasses the migratory window of the majority of songbird species encountered at the LSLBO. Most of the activity during the opening days of fall monitoring is locally breeding individuals, but it is not unusual to observe a few individuals actively migrating. After the opening week, migration activity picks up and there can be consistent and heavy migratory passage of songbirds through the remainder of July and into early August. Migration from mid-August until mid-September occurs in pulses; relatively steady migration is interspersed with the occasional heavy passage of songbirds. Activity then slows down considerably and by late September most songbird activity consists of resident species and the occasional late migrant.

Daily migration monitoring was conducted from July 12 to September 29 for 80 days of coverage. The census was conducted every day of operation. Observers aimed to run 8 visual migration counts each day, but conducted 6 on poor weather days. Poor weather conditions prevented banding on 3 days and forced reduced net-hours on 32 days. Typical during the fall, strong late morning winds develop which often forces the exposed nets to be closed early. Overall the fall received excellent migration coverage consistent with previous years (Table 2).

| | nury of error | it during i | an ingratic | in monitorn | ing at LDL | b0, 20012 | .012. | | |
|--------------------|---------------|-------------|-------------|-------------|------------|-----------|--------|---------|--------|
| Fall | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Coverage | | | | | | | | | |
| First Day | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12- Jul | 12-Jul |
| Last Day | 30-Sep | 29-Sep | 29-Sep | 30-Sep | 2-Oct | 28-Sep | 30-Sep | 30-Sep | 29-Sep |
| Number of Days | 78 | 75 | 77 | 73 | 76 | 77 | 80 | 81 | 80 |
| Person-days | 164 | 170 | 149 | 114 | 131 | 165 | 158 | 140 | 126 |
| Banding | | | | | | | | | |
| First Day | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul |
| Last Day | 30-Sep | 29-Sep | 29-Sep | 30-Sep | 2-Oct | 28-Sep | 30-Sep | 30-Sep | 29-Sep |
| Number of Days | 73 | 71 | 73 | 68 | 74 | 75 | 77 | 75 | 77 |
| Av. Daily Net Hrs. | 69.8 | 76 | 73.9 | 71.9 | 75.7 | 78.9 | 81.5* | 77.9* | 82.1* |
| Census | | | | | | | | | |
| First Day | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul |
| Last Day | 30-Sep | 29-Sep | 29-Sep | 30-Sep | 1-Oct | 28-Sep | 30-Sep | 30-Sep | 29-Sep |
| Number of Days | 78 | 75 | 77 | 73 | 75 | 77 | 80 | 81 | 80 |
| Vis-Migs | | | | | | | | | |
| First Day | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul | 12-Jul |
| Last Day | 30-Sep | 29-Sep | 29-Sep | 30-Sep | 2-Oct | 28-Sep | 30-Sep | 30-Sep | 29-Sep |
| Number of Days | 78 | 75 | 77 | 73 | 76 | 77 | 80 | 81 | 80 |
| Av Daily Vis-migs | 7.6 | 7.7 | 7.7 | 7.7 | 7.5 | 7.6 | 7.5 | 7.3 | 7.6 |

Table 2.Summary of effort during fall migration monitoring at LSLBO, 2004-2012.

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

Mistnets were set for a total of 6567.17 net hours; achieving 84% of the total possible 7840 net hours. The twelve standard netlanes were set for 5745.65 net hours and the two aerial nets were set for 821.52 net hours; achieving 86% and 73% respectively, of the total possible net hours. A total of 1588 birds were banded and 116 birds were recaptured during the season. The banding total was below the fall average of 1821. Banding was steady, but not especially busy, through most of the season (Figure 3). The busiest banding day of the fall was September 13, with 184 birds banded. Banding totals surpassed 50 birds on only two other days: July 23 (75) and September 15 (51).

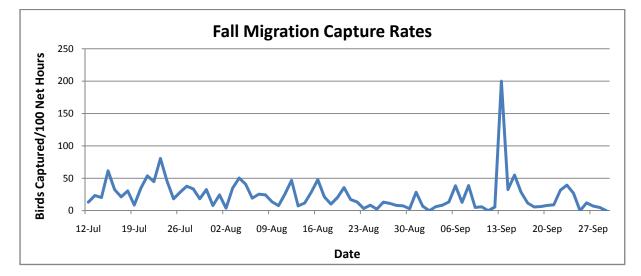


Figure 3. Daily capture rates during 2012 fall migration.

A total of 56 species were captured during fall banding, slightly above the fall average of 55. The top five banded species were: Myrtle warbler (359), ovenbird (174), Swainson's thrush (146), yellow warbler (97), and Tennessee warbler (84). These five species accounted for 54% of all the birds banded during the season. Two species highlighted the fall banding: a red-winged blackbird banded on July 17, the first one banded since 2000; and a pileated woodpecker banded on September 1, only the third banding record at the LSLBO. A complete list of all species banded is in Appendix I.

Migration was constant throughout the entire fall migration period with three definite peaks occurring during the season (Figure 4). Although migrants were observed on the opening day of fall monitoring in 2012, the first peak did not occur until July 29. The peak that occurred during the period of July 29 to August 2 was composed primarily of a large number of Franklin's gulls moving through the area; actual songbird passage, however, was quite light over that period of time. The second peak of the fall occurred in mid-August with a large passage of Tennessee warblers and myrtle warblers. The third peak of the fall occurred during the second week of September. This passage included large numbers of myrtle warblers and orange-crowned warblers. A total of 127 species were encountered during fall migration. No new species were recorded for the station in the fall, but highlights included red crossbill, gray catbird, upland sandpiper, varied thrush, and Townsend's solitaire. Sight records and peak days for encountered species are listed in Appendix II.

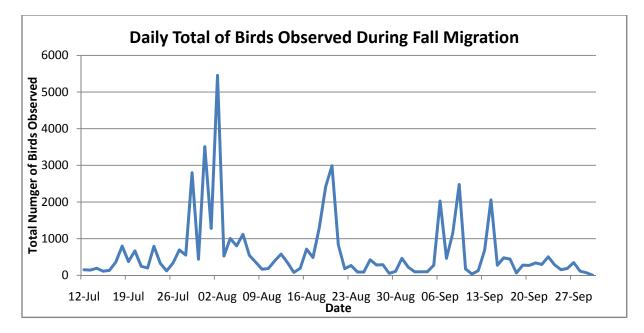


Figure 4. Total number of birds detected each day during fall migration 2012.

Monitoring Avian Productivity and Survivorship (MAPS)

Monitoring Avian Productivity and Survivorship (MAPS) is a long-term monitoring program coordinated by the Institute for Bird Populations. The primary focus of MAPS is to monitor populations on the breeding grounds. The LSLBO has participated in the MAPS program since 1994 and it remains one of the organizations core monitoring projects. 2012 marks the 19th consecutive year that the LSLBO has contributed to the MAPS program.

The LSLBO currently operates four MAPS stations: Far-and-Away (FAWA), Fern Gully (FEGU), Roadside (ROAD), and Residence (RESI). Three stations, FAWA, FEGU, and ROAD, are located in the forest bordering the migration monitoring station, while RESI is located near the Boreal Centre for Bird Conservation. FAWA and ROAD have operated for all 19 years. FEGU operated from 1994 to 2000. It was reopened in 2003, and has since operated for 10 consecutive years. RESI was established in 2000 and completed its 12th consecutive year of operation. Each station is visited once every 10 day period throughout the breeding season and follows operating protocols described in the MAPS Manual. The LSLBO operates through 6 of the periods, the dates that each station was visited in 2012 were:

| | FAWA | FEGU | ROAD | RESI |
|----------------------------|---------|----------|----------|---------|
| Period 5 (Jun 10 – 19) | June 14 | June 11 | June 13 | June 15 |
| Period 6 (Jun 20 – 29) | June 26 | June 22 | June 23 | June 25 |
| Period 7 (Jun 30 – Jul 9) | July 2 | June 30 | July 1 | July 3 |
| Period 8 (Jul 10 - Jul 19) | July 13 | July 11 | July 12 | July 10 |
| Period 9 (Jul 20 – 29) | July 22 | July 23 | July 25 | July 20 |
| Period 10 (Jul 30 – Aug 8) | July 31 | August 1 | August 2 | July 30 |

MAPS Banding

The LSLBO operates four MAPS station. Each MAPS station operates 10 mistnets and can achieve a maximum of 360 net hours during the season. FAWA, FEGU, and ROAD received maximum coverage. RESI received slightly reduced coverage, with 357 net hours, due to a moose damaging a net.

A total of 258 birds were captured during the 2012 MAPS banding season; 167 were new bands and 91 recaptures, representing 22 species and forms. FEGU had the highest capture total of the stations with 56 birds banded and 33 recaptured from 12 species (Table 3). RESI had the second highest capture total and the highest species diversity of the stations diversity with 57 banded and 15 recaptured from 18 species (Table 4). ROAD had the third highest capture total with 35 banded and 28 recaptured from 13 species (Table 5). FAWA had the lowest capture total with 19 banded and 15 recaptured from 10 species (Table 6).

| Species | 20 | <u>U) MAPS s</u> 12 | Previous Years' Total Captures | | | | | | | |
|------------------------------|--------|------------------------|--------------------------------|-------|------|------|------|--|--|--|
| 2 perces | Banded | Recap | 94-99 | 03-08 | 2009 | 2010 | 2011 | | | |
| Sharp-shinned Hawk | | F | | 1 | , | | | | | |
| Northern Saw-whet Owl | | | 1 | | | | | | | |
| Yellow-bellied Sapsucker | | | _ | 2 | 1 | 1 | 1 | | | |
| Three-toed Woodpecker | | | | 1 | | | | | | |
| Alder Flycatcher | | | 6 | 5 | 1 | | | | | |
| Least Flycatcher | 1 | | 2 | 6 | | | | | | |
| Blue-headed Vireo | | | 2 | 1 | | | | | | |
| Red-eyed Vireo | | | 4 | 4 | | 2 | | | | |
| Blue Jay | | | | 1 | | | | | | |
| Black-capped Chickadee | | | 7 | 3 | | | | | | |
| Red-breasted Nuthatch | | | 4 | | | | | | | |
| Brown Creeper | | | | 3 | | | | | | |
| Winter Wren | 3 | | 3 | 3 | 1 | | | | | |
| Swainson's Thrush | 5 | | 50 | 38 | 9 | 1 | 4 | | | |
| Hermit Thrush | | | 1 | 3 | 1 | | | | | |
| American Robin | | | 4 | 1 | 1 | | 1 | | | |
| Cedar Waxwing | | | | 2 | | | | | | |
| Tennessee Warbler | | | 30 | 55 | 25 | | | | | |
| Orange-crowned Warbler | | | 1 | | | | | | | |
| Yellow Warbler | | | 13 | 10 | | 1 | | | | |
| Chestnut-sided Warbler | | | 2 | | | | | | | |
| Magnolia Warbler | | | 17 | 6 | 3 | | 3 | | | |
| Yellow-rumped Warbler | 1 | | 26 | 15 | 2 | 6 | 1 | | | |
| Black-throated Green Warbler | | | 1 | 1 | | | | | | |
| Bay-breasted Warbler | | | | 1 | | | | | | |
| Black-and-white Warbler | 4 | | 12 | 12 | 7 | 1 | 2 | | | |
| American Redstart | 12 | 11 | 237 | 170 | 19 | 22 | 7 | | | |
| Ovenbird | 9 | 3 | 41 | 75 | 18 | 5 | 10 | | | |
| Northern Waterthrush | | | 1 | 1 | | | | | | |
| Mourning Warbler | 1 | | 51 | 24 | 12 | 5 | 1 | | | |
| Common Yellowthroat | | | | 2 | | | | | | |
| Wilson's Warbler | | | | 1 | | | | | | |
| Canada Warbler | 12 | 10 | 112 | 115 | 20 | 27 | 23 | | | |
| Western Tanager | | | 1 | 3 | 1 | 2 | | | | |
| Chipping Sparrow | 1 | | 2 | 1 | 1 | | | | | |
| Song Sparrow | | | 5 | | | | | | | |
| Swamp Sparrow | | | 2 | | | 1 | | | | |
| Lincoln's Sparrow | 1 | | | | | 1 | | | | |
| White-throated Sparrow | 6 | 9 | 102 | 88 | 8 | 14 | 9 | | | |
| Rose-breasted Grosbeak | | | | 1 | | | 1 | | | |
| Pine Siskin | | | 2 | | | | | | | |
| Total | 56 | 33 | 742 | 493 | 130 | 89 | 63 | | | |

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

| Species | 20. | | | | | ' Total Ca | - | |
|------------------------------|--------|-------|--------|------|------|------------|------|------|
| | Banded | Recap | '00-06 | 2007 | 2008 | 2009 | 2010 | 2011 |
| Sharp-shinned Hawk | | | 2 | | | 1 | | |
| Ruby-throated Hummingbird | | | 2 | | | | | |
| Yellow-bellied Sapsucker | 2 | | 17 | 2 | 2 | 2 | 1 | |
| Downy Woodpecker | | | | | 1 | | | |
| Northern Flicker | | | 1 | | | | | |
| Western Wood-Pewee | | | 1 | | | | | |
| Alder Flycatcher | | | 1 | | | | | |
| Least Flycatcher | | | 44 | 1 | 4 | | | |
| Black-capped Chickadee | 1 | | 23 | 2 | | | | |
| Red-breasted Nuthatch | | | 3 | | 1 | | | |
| Brown Creeper | 1 | | 2 | | 1 | | 1 | |
| Winter Wren | 1 | | 5 | | 8 | | | |
| Ruby-crowned Kinglet | | | 4 | | | | | |
| Swainson's Thrush | 4 | 1 | 58 | 4 | 13 | 13 | 8 | 4 |
| Hermit Thrush | | | 24 | 3 | | | | 2 |
| American Robin | 1 | | 6 | | 2 | 2 | 4 | |
| Red-eyed Vireo | 1 | | 8 | 4 | 5 | | 1 | |
| Philadelphia Vireo | | | 2 | | 1 | | | |
| Warbling Vireo | | | 2 | | | | | |
| Blue-headed Vireo | | | 3 | | | | 1 | |
| Cedar Waxwing | | | | | | | 1 | 1 |
| Tennessee Warbler | 2 | | 156 | 12 | 12 | 10 | 2 | 2 |
| Orange-crowned Warbler | | | 1 | | | | | |
| Yellow Warbler | | | 15 | 4 | 3 | 2 | | |
| Magnolia Warbler | | | 30 | 4 | 3 | 5 | 1 | 1 |
| Cape May Warbler | | | | 1 | | | | |
| Yellow-rumped Warbler | 4 | 1 | 121 | 9 | 6 | 12 | 7 | 3 |
| Black-throated Green Warbler | | | 5 | | | 3 | | |
| Bay-breasted Warbler | | | 6 | | | | | |
| Blackpoll Warbler | | | 2 | | | | | |
| Black-and-white Warbler | 3 | | 9 | 3 | 6 | 4 | 2 | 1 |
| American Redstart | 6 | | 84 | 15 | 7 | 7 | 6 | 3 |
| Ovenbird | 8 | 3 | 63 | 13 | 11 | 18 | 14 | 6 |
| Northern Waterthrush | | | 1 | | | | | 1 |
| Mourning Warbler | | 2 | 11 | 2 | 4 | 9 | 6 | 3 |
| Common Yellowthroat | 1 | | 3 | | 1 | 1 | 1 | - |
| Canada Warbler | 4 | 1 | 29 | 12 | 11 | 2 | 8 | 4 |
| Western Tanager | | - | 3 | | | | Ū. | |
| Rose-breasted Grosbeak | | | 7 | | 1 | 1 | 2 | |
| Chipping Sparrow | 1 | | 12 | 2 | - | 6 | 1 | |
| Clay-colored Sparrow | | | 12 | - | | 5 | 1 | |
| Lincoln's Sparrow | | | 7 | 9 | 1 | 10 | 1 | |
| Swamp Sparrow | 1 | | 1 | / | | 10 | 1 | |
| White-throated Sparrow | 16 | 6 | 102 | 13 | 18 | 9 | 17 | 6 |
| Purple Finch | 10 | 0 | 102 | 15 | 10 | 2 | 1/ | 0 |
| Pine Siskin | | | 1 | | | 4 | | |
| Total | 57 | 15 | 889 | 115 | 122 | 120 | 85 | 37 |

| Table 4 Captures | at the Residence | REST | MAPS | station |
|-------------------|--------------------|-------|------|----------|
| Table 4. Captures | s at the Residence | (ICD) | | station. |

| Species | ties 2012 | | | | Previous Years Captures | | | |
|------------------------------|-----------|-------|--------|------|-------------------------|------|-------|------|
| | Banded | Recap | 94-'06 | 2007 | 2008 | 2009 | 20010 | 2011 |
| Yellow-bellied Sapsucker | | | 9 | | 1 | 3 | | |
| Downy Woodpecker | | | 1 | | | | | |
| Hairy Woodpecker | | | 2 | 1 | | | | |
| Pileated Woodpecker | | | 1 | | | | | |
| Yellow-bellied Flycatcher | | | 1 | | | | | |
| Alder Flycatcher | | | 6 | | | | | |
| Least Flycatcher | | | 11 | | | | | |
| Black-capped Chickadee | | | 11 | | | 1 | 1 | |
| Red-breasted Nuthatch | | | 1 | | | | | |
| Brown Creeper | 1 | | 1 | 2 | | 2 | | |
| Winter Wren | | | 7 | 5 | 2 | 6 | | |
| Ruby-crowned Kinglet | | | 4 | | | | | |
| Swainson's Thrush | 7 | 3 | 100 | 8 | 13 | 11 | 7 | 7 |
| Hermit Thrush | | | 2 | | | 3 | 1 | |
| American Robin | 4 | 7 | 7 | 1 | | 1 | 1 | 5 |
| Cedar Waxwing | | | 3 | | | | | |
| Warbling Vireo | | | 1 | | | | | |
| Red-eyed Vireo | 1 | | 6 | 2 | | 1 | | |
| Tennessee Warbler | 1 | | 112 | 3 | 9 | 10 | | 1 |
| Orange-crowned Warbler | | | 1 | | | | | |
| Yellow Warbler | | | 9 | | | | | |
| Chestnut-sided Warbler | | | 5 | | | | | |
| Magnolia Warbler | | | 114 | 3 | 1 | 6 | 1 | 4 |
| Cape May Warbler | | | 3 | | | | | |
| Yellow-rumped Warbler | 1 | 6 | 80 | 4 | 9 | 3 | 2 | 2 |
| Black-throated Green Warbler | | | 7 | | | | 1 | |
| Palm Warbler | | | 1 | | | | | |
| Blackpoll Warbler | | | 2 | | | | | |
| Black-and-white Warbler | 1 | | 28 | 6 | 3 | 3 | 1 | 2 |
| American Redstart | 4 | 1 | 231 | 13 | 14 | 11 | 2 | 2 |
| Ovenbird | 6 | 10 | 132 | 9 | 18 | 20 | 14 | 17 |
| Northern Waterthrush | | | 3 | | | 1 | | |
| Mourning Warbler | | | 18 | 1 | 2 | 4 | 1 | |
| Common Yellowthroat | | | 2 | | | | | |
| Canada Warbler | 6 | | 218 | 8 | 15 | 21 | 10 | 9 |
| Western Tanager | | | 3 | | 1 | | | |
| Rose-breasted Grosbeak | 1 | | 4 | 1 | | | | |
| Chipping Sparrow | | | 16 | 3 | | 1 | 1 | |
| Song Sparrow | | | 2 | | | | | |
| Lincoln's Sparrow | | 1 | 3 | | 1 | | | |
| Swamp Sparrow | | | | 1 | | | | |
| White-throated Sparrow | 2 | | 129 | 6 | 5 | 11 | 8 | 2 |
| Purple Finch | | | 1 | | | | | |
| Pine Siskin | | | 1 | | | | | |
| Total | 35 | 20 | 1221 | 77 | 94 | 110 | 51 | 51 |
| Total | 33 | 28 | 1441 | 77 | 74 | 119 | 51 | 51 |

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

| Species | 20 | 12 | | Previou | s Years' | Total Ca | ptures | |
|--------------------------|--------|-------|--------|---------|----------|----------|--------|------|
| | Banded | Recap | 94-'06 | 2007 | 2008 | 2009 | 2010 | 2011 |
| Sharp-shinned Hawk | | | | | | 1 | | |
| Yellow-bellied Sapsucker | 1 | 2 | 1 | 2 | 3 | | 3 | 3 |
| Downy Woodpecker | | | 1 | | | | | 1 |
| Hairy Woodpecker | | | | | 1 | | | 1 |
| Least Flycatcher | | | 15 | 2 | 1 | | 8 | 6 |
| Winter Wren | | | | 1 | | | | |
| Swainson's Thrush | | | 10 | | 2 | 1 | 7 | 2 |
| Hermit Thrush | | | 2 | 1 | 2 | 1 | | |
| American Robin | 1 | | 11 | 1 | 1 | 1 | 3 | |
| Cedar Waxwing | | | 1 | | | | | |
| Philadelphia Vireo | | | 1 | 1 | | | | |
| Warbling Vireo | | | | | | | | 1 |
| Red-eyed Vireo | 1 | | 7 | 1 | 1 | | 1 | 2 |
| Tennessee Warbler | | | 18 | 4 | 5 | 10 | | |
| Yellow-warbler | 1 | | 5 | | 1 | | 2 | 1 |
| Chestnut-sided Warbler | | | 1 | | | | | |
| Magnolia Warbler | | | 1 | | | | | |
| Yellow-rumped Warbler | 3 | 1 | 36 | 3 | 4 | 2 | 7 | 5 |
| Black-and-white Warbler | | | 3 | | 2 | 1 | | |
| American Redstart | 1 | | 70 | 3 | 10 | 4 | 7 | 4 |
| Ovenbird | 2 | 3 | 47 | 8 | 6 | 7 | 6 | 5 |
| Connecticut Warbler | | | 1 | | | | | |
| Mourning Warbler | 3 | | 69 | 4 | 9 | 12 | 17 | 5 |
| Common Yellowthroat | | | 2 | | | | | |
| Canada Warbler | 3 | 2 | 117 | 10 | 12 | 12 | 10 | 5 |
| Western Tanager | | | 2 | | | | 2 | |
| Rose-breasted Grosbeak | | | 1 | | 1 | | | 1 |
| Lincoln's Sparrow | | | 1 | | 3 | 1 | | |
| White-throated Sparrow | 3 | 7 | 172 | 17 | 16 | 15 | 11 | 14 |
| Slate-coloured Junco | | | | | 1 | | | |
| Total | 19 | 15 | 605 | 58 | 80 | 68 | 72 | 56 |

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

Breeding Status

Breeding status was determined for the 64 species encountered during MAPS station visits in 2012 (Table 7). The breeder status (B) was given to species with strong evidence supporting breeding activity within the boundaries of the MAPS station. Likely breeders (L) were species frequently observed at a station, but lacked strong evidence of breeding activity within the station's boundaries. Transient species (T) were observed at a station, but it is unlikely that they were breeding within the stations boundaries. Observations were restricted to MAPS banding site visits only.

| Species | RESI | ROAD | FEGU | FAWA | Species | RESI | ROAD | FEGU | FAWA |
|------------------------------|--------|--------|--------|--------|------------------------|------|------|------|------|
| Common Loon | Т | | | Т | Ruby-crowned Kinglet | В | | Т | |
| Canada Goose | | Т | | | Swainson's Thrush | В | В | В | Т |
| Mallard | В | | | | Hermit Thrush | В | | | |
| Common Goldeneye | В | | | | American Robin | В | В | В | Т |
| Osprey | | | | Т | Г Cedar Waxwing | | Т | Т | Т |
| Bald Eagle | | Т | Т | Т | Tennessee Warbler | В | В | В | L |
| Sharp-shinned Hawk | Т | | | | Yellow Warbler | В | В | В | В |
| Merlin | | Т | Т | Т | Magnolia Warbler | В | | | Т |
| Ruffed Grouse | В | | Т | Т | Yellow-rump'dWarb. | В | В | В | В |
| Spotted Sandpiper | Т | | | | Black-thrt'dGrnWarb. | В | Т | В | Т |
| Franklin's Gull | | Т | Т | Т | Blackburnian Warbler | L | | | |
| Ring-billed Gull | | Т | | Т | Bay-breasted Warbler | | Т | | |
| Belted Kingfisher | Т | | | | Black-and-white Warb. | В | В | В | Т |
| Yellow-bellied Sapsucker | В | Т | Т | В | American Redstart | В | В | В | В |
| Hairy Woodpecker | L | Т | Т | | Ovenbird | В | В | В | В |
| Northern Flicker | | | Т | | Mourning Warbler | В | Т | В | В |
| Pileated Woodpecker | В | Т | | | Common Yellowthroat | В | | | |
| Alder Flycatcher | L | Т | L | В | Canada Warbler | В | В | В | В |
| Least Flycatcher | В | L | L | L | Western Tanager | В | L | В | Т |
| Eastern Phoebe | Т | | | | Chipping Sparrow | В | В | L | |
| Blue-headed Vireo | Т | L | Т | | Song Sparrow | | Т | В | |
| Warbling Vireo | В | | | | Lincoln's Sparrow | | L | | |
| Philadelphia Vireo | В | Т | L | В | Swamp Sparrow | В | | | |
| Red-eyed Vireo | В | В | В | В | White-thrt'd Sparrow | В | В | В | В |
| Blue Jay | Т | Т | Т | Т | Rose-breast'd Grosbeak | В | Т | Т | L |
| American Crow | Т | Т | Т | В | Brown-headed Cowbird | Т | | | |
| Common Raven | Т | Т | | Т | Pine Siskin | Т | Т | Т | Т |
| Tree Swallow | Т | Т | Т | | Purple Finch | | Т | | Т |
| Black-capped Chickadee | В | В | В | В | American Goldfinch | | | | Т |
| Boreal Chickadee | L | - | - | - | Evening Grosbeak | Т | Т | Т | Т |
| Red-breasted Nuthatch | В | B | B | Т | | | | | |
| White-breasted Nuthatch | T B | T L | T L | T T | | | | | |
| Brown Creeper Winter Wren | В | L B | L B | I L | | BECI | RUVD | FEGU | FAWA |
| | D | D | D | L | Total sp. Breeder (B) | 33 | 15 | 18 | 13 |
| | | | | | Total sp. Likely (L) | 4 | 5 | 5 | 4 |
| | | | | | Total sp Transient (T) | 15 | 24 | 17 | 23 |
| | | | | | Total sp. | 52 | 44 | 40 | 40 |

Table 7.Breeding Status of MAPS birds in 2012.

Recaptures

The LSLBO recorded 298 recaptures during the 2012 banding season: 72 during spring migration, 116 during fall migration, 91 during MAPS, 16 during target banding for the feather isotope projects, 2 during the Canada Warbler Project, and 1 during northern saw-whet owl banding. The recapture records represent 208 individuals: 135 were banded in 2012 and recaptured later in the season. 41 birds were banded in the 2011 season. 32 birds were originally banded before 2011 and represent some of the oldest known-age birds encountered during the banding season (Table 8). All birds were originally banded by the LSLBO; there were no foreign bands recovered during banding activities.

| Species | Band Number | Original Banding | | | Recap | oture | Age |
|------------------------|----------------|------------------|----------|-----|------------|----------|----------|
| | | Date | Location | Age | Date | Location | |
| Sharp-shinned Hawk | 1543-06194 | 08/08/2010 | Mig | HY | 25/05/2012 | Mig | 2 years |
| Northern Saw-whet Owl | 0924-32980 | 12/10/2010 | NSWO | HY | 17/09/2012 | NSWO | 2 years |
| Swainson's Thrush | 2341-50292 | 23/07/2010 | Mig | HY | 20/07/2012 | Mig | 2 years |
| White-throated Sparrow | 2341-50310 | 28/07/2010 | Mig | HY | 22/06/2012 | FEGU | 2 years |
| American Redstart | 2520-57803 | 13/06/2010 | FEGU | SY | 12/06/2012 | FEGU | 3 years |
| Ovenbird | 2311-97215 | 13/07/2010 | Mig | SY | 16/06/2012 | LSLPP | 3 years |
| Canada Warbler | 2500-78927 | 01/08/2009 | ROAD | HY | 29/05/2012 | Mig | 3 years |
| Canada Warbler | 2500-78957 | 23/06/2010 | ROAD | SY | 12/06/2012 | FEGU | 3 years |
| Myrtle Warbler | 2500-78980 | 22/07/2010 | FEGU | AHY | 21/05/2012 | Mig | 3+ years |
| Canada Warbler | 2560-00670 | 29/07/2010 | Mig | AHY | 04/06/2012 | Mig | 3+ years |
| Ovenbird | 2311-97325 | 11/08/2010 | Mig | AHY | 13/06/2012 | ROAD | 3+ years |
| Myrtle Warbler | 2450-46077 | 30/06/2009 | RESI | SY | 15/06/2012 | RESI | 4 years |
| American Redstart | 2470-89659 | 22/07/2008 | Mig | HY | 08/06/2012 | LSLPP | 4 years |
| Ovenbird | 1741-02809 | 26/05/2009 | Mig | SY | 13/06/2012 | ROAD | 4 years |
| Red-eyed Vireo | 2311-97027 | 27/07/2009 | Mig | AHY | 07/06/2012 | Mig | 4+ years |
| Myrtle Warbler | 2560-00445 | 29/05/2010 | Mig | ASY | 14/06/2012 | LSLPP | 4+ years |
| Myrtle Warbler | 2500-78964 | 01/07/2010 | FAWA | ASY | 14/06/2012 | FAWA | 4+ years |
| Ovenbird | 2311-97918 | 01/06/2010 | LSLPP | ASY | 14/06/2012 | LSLPP | 4+ years |
| Mourning Warbler | 2500-78965 | 02/07/2010 | RESI | ASY | 03/07/2012 | RESI | 4+ years |
| Canada Warbler | 2500-78615 | 15/07/2009 | Mig | AHY | 31/05/2012 | Mig | 4+ years |
| White-throated Sparrow | 2291-01411 | 11/06/2010 | RESI | ASY | 20/07/2012 | RESI | 4+ years |
| Ovenbird | 1741-02018 | 30/06/2008 | RESI | SY | 20/07/2012 | RESI | 5 years |
| Alder Flycatcher | 2350-49991 | 02/07/2008 | FEGU | AHY | 04/06/2012 | Mig | 5+ years |
| Canada Warbler | 2500-78568 | 07/06/2009 | Mig | ASY | 22/06/2012 | FEGU | 5+ years |
| White-throated Sparrow | 1721-63948 | 13/06/2009 | FEGU | ASY | 14/06/2012 | FAWA | 5+ years |
| White-throated Sparrow | 1721-63956 | 21/06/2009 | FAWA | ASY | 14/06/2012 | FAWA | 5+ years |
| American Redstart | 2470-89115 | 10/06/2007 | Mig | SY | 26/05/2012 | Mig | 6+ years |
| Ovenbird | 1741-02022 | 02/07/2008 | FEGU | ASY | 23/07/2012 | Mig | 6+ years |
| Canada Warbler | 2350-49332 | 29/05/2006 | Mig | SY | 23/06/2012 | ROAD | 7 years |
| American Redstart | 2330-39827 | 23/08/2006 | Mig | AHY | 12/06/2012 | FEGU | 7+ years |
| White-throated Sparrow | 1721-63308 | 06/05/2007 | Mig | ASY | 25/06/2012 | RESI | 7+ years |
| Ovenbird | 2181-79095 | 29/06/2005 | FEGU | AHY | 02/07/2012 | FAWA | 8+ years |

Table 8. Age of recaptured birds originally banded at the LSLBO before 2011.

Northern Saw-whet Owl Monitoring

The LSLBO completed its ninth consecutive year of northern saw-whet owl monitoring in 2012. This project began in 2004 to monitor northern saw-whet owl populations during fall migration through banding. Banding was conducted over 32 nights from August 29 to October 10. Mistnets were set for a total of 468 net hours. A total of 112 northern saw-whet owls were banded, which is slightly above the average of 106 (Figure 5). A barred owl was captured and banded on October 8 and represented the fourth barred owl to be banded at the station during owl banding.

One northern saw-whet owl was recaptured on September 17 that was originally banded at the LSLBO as a hatch-year bird on October 12, 2010. Two northern saw-whet owls banded at the LSLBO were recaptured at another station later in the season. The first, 0924-53098, was banded at the LSLBO on September 16 and recaptured east of Tofield, Alberta on September 27. It was estimated to have flown 260 km in 11 days. The second saw-whet was banded at the LSLBO on September 22 and recaptured at the Bearverhill Bird Observatory on October 2. Thishatch-year female flew approximately the same distance, but in 10 days.

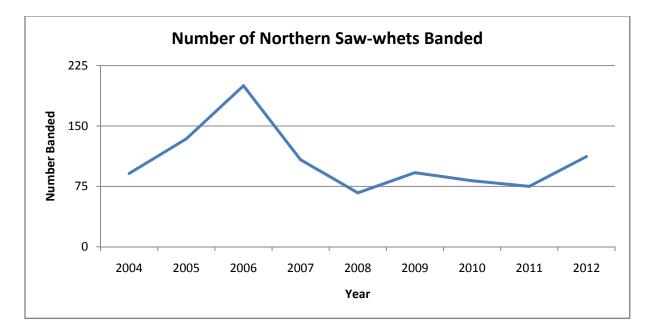


Figure 5. Total number of northern saw-whet owls banded at the LSLBO 2004-2012.

Capture Rates by Netlane- Standard versus Aerial Nets

The LSLBO traditionally operated 12 standard netlanes, using the same net types in the same locations each year for comparability. Two raised nets (aerial nets) were erected in the fall of 2010 to test if vegetation changes in the LSLBO's study area have affected capture rates and species diversity in the standard netlanes. These nets were placed parallel to and above existing nets (11 and 12) and designated 11x and 12x. The aerial nets were used during both the spring and fall migration seasons in 2012; it was the first full spring that the nets were used.

In the spring the aerial nets accounted for 30% of all bird captured. Net 11x had a capture rate of 144.8 birds/100 net hours, capturing 353 birds from 29 species. Net 12x had a capture rate of 90.3 birds/100 net hours, capturing 231 birds from 29 species. Overall the three nets positioned along the shoreline (nets 6, 11, and 11x) had the highest capture rates of all the nets in the spring (Figure 6). Net 11, which is adjacent to 11x, had a lower capture rate indicating that there may be vegetation effects at that location. The remaining nets are all located in the forest, these nets had a considerably lower capture rate than net 12x, which is the aerial net representing this area.

In the fall, the aerial nets accounted for 29% of all birds captured. Net 11x had a capture rate of 88.8 birds/100 net hours, with 357 birds captured from 40 species, and net 12x had a capture rate of 23.6 birds/100 net hours. Netlane 6 and 11x had the highest capture rates of all the nets, by a considerable amount (Figure 6). The difference between net 11 and 11x was substantial. Net 12x, unlike during the spring, did not have the highest capture rate of the forest nets during the fall; nets 1 and 5 had slightly higher capture rates.

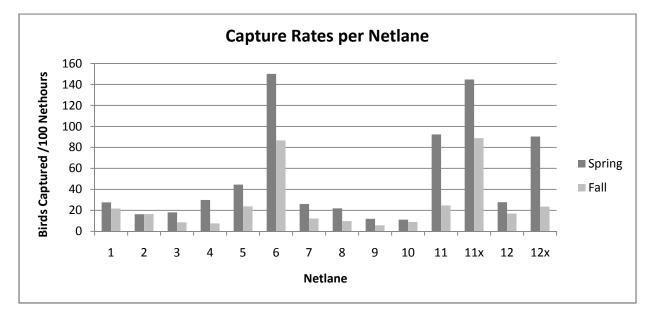


Figure 6. Capture rate per netlane during 2012 spring and fall migration.

Determining the Timing of Fall Migration

The LSLBO began a joint research project with the University of Alberta and Alberta Parks in 2010. One of the objectives of the project was to collect feathers from individuals of four species (Swainson's thrush, Tennessee warbler, Myrtle warbler, and American redstart) to use for stable isotope analysis. Stable isotopes signatures expressed in feathers can be used to determine the approximate latitude in which the feather was grown. Collecting feathers from individuals over the course of the fall should provide information of when locally produced young birds migrate out of the area and migrants from other areas move through. This would provide a stronger understanding of the migratory patterns observed at the LSLBO.

The focus in 2010 was beginning to specifically examine the timing of fall migration through stable isotopes. Feather collection was expanded in 2011 to include spring migration and the breeding season. Individuals were captured on the breeding grounds to obtain a baseline isotope signature to act as a benchmark to compare to the migratory signatures. Feathers were collected during spring migration to provide connectivity between the two migration seasons; for example, to identify if leap-frog migration is expressed by any of the focal species.

The collection in 2012 continued following the same methods in 2011. A total of 765 feathers were collected through the seasons (Table 9).

| | Spring Migration | Breeding Season | Fall Migration | Total |
|-------------------|------------------|-----------------|----------------|-------|
| Myrtle Warbler | 100 | 35 | 115 | 250 |
| Swainson's Thrush | 101 | 12 | 114 | 227 |
| American Redstart | 71 | 37 | 48 | 156 |
| Tennessee Warbler | 46 | 8 | 78 | 132 |
| Total | 318 | 92 | 355 | 765 |

Table 9. Feather samples collected from species for stable isotope analysis.

Canada Warbler Project

In 2012 the LSLBO re-initiated the Canada Warbler Project. This multi-year project was aimed at determining the habitat use of breeding Canada warblers in the Lesser Slave Lake Provincial Park. Radio-transmitters were placed on 16 individuals at four study sites throughout the Park. The transmitters were used for locating each bird to obtain location points. These points were then used to estimate the Canada warbler's territory size and delineate territory boundaries. Vegetation surveys were then conducted to describe habitats that Canada warblers use.

This was a stand-alone project and did not incorporate data and activities from normal monitoring activities. It is a question-based research project with the expectation that the results will be peer reviewed and published in a scientific journal. Results from the field work in 2012 were not prepared at the time of this report.

Staff and Volunteers

The LSLBO operated with two banders during the 2012 season. The bander-in-charge has been working at the LSLBO since 2004 and the assistant bander has been at the LSLBO since 2008. These staff members are licensed banders and responsible for all monitoring activities and the safety of all birds banded. Joining them were staff working on the Canada warbler project and Cori Klassen, the boreal educator at the BCBC. Volunteer activity was minimal and only occurred on 14 days during the year (Table 10).

| LSLBO Staff | Spring | MAPS | Fall | Total |
|------------------------|--------|------|------|-------|
| Richard Krikun | 39 | 10 | 52 | 101 |
| Nicole Linfoot | 42 | 18 | 59 | 119 |
| Scott Sandford | 7 | 1 | 3 | 11 |
| Angela Nerbas | 7 | 1 | 3 | 11 |
| Cori Klassen | | | 7 | 7 |
| Total | 95 | 20 | 124 | 239 |
| | | | | |
| Volunteers | | | | |
| Kathy Cullen | 2 | | 2 | 4 |
| Dave Cullen | 2 | | 2 | 4 |
| Karin Nelson | 1 | | | 1 |
| Meaghan Bouchard | | | 2 | 2 |
| Amelie Roberto-Charron | | | 2 | 2 |
| Melanie Quinn | | | 1 | 1 |
| Total | 5 | | 9 | 14 |

Table 10. Number of staff and volunteer days spent on monitoring projects in 2012.

Visitors and Education

Education is an important component of the LSLBO's mandate. Education programs provided by the Boreal Centre for Bird Conservation (BCBC) highlight the migration monitoring at the monitoring station for elementary, secondary, and post-secondary students. The LSLBO also hosts drop-in events for visitors of the Park to learn more about birds, migration and conservation (Table 11).

Spring is an active time for school groups coming to the lab. In 2012 the LSLBO had 9 elementary school classes, 3 junior high school classes, 2 post-secondary classes. Additional tours consisted of avid birders from Texas, and a media visit (Let's Go Outdoors). The annual Songbird Festival was held on June 2and about 80 visitors participated in the banding lab tours.

Visitation usually drops in the fall and most visitors consist of campers or tourists exploring the area. Formal banding lab tours are advertised twice a week through mid-July and August. Ten of these tours were held in the fall and were led by one of the BCBC's interpreters. Four scheduled tours for larger groups were held in the fall and included a Junior Forest Wardens outing and a group from the local senior's lodge. One of the final lab tours of the fall was a biology field class from Portage College.

| | Adults | Kids | Total |
|------------------|--------|------|-------|
| Spring Migration | 255 | 246 | 501 |
| Fall Migration | 156 | 94 | 250 |
| Total | 411 | 340 | 751 |

Table 11.Number of visitors to the banding station in 2012.

Recommendations

Migration Monitoring

• The station manual needs to be evaluated and, if needed, updated. The CMMN has requested station self-evaluations, which include the protocol update. Additions to the protocol should include addressing the operation of the aerial nets, visitors and banding-lab tours, and administrative requirements (ie. data-submission and permit renewals).

Aerial Nets

- A full analysis of the effectiveness of the aerial nets in terms of compensating species captures and vegetation changes has not been completed. This is because the aerial nets have only had one complete spring of operation. The aerial nets should continue to be used in 2013 to gather more data.
- At least two personnel should be present when operating the aerial nets.

Northern Saw-whet Owl Banding

• Traditionally staff living on site would band owls in their free time in the evenings. Field staff will not be living on site in the fall of 2013, which may affect how the owl project is conducted. Owl monitoring will need to be re-evaluated to determine the logistics of how staff will run it without interfering with normal migration monitoring activities.

Canada Warbler Project

- The Canada Warbler Project has now become its own project with a dedicated staff.
- The banding staff is required to assist with any banding necessary, so careful planning must be done to avoid conflicts between this project and other monitoring priorities.

Joint Research Project: LSLBO, University of Alberta, and Alberta Parks

- The LSLBO will continue contributing feathers from birds captured during normal migration monitoring and MAPS banding and may assist in retrieving geolocators attached to Ovenbirds in 2012. The LSLBO needs to ensure that operational support in-kind for partner projects does not take away from the LSLBO's core programs.
- The University of Alberta has established an agreement with the federal government which will streamline the permitting process and allow more flexibility with the feather collection for stable isotopes.

Visitors, education, and volunteers

- Scheduled banding lab tours should always have an educator/interpreter present; the banding staff cannot handle large groups and effectively run the monitoring station.
- Interpretation staff should be knowledgeable about the monitoring projects and their goal to effectively and accurately pass on important information to visitors at the BCBC.
- The volunteer program needs to be evaluated. The LSLBO is having a difficult time attracting and keeping long-term volunteers. The evaluation needs to include if we are advertising for volunteers correctly, if the banding staff are interacting with volunteers correctly, and if non-skilled volunteers are actually beneficial to the projects.

Acknowledgements

The 2012 field season was extremely successful. The field staff did an amazing job collecting data for a large number of projects in a relatively short period of time. This work could not have been completed without support from the LSLBO, BCBC, Lesser Slave Lake Provincial Park, and the University of Alberta and our funders.

We would like to thank the following people:

- The LSLBO Board of Directors: Bob Deacon, Terry Kristoff, Nelson Lutz, Ronda • Groom, Tyler Flockhart, Cherie Friesen, and Neal Knoot.
- Patti Campsall, the LSLBO Executive Director, for outstanding daily operational support.
- The Canada Warbler field crew, Scott Sandford and Angela Nerbas; and Tyler Flockhart for amazing logistical support during the field season.
- The BCBC education staff, Cori Klassen, Kaley Donaldson, and Adam Rooke. •
- Dr. Erin Bayne and Samuel Hache from the University of Alberta.
- Reg Arbuckle from Alberta Parks.
- The volunteers for the season, Cori Klassen, Dave and Kathy Cullen, Kerin Nelson, Meachghan Bouchard, AmelieRoboerto-Charron, and Melanie Quinn.
- The LSLBO's two most loyal visitors and highly enjoyable sources of company (especially with gifts of coffee, donuts, and fresh garden veggies): Aaron Lehman and Wayne Bowles.

Government

ÉTIINES N'AISEAUX

Further information about migration monitoring and MAPS can be found at: Canadian Migration Monitoring Network - www.bsc.org/cmmn.html Nature Counts - www.naturecounts.ca Institute for Bird Populations – www.birdpop.org

WILDLIFF



MONITORING NETWORK

Canada Summer Jobs

Summer Temporary **Employment Program**

Community Spirit Grant Program

Sara Scobie Memorial Fund

Stephen Partington





Appendix I: Annual Banding Totals

| Species | 2012 Spring Migration | 2012 MAPS | 2012 Fall Migration | 2012 Projects | 2012 Total | Grand Total 1993-2012 |
|---------------------------------|--------------------------|--------------|------------------------|------------------|---------------|--------------------------|
| "Audubon's" Warbler | | | | | | 2 |
| Alder Flycatcher | 26 | | 39 | | 65 | 1747 |
| American Goldfinch | | | | | | 1 |
| American Kestrel | 1 | | | | 1 | 2 |
| American Magpie | | | | | | 1 |
| American Pipit | | | | | | 18 |
| American Redstart | 89 | 23 | 57 | 15 | 184 | 6711 |
| American Robin | 17 | 6 | 5 | | 28 | 358 |
| American Tree Sparrow | 46 | | 16 | | 62 | 508 |
| Baltimore Oriole | | | | | | 5 |
| Bay-breasted Warbler | 1 | | 4 | | 5 | 110 |
| Barred Owl | | | | 1 | 1 | 4 |
| Black-and-White Warbler | 41 | 8 | 59 | | 108 | 1596 |
| Blackburnian Warbler | | | | | | 2 |
| Black-capped Chickadee | 2 | 1 | 52 | | 55 | 844 |
| Blackpoll Warbler | 19 | | 7 | | 26 | 321 |
| Black-throated Green Warbler | | | 3 | | 3 | 119 |
| Blue Jay | 1 | | 1 | | 2 | 55 |
| Blue-headed Vireo | 1 | | | | 1 | 75 |
| Boreal Chickadee | | | | | | 25 |
| Brown Creeper | | 2 | 12 | | 14 | 52 |
| Brown -headed Cowbird | | | | | | 5 |
| Canada Warbler | 31 | 25 | 42 | 15 | 113 | 2658 |
| Cape May Warbler | 1 | | 7 | | 8 | 136 |
| Cedar Waxwing | | | 10 | | 10 | 140 |
| Chestnut-sided Warbler | | | | | | 21 |
| Chipping Sparrow | 60 | 2 | 4 | | 66 | 1913 |
| Clay-colored Sparrow | 31 | | 3 | | 34 | 849 |
| Common Grackle | | | | | | 4 |
| Common Yellowthroat | 12 | 1 | 11 | | 24 | 613 |
| Connecticut Warbler | | | | | | 24 |
| Cooper's Hawk | | | | | | 2 |
| Downy Woodpecker | | | 3 | | 3 | 60 |
| Eastern Kingbird | | | | | | 1 |
| Eastern Phoebe | 2 | | | | 2 | 131 |
| Evening Grosbeak | | | | | | 1 |
| Fox Sparrow | 4 | | | | 4 | 74 |
| Golden-crowned Kinglet | | | 4 | | 4 | 76 |
| Gray Catbird | 1 | | | | 1 | 6 |
| Gray Jay | | | | | | 3 |
| Gray-cheeked Thrush | 35 | | 4 | | 39 | 158 |

| Species | 2012 Spring Migration | 2012 MAPS | 2012 Fall Migration | 2012 Projects | 2012 Total | Grand Total 1993-2012 |
|------------------------|--------------------------|--------------|------------------------|------------------|---------------|--------------------------|
| Hairy Woodpecker | | | 4 | | 4 | 26 |
| Harris's Sparrow | | | | | | 6 |
| Hermit Thrush | 17 | | 26 | | 43 | 475 |
| Hoary Redpoll | | | | | | 1 |
| House Wren | 2 | | | | 2 | 26 |
| Lapland Longspur | | | | | | 5 |
| Lazuli Bunting | | | | | | 1 |
| Le Conte's Sparrow | | | | | | 6 |
| Least Flycatcher | 51 | 1 | 26 | | 78 | 2005 |
| Lincoln's Sparrow | 6 | 1 | 5 | | 12 | 768 |
| Long-eared Owl | | | | | | 1 |
| MacGillivray's Warbler | | | | | | 2 |
| Magnolia Warbler | 8 | | 9 | | 17 | 898 |
| Marsh Wren | | | - | | | 3 |
| Mourning Warbler | 7 | 4 | 32 | | 43 | 991 |
| Nashville Warbler | 1 | | | | 1 | 4 |
| Northern Flicker | 1 | | 2 | | 3 | 27 |
| Northern Goshawk | | | | | | 1 |
| Northern Mockingbird | | | | | | 1 |
| Northern Pygmy-Owl | | | | | | 2 |
| Northern Saw-whet Owl | | | | 112 | 112 | 967 |
| Northern Shrike | | | | | | 1 |
| Northern Waterthrush | 16 | | 14 | | 30 | 675 |
| Orange-crowned Warbler | 22 | | 53 | | 75 | 1132 |
| Olive-sided Flycatcher | | | | | | 2 |
| Ovenbird | 32 | 25 | 174 | 24 | 255 | 2984 |
| Western Palm Warbler | 12 | | 5 | | 17 | 232 |
| Philadephia Vireo | | | 4 | | 4 | 168 |
| Pileated Woodpecker | | | 1 | | 1 | 3 |
| Pine Siskin | | | | | | 164 |
| Purple Finch | | | 8 | | 8 | 75 |
| Red-breasted Nuthatch | | | 4 | | 4 | 121 |
| Red-eyed Vireo | 9 | 3 | 22 | | 34 | 663 |
| Red-winged Blackbird | | | 1 | | 1 | 6 |
| Rose-breasted Grosbeak | | 1 | 11 | | 12 | 292 |
| Ruby-crowned Kinglet | 7 | - | 9 | | 16 | 354 |
| Savannah Sparrow | 9 | | 7 | | 16 | 172 |
| Sharp-shinned Hawk | 3 | | 34 | | 37 | 446 |
| Slate-colored Junco | 174 | | 43 | | 217 | 1410 |
| Song Sparrow | 7 | | 2 | | 9 | 259 |
| Swainson's Thrush | 403 | 16 | 146 | 3 | 568 | 4693 |
| Swamp Sparrow | | 1 | 5 | | 6 | 171 |
| Tennessee Warbler | 82 | 3 | 84 | 5 | 174 | 4738 |
| Three-toed Woodpecker | 52 | | <u> </u> | ` | | 1 |
| Townsend's Solitaire | | | | | | 1 |
| Varied Thrush | | | | | | 6 |

| Species | 2012 Spring Migration | 2012 MAPS | 2012 Fall Migration | 2012 Projects | 2012 Total | Grand Total 1993-2012 |
|--------------------------------|--------------------------|--------------|------------------------|------------------|---------------|--------------------------|
| Veery | | | | | | 7 |
| Vesper Sparrow | | | | | | 3 |
| Warbling Vireo | | | 2 | | 2 | 59 |
| Western Tanager | | | 2 | | 2 | 150 |
| Western Wood-Pewee | | | | | | 22 |
| White-breasted Nuthatch | | | 2 | | 2 | 10 |
| Gambel's White-crowned Sparrow | 21 | | 12 | | 33 | 426 |
| White-throated Sparrow | 72 | 27 | 32 | | 131 | 2457 |
| White-winged Crossbill | | | | | | 1 |
| Wilson's Warbler | 3 | | 6 | | 9 | 494 |
| Winter Wren | | 4 | 1 | | 5 | 47 |
| Yellow Warbler | 44 | 1 | 97 | | 142 | 3299 |
| Yellow-bellied Flycatcher | 1 | | | | 1 | 73 |
| Yellow-bellied Sapsucker | 3 | 3 | 1 | | 7 | 149 |
| Yellow-rumped Warbler | 509 | 9 | 359 | 19 | 896 | 9404 |
| | | | | | | |
| Total number of birds banded | 1943 | 167 | 1588 | 194 | 3892 | 61017 |
| Total number of species banded | 47 | 22 | 56 | 8 | 66 | 102 |

Appendix II: 2012 Migration Sight Records

The following list includes the seasonal first and last dates, the maximum total, and the number of days that each of the 166 species was encountered in 2012. Seasonal first and last dates, maximum totals, and the number of days encounter during 2011 have been included as a comparison in dates between the two seasons. All sightings are from the LSLBO during normal migration monitoring activities.

Common Loon:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------------|--------------------|-------------------|
| First sighting | May 3- 3 | May 2 - 1 | Jul 12 - 2 | Jul 12 - 3 |
| Last Sighting | Jun 10 - 1 | May 15 - 3 | Sep 28 - 1 | Sep 27 - 1 |
| Peak Day | Jun 3 - 45 | May 13 - 8 | Aug 26 - 10 | Aug 9 - 24 |
| # of Days Sighted | 33 | 11 | 52 | 46 |

Horned Grebe:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|---------------------|--------------------|------------|
| First sighting | | May 3 - 1 | Aug 16 - 3 | Aug 27 - 4 |
| Last Sighting | | May 13 - 2 | Sep 28 - 1 | Sep 30 - 4 |
| Peak Day | | May 11&13- 3 | Sep 26 - 13 | Sep 5 - 7 |
| # of Days Sighted | 0 | 3 | 28 | 3 |

Red-necked Grebe:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|---------------|-------------|------------|
| First sighting | May 18 - 6 | May 11 - 3 | Jul 23 - 2 | Jul 13 - 1 |
| Last Sighting | Jun 4 - 2 | May 13 - 3 | Sep 28 - 2 | Sep 23 - 3 |
| Peak Day | | All dates - 3 | Sep 24 - 11 | Sep 8 - 10 |
| # of Days Sighted | 15 | 2 | 50 | 53 |

Western Grebe:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-------------------|---------------|
| First sighting | May 18 - 1 | | Aug 26 - 2 | Jul 18 - 1 |
| Last Sighting | | | Sep 26 - 1 | Sep 30 - 4 |
| Peak Day | | | Aug26&Sep15- 2 | Aug5&Sep24- 5 |
| # of Days Sighted | 1 | 0 | 6 | 26 |

American White Pelican:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|--------------------|--------------------|
| First sighting | May 17 - 9 | | Jul 29 - 1 | Jul 12 - 3 |
| Last Sighting | Jun 2 - 5 | | Sep 24 - 1 | Sep 20 - 1 |
| Peak Day | | | Aug 20 - 10 | Aug 31 - 10 |
| # of Days Sighted | 8 | 0 | 29 | 47 |

Double-crested Cormorant:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------------|------------|-------------------|
| First sighting | May 7 - 2 | Apr 26 - 1 | Sep 27 - 1 | Jul 13 - 1 |
| Last Sighting | May 30 - 10 | May 11 - 1 | | Sep 7 - 1 |
| Peak Day | | May 6 - 19 | | Jun 14 - 8 |
| # of Days Sighted | 4 | 6 | 1 | 6 |

Great Blue Heron:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|---------------|------------------|------------------|
| First sighting | Apr 3 - 3 | Apr 19 - 1 | Aug 2 - 1 | Jun 30 - 1 |
| Last Sighting | | May 14 - 1 | Sep 14 - 1 | Sep 3 - 1 |
| Peak Day | | All dates - 1 | Aug 5 - 2 | Aug 3 - 2 |
| # of Days Sighted | 1 | 4 | 10 | 6 |

Tundra Swan

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|---------------------|-----------|-----------|
| First sighting | Apr 23 - 114 | Apr 22 - 1 | | |
| Last Sighting | May 8 - 2 | May 7 - 2 | | |
| Peak Day | | Apr 24 - 177 | | |
| # of Days Sighted | 7 | 8 | 0 | 0 |

Greater White-fronted Goose:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|----------------------|--------------------|---------------------|
| First sighting | Apr 23 - 3 | Apr 23 - 116 | Aug 31 - 20 | Sep 5 - 70 |
| Last Sighting | May 8 - 520 | May 10 - 10 | Sep 27 - 1 | Sep 23 - 30 |
| Peak Day | May 7 - 3310 | May 7 - 13325 | Sep 22 - 90 | Sep 15 - 473 |
| # of Days Sighted | 11 | 10 | 7 | 5 |

Snow Goose:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|---------------------|--------------------|--------------------|
| First sighting | Apr 30 - 1 | May 2 - 2 | Sep 27 - 90 | Sep 25 - 45 |
| Last Sighting | May 8 - 2 | May 5 - 8 | | |
| Peak Day | May 1 - 240 | May 7 - 3747 | | |
| # of Days Sighted | 5 | 7 | 1 | 1 |

Canada Goose:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|---------------------|--------------------|--------------------|
| First sighting | Apr 23 - 4 | Apr 22 - 63 | Aug 12 - 16 | Jul 15 - 3 |
| Last Sighting | Jun 9 - 8 | May 14 - 2 | Sep 28 - 6 | Sep 25 - 14 |
| Peak Day | May 8 - 115 | May 10 - 256 | Sep 14 - 80 | Sep 12 - 69 |
| # of Days Sighted | 42 | 23 | 19 | 19 |

Green-winged Teal:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|--------------------|-----------|-----------|
| First sighting | May 7 - 3 | May 2 - 40 | | |
| Last Sighting | Jun 6 - 1 | May 13 - 49 | | |
| Peak Day | May 8 - 14 | | | |
| # of Days Sighted | 10 | 8 | 0 | 0 |

Mallard:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|-------------------|--------------------|--------------------|
| First sighting | Apr 23 - 3 | Apr 25 - 10 | Jul 12 - 3 | Jun 26 - 1 |
| Last Sighting | Jun 8 - 11 | May 15 - 6 | Sep 29 - 4 | Sep 28 - 2 |
| Peak Day | Apr 29 - 172 | May 2 - 30 | Aug 20 - 35 | Aug 19 - 10 |
| # of Days Sighted | 41 | 21 | 32 | 14 |

Northern Pintail:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|--------------------|-----------|-----------|
| First sighting | Apr 29 - 4 | May 3 - 2 | | |
| Last Sighting | May 12 - 10 | May 13 - 38 | | |
| Peak Day | May 5 - 20 | | | |
| # of Days Sighted | 3 | 3 | 0 | 0 |

Blue-winged Teal:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|----------------------|--------------------|-----------|-----------|
| First sighting | May 11 - 1 | May 7 - 1 | | |
| Last Sighting | May 26 - 1 | May 14 - 2 | | |
| Peak Day | May 15&17 - 4 | May 13 - 21 | | |
| # of Days Sighted | 5 | 5 | 0 | 0 |

Northern Shoveler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|--------------------|-----------|-----------|
| First sighting | May 5 - 10 | May 3 - 4 | | |
| Last Sighting | May 8 - 38 | May 15 - 1 | | |
| Peak Day | | May 13 - 44 | | |
| # of Days Sighted | 4 | 6 | 0 | 0 |

Gadwall:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------------|-----------|-----------|
| First sighting | May 8 - 1 | May 13 - 1 | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 1 | 0 | 0 |

American Wigeon:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------------|-------------------|-----------|
| First sighting | Apr 24 - 20 | May 2 - 80 | Jul 28 - 1 | |
| Last Sighting | Jun 10 - 1 | Ma 15 - 2 | | |
| Peak Day | May 5 - 47 | | | |
| # of Days Sighted | 28 | 13 | 1 | 0 |

Ring-necked Duck:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------------|-----------|-----------|
| First sighting | May 16 - 5 | May 3 - 1 | | |
| Last Sighting | | May 13 - 8 | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 5 | 0 | 0 |

Greater Scaup:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|--------------------|-----------|-----------|
| First sighting | May 6 - 2 | May 8 - 7 | | |
| Last Sighting | May 8 - 7 | May 13 - 10 | | |
| Peak Day | | | | |
| # of Days Sighted | 2 | 2 | 0 | 0 |

Long-tailed Duck:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|--------------------|-----------|-----------|
| First sighting | May 4 - 15 | May 13 - 92 | | |
| Last Sighting | May 26 - 1 | | | |
| Peak Day | May 17 - 318 | | | |
| # of Days Sighted | 12 | 1 | 0 | 0 |

Surf Scoter:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|--------------------|-----------|------------------|
| First sighting | May 7 - 3 | May 10 - 3 | | Aug 6 - 2 |
| Last Sighting | May 31 - 7 | May 14 - 55 | | |
| Peak Day | May 18 - 137 | | | |
| # of Days Sighted | 14 | 3 | 0 | 1 |

White-winged Scoter:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|------------|------------------|
| First sighting | May 6 - 2 | May 14 - 7 | Jul 16 - 3 | Aug 1 - 2 |
| Last Sighting | May 21 - 2 | May 15 - 8 | Sep 24 - 7 | Aug 18 - 1 |
| Peak Day | May 16 - 15 | | | |
| # of Days Sighted | 7 | 2 | 4 | 2 |

Common Goldeneye:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|--------------------|--------------------|--------------------|
| First sighting | Apr 23 - 2 | Apr 24 - 1 | Jul 13 - 2 | Jun 17 - 1 |
| Last Sighting | Jun 9 - 2 | May 15 - 14 | Sep 29 - 6 | Sep 30 - 6 |
| Peak Day | May 9 - 65 | May 13 - 40 | Sep 26 - 60 | Sep 27 - 19 |
| # of Days Sighted | 47 | 20 | 29 | 29 |

Bufflehead:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------|--------------------|--------------------|
| First sighting | May 2 - 7 | May 3 - 1 | Aug 8 - 1 | Jun 13 - 1 |
| Last Sighting | Jun 1 - 1 | May 15 - 3 | Sep 29 - 30 | Sep 30 - 7 |
| Peak Day | May 6&9 - 8 | May 10 - 5 | Sep 28 - 32 | Sep 18 - 59 |
| # of Days Sighted | 13 | 9 | 12 | 16 |

Common Merganser:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|--------------------|-------------------|
| First sighting | Apr 23 - 6 | Apr 23 - 2 | Jul 15 - 3 | Jun 12 - 1 |
| Last Sighting | Jun 8 - 41 | May 15 - 2 | Sep 29 - 2 | Sep 30 - 1 |
| Peak Day | May 31 - 49 | May 2 - 21 | Jul 18 - 32 | Jun 18 - 7 |
| # of Days Sighted | 41 | 19 | 53 | 48 |

Red-breasted Merganser:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------------|-----------|-----------|
| First sighting | Apr 28 - 1 | May 6 - 4 | | |
| Last Sighting | Jun 7 - 6 | May 15 - 2 | | |
| Peak Day | May 9 - 47 | May 10 - 8 | | |
| # of Days Sighted | 17 | 8 | 0 | 0 |

Osprey:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|------------------|------------------|
| First sighting | May 4 - 1 | | Jul 18 - 1 | Jul 13- 1 |
| Last Sighting | May 29 - 1 | | Sep - 5 | Aug 23 - 1 |
| Peak Day | | | Aug 2 - 3 | Aug 1 - 5 |
| # of Days Sighted | 2 | 0 | 19 | 15 |

Bald Eagle:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------------|---------------------|--------------------|
| First sighting | Apr 24 - 1 | Apr 22 - 1 | Jul 12 - 1 | Jul 12 - 2 |
| Last Sighting | Jun 10 - 2 | May 15 - 2 | Sep 29 - 3 | Sep 30 - 5 |
| Peak Day | May 18 - 4 | May 14 - 4 | Sep 7&12 - 5 | 5 dates - 5 |
| # of Days Sighted | 41 | 24 | 78 | 77 |

Northern Harrier:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|---------------------|--------------------|
| First sighting | Apr 23 - 4 | Apr 22 - 5 | Jul 29 - 1 | Aug 7 - 1 |
| Last Sighting | May 21 - 2 | May 15 - 2 | Sep 27 - 4 | Sep 30 - 1 |
| Peak Day | Apr 24 - 21 | May 2 - 19 | Sep 8&27 - 4 | 3 dates - 3 |
| # of Days Sighted | 22 | 19 | 21 | 23 |

Sharp-shinned Hawk:

| ^ | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|------------|------------|
| First sighting | Apr 24 - 1 | Apr 22 - 1 | Jul 22 - 1 | Jul 26 - 1 |
| Last Sighting | Jun 7 - 1 | May 15 - 1 | Sep 27 - 4 | Sep 30 - 3 |
| Peak Day | 3 dates - 2 | Apr 28 - 8 | Sep 8 - 25 | Sep 3 - 19 |
| # of Days Sighted | 13 | 18 | 46 | 48 |

Cooper's Hawk:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|-------------|-----------|-----------|
| First sighting | May 7 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 0 |

Northern Goshawk:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|-------------|---------------|---------------|
| First sighting | May 6 - 1 | May 9 - 1 | Aug 1 - 1 | Aug 29 - 1 |
| Last Sighting | | May 12 - 1 | Sep 19 - 1 | Sep 21 - 1 |
| Peak Day | | | All dates - 1 | All dates - 1 |
| # of Days Sighted | 1 | 2 | 8 | 7 |

Broad-winged Hawk:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-------------------|-----------|
| First sighting | May 15 - 2 | Apr 25 - 1 | Aug 15 - 1 | |
| Last Sighting | May 29 - 1 | May 12 - 1 | Aug 27 - 1 | |
| Peak Day | | | | |
| # of Days Sighted | 4 | 2 | 2 | 0 |

Red-tailed Hawk:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|---------------|---------------|---------------|
| First sighting | Apr 23 - 2 | Apr 25 - 1 | Aug 22 - 1 | Jul 13 - 1 |
| Last Sighting | May 6 - 1 | May 13 - 1 | Sep 7 - 1 | Sep 3 - 1 |
| Peak Day | Apr 30 - 3 | All dates - 1 | All dates - 1 | All dates - 1 |
| # of Days Sighted | 4 | 4 | 4 | 3 |

Rough-legged Hawk:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|-------------|------------|-----------|
| First sighting | Apr 25 - 1 | Apr 25 - 1 | Sep 17 - 1 | |
| Last Sighting | May 12 - 1 | | | |
| Peak Day | All dates - 1 | | | |
| # of Days Sighted | 5 | 1 | 1 | 0 |

American Kestrel:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|---------------|-------------|-----------|
| First sighting | Apr 29 - 1 | Apr 22 - 1 | Aug 26 - 1 | |
| Last Sighting | May 17 - 1 | May 13 - 1 | Sep 15 - 1 | |
| Peak Day | All dates - 1 | All dates - 1 | Sep 8&9 - 2 | |
| # of Days Sighted | 4 | 4 | 4 | 0 |

Merlin:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-----------------|-------------------|------------------|----------------------|
| First sighting | Apr 23 - 1 | Apr 22 - 1 | Jul 14 - 1 | Jul 15 - 1 |
| Last Sighting | Jun 10 - 2 | May 14 - 1 | Sep 28 - 1 | Sep 25 - 1 |
| Peak Day | Apr29& Jun10- 2 | Apr 27 - 3 | Aug 1 - 4 | Aug 10&24 - 3 |
| # of Days Sighted | 22 | 22 | 42 | 38 |

Peregrine Falcon:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|---------------|------------|-----------|
| First sighting | Apr 24 - 1 | Apr 25 - 1 | Sep 21 - 1 | |
| Last Sighting | May 15 - 2 | May 12 - 1 | | |
| Peak Day | | All dates - 1 | | |
| # of Days Sighted | 5 | 5 | 1 | 0 |

Ruffed Grouse:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|--------------------|-------------------|--------------------|
| First sighting | 23 Apr - 1 | Apr 23 - 1 | Sep 1 - 1 | Jul 13 - 1 |
| Last Sighting | Jun 8 - 1 | May 14 - 2 | Sep 28 - 1 | Sep 28 - 1 |
| Peak Day | Apr 24 - 3 | 3 dates - 2 | Sep 18 - 3 | 3 dates - 2 |
| # of Days Sighted | 38 | 11 | 18 | 10 |

Sora:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-----------|-----------|
| First sighting | May 29 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 0 |

Sandhill Crane:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|--------------------|---------------------|-------------|
| First sighting | Apr 23 - 80 | Apr 24 - 8 | Sep 1 - 13 | Jul 26 - 2 |
| Last Sighting | May 8 - 330 | May 13 - 4 | Sep 26 - 4 | Sep 8 - 100 |
| Peak Day | | May 2 - 280 | Sep 16 - 160 | |
| # of Days Sighted | 5 | 12 | 7 | 3 |

Semipalmated Plover:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-----------|-----------|
| First sighting | May 13 - 2 | May 9 - 1 | | |
| Last Sighting | May 14 - 2 | | | |
| Peak Day | | | | |
| # of Days Sighted | 2 | 1 | 0 | 0 |

Killdeer:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|---------------------|-----------|-----------|
| First sighting | Apr 24 - 2 | Apr 26 - 1 | | |
| Last Sighting | May 30 - 1 | May 13 - 2 | | |
| Peak Day | May 12 - 4 | May 7&13 - 2 | | |
| # of Days Sighted | 10 | 10 | 0 | 0 |

American Avocet:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|-------------|-----------|-----------|
| First sighting | May 6 - 2 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 0 | 0 | 0 | 0 |

Greater Yellowlegs:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|-------------------|---------------|---------------|
| First sighting | Apr 23 - 1 | Apr 26 - 1 | Aug 5 - 1 | Jul 13 - 1 |
| Last Sighting | May 22 - 1 | May 13 - 2 | Sep 24 - 1 | Sep 25 - 1 |
| Peak Day | May 14 - 245 | May 3 - 28 | Aug20&Sep19-2 | All dates - 1 |
| # of Days Sighted | 17 | 15 | 7 | 5 |

Lesser Yellowlegs:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------------|-----------|-----------|
| First sighting | May 13 - 2 | May 3 - 45 | | |
| Last Sighting | May 14 - 1 | | | |
| Peak Day | | | | |
| # of Days Sighted | 2 | 1 | 0 | 0 |

Solitary Sandpiper:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-----------|-----------|
| First sighting | May 14 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 0 |

Spotted Sandpiper:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|--------------------|-------------------|-------------------|
| First sighting | May 5 - 1 | May 6 - 4 | Jul 12 - 1 | Jul 13 - 3 |
| Last Sighting | Jun 10 - 2 | May 14 - 1 | Sep 9 - 3 | Sep 3 - 4 |
| Peak Day | May 16 - 46 | May 13 - 25 | Aug 15 - 7 | Aug 11 - 8 |
| # of Days Sighted | 35 | 6 | 39 | 32 |

Long-billed Curlew:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-----------|-----------|
| First sighting | May 14 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 0 | 0 | 0 | 0 |

Upland Sandpiper:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-------------------|-----------|
| First sighting | | | Aug 21 - 1 | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 0 | 0 | 0 | 0 |

Least Sandpiper:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-----------|-----------|
| First sighting | May 14 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 0 |

Baird's Sandpiper:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-------------------|-----------|
| First sighting | | | Sep 6 - 40 | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 0 | 0 | 1 | 0 |

Pectoral Sandpiper:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-----------|-----------|
| First sighting | | | Jul 28- 1 | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 0 | 0 | 1 | 0 |

Long-billed Dowitcher:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|-------------|-----------|-----------|
| First sighting | May 14 - 70 | | | |
| Last Sighting | May 15 - 7 0 | | | |
| Peak Day | | | | |
| # of Days Sighted | 2 | 0 | 0 | 0 |

Common Snipe:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|---------------|-----------|-----------|
| First sighting | Apr 24 - 1 | Apr 26 - 1 | | |
| Last Sighting | May 14 0 1 | May 9 - 1 | | |
| Peak Day | Apr 29 - 2 | All dates - 1 | | |
| # of Days Sighted | 5 | 7 | 0 | 0 |

Bonaparte's Gull:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|--------------------|------------|-----------|
| First sighting | May 5 - 4 | May 13 - 51 | Sep 11 - 1 | |
| Last Sighting | May 14 - 5 | May 15 - 1 | | |
| Peak Day | May 12 - 25 | | | |
| # of Days Sighted | 4 | 2 | 1 | 0 |

Franklin's Gull:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|---------------------|---------------------|--------------------|
| First sighting | Apr 23 - 5 | Apr 26 - 25 | Jul 12 - 11 | Jul 13 - 1 |
| Last Sighting | May 29 - 11 | May 15 - 74 | Sep 13 - 1 | Aug 28 - 15 |
| Peak Day | May 14 - 180 | May 13 - 404 | Aug 2 - 5325 | Aug 7 - 318 |
| # of Days Sighted | 29 | 15 | 32 | 19 |

Mew Gull:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|--------------------|-----------|-----------|
| First sighting | Apr 29 - 3 | Apr 24 - 1 | | |
| Last Sighting | May 14 - 5 | May 15 - 1 | | |
| Peak Day | May 13 - 10 | May 13 - 40 | | |
| # of Days Sighted | 10 | 9 | 0 | 0 |

Ring-billed Gull:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------------|---------------------|---------------------|
| First sighting | Apr 29 - 26 | Apr 26 - 3 | Jul 14 - 2 | Jul 16 - 16 |
| Last Sighting | Jun 3 - 1 | May 15 - 3 | Sep 29 - 4 | Sep 24 - 1 |
| Peak Day | May 9 - 40 | May 2 - 18 | Jul 31 - 162 | Aug 15 - 151 |
| # of Days Sighted | 14 | 12 | 52 | 27 |

California Gull:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------------|------------------|------------|
| First sighting | | May 2 - 2 | Aug 9 - 1 | Jul 25 - 1 |
| Last Sighting | | May 13 - 2 | Sep 27 - 1 | |
| Peak Day | | | Sep 3 - 2 | |
| # of Days Sighted | 0 | 2 | 7 | 1 |

Herring Gull:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|--------------------|--------------------|------------|
| First sighting | Apr 24 - 2 | May 4 - 2 | Jul 17 - 1 | Jul 20 - 3 |
| Last Sighting | May 22 - 1 | May 15 - 4 | Sep 29 - 2 | Sep 27 - 5 |
| Peak Day | May 5 - 9 | May 13 - 52 | Aug 25 - 18 | Sep 17 - 7 |
| # of Days Sighted | 18 | 10 | 27 | 18 |

Caspian Tern:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-----------|-----------|
| First sighting | May 17 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 0 |

Common Tern:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|----------------------|-------------------|--------------------|
| First sighting | May 7 - 1 | May 12 - 2 | Jul 14 - 4 | Jul 13 - 3 |
| Last Sighting | Jun 9 - 1 | May 14 - 1 | Sep 15 - 3 | Aug 28 - 3 |
| Peak Day | May 23 - 9 | May 12&13 - 2 | | 3 dates - 3 |
| # of Days Sighted | 19 | 3 | 3 | 8 |

Forster's Tern:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------------|-------------------|-----------|
| First sighting | | May 13 - 1 | Aug 27 - 6 | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 0 | 1 | 1 | 0 |

Mourning Dove:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|-------------------|-----------|-----------|
| First sighting | May 30 - 1 | May 12 - 1 | | |
| Last Sighting | Jun 5 - 1 | | | |
| Peak Day | All dates - 1 | | | |
| # of Days Sighted | 3 | 1 | 0 | 0 |

Long-eared Owl:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|-------------|-----------|-----------|
| First sighting | May 5 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 0 |

Barred Owl:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|------------|-----------|
| First sighting | Apr 29 - 1 | | Sep 19 - 1 | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 1 | 0 |

Common Nighthawk:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|-------------|-----------|-------------------|
| First sighting | Jun 4 - 1 | | | Aug 29 - 1 |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 1 |

Ruby-throated Hummingbird:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|-------------|-----------|---------------|
| First sighting | Jun 2 - 3 | | | Jul 13 - 1 |
| Last Sighting | | | | Aug 21 - 1 |
| Peak Day | | | | All dates - 1 |
| # of Days Sighted | 1 | 0 | 0 | 3 |

Belted Kingfisher:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-----------------|-------------|-------------------|---------------|
| First sighting | 23 Apr - 1 | Apr 27 - 1 | Jul 16 - 1 | Jul 12 - 1 |
| Last Sighting | Jun 8 - 1 | May 13 - 1 | Sep 19 - 1 | Sep 25 - 1 |
| Peak Day | Apr30&May 1 - 2 | May 9 - 5 | Aug 20 - 3 | All dates - 1 |
| # of Days Sighted | 20 | 11 | 24 | 16 |

Yellow-bellied Sapsucker:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|-------------------|-------------------|
| First sighting | Apr 24 - 3 | May 2 - 1 | Aug 16 - 1 | Jul 13 - 2 |
| Last Sighting | May 31 - 1 | May 15 - 1 | | Sep 11 - 1 |
| Peak Day | 3 Dates - 4 | May 12 - 5 | | Jul 15 - 3 |
| # of Days Sighted | 28 | 14 | 1 | 7 |

Downy Woodpecker:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|-------------------|----------------------|-------------------|
| First sighting | Apr 29 - 1 | May 9 - 1 | Jul 16 - 1 | Jul 19 - 1 |
| Last Sighting | May 15 - 1 | May 11 - 1 | Sep 28 - 1 | Sep 24 - 1 |
| Peak Day | All dates - 1 | | Sep 15&23 - 2 | Sep 21 - 2 |
| # of Days Sighted | 6 | 2 | 15 | 14 |

Hairy Woodpecker:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|---------------|-------------------|-------------------|
| First sighting | May 5 - 1 | May 2 - 1 | Jul 12 - 1 | Jul 17 - 2 |
| Last Sighting | Jun 5 - 1 | May 15 - 1 | Sep 27 - 1 | Sep 27 - 1 |
| Peak Day | All dates - 1 | All dates - 1 | Jul 16 - 3 | |
| # of Days Sighted | 8 | 3 | 26 | 19 |

Northern Flicker:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|------------------|------------------|
| First sighting | Apr 23 - 26 | Apr 25 - 5 | Jul 13 - 1 | Jul 17 - 1 |
| Last Sighting | Jun 8 - 1 | May 15 - 1 | Sep 24 - 1 | Sep 21 - 1 |
| Peak Day | Apr 29 - 86 | May 2 - 29 | Aug 3 - 3 | Sep 8 - 2 |
| # of Days Sighted | 41 | 21 | 20 | 12 |

Three-toed Woodpecker:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-----------|-----------|
| First sighting | Apr 30 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 0 |

Pileated Woodpecker:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|--------------------|------------------|----------------------|
| First sighting | Apr 23 - 1 | Apr 22 - 1 | Jul 14 - 1 | Jul 30 - 1 |
| Last Sighting | May 30 - 1 | May 6 - 2 | Sep 23 - 1 | Sep 27 - 1 |
| Peak Day | May 24 - 2 | May 2&6 - 2 | Sep 9 - 2 | Aug 11&22 - 2 |
| # of Days Sighted | 10 | 8 | 11 | 18 |

Western Wood-pewee:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|------------------|---------------|-------------|-------------------|---------------|
| First sighting | May 20 - 1 | | Jul 21 - 1 | Jul 17 - 1 |
| Last Sighting | Jun 8 - 1 | | Aug 6 - 1 | Sep 23 - 1 |
| Peak Day | All dates - 1 | | | All dates - 1 |
| # of Day Sighted | 4 | 0 | 2 | 6 |

Yellow-bellied Flycatcher:

| - | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-----------|-----------|
| First sighting | May 25 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 0 |

Alder Flycatcher:

| ¥ | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------|-------------|----------------------|-----------------|
| First sighting | May 21 - 6 | | Jul 12 - 2 | Jul 12 - 1 |
| Last Sighting | Jun 10 - 2 | | Aug 31 - 2 | Sep 15 - 1 |
| Peak Day | May21&Jun4-6 | | Aug 14&15 - 5 | Jun26,Aug10 - 4 |
| # of Days Sighted | 17 | 0 | 25 | 25 |

Least Flycatcher:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|--------------------|----------------|------------------|
| First sighting | May 7 - 1 | May 8 - 1 | Jul 12 - 1 | Jul 13 - 1 |
| Last Sighting | Jun 8 - 2 | May 15 - 3 | Sep 6 - 2 | Sep 8 - 1 |
| Peak Day | May 13&12- 28 | May 13 - 11 | Jul25&Aug4 - 7 | Aug 8 - 5 |
| # of Days Sighted | 18 | 6 | 36 | 36 |

Eastern Phoebe:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|----------------|------------------|-------------------|---------------|
| First sighting | Apr 25 - 1 | Apr 22 - 1 | Jul 26 - 1 | Jul 12 - 1 |
| Last Sighting | Jun 3 - 1 | May 13 - 1 | Sep 7 - 1 | Aug 20 - 1 |
| Peak Day | Apr29&May1 - 3 | May 3 - 4 | Aug 20 - 2 | All dates - 1 |
| # of Days Sighted | 22 | 17 | 8 | 3 |

Say's Phoebe:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|-------------------|-------------------|
| First sighting | May 5 - 1 | May 3 - 1 | Aug 20 - 2 | Aug 26 - 1 |
| Last Sighting | May 18 - 1 | May 13 - 5 | | |
| Peak Day | May 13 - 21 | | | |
| # of Days Sighted | 10 | 3 | 1 | 1 |

Eastern Kingbird:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|-------------------|--------------------|--------------------|
| First sighting | May 16 - 2 | May 11 - 5 | Jul 18 - 1 | Aug 3 - 1 |
| Last Sighting | Jun 3 - 8 | | Aug 27 - 6 | Sep 15 - 5 |
| Peak Day | | | Aug 20 - 29 | Aug 24 - 24 |
| # of Days Sighted | 5 | 1 | 8 | 13 |

Blue-headed Vireo:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------|---------------|-------------------|
| First sighting | May 9 - 2 | | Jul 18 - 1 | Jul 18 - 1 |
| Last Sighting | May 23 - 1 | | Sep 23 - 1 | Sep 4 - 1 |
| Peak Day | 4 dates - 2 | | All dates - 1 | Aug 20 - 2 |
| # of Days Sighted | 13 | 0 | 9 | 6 |

Warbling Vireo:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|-------------|------------------|---------------|
| First sighting | May 12 - 1 | | Aug 4 - 2 | Aug 26 - 1 |
| Last Sighting | May 29 - 1 | | Aug 27 - 1 | Sep 1 - 1 |
| Peak Day | All dates - 1 | | | All dates - 1 |
| # of Days Sighted | 5 | 0 | 4 | 4 |

Philadelphia Vireo:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|-------------|-----------------------|-------------------|
| First sighting | May 20 - 1 | | Jul 20 - 1 | Jul 12 - 4 |
| Last Sighting | Jun 9 - 1 | | Aug 31 - 3 | Sep 8 - 1 |
| Peak Day | All dates - 1 | | Aug 3 & 31 - 3 | |
| # of Days Sighted | 9 | 0 | 18 | 6 |

Red-eyed Vireo:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------|-------------------|-------------------|
| First sighting | May 20 - 1 | | Jul 21 - 5 | Jul 12 - 3 |
| Last Sighting | Jun 10 - 6 | | Sep 13 - 1 | Sep 6 - 2 |
| Peak Day | Jun 4&7 - 7 | | Aug 7 - 11 | Aug 13 - 8 |
| # of Days Sighted | 21 | 0 | 45 | 39 |

Gray Jay:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|-------------|------------|-----------|
| First sighting | May 31- 1 | | Sep 21 - 1 | |
| Last Sighting | Jun 4 - 2 | | | |
| Peak Day | | | | |
| # of Days Sighted | 3 | 0 | 1 | 0 |

Blue Jay:

| - | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------------|--------------------|------------------|
| First sighting | Apr 28 - 1 | Apr 23 - 3 | Jul 13 - 1 | Jul 17 - 3 |
| Last Sighting | Jun 8 - 1 | May 15 - 1 | Sep 26 - 1 | Sep 30 - 1 |
| Peak Day | May 14 - 3 | | 6 dates - 2 | Sep 3 - 6 |
| # of Days Sighted | 17 | 5 | 35 | 42 |

American Magpie:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|------------------|--------------------|-------------------|------------|-------------------|
| First sighting | Apr 23 - 1 | Apr 22 - 4 | Jul 12 - 1 | Aug 5 - 1 |
| Last Sighting | Jun 9 - 1 | May 15 - 1 | Sep 26 - 2 | Sep 30 - 1 |
| Peak Day | 3 dates - 2 | Apr 24 - 8 | Sep 1 - 13 | Sep 24 - 4 |
| # of Day Sighted | 25 | 24 | 51 | 21 |

American Crow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|--------------------|-----------------------|
| First sighting | Apr 23 - 3 | Apr 22 - 3 | Jul 12 - 5 | Jul 12 - 2 |
| Last Sighting | Jun 10 - 2 | May 15 - 10 | Sep 16 - 3 | Sep 23 - 3 |
| Peak Day | Apr 28 - 18 | May 6 - 18 | Aug 18 - 40 | Aug 16&21 - 15 |
| # of Days Sighted | 48 | 24 | 55 | 50 |

Common Raven:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|----------------|-------------|--------------------|--------------------|
| First sighting | Apr 23 - 11 | Apr 22 - 2 | Jul 14 - 1 | Jul 15 - 2 |
| Last Sighting | Jun 2 - 2 | May 15 - 1 | Sep 29 - 8 | Sep 30 - 4 |
| Peak Day | Apr23&May12-11 | May 3 - 10 | Sep 25 - 13 | Sep 22 - 88 |
| # of Days Sighted | 26 | 23 | 65 | 67 |

Tree Swallow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|-------------------|--------------------|--------------------|
| First sighting | Apr 29 - 30 | Apr 27 - 4 | Jul 12 - 1 | Jul 13 - 65 |
| Last Sighting | Jun 10 - 2 | May 14 - 4 | Aug 13 - 40 | Aug 20 - 9 |
| Peak Day | May 13 - 478 | May 1 - 78 | | |
| # of Days Sighted | 30 | 18 | 16 | 15 |

Bank Swallow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|-------------|--------------------|-----------|
| First sighting | May 13 - 3 | | Jul 17 - 11 | |
| Last Sighting | May 22 - 3 | | Sep 6 - 2 | |
| Peak Day | May 16 - 294 | | Aug 27 - 14 | |
| # of Days Sighted | 5 | 0 | 4 | 0 |

Cliff Swallow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------|-------------------|-------------------|
| First sighting | May 13 - 5 | | Aug 21 - 2 | Jul 15 - 2 |
| Last Sighting | May 25 - 14 | | | Aug 12 - 3 |
| Peak Day | May 17 - 88 | | | |
| # of Days Sighted | 5 | 0 | 1 | 2 |

Barn Swallow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-------------------|-------------------|
| First sighting | May 13 - 2 | | Aug 13 - 1 | Jul 15 - 2 |
| Last Sighting | Jun 3 - 2 | | | Aug 12 - 3 |
| Peak Day | | | | |
| # of Days Sighted | 4 | 0 | 1 | 2 |

Black-capped Chickadee:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|--------------------|--------------------|--------------------|
| First sighting | Apr 23 - 5 | Apr 22 - 2 | Jul 12 - 4 | Jul 12 - 1 |
| Last Sighting | Jun 9 - 2 | May 15 - 2 | Sep 29 - 4 | Sep 30 - 4 |
| Peak Day | | 4 dates - 4 | Sep 21 - 22 | Sep 18 - 12 |
| # of Days Sighted | 36 | 21 | 70 | 68 |

Boreal Chickadee:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------------|-------------------|-------------------|
| First sighting | | Apr 26 - 1 | Sep 5 - 1 | Jul 15 - 1 |
| Last Sighting | | | Sep 28 - 1 | Sep 20 - 2 |
| Peak Day | | | Sep 26 - 2 | |
| # of Days Sighted | 0 | 1 | 10 | 8 |

Red-breasted Nuthatch:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|---------------|--------------------|-------------|
| First sighting | Apr 29 - 1 | Apr 26 - 1 | Jul 12 - 1 | Jul 12 - 1 |
| Last Sighting | Jun 8 - 1 | May 15 - 1 | Sep 27 - 1 | Sep 30 - 4 |
| Peak Day | All dates - 1 | All dates - 1 | Aug 18 - 13 | Sep 6&8 - 5 |
| # of Days Sighted | 10 | 8 | 42 | 36 |

White-breasted Nuthatch:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-------------------|-------------------|
| First sighting | May 2 - 1 | | Sep 6 - 1 | Aug 26 - 2 |
| Last Sighting | May 22 - 1 | | Sep 27 - 1 | |
| Peak Day | | | Sep 23 - 2 | |
| # of Days Sighted | 2 | 0 | 7 | 1 |

Brown Creeper:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|---------------|-------------------|---------------|
| First sighting | Apr 24 - 1 | May 4 - 1 | Jul 13 - 1 | Aug 8 - 1 |
| Last Sighting | May 3 - 1 | May 11 - 1 | Sep 27 - 1 | Sep 21 - 1 |
| Peak Day | All dates - 1 | All dates - 1 | Sep 23 - 5 | All dates - 1 |
| # of Days Sighted | 7 | 5 | 11 | 4 |

House Wren:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|------------|-----------|
| First sighting | May 18 - 1 | | Sep 21 - 1 | |
| Last Sighting | May 31 - 1 | | | |
| Peak Day | | | | |
| # of Days Sighted | 2 | 0 | 1 | 0 |

Winter Wren:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|--------------------|------------|-------------------|
| First sighting | Apr 23 - 2 | Apr 25 - 1 | Sep 22 - 1 | Jul 13 - 2 |
| Last Sighting | May 30 - 1 | May 15 - 1 | | Aug 11 - 1 |
| Peak Day | 7 dates - 2 | 5 dates - 2 | | |
| # of Days Sighted | 34 | 12 | 1 | 4 |

Golden-crowned Kinglet:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-------------------|------------|
| First sighting | | | Sep 15 - 1 | Jul 26 - 1 |
| Last Sighting | | | Sep 29 - 1 | Sep 20 - 1 |
| Peak Day | | | Sep 26 - 3 | |
| # of Days Sighted | 0 | 0 | 7 | 2 |

Ruby-crowned Kinglet:

| - | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|--------------------|--------------------|------------------|
| First sighting | Apr 24 - 2 | Apr 25 - 3 | Jul 13 - 1 | Jul 12 - 1 |
| Last Sighting | Jun 4 - 1 | May 15 - 1 | Sep 29 - 1 | Sep 30 - 1 |
| Peak Day | Apr 29 - 5 | 3 dates - 4 | Sep 23 - 18 | Sep 9 - 6 |
| # of Days Sighted | 38 | 18 | 31 | 20 |

Townsend's Solitaire:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|------------|------------|
| First sighting | | | Sep 24 - 1 | Sep 27 - 1 |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 0 | 0 | 1 | 1 |

Varied Thrush:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|------------|-----------|
| First sighting | | | Sep 23 - 1 | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 0 | 0 | 1 | 0 |

Gray-cheeked Thrush:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------|-------------------|-----------|
| First sighting | May 9 - 2 | | Sep 4 - 1 | |
| Last Sighting | May 27 - 1 | | Sep 23 - 1 | |
| Peak Day | May 19 - 33 | | Sep 17 - 3 | |
| # of Days Sighted | 7 | 0 | 5 | 0 |

Swainson's Thrush:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|--------------------|-----------------|-------------------|
| First sighting | May 2 - 1 | May 7 - 1 | Jul 12 - 1 | Jul 12 - 3 |
| Last Sighting | Jun 10 - 1 | May 14 - 3 | Sep 17 - 1 | Sep 18 - 1 |
| Peak Day | May 19 - 596 | May 13 - 12 | Jul30&Aug16- 13 | Aug 4 - 14 |
| # of Days Sighted | 33 | 5 | 56 | 62 |

Hermit Thrush:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|------------------|--------------------|-------------------|
| First sighting | Apr 23 - 2 | Apr 26 - 2 | Jul 16 - 1 | Jul 12 - 1 |
| Last Sighting | May 31 - 1 | May 15 - 1 | Sep 28 - 1 | Sep 23 - 1 |
| Peak Day | May 12 - 8 | May 5 - 8 | 3 dates - 6 | Sep 21 - 2 |
| # of Days Sighted | 20 | 17 | 17 | 11 |

American Robin:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|----------------------|----------------------|--------------------|--------------------|
| First sighting | Apr 23 - 227 | Apr 22 - 363 | Jul 13 - 3 | Jul 13 - 6 |
| Last Sighting | Jun 10 - 3 | May 15 - 2 | Sep 28 - 3 | Sep 30 - 1 |
| Peak Day | Apr 29 - 2173 | Apr 27 - 1903 | Aug 20 - 10 | Sep 25 - 93 |
| # of Days Sighted | 48 | 24 | 48 | 37 |

Gray Catbird:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-------------------|-----------|
| First sighting | May 26 - 1 | | Aug 20 - 1 | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 0 | 0 | 0 | 0 |

European Starling:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------|------------------|-----------|
| First sighting | Apr 24 - 51 | Apr 24 - 4 | Sep 7 - 3 | |
| Last Sighting | May 22 - 3 | May 15 - 3 | | |
| Peak Day | | May 3 - 11 | | |
| # of Days Sighted | 11 | 15 | 1 | 0 |

American Pipit:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|--------------------|--------------------|--------------------|
| First sighting | Apr 23 - 1 | Apr 28 - 49 | Aug 3 - 1 | Aug 20 - 1 |
| Last Sighting | May 22 - 1 | May 15 - 6 | Sep 28 - 1 | Sep 30 - 1 |
| Peak Day | Apr 29 - 95 | May 3 - 228 | Sep 13 - 60 | Aug 26 - 35 |
| # of Days Sighted | 23 | 18 | 30 | 32 |

Cedar Waxwing:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|-------------|---------------------|--------------------|
| First sighting | May 25 - 8 | | Jul 12 - 5 | Jul 12 - 18 |
| Last Sighting | Jun 10 - 4 | | Sep 18 - 2 | Sep 29 - 3 |
| Peak Day | May 31 - 331 | | Aug 20 - 127 | Sep 9 - 109 |
| # of Days Sighted | 16 | 0 | 63 | 74 |

Tennessee Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|-------------|--------------------|---------------------|
| First sighting | May 9 - 2 | | Jul 12 - 4 | Jul 12 - 3 |
| Last Sighting | Jun 8 - 1 | | Sep 16 - 2 | Sep 27 - 1 |
| Peak Day | May 25 - 198 | | Aug 6 - 303 | Aug 11 - 201 |
| # of Days Sighted | 22 | 0 | 45 | 46 |

Orange-crowned Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|--------------------|--------------------|-------------------|
| First sighting | Apr 23 - 4 | Apr 27 - 1 | Aug 21 - 1 | Jul 18 - 1 |
| Last Sighting | May 21 - 1 | May 13 - 79 | Sep 27 - 1 | Sep 30 - 2 |
| Peak Day | May 10 - 23 | | Sep 13 - 46 | Sep 9 - 52 |
| # of Days Sighted | 20 | 11 | 22 | 25 |

Nashville Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-----------|-----------|
| First sighting | May 21 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 0 |

Yellow Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|---------------------|--------------------|--------------------|
| First sighting | May 5 - 1 | May 10 - 8 | Jul 12 - 6 | Jul 12 - 8 |
| Last Sighting | Jun 10 - 2 | May 13 - 240 | Sep 13 - 2 | Aug 29 - 11 |
| Peak Day | May 16 - 405 | | Jul 23 - 71 | Aug 11 - 32 |
| # of Days Sighted | 37 | 4 | 49 | 41 |

Magnolia Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------------|---------------------|--------------------|
| First sighting | May 16 - 4 | May 10 - 1 | Jul 20 - 1 | Jul 12 - 1 |
| Last Sighting | Jun 10 - 1 | | Sep 9 - 1 | Sep 9 - 1 |
| Peak Day | May 21 - 7 | | Aug 5&20 - 3 | 3 dates - 2 |
| # of Days Sighted | 11 | 1 | 25 | 22 |

Cape May Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|------------------|-------------------|
| First sighting | May 21 - 1 | | Jul 23 - 1 | Aug 4 - 2 |
| Last Sighting | May 25 - 1 | | Aug 19 - 1 | Sep 5 - 1 |
| Peak Day | | | Aug 4 - 6 | Aug 14 - 4 |
| # of Days Sighted | 2 | 0 | 9 | 10 |

Yellow-rumped Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|----------------------|----------------------|--------------|----------------------|
| First sighting | Apr 23 - 15 | Apr 22 - 74 | Jul 12 - 10 | Jul 12 - 35 |
| Last Sighting | Jun 10 - 1 | May 15 - 52 | Sep 28 - 3 | Sep 30 - 25 |
| Peak Day | Apr 29 - 4804 | May 13 - 2503 | Sep 9 - 2215 | Aug 11 - 1101 |
| # of Days Sighted | 49 | 24 | 66 | 72 |

Black-throated Green Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|---------------|-------------------------|----------------------|
| First sighting | May 10 - 1 | May 9 - 1 | Jul 13 - 1 | Jul 17 - 1 |
| Last Sighting | Jun 8 - 1 | May 13 - 1 | Aug 17 - 1 | Aug 26 - 1 |
| Peak Day | All dates - 1 | All dates - 1 | Jul 23&Aug 5 - 3 | Jul 21&24 - 2 |
| # of Days Sighted | 10 | 3 | 6 | 9 |

Palm Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|-------------------|---------------|
| First sighting | Apr 29 - 1 | May 12 - 3 | Jul 27 - 2 | Jul 19 - 1 |
| Last Sighting | May 26 - 1 | May 13 - 1 | Sep 27 - 1 | Sep 20 - 1 |
| Peak Day | May 14 - 16 | | Sep 21 - 4 | All dates - 1 |
| # of Days Sighted | 14 | 2 | 10 | 4 |

Bay-breasted Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|------------------|-------------------|
| First sighting | May 25 - 1 | | Jul 24 - 1 | Jul 31 - 1 |
| Last Sighting | | | Aug 1 - 2 | Aug 24 - 1 |
| Peak Day | | | | Aug 20 - 2 |
| # of Days Sighted | 1 | 0 | 3 | 6 |

Blackpoll Warbler:

| <u> </u> | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|-------------------|-------------------|
| First sighting | May 9 - 2 | May 13 - 5 | Aug 4 - 1 | Jul 24 - 1 |
| Last Sighting | May 28 - 1 | | Sep 1 - 1 | Sep 21 - 1 |
| Peak Day | May 18 - 24 | | Aug 22 - 3 | Aug 29 - 2 |
| # of Days Sighted | 8 | 1 | 7 | 3 |

Black-and-white Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|--------------------|--------------------|--------------------|
| First sighting | May 1 - 1 | May 7 - 1 | Jul 12 - 5 | Jul 12 - 7 |
| Last Sighting | Jun 10 - 2 | May 15 - 5 | Aug 31 - 2 | Sep 8 - 1 |
| Peak Day | May 9 - 19 | May 11 - 11 | Jul 23 - 32 | Aug 11 - 61 |
| # of Days Sighted | 37 | 9 | 40 | 41 |

American Redstart:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|-------------|-------------------|-------------------|
| First sighting | May 15 - 6 | | Jul 12 - 3 | Jul 12 - 7 |
| Last Sighting | Jun 10 - 11 | | Sep 14 - 1 | Sep 15 - 1 |
| Peak Day | May 21 - 167 | | Aug 3 - 54 | Aug 5 - 41 |
| # of Days Sighted | 27 | 0 | 47 | 51 |

Ovenbird:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|--------------------|-------------------|-------------------|
| First sighting | May 5 - 2 | May 10 - 2 | Jul 12 - 4 | Jul 12 - 2 |
| Last Sighting | Jun 10 - 4 | May 15 - 3 | Sep 17 - 1 | Sep 10 - 2 |
| Peak Day | 3 dates - 9 | 3 dates - 3 | Aug 5 - 26 | Aug 4 - 14 |
| # of Days Sighted | 35 | 6 | 43 | 45 |

Northern Waterthrush:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|----------------------|-------------------|--------------------|-------------------|
| First sighting | May 7 - 1 | May 11 - 1 | Jul 13 - 1 | Jul 12 - 1 |
| Last Sighting | Jun 9 - 1 | May 14 - 1 | Aug 31 - 1 | Aug 28 - 1 |
| Peak Day | May 14&19 - 4 | May 13 - 2 | 3 dates - 2 | Jul 26 - 3 |
| # of Days Sighted | 16 | 3 | 17 | 14 |

Connecticut Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------------|-----------|-----------|
| First sighting | May 23 - 1 | May 10 - 1 | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 1 | 0 | 0 |

Mourning Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|------------------|-------------|---------------------|--------------------|
| First sighting | May 21 - 1 | | Jul 30 - 1 | Jul 13 - 1 |
| Last Sighting | Jun 8 - 1 | | Sep 5 - 2 | Sep 5 - 1 |
| Peak Day | Jun 5 - 4 | | Aug 3&16 - 7 | 3 dates - 3 |
| # of Days Sighted | 12 | 0 | 24 | 13 |

Common Yellowthroat:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|--------------------|-------------------|
| First sighting | May 18 - 3 | | Jul 12 - 1 | Jul 12 - 1 |
| Last Sighting | Jun 9 - 1 | | Sep 15 - 1 | Sep 3 - 1 |
| Peak Day | May 19 - 8 | | 3 dates - 4 | Aug 29 - 4 |
| # of Days Sighted | 15 | 0 | 27 | 18 |

Wilson's Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|------------------|------------------|
| First sighting | May 19 - 2 | | Aug 3 - 1 | Aug 11 - 2 |
| Last Sighting | May 27 - 2 | | Sep 16 - 1 | Sep 12 - 1 |
| Peak Day | May 25 - 4 | | Sep 4 - 4 | Sep 6 - 8 |
| # of Days Sighted | 4 | 0 | 17 | 14 |

Canada Warbler:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|-------------|-------------------|--------------------|
| First sighting | May 16 - 6 | | Jul 12 - 1 | Jul 12 - 1 |
| Last Sighting | Jun 10 - 3 | | Aug 26 - 1 | Aug 24 - 1 |
| Peak Day | May 26&27- 14 | | Aug 6 - 20 | Aug 11 - 26 |
| # of Days Sighted | 25 | 0 | 37 | 36 |

Western Tanager:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-------------------|--------------------|
| First sighting | May 12 - 2 | May 10 - 1 | Jul 12 - 1 | Jul 15 - 3 |
| Last Sighting | Jun 4 - 1 | | Aug 31 - 2 | Sep 7 - 1 |
| Peak Day | May 13 - 5 | | Aug 3 - 13 | Jul 21 - 20 |
| # of Days Sighted | 18 | 1 | 24 | 19 |

American Tree Sparrow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|--------------------|--------------------|------------|
| First sighting | Apr 23 - 42 | Apr 22 - 5 | Sep 13 - 1 | Sep 4 - 1 |
| Last Sighting | May 1 - 4 | May 10 - 1 | Sep 28 - 4 | Sep 25 - 1 |
| Peak Day | Apr 29 - 871 | May 3 - 464 | Sep 23 - 35 | |
| # of Days Sighted | 9 | 16 | 13 | 2 |

Chipping Sparrow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|----------------------|--------------------|-------------------|
| First sighting | May 2 - 1 | May 7 - 1 | Jul 12 - 1 | Jul 12 - 1 |
| Last Sighting | Jun 10 - 2 | May 15 - 126 | Aug 12 - 5 | Sep 7 - 1 |
| Peak Day | May 16 - 992 | May 13 - 4862 | Jul 20 - 20 | Aug 29 - 4 |
| # of Days Sighted | 37 | 7 | 32 | 9 |

Clay-colored Sparrow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|-------------------|-------------------|
| First sighting | May 7 - 1 | May 13 - 5 | Jul 23 - 1 | Aug 12 - 1 |
| Last Sighting | Jun 9 - 1 | May 15 - 1 | Aug 31 - 1 | Aug 28 - 1 |
| Peak Day | May 22 - 49 | | Aug 12 - 3 | |
| # of Days Sighted | 27 | 3 | 6 | 2 |

Savannah Sparrow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|------------------|-------------------|---------------|
| First sighting | Apr 24 - 1 | Apr 30 - 2 | Aug 22 - 1 | Aug 24 - 1 |
| Last Sighting | May 20 - 1 | May 14 - 1 | Sep 9 - 1 | Sep 13 - 1 |
| Peak Day | May 12 - 8 | May 6 - 6 | Aug 31 - 4 | All dates - 1 |
| # of Days Sighted | 18 | 11 | 9 | 4 |

Le Conte's Sparrow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-------------------|-----------|
| First sighting | May 12 - 2 | | Aug 23 - 1 | |
| Last Sighting | May 15 - 1 | | | |
| Peak Day | | | | |
| # of Days Sighted | 2 | 0 | 1 | 0 |

Fox Sparrow:

| ^ | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|--------------------|-----------|-------------------|
| First sighting | Apr 23 - 5 | Apr 26 - 3 | | Jul 18 - 1 |
| Last Sighting | Apr 29 - 3 | Apr 30 - 33 | | |
| Peak Day | Apr 24 - 7 | | | |
| # of Days Sighted | 5 | 2 | 0 | 1 |

Song Sparrow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------|-------------------|-------------------|-------------------|
| First sighting | Apr 23 - 2 | Apr 26 - 1 | Jul 12 - 6 | Jul 12 - 4 |
| Last Sighting | Jun 10 - 3 | May 15 - 2 | Aug 29 - 1 | Sep 9 - 1 |
| Peak Day | Apr 29&May2-6 | May 13 - 8 | Jul 13 - 8 | Jul 26 - 6 |
| # of Days Sighted | 49 | 20 | 31 | 39 |

Lincoln's Sparrow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-------------------|--------------------|
| First sighting | May 2 - 1 | May 8 - 1 | Jul 12 - 4 | Jul 12 - 2 |
| Last Sighting | Jun 10 - 1 | May 15 - 1 | Sep 26 - 1 | Sep 23 - 1 |
| Peak Day | May 8 - 5 | May 10 - 7 | Jul 20 - 5 | 4 dates - 3 |
| # of Days Sighted | 27 | 6 | 27 | 31 |

Swamp Sparrow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|---------------|-----------|
| First sighting | May 13 - 1 | | Jul 25 - 1 | |
| Last Sighting | | | Sep 19 - 1 | |
| Peak Day | | | All dates - 1 | |
| # of Days Sighted | 1 | 0 | 5 | 0 |

White-throated Sparrow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|--------------------|------------|-------------------|
| First sighting | Apr 29 - 1 | May 8 - 9 | Jul 12 - 7 | Jul 12 - 3 |
| Last Sighting | Jun 10 - 5 | May 15 - 16 | Sep 28 - 2 | Sep 16 - 1 |
| Peak Day | May 9 - 29 | May 10 - 40 | Sep 5 - 10 | Jul 15 - 9 |
| # of Days Sighted | 41 | 8 | 71 | 50 |

White-crowned Sparrow:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------------|--------------------|-------------------|
| First sighting | Apr 28 - 3 | May 4 - 4 | Sep 1 - 1 | Sep 9 - 1 |
| Last Sighting | May 20 - 1 | May 13 - 4 | Sep 24 - 1 | Sep 25 - 2 |
| Peak Day | May 13 - 36 | | Sep 14 - 11 | Sep 23 - 6 |
| # of Days Sighted | 30 | 2 | 18 | 4 |

Dark-eyed Junco:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|----------------------|--------------|--------------|--------------------|
| First sighting | Apr 23 - 99 | Apr 22 - 84 | Aug 26 - 1 | Jul 25 - 1 |
| Last Sighting | May 9 - 2 | May 14 - 3 | Sep 29 - 2 | Sep 30 - 2 |
| Peak Day | Apr 24 - 1103 | May 3 - 1002 | Sep 23 - 167 | Sep 21 - 15 |
| # of Days Sighted | 12 | 19 | 24 | 13 |

Lapland Longspur:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|-------------------|--------------------|
| First sighting | Apr 24 - 2 | Apr 28 - 8 | Aug 21 - 1 | Aug 29 - 4 |
| Last Sighting | May 16 - 7 | May 13 - 55 | Sep 26 - 1 | Sep 29 - 1 |
| Peak Day | May 14 - 30 | May 3 - 74 | Sep 6 - 13 | Sep 11 - 34 |
| # of Days Sighted | 9 | 7 | 17 | 18 |

Snow Bunting:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------------|-----------|-----------|
| First sighting | Apr 23 - 2 | Apr 23 - 1 | | |
| Last Sighting | Apr 25 - 7 | Apr 25 - 2 | | |
| Peak Day | | Apr 24 - 3 | | |
| # of Days Sighted | 2 | 3 | 0 | 0 |

Rose-breasted Grosbeak:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|-------------------|------------------|
| First sighting | May 9 - 2 | May 15 - 1 | Jul 24 - 1 | Jul 17 - 1 |
| Last Sighting | Jun 7 - 1 | | Sep 6 - 1 | Sep 5 - 1 |
| Peak Day | May 21 - 14 | | Aug 4 - 11 | Aug 11- 9 |
| # of Days Sighted | 23 | 1 | 22 | 23 |

Western Meadowlark:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-----------|-----------|
| First sighting | May 24 - 1 | | | |
| Last Sighting | | | | |
| Peak Day | | | | |
| # of Days Sighted | 1 | 0 | 0 | 0 |

Red-winged Blackbird:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|--------------------|--------------------|--------------------|
| First sighting | Apr 23 - 5 | Apr 29 - 1 | Jul 17 - 72 | Jul 17 - 25 |
| Last Sighting | Jun 10 - 1 | May 15 - 2 | Aug 4 - 2 | Aug 5 - 13 |
| Peak Day | Apr 29 - 215 | May 13 - 56 | Jul 23 - 73 | |
| # of Days Sighted | 35 | 16 | 10 | 4 |

Yellow-headed Blackbird:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-------------------|-------------------|
| First sighting | Apr 29 - 3 | May 10 - 7 | Jul 27 - 1 | Aug 11 - 1 |
| Last Sighting | May 13 - 4 | | | |
| Peak Day | | | | |
| # of Days Sighted | 2 | 1 | 1 | 1 |

Common Grackle:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|--------------------|--------------------|--------------------|
| First sighting | Apr 23 - 10 | Apr 22 - 2 | Jul 26 - 10 | Aug 3 - 1 |
| Last Sighting | Jun 7 - 1 | May 13 - 2 | Sep 19 - 1 | Sep 21 - 12 |
| Peak Day | Apr 24 - 67 | Apr 27 - 47 | | Aug 24 - 39 |
| # of Days Sighted | 20 | 11 | 15 | 13 |

Brown-headed Cowbird:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|--------------------|-----------|-------------------|
| First sighting | Apr 25 - 3 1 | May 6 - 1 | | Jul 13 - 1 |
| Last Sighting | Jun 5 - 1 | May 15 - 1 | | Jul 18 - 4 |
| Peak Day | | May 10 - 20 | | |
| # of Days Sighted | 25 | 10 | 0 | 2 |

Baltimore Oriole:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------------|-------------|-----------|-------------------|
| First sighting | May 16 - 4 | | | Jul 21 - 1 |
| Last Sighting | May 22 - 1 | | | Jul 22 - 1 |
| Peak Day | | | | |
| # of Days Sighted | 3 | 0 | 0 | 2 |

Purple Finch:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------------|--------------------|--------------------|
| First sighting | Apr 23 - 1 | Apr 23 - 1 | Jul 13 – 1 | Jul 13 - 1 |
| Last Sighting | Jun 8 - 1 | May 15 - 2 | Sep 21 - 1 | Sep 13 - 1 |
| Peak Day | Apr 29 - 17 | May 3 - 29 | Aug 20 - 17 | Aug 24 - 15 |
| # of Days Sighted | 18 | 20 | 37 | 37 |

Red Crossbill:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-------------|-----------|
| First sighting | | | Aug 17 - 50 | |
| Last Sighting | | | Sep 24 - 1 | |
| Peak Day | | | | |
| # of Days Sighted | 0 | 0 | 4 | 0 |

White-winged Crossbill:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|-------------|-------------------|--------------------|
| First sighting | | | Aug 3 - 33 | Jul 13 - 1 |
| Last Sighting | | | Sep 27 - 1 | Aug 27 - 14 |
| Peak Day | | | | Jul 24 - 70 |
| # of Days Sighted | 0 | 0 | 24 | 29 |

Common Redpoll:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|---------------------|--------------------|-------------------|-----------|
| First sighting | Apr 23 - 100 | Apr 22 - 20 | Aug 18 - 1 | |
| Last Sighting | May 3 - 5 | May 13 - 6 | | |
| Peak Day | Apr 29 - 486 | Apr 24 - 27 | | |
| # of Days Sighted | 9 | 8 | 1 | 0 |

Pine Siskin:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------|--------------------|--------------------|
| First sighting | Apr 27 - 4 | Apr 22 - 30 | Jul 12 - 28 | Jul 12 - 79 |
| Last Sighting | Jun 9 - 11 | May 14 - 1 | Sep 29 - 3 | Sep 30 - 3 |
| Peak Day | Jun 2 - 292 | May 3 - 100 | Aug 6 - 194 | Sep 7 - 187 |
| # of Days Sighted | 33 | 14 | 61 | 55 |

American Goldfinch:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|--------------------|-------------|-----------|-----------|
| First sighting | May 25 - 1 | | | |
| Last Sighting | Jun 3 - 2 | | | |
| Peak Day | 3 dates - 2 | | | |
| # of Days Sighted | 9 | 0 | 0 | 0 |

Evening Grosbeak:

| | Spring 2012 | Spring 2011 | Fall 2012 | Fall 2011 |
|-------------------|-------------|--------------------|---------------|--------------------|
| First sighting | Apr 23 - 7 | Apr 22 - 1 | Aug 24 - 2 | Jul 15 - 5 |
| Last Sighting | Jun 7 - 1 | May 15 - 3 | Sep 28 - 7 | Sep 25 - 1 |
| Peak Day | May 4 - 50 | May 13 - 15 | Aug 6&Sep28-7 | Jul 25 - 16 |
| # of Days Sighted | 32 | 24 | 23 | 36 |