



## 2021 Annual Report

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## 2021 Executive Summary

The Lesser Slave Lake Bird Observatory (LSLBO) completed its 28<sup>th</sup> year of avian population monitoring in the Lesser Slave Lake Provincial Park of northern Alberta (27<sup>th</sup> year of standardized efforts). Dedicated to bird conservation through research and education, the LSLBO manages four core monitoring programs that contribute to national and international networks: spring migration monitoring, fall migration monitoring, Monitoring Avian Productivity and Survivorship (MAPS), and fall owl migration monitoring.

Spring migration monitoring ran daily April 17 to June 10. Overall, monitoring efforts for spring migration this year were roughly equal to previous years since more days were covered, but daily effort was marginally less due to frequent poor weather conditions. Approximately 85,500 birds of 160 identified species were encountered. Only 65.7% of possible net-hours were attained, banding a total of 983 birds of 45 species – just above the spring banding average. There were an additional 151 recapture records, of which, the oldest known-aged bird was a 9 year-old Hairy Woodpecker.

Fall migration monitoring occurred daily July 12 to September 30. Overall monitoring efforts for fall migration were similar to past years, but standard net-hours were the fourth lowest since 1995 due to poor weather, predator sightings, and high capture rates closing nets to guard against overwhelming operators with too many captures. Over 69,000 birds of 138 species were counted across monitoring methods. Although mist-netting efforts were well below average (only 59.6% of possible coverage), this was the third-consecutive record-breaking season for fall banding in the LSLBO's history with 5,372 birds banded from 66 species. Total capture rates were more than double the fall average and 14 species beat their previous banding records. An additional 384 recaptures were recorded with a Red-eyed Vireo estimated to be 6+ years old as the oldest known-aged bird and two Swainson's Thrush banded this fall recovered elsewhere.

Four MAPS sites were operated June 10 to August 2, completing our 28<sup>th</sup> year of MAPS contributions. It was a similarly record-breaking season for MAPS banding with 862 birds of 31 species across stations (triple the MAPS average). Within an additional 303 recapture records, the oldest known-aged birds were two Mourning Warblers aged 9+ years old. Of 68 detected species, 26 were confirmed to breed in at least one site.

Targeted fall owl migration monitoring was conducted for the 18<sup>th</sup> year on 45 nights, September 1 to October 31. A Northern Saw-whet Owl net array and a smaller Boreal Owl net array captured a combined 213 Saw-whet Owls and 1 Boreal Owl (yet another record-breaking total). Due to a record number of non-standard hours, this was only the fifth highest capture rate since 2004. An owl banded during this program in previous years was found in California and another was recaptured at the Beaverhill Bird Observatory.

Additional collaborative projects included the final year of breeding bird surveys assessing species assemblages in harvested forests (Vanderwell Contractors), roadside owl surveys (West Fraser), flat fly collection (University of Guelph), arthropod surveys (Caterpillars Counts!), sharing a subset of monitoring data with eBird (Cornell Lab), and donating specimens to the Royal Alberta Museum. One article was published which used some LSLBO data.

COVID-19 safety procedures followed those established in 2020 with stringent sanitation guidelines and visitors and inexperienced volunteers prohibited from the station until vaccination was widely available during fall migration monitoring. However, education programs continued to be affected by the ongoing pandemic with less tourism locally and the need for small, preregistered tours suppressing on-site outreach, but continuing enhanced off-site education efforts.

## Migration Monitoring

Migration monitoring estimates population trends central to avian conservation efforts. Since much of northern Canada is remote with low human population densities, breeding bird surveys often cannot provide sufficient information on northern species. Similarly, South American nations often lack the resources required to study Neotropical migratory species on their wintering grounds. By considering numbers of observed and captured individuals migrating through more accessible locations, population trends of these species can be obtained.

Since 1994, the Lesser Slave Lake Bird Observatory (LSLBO) has been conducting migration monitoring over both spring and fall migration periods with 2021 marking the 27<sup>th</sup> year of standardized data collection (since 1995). The LSLBO is a member station of the Canadian Migration Monitoring Network - Réseau canadien de surveillance des migrations (CMMN-RCSM) and contributes to the population trend analysis program. Established in 1998, the CMMN is a unique network including Birds Canada, Environment and Climate Change Canada, and approximately 25 member stations working collaboratively to monitor avian migration across Canada.

Migration monitoring follows a standardized approach as outlined in the Lesser Slave Lake Bird Observatory Standard Operating Protocol (revised 2021). The approach is roughly the same in both the spring and the fall, with small differences to account for the opposite directions of migration. Priority species for monitoring include passerines and near-passerines, but all avian species encountered are recorded daily using four methods: census, visual migration counts, incidental observations, and mist-netting. Census is performed once daily along a 700 m transect crossing the study site for 30 minutes during peak migration hours. Visual migration counts are 5-minute-long observations from a fixed location of clearly migrating individuals. Other birds encountered in the study area not included in these standardized counts are recorded as incidental observations.

Banding is performed alongside observations to record species that migrate discretely and to gather morphometric measurements and demographic information from a subset of individuals that cannot be obtained otherwise. Mist-netting is accomplished using twelve standard nets (since 1995) and two non-standard aerial nets (since fall 2010) for a period of seven hours beginning half an hour before sunrise (maximum 98 net-hours possible in a day). Mist-netting is not performed under adverse weather conditions or the persistent presence of predators.

To summarize the effort dedicated to observing migration, a daily coverage code is assigned (Table 1). Throughout migration monitoring, the LSLBO strives to obtain a daily coverage code of four. However, when the weather prevents mist-netting, the maximum coverage code that can be attained is three.

**Table 1. Criteria for daily coverage codes.** Obtaining field hours is mandatory; performance of census, visual migration counts, and standard mist-netting is required as described. Class 1 observers can reliably identify > 75% of bird species encountered, while class 2 observers can identify 50-75%.

Code	Coverage	Field Hours	Census	# Vis. Migs.	Standard Mist-Netting	Requirements (Census, vis. migs., netting)	Min. Observer Requirements
0	None	0	No	0	0%	No Activity	None
1	Casual	1	Yes	4	≥ 10%	One of the three counts	1 (class 2+)
2	Poor	2	Yes	4	≥ 25%	Census, one of other counts	1 (class 2+)
3	Fair	4	Yes	6	≥ 50%	Two counts	1 (class 2+)
4	Good	6	Yes	7	≥ 50%	All	1 (class 1)
5	Excellent	10	Yes	8	≥ 90%	All (non-standard period)	3 (class 1)

## Spring Migration Monitoring

Spring migration monitoring occurs for approximately 7 weeks from mid-April to June 10, although yearly weather conditions can allow monitoring beyond the standard period or prevent early efforts. This period covers the migration window for most species encountered at the LSLBO as they move northward to their breeding grounds. However, some species that migrate early and irregularly (for example, Dark-eyed Junco) are frequently missed by our spring monitoring period. Overall, the diversity of species observed increases quickly in May, with busy banding periods possible mid to late May. By June, local breeding birds are encountered regularly alongside small numbers of late migrants.

In 2021, spring migration monitoring took place from April 17 to June 10. In response to the COVID-19 pandemic, additional hygiene measures were implemented, visitors were prohibited, no volunteer training was undertaken, and seasonal staff completed a precautionary quarantine period. With daily coverage achieved, the number of days covered and those with census and visual migration counts (vis-migs) were above average (Table 2). Despite 41 days meeting our goal of 8 vis-migs per day, high winds and rain cut monitoring efforts short frequently enough that the daily vis-mig code was below average (Table 2). Poor weather similarly prevented the nets from being opened on 12 days, while cold starts and late morning winds prevented full net-hours on an additional 21 days. Only 22 days saw full net-hours. Overall, monitoring efforts for spring migration this year were roughly equal to previous years since more days were covered, but daily effort was marginally less due to frequent poor weather conditions.

**Table 2. Summary of effort during spring migration monitoring.** Averages include 1995 to 2021, except visual migration effort, which is 2000-2021 (standard observation time reduced from 10 to 5 minutes).

	2021	Average	Min (Year)	Max (Year)
<b>Daily Coverage</b>				
First day <sup>1</sup>	April 17	April 22	April 15 (2016)	May 4 (1996, 98)
Last day <sup>1</sup>	June 10	June 9	May 15 (2011) <sup>2</sup>	June 17 (1997)
Number of days (55 possible)	55	47	24 (2011) <sup>2</sup>	57 (2000, 01, 06)
Person-days	102	101	55 (2011) <sup>2</sup>	130 (2001)
Average daily coverage code	3.69	3.75	3.43 (2021)	3.95 (2005)
<b>Banding</b>				
Number of days	43	42	23 (2011) <sup>2</sup>	54 (2001)
Standard nets average daily net-hours (84 max)	56.6	63.5	48.7 (2020)	75.8 (2008)
Aerial nets average daily net-hours (14 max)	7.8	8.9	5.6 (2019)	10.7 (2015)
<b>Census</b>				
Number of days	55	46	24 (2011) <sup>2</sup>	57 (2001, 16)
<b>Visual Migration Counts</b>				
Number of days	55	49	24 (2011) <sup>2</sup>	57 (2000, 01, 16)
Average daily vis. migs.	7.5	7.7	7.0 (2021)	8.4 (2002)

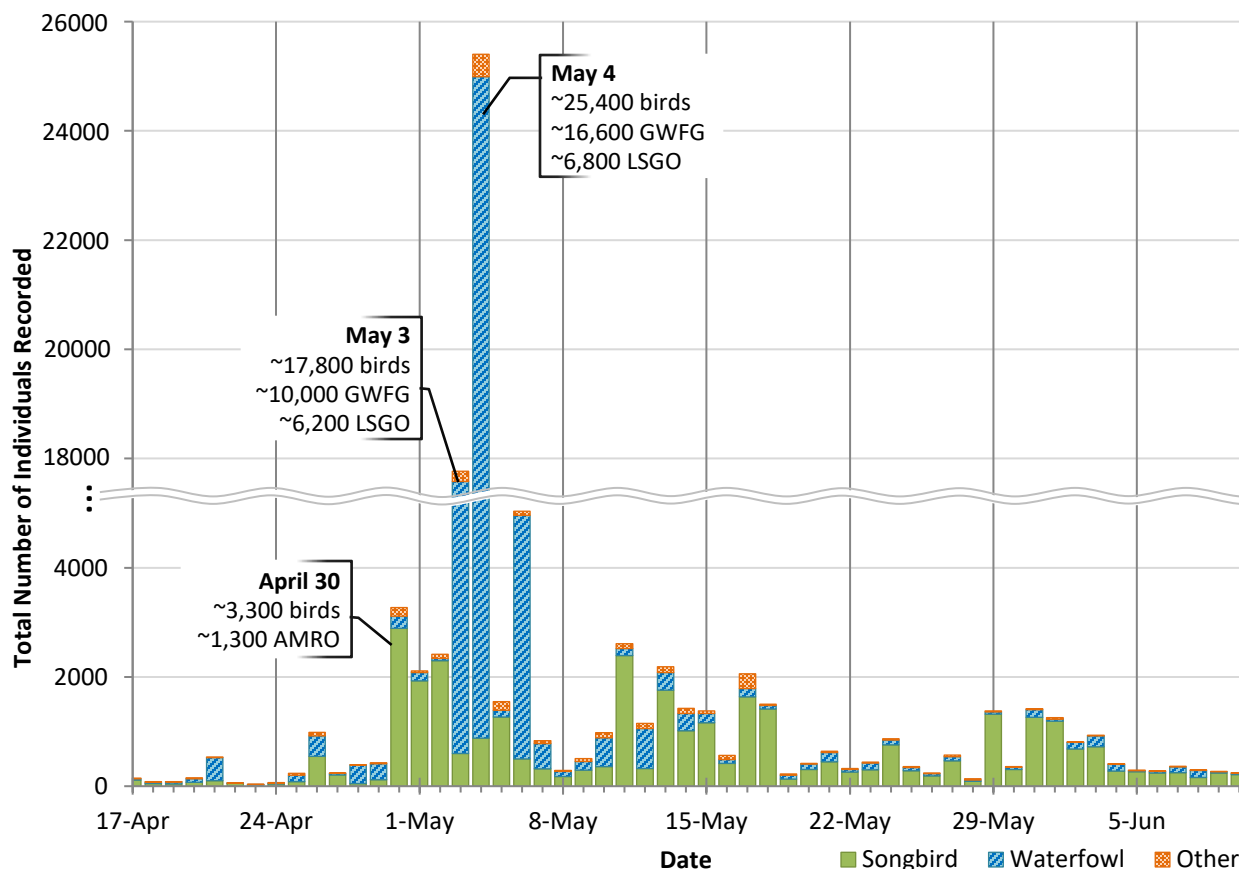
1. "Min" date values represent the earliest first or last day, while "Max" represents the latest start/end.

2. 2011: Monitoring site was evacuated due to large forest fires in May cutting the season short.

## Spring Migration Daily Totals

A total of 85,504 birds from 160 identified species were recorded across counting methods. Census documented 8% of all birds encountered with a high diversity of 116 identified species including the only Cooper's Hawk and Northern Rough-winged Swallow recorded during spring migration monitoring. Visual migration counts documented 11% of birds encountered with 55 species identified, including the only Bonaparte's Gull. Banding accounted for 1% of encounters from 45 species, including the only Veery. Incidental observations contributed the most individuals (79% of records) from 155 species, 35 of which were only encountered incidentally, including: Trumpeter Swan, Mourning Dove, Black-bellied Plover, Short-billed (Mew) Gull, Double-crested Cormorant, Rough-legged Hawk, Peregrine Falcon, Barn Swallow, Bohemian Waxwing, White-breasted Nuthatch, Snow Bunting, "Oregon" Junco, Vesper Sparrow, LeConte's Sparrow, Brewer's Blackbird, Connecticut Warbler, and Chestnut-sided Warbler.

Overall migration activity first peaked on April 30 with flocks of American Robin (Figure 1). Large flocks of geese followed on May 3 and May 4 (the busiest day for overhead migration). Waterfowl migration was busiest early May due to these geese but died down as smaller flocks of ducks moved through. Songbird migration was more erratic with numerous flocks of American Robin, "Slate-coloured" Junco, and blackbirds early in the season. Warblers and sparrows came later as songbird migration lulled with a few peaks during favourable weather, before picking up again for the seventh week of monitoring when various warblers and Swainson's Thrush finished their migrations. For a brief weekly review see Spring Migration Weekly Summary (p. 7). For a more detailed break-down of each species' abundances, as well as arrival, peak, and departure timings, see Appendix I. Migration Occurrence Records (p. 30).



**Figure 1. Total number of individuals detected daily during spring migration monitoring between all methods, 2021. Codes: American Robin (AMRO), Greater White-fronted Goose (GWFG), "Lesser" Snow Goose (LSGO).**

## Spring Migration Mist-netting Effort & Productivity

The LSLBO operates 12 standard and 2 non-standard (aerial) nets during migration monitoring. Standard nets are labeled 1 to 12 and have operated since 1995, with 7-hour monitoring periods standardized in 2000. In 2011, two aerial nets (11X/12X) were set-up alongside nets 11 and 12 for their first spring season and have operated yearly except 2020 when the COVID-19 pandemic limited manpower. A total of 3,539.5 net-hours were accumulated, representing 65.7% of 5,390.0 possible net-hours (Table 3). This is above the spring average of 3,192.5 standard net-hours (2000-21, 2011 excluded) since 2021's spring period was longer than average. Mist-netting was partially attempted on 21 days and not attempted on 12 days due to cold temperatures, rain, and high winds. Situated close to the shoreline, nets 6, 11, and the aerials accumulated the fewest net-hours due to wind exposure.

Across all nets, the capture rate for spring migration monitoring was 33.4 birds per 100 net-hours, which is just under the season average of 34.6 birds per 100 net-hours (Table 3). Indeed, most nets saw below average capture rates, except nets 5, 10, 12, and 12X. Located in relatively short willow, net 6 achieved the highest capture rate of 82.0 birds per 100 net-hours while net 11 saw the greatest species diversity (29 species). The two aerial nets were productive, capturing 23% of all birds. The net with the lowest capture rate was net 2 (7.9 birds/100 net-hours) and the nets with the lowest species diversity were nets 2 and 9 with 10 species captured each. These nets are in mature deciduous forest with a thinning understory. A total of 7 birds were released either accidentally or because they were females heavy with eggs in their oviducts and operators did not want to keep them from their nests.

**Table 3. Net-hours and capture rates** per 100 net-hours for each net-lane during spring migration including average capture rates from 1995-2021 (2011 excluded).

Net-lane	Net-hours (Coverage %)	Captures				Capture Rate (Average)
		New Bands	Recaptures	Released Unbanded	Total Capture of Total Species	
<b>1</b>	266.0 (69.1%)	46	11	0	57 of 14	21.4 (26.0)
<b>2</b>	266.0 (69.1%)	16	5	0	21 of 10	7.9 (18.2)
<b>3</b>	266.0 (69.1%)	29	4	0	33 of 11	12.4 (21.6)
<b>4</b>	263.0 (68.3%)	41	15	0	56 of 13	21.3 (23.9)
<b>5</b>	262.5 (68.2%)	129	15	1	145 of 24	55.2 (36.6)
<b>6</b>	236.5 (61.4%)	179	11	4	194 of 27	82.0 (88.1)
<b>7</b>	263.5 (68.4%)	30	10	1	41 of 13	15.6 (20.7)
<b>8</b>	263.0 (68.3%)	31	11	0	42 of 17	16.0 (18.8)
<b>9</b>	260.5 (67.7%)	17	8	0	25 of 10	9.6 (15.8)
<b>10</b>	260.5 (67.7%)	38	7	0	45 of 13	17.3 (17.1)
<b>11</b>	236.0 (61.3%)	97	9	0	106 of 29	44.9 (62.3)
<b>12</b>	267.0 (69.4%)	102	15	0	117 of 27	43.8 (38.6)
<b>Total standard</b>	3,110.5 (67.3%)	755	121	6	882 of 43	29.0 (32.3)
<b>11X</b>	207.0 (53.8%)	94	5	1	100 of 22	48.3 (59.0)
<b>12X</b>	222.0 (57.7%)	134	25	0	159 of 26	71.6 (38.2)
<b>Total non-standard</b>	429.0 (55.7%)	228	30	1	259 of 30	60.4 (48.6)
<b>Grand total</b>	<b>3,539.5 (65.7%)</b>	<b>983</b>	<b>151</b>	<b>7</b>	<b>1141 of 46</b>	<b>33.4 (34.6)</b>

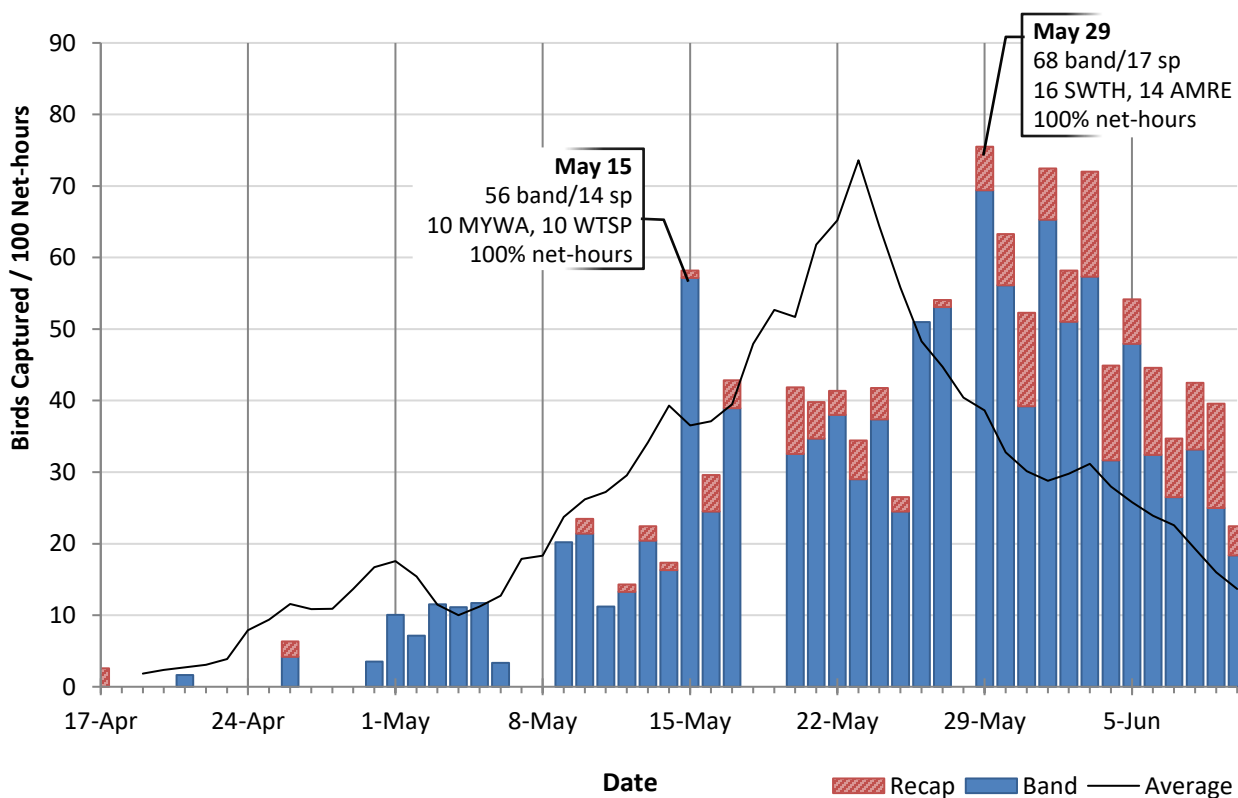


## Spring Migration Captures

A total of 983 birds were banded during spring migration monitoring with an additional 151 recapture records. The banding total is above the season average of 937.4 birds banded (1995-2021, 2011 excluded). The first peak in capture rates occurred on May 15 with 56 birds banded; the majority being flycatchers, warblers, or sparrows (Figure 2). In general, capture rates were around or below the historical average until after the season's typical banding peak (May 21 to 25). By May 26, capture rates became consistently above average. Most of these late-season captures were Alder Flycatcher, Swainson's Thrush, American Redstart, Tennessee Warbler, Mourning Warbler, or Canada Warbler. This surge included the busiest day of spring banding (May 29), when 68 birds of 17 species were banded.

A total of 45 species were banded, which is roughly equal to the spring average of 45.5 species (1995-2021, 2011 excluded). The five most frequently banded species accounted for 45% of all birds banded. These species were: Swainson's Thrush (142 banded), American Redstart (92), White-throated Sparrow (84), Tennessee Warbler (65), and Least Flycatcher (60). All species banding totals are listed in Appendix II. To-date and 2021 Banding Totals (p. 70).

Only Mourning Warblers broke their previous banding record with 47 banded (35 banded in 2017) and no species saw record lows. Capture highlights included the spring's second Townsend Solitaire, seventh Hairy Woodpecker, ninth Veery (last banded 2014), ninth Gray Catbird, and ninth Philadelphia Vireo (not banded in spring since 2005). The oldest known-age bird recaptured during the spring was a Hairy Woodpecker estimated to be 9 years old (see Recaptures, p. 22).



**Figure 2. Daily capture rates** standardized to 100 net-hours during spring migration with a three-day moving average for capture rates from 2000-2021. Codes: *species* (sp), "Myrtle" Warbler (MYWA), White-throated Sparrow (WTSP), Swainson's Thrush (SWTH), American Redstart (AMRE).

## Spring Migration Weekly Summary

The following is a summary of weekly monitoring efforts, captures, and observations. In total capture summaries, the number of birds banded is followed by the week's top banded species, a *return* is a bird banded in a previous year and recaptured in 2021, while a *repeat* was previously banded or recaptured in 2021. For more detailed weekly totals, see Appendix I (page 30).

### April 17 - April 23 (Week 1)

Warm temperatures beginning late March melted all snow except the largest drifts for a promising start to spring migration monitoring. The ground was dry on-site except in the low area behind net 5. With its usual snowdrift, net 6 was the only place that required shovelling. Last year's high water levels retreated over winter to reveal a barren rocky shore jutting up against the ice-covered lake. Warm weather turned cold and windy, thawing only briefly before snow overnight April 21 began a cold stretch for the rest of the week. Without access to vaccines yet, staff used the same COVID-19 safety procedures as in 2020. Mist-netting was partially attempted on four days, accumulating 36% of possible net-hours to capture three birds. Only the drumming of Ruffed Grouse and woodpeckers rang from the forest while Bald Eagles and American Crows collected nesting material. Amongst over 1,000 birds recorded just American Robin, Evening Grosbeak, Common Redpoll, Pine Siskin, and Lapland's Longspur were on the move. Although modest numbers of Dark-eyed Junco were spotted, their first rush passed through the area earlier in April. Diversity was the lowest for spring with 42 identified species.



Figure 3. This American Tree Sparrow was the first bird banded in 2021, and the only bird banded in Week 1.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.6, 50 VISUAL MIGRATION WATCHES, 246.5 NET-HOURS

**TOTAL CAPTURES:** 3 OF 2 SP; 1 BAND (1 AMERICAN TREE SPARROW, FIGURE 3), 2 RETURN, 0 REPEAT

### April 24 – April 30 (Week 2)

Cold and windy conditions became snowy with few stretches of favourable weather. Mist-netting was attempted on only three days (26% of possible net-hours) but banded the second ever spring Townsend's Solitaire (Figure 4). The snow forced birds to stopover with the ground hosting foraging American Robin and Varied Thrush (the sixth through ninth ever observed during spring). Foraging activity dominated and even a Pine Marten was seen chasing a Snowshoe Hare. The Bald Eagles appeared to be incubating eggs with an adult depositing a Mallard at the nest. A flock of Bohemian Waxwings was spotted reverse migrating alongside other passerines. Although commonly found in town, this species is rarely observed at the station and prior to these 19 birds, only 14 had been recorded during monitoring since 1994. On the first warm day of the week (April 30), songbird migration peaked for the season with over 1,000 American Robins (Figure 1). Within the 57 species recorded were season first observations for 25 species, including Greater Yellowlegs, Franklin's Gull, Sharp-shinned Hawk, Tree Swallow, Song Sparrow, Rusty Blackbird, and "Myrtle" Warbler. Spring migration peaked for Mallard, Common Loon, Northern Harrier, American Pipit, and Common Grackle.



Figure 4. Migrating Townsend's Solitaire banded on April 28.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.3, 48 VISUAL MIGRATION WATCHES, 176.0 NET-HOURS

**TOTAL CAPTURES:** 6 OF 6 SP; 5 BAND (5 SP), 0 RETURN, 1 REPEAT

### May 1 - May 7 (Week 3)

Warmer weather allowed for the first two full days of spring mist-netting. However, cool mornings, windy afternoons, and rain reduced net-hours to 68% of possible. Overhead, 17,000 migrating geese on May 3 and 24,000 on May 4 made for the busiest days of spring. Furthermore, this was the busiest week with 54,500 records total (Figure 1). Cracks in the ice first spotted on April 30 opened and increased waterfowl diversity. Overall, 92 species were identified, 35 of which were season first records including Black-bellied Plover, Double-crested Cormorant, Belted Kingfisher, Eastern Phoebe, Ruby-crowned Kinglet, Winter Wren, Hermit Thrush, White-throated Sparrow, and Orange-crowned Warbler. Peak migration passed for Canada, Snow, and Greater White-fronted Geese, Franklin's Gull, and Tree Swallow with continued American Robin and blackbird migration throughout. The last Tundra Swan, Sandhill Crane, Lapland's Longspur, and American Tree Sparrow came and went.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.7, 54 VISUAL MIGRATION WATCHES, 469.5 NET-HOURS

**TOTAL CAPTURES:** 41 OF 12 SP; 41 BAND (15 "SLATE-COLOURED" JUNCO), 0 RETURN, 0 REPEAT

### May 8 - May 14 (Week 4)

Rain on May 8 kept the nets shut and spurred foraging and reverse migration and, on the way to the site, field staff found a drenched and disorientated Barred Owl on the highway. With no apparent signs of injury, it was dried out and banded for monitoring after release. After the resident Barred Owls began attacking it but eliciting no response, it was brought to WILDNorth in Edmonton where it was determined to be occipitally blind. After a successful rehabilitation, it was released locally on June 7. The rest of the week was warm and calm to allow for six days of full netting (85% of possible net-hours) and the last of the snow drifts completely melted. Open pockets of water on the lake kept waterfowl flocks close to shore. Songbird migration was erratic and driven by movements of "Myrtle" Warblers, who accounted for 27% of all observations. There were far fewer records (8,700) than last week, but this was the most diverse period of spring monitoring with 104 species identified, 31 of which were season firsts, including Red-necked Grebe, Spotted Sandpiper, Least Flycatcher, Blue-headed Vireo, Swainson's Thrush, Chipping Sparrow, Baltimore Oriole, Ovenbird, Yellow Warbler, and Western Tanager. Observations peaked for: Surf Scoter, Yellow-bellied Sapsucker, Eastern Phoebe, Ruby-crowned Kinglet, and Orange-crowned Warbler, while the last Greater White-fronted Goose, Northern Pintail, Greater Yellowlegs, and Short-billed (Mew) Gull were recorded.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.9, 54 VISUAL MIGRATION WATCHES, 584.0 NET-HOURS

**TOTAL CAPTURES:** 106 OF 23 SP; 100 BAND (20 "MYRTLE" WARBLER), 3 RETURN, 3 REPEAT

### May 15 - May 21 (Week 5)

The lake was freed of ice, but periods of rain, snow, and high winds closed nets sporadically so only 60% of net-hours were attained. May 15 was the first day with above average capture rates (Figure 2). Early in the week, birds were captured with high fat scores suggesting some stop-over activity. The first signs of active breeding were observed with some captured birds exhibited cloacal protuberances. Although only 98 species were identified on-site throughout the week, participants found 101 species locally for the Great Canadian Birdathon, including an adult male "Oregon" Junco in the LSLBO parking lot. There were first encounters of 9 species, including Alder Flycatcher, Red-eyed Vireo, Tennessee Warbler, American Redstart, and Canada Warbler; and the last of 14 species, including "Lesser" Snow Goose, American Pipit, "Slate-coloured" Junco, and Orange-crowned Warbler. Peak occurrences were recorded for Least Flycatcher, Blue-headed Vireo, Chipping Sparrow, White-throated Sparrow, Yellow Warbler, Rose-breasted Grosbeak, and Western Tanager.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.6, 52 VISUAL MIGRATION WATCHES, 414.0 NET-HOURS

**TOTAL CAPTURES:** 176 OF 27 SP; 158 BAND (33 WHITE-THROATED SPARROW), 3 RETURN, 15 REPEAT

**May 22 – May 28 (Week 6)**

Warm temperatures prompted the leaves to unfurl, but frequent rain and high winds interfered with mist-netting (66% of possible net-hours). Overhead migration slowed considerably, signs of active breeding increased, and songs from many species filled the forest making it difficult to hear quiet species or those farther away due to the overlapping assortment of birdsong. Within the 87 identified species were the first Ruby-throated Hummingbird, Bank Swallow, House Wren, American Goldfinch, and Mourning Warbler, and the last “Yellow-shafted” Flicker, Ruby-crowned Kinglet, and “Western” Palm Warbler. Unusual observations included Gray Catbird, Lesser Scaup, and American Golden Plover, while Clay-coloured Sparrow migration peaked.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.6, 50 VISUAL MIGRATION WATCHES, 449.5 NET-HOURS

**TOTAL CAPTURES:** 180 OF 25 SP; 167 BAND (31 SWAINSON’S THRUSH), 4 RETURN, 9 REPEAT

**May 29 - June 4 (Week 7)**

With overnight rains, but nice weather during the monitoring period, the nets accumulated the most weekly net-hours (94% of possible), and capture rates were consistently above the historical average (Figure 2). With 341 birds banded from 26 species, banding was the busiest for spring in terms of both numbers and diversity with a Veery (ninth captured since 1994) and a bizarre Mourning Warbler (Figure 5). Observations increased slightly compared to week 6 with 89 species identified - 9 of which were season firsts, including Western Grebe, Western Wood-pewee, and Cedar Waxwing. Last encounters were more numerous (26 species) including Surf Scoter, Long-tailed Duck, American Kestrel, Blue-headed Vireo, Cliff Swallow, Gray-cheeked Thrush, Red-winged Blackbird, and Blackpoll Warbler. Peak Pine Siskin, Swainson’s Thrush, Tennessee Warbler, Common Yellowthroat, American Redstart, and Magnolia Warbler passed. Unusual observations included Trumpeter Swan, Black Tern, Northern Rough-winged Swallow, and Barn Swallow. A Black Bear visited the parking lot to tip the garbage can over for the first time and would strike again occasionally for the rest of the year.



**Figure 5.** Mourning Warbler banded June 3. Throat and head feathers are yellower than a typical spring male, but its unclear if the cause is hybridization or a weak pre-alternate moult.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 4.0, 56 VISUAL MIGRATION WATCHES, 641.5 NET-HOURS

**TOTAL CAPTURES:** 402 OF 27 SP; 341 BAND (72 AMERICAN REDSTART), 19 RETURN, 42 REPEAT

**June 5 - June 10 (Week 8, 6-day period)**

Overhead migration slowed to a trickle of Cedar Waxwings and Pine Siskins. The week recorded 1,600 observations, of which 39% were locally breeding birds. A Connecticut Warbler was the only first encounter from 69 identified species. The nets saw almost full net-hours (95% of possible) and steadily captured Alder Flycatcher, Mourning Warbler, and Common Yellowthroat, which all appeared to be migrating. The last day of spring migration monitoring felt more like running a MAPS station with several recaptures first thing followed by few new bands (most of which were in breeding condition). A pair of Canada Geese visited the lake with young goslings, but were harassed by a Common Loon which the adults had to fend off. The Black Bears kept their distance, but a Canada Lynx was seen sauntering into FEGU.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 4.0, 48 VISUAL MIGRATION WATCHES, 558.5 NET-HOURS

**TOTAL CAPTURES:** 220 OF 21 SP; 170 BAND (33 ALDER FLYCATCHER), 8 RETURN, 42 REPEAT

## Fall Migration Monitoring

Fall migration monitoring takes place over 12 weeks from July 12 to September 30 (although some years have monitored beyond the standard dates) – a period that covers the migration window for most songbird species anticipated at the LSLBO as they move south for the winter. Unfortunately, the species that often receive poor coverage with spring migration monitoring also receive poor coverage in the fall as they tend to migrate through the area in October when it is normally too cold for mist-netting and monitoring has finished. Abundances of individuals increase through July as more migrants are observed alongside local breeders. By August, most encounters are of migrants which continue to move in declining numbers into late September. Fall migration is erratic and busy days are remarkably difficult to predict.

In 2021, fall migration monitoring occurred daily from July 12 to September 30 (Table 4). Overall monitoring efforts for fall migration were similar to previous years. With no interruptions to coverage, the number of days monitored (81 days) was above average. Census was performed daily, and 60 days achieved the desired 8 daily visual migration counts. Storms completely prevented the nets from opening on 13 days, while exceptionally high capture rates, cold starts and late morning winds prevented full net-hours on 56 days. Only 12 days obtained full net-hours and, as a result, lower than average and the fourth lowest total of daily standard net-hours were accumulated since 1995. During high capture events, the non-standard aerial nets are closed before any standard net. These nets were kept closed most days in July to keep captures at a manageable level, which resulted in a record low number of daily net-hours on the aerial nets. Even when captures were low, high winds frequently caused their early closure. With volunteers and a contract extension for the field assistant during early September, the number of person-days accumulated was well above average (see Staff and Volunteers, p. 27).

**Table 4. Summary of effort during fall migration monitoring.** Averages based on 1995 to 2021 data, except visual migration effort (2000-2021; standard observation time reduced from 10 to 5 minutes).

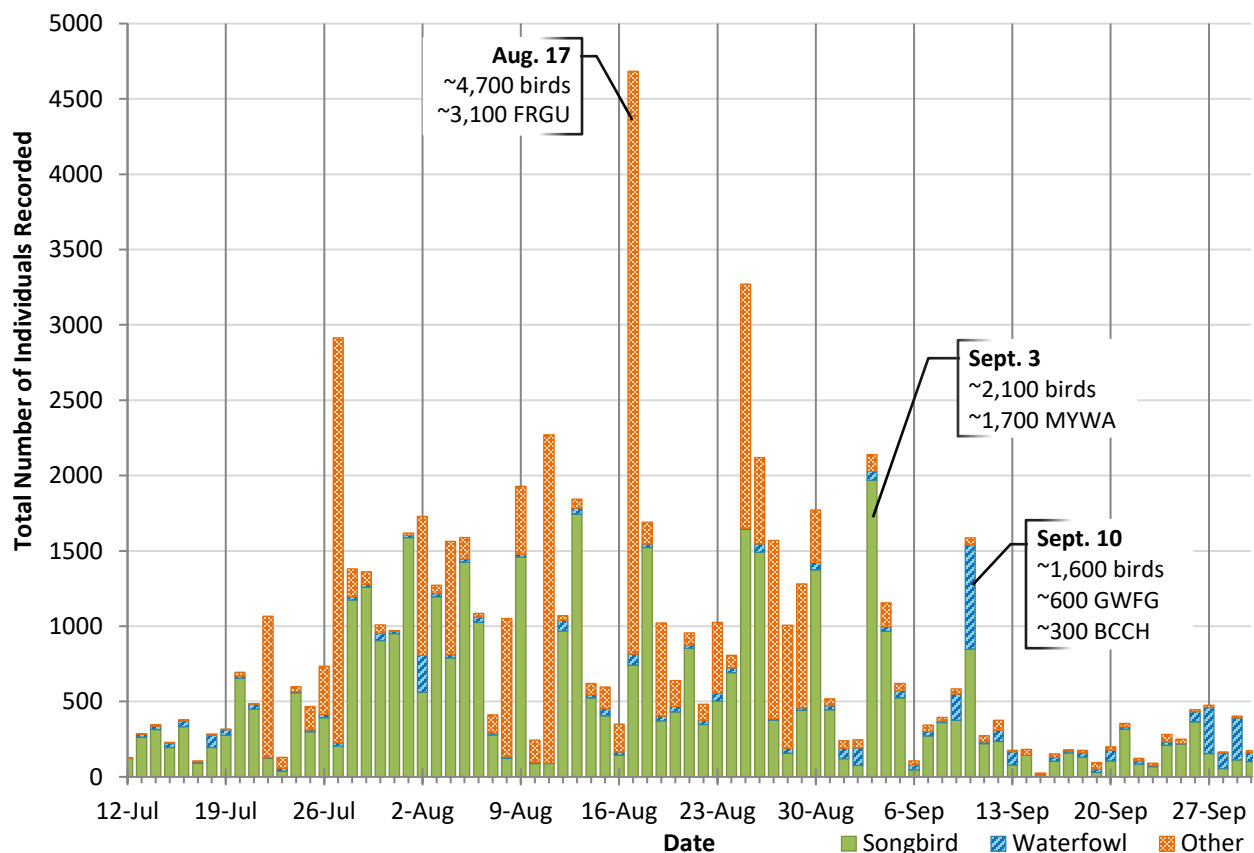
	2021	Average	Min (Year)	Max (Year)
<b>Daily Coverage</b>				
First day <sup>1</sup>	July 12	July 13	July 7 (2000)	Aug. 5 (1997)
Last day <sup>1</sup>	Sept. 30	Sept. 29	Sept. 22 (2001)	Oct. 6 (2000)
Number of days (81 possible)	81	74	35 (1997)	91 (2000)
Person-days	172	144	45 (1997)	207 (2000)
Average daily coverage code	3.72	3.74	3.48 (2003)	3.90 (2001)
<b>Banding</b>				
Number of days	68	70	33 (1997)	89 (2000)
Standard nets average daily net-hours (84 max)	54.6	64.4	34.3 (1996)	76.3 (2008)
Aerial nets average daily net-hours (14 max)	3.8	8.5	3.8 (2021)	10.3 (2012)
<b>Census</b>				
Number of days	81	69	8 (1997)	90 (2000)
<b>Visual Migration Counts</b>				
Number of days	81	79	69 (2001)	91 (2000)
Average daily vis. migs.	7.5	7.6	7.3 (2011)	7.8 (2001)

1. "Min" date values represent the earliest first or last day, while "Max" represents the latest start/end.

## Fall Migration Daily Totals

A total of 69,208 birds from 138 identified species were recorded during fall migration monitoring between counting methods. Census accounted for 18% of all encounters with 100 species identified, including the only LeConte's Sparrow recorded during fall migration monitoring. Visual migration counts contributed the fewest encounters at 6%, recording 48 identified species, including the only Cliff Swallow. Banding accounted for a relatively high proportion of encounters and at 8% added more to total observations during fall than during spring migration monitoring (1%). There were 65 species banded, including the only Yellow-bellied Flycatcher, Varied Thrush, "Oregon" Junco, Nashville Warbler, Blackburnian Warbler, and Chestnut-sided Warbler encountered. Incidental observations recorded the majority of birds (69%) and the highest species diversity (129 species) with 22 species only recorded incidentally. These species included Surf Scoter, Red-breasted Merganser, Pied-billed Grebe, Ruby-throated Hummingbird, Least Sandpiper, American Three-toed Woodpecker, Olive-sided Flycatcher, Say's Phoebe, American Goldfinch, and Vesper Sparrow.

Overall, songbird migration was erratic (Figure 6). In general, overhead migration rates were low while foraging activity was unusually high throughout the season, which caused several high capture events. It is possible that large forest fires in 2019 to the northeast created an additional funnelling effect or destroyed important stopover habitat for southward migration. Songbird observations steadily increased in response to Tennessee Warbler migration, followed by "Myrtle" Warblers. For a more detailed summary of each week see Fall Migration Weekly Summary (p. 14). For a break-down of each species' abundance, as well as arrival, peak, and departure timing, see Appendix I (p. 30).



**Figure 6. Total number of individuals detected daily during fall migration across all methods, 2021.** Codes: Franklin's Gull (FRGU), "Myrtle" Warbler (MYWA), Greater White-fronted Goose (GWFG), Black-capped Chickadee (BCCH).



## Fall Migration Mist-netting Effort & Productivity

Fall migration monitoring uses the same nets as spring with 12 standard nets (coded 1 to 12, established 1994-95) and two non-standard aerial nets (11X/12X, established fall 2010). This fall accumulated a total of 4,730.0 net-hours, achieving 59.6% of 7,938.0 possible net-hours (Table 5). The standard nets were set for only 4,422.8 net-hours (average 5,356.4 net-hours; 2000-2021). With 307.3 net-hours, non-standard netting was also well below average (684.9 net-hours; 2010-2021). The non-standard nets were frequently closed to reduce captures during high capture events and sometimes nets 5, 6, 11, and 12 were similarly kept closed. Moreover, despite an above average number of days monitored, inclement weather and the presence of feeding Sharp-shinned Hawk or bears often prevented mist-netting this fall. In addition to high capture events often forcing its closure and due to its high exposure to wind along the less vegetated shoreline, net 6 accumulated the fewest net-hours of the standard nets.

The total fall capture rate was more than four times higher than this spring's capture rate and more than double the average fall capture rate with 138.4 birds per 100 net-hours (average 56.4 birds/100 net-hours; Table 5). Between July 29, 30, and August 6, 193 captures had to be released at the net and the affected nets closed after captures became too high to process all birds in a safe timeframe. Other birds were released at the net after showing signs of stress, escaping extractors, or exhibiting complete juvenile plumage making identification impossible (for only a few species). All nets saw above average capture rates with net 8 capturing over five times its average capture rate. Nets 4, 5, 10, and 12 caught triple to quadruple their averages, while the rest roughly doubled their average. Only nets 2, 11X, and 12X were close to average in terms of capture rates. As usual, net 6 experienced the highest capture rate (444.1 birds/100 net-hours) and caught the highest diversity (47 species). Because they were opened only when captures in all standard nets were low, the aerals caught only 5% of all birds captured.

**Table 5.** Net-hours and capture rates per 100 net-hours for each net-lane during fall migration.

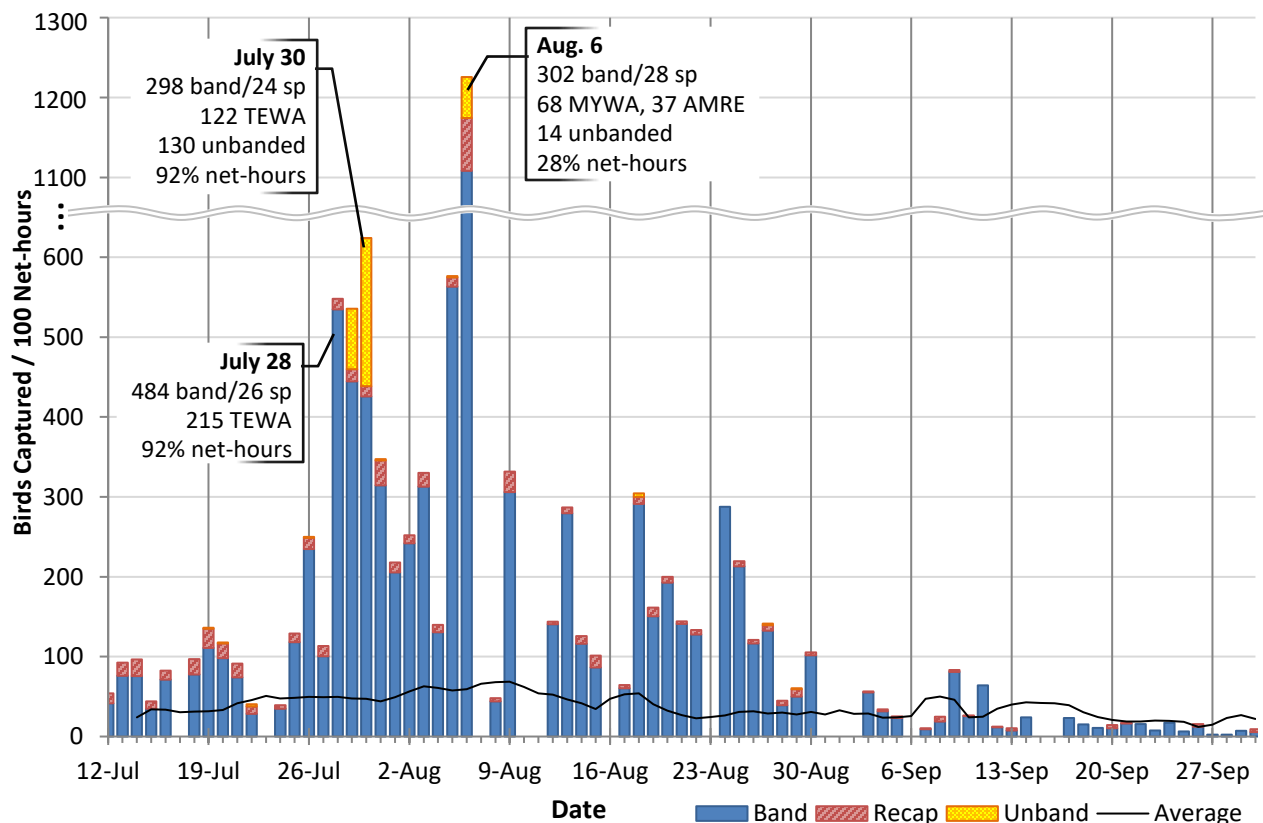
Net-lane	Net-hours (Coverage %)	Captures				Capture Rate (Average)
		New Bands	Recaptures	Released Unbanded	Total Capture of Total Species	
<b>1</b>	405.8 (71.6%)	343	16	76	435 of 25	107.2 (61.7)
<b>2</b>	405.8 (71.6%)	139	13	0	152 of 23	37.5 (33.3)
<b>3</b>	407.0 (71.8%)	211	17	0	228 of 25	56.0 (31.5)
<b>4</b>	423.0 (74.6%)	354	41	69	464 of 33	109.7 (28.4)
<b>5</b>	329.0 (58.0%)	707	44	3	754 of 42	229.2 (66.0)
<b>6</b>	208.8 (36.8%)	878	46	3	927 of 47	444.1 (177.4)
<b>7</b>	406.0 (71.6%)	242	31	2	275 of 25	67.7 (23.4)
<b>8</b>	409.3 (72.2%)	557	40	40	637 of 34	155.7 (29.9)
<b>9</b>	420.5 (74.2%)	192	15	0	207 of 18	49.2 (17.8)
<b>10</b>	419.5 (74.0%)	405	36	0	441 of 34	105.1 (25.3)
<b>11</b>	220.8 (38.9%)	359	18	0	377 of 33	170.8 (74.0)
<b>12</b>	367.5 (64.8%)	740	40	11	791 of 43	215.2 (57.7)
<b>Total standard</b>	4,422.8 (65.0%)	5,127	357	204	5,688 of 65	145.6 (52.2)
<b>11X</b>	118.0 (20.8%)	139	5	0	144 of 22	122.0 (102.0)
<b>12X</b>	189.3 (33.4%)	106	22	1	129 of 24	68.2 (61.4)
<b>Total non-standard</b>	307.3 (27.1%)	245	27	1	273 of 31	95.1 (81.7)
<b>Grand total</b>	<b>4,730.0 (59.6%)</b>	<b>5,372</b>	<b>384</b>	<b>205</b>	<b>5,961 of 66</b>	<b>138.4 (56.4)</b>

## Fall Migration Captures

A phenomenal 5,372 birds were banded during fall migration monitoring (fall average 2,280.6 birds banded; 1995-2021) with an additional 384 recapture records and 205 birds that were released unbanded. This was the busiest fall season since operations began due to most days in July and August experiencing a capture rate well above the historical daily average. Banding was erratically busy overall, beginning relatively steady in July and first peaked on July 28 when 484 birds were banded for the busiest day in the fall and a new record for the most birds banded in a single day at the LSLBO (Figure 7). Banding would steadily slow into late August until capture rates became lower than the historical daily average through much of September.

With 66 species banded, species diversity was also above average (58.1 species; 1995-2021). The five most frequently banded species accounted for 66% of all birds banded. These species were: Tennessee Warbler (1,174 banded), “Myrtle” Warbler (639), Swainson’s Thrush (617), American Redstart (589) and Ovenbird (424). All species banding totals are listed in Appendix II (p. 70).

No species saw record low band totals, but 14 species broke their previous record highs. These included: Swainson’s Thrush (617 banded; surpassing 362 banded in fall 2018), Philadelphia Vireo (34; 27 in 1995), Ovenbird (424; 303 in 2014), Tennessee Warbler (1174; 715 in 2002), Bay-breasted Warbler (50; 38 2019), Black-and-white Warbler (175; 123 in 2020), Canada Warbler (232; 188 in 2020), Rose-breasted Grosbeak (41; 22 in 2019), and Western Tanager (39; 26 in 2019). Other capture highlights were Varied Thrush, Red-winged Blackbird, Common Grackle, and Blackburnian Warbler. The oldest known-age bird recaptured during fall was a Red-eyed Vireo estimated to be at least 6 years old (see Recaptures, p. 22).



**Figure 7. Daily capture rates** standardized to 100 net-hours during fall migration for standard and non-standard captures with a three-day moving average of capture rates from 2000-2021. Codes: *species (sp)*, *Tennessee Warbler (TEWA)*, *“Myrtle” Warbler (MYWA)*, *American Redstart (AMRE)*.



## Fall Migration Weekly Summary

The following is a weekly summary of monitoring efforts, captures, and observations. For capture summaries, birds banded is followed by the top banded species, a *return* was banded in a previous year and recaptured in 2021, while a *repeat* was banded or already recaptured within 2021. For more detailed weekly totals, see Appendix I (page 30).

### July 12 - July 18 (Week 1)

Fall migration monitoring began hot with unrelenting smoke from fires in British Columbia. After two extreme heat warnings and little rain, the ground was dangerously dry. A small amount of precipitation closed the nets, but with full netting on five days (79% of possible net-hours), this week had the most net-hours accumulated during fall. From the 60 identified species, final efforts of local breeders were plentiful with many fledglings (including two Dark-eyed Juncos in complete juvenile plumage), a Belted Kingfisher carrying food, and a Common Goldeneye and her three ducklings hugging the shore throughout the week. With the young birds came the flat flies (see Collaborative Projects, p. 24). The forest was quiet overall with only the Red-eyed Vireos and White-throated Sparrows singing consistently alongside a cacophony of begging calls. Migration began as a trickle midweek with blackbirds, "Myrtle" Warbler and a few Tree Swallow, Tennessee Warbler, American Redstart, Yellow Warbler, and Western Tanager.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.9, 54 VISUAL MIGRATION WATCHES, 544.0 NET-HOURS

**TOTAL CAPTURES:** 415 OF 28 SP; 336 BAND (95 "MYRTLE" WARBLER), 10 RETURN, 69 REPEAT

### July 19 - July 25 (Week 2)

The smoke lingered for the first half of the week and high winds interrupted the last half. The more exposed shoreline and aerial nets were often closed (68% of possible net-hours). July 25 had most nets closed to minimize risk to birds and staff alike after multiple bear sightings. Migration picked up with 64 species encountered. As a result of most warbler species foraging through the canopy as they migrated, capture rates were often above the historical average for this period. First encounters were noted for several species which do not breed on-site, including Warbling Vireo, American Goldfinch, Nashville Warbler, Bay-breasted Warbler, and "Western" Palm Warbler, while Tree Swallow migration peaked. Gulls circled in the winds and large flocks of White-winged Crossbills were seen going north. After many COVID-19 restrictions were lifted and vaccinations became widely available, we had our first public tour since 2019. Groups were preregistered, keeping numbers small and allowing for guided outdoor activities.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.9, 54 VISUAL MIGRATION WATCHES, 464.5 NET-HOURS

**TOTAL CAPTURES:** 437 OF 33 SP; 368 BAND (52 YELLOW WARBLER), 3 RETURN, 66 REPEAT

### July 26 - August 1 (Week 3)

Though it began gusty, the weather was hot and calm overall. The continuation of unusually high foraging activity made this the busiest week for banding with 1,712 birds banded including a new single-day record of 484 bands on July 28 (44% Tennessee Warbler). With such high captures, the shorelines and aerals were frequently closed (76% of net-hours attained). Birds had to be released unbanded on July 29 and 30 due to high captures. On July 30, 205 birds were released unbanded when closing round caught 262 birds. All three banders were able to extract then process simultaneously using the MAPS kit after FAWA was closed. With 10,000 encounter records, counts were similarly busy. Among the 77 species identified were 11 firsts including Northern Harrier, Eastern Kingbird, Orange-crowned Warbler, and Cape May Warbler. Migration peaked for Philadelphia Vireo, Black-and-white Warbler, Tennessee Warbler, Magnolia Warbler, and Canada Warbler.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 4.0, 56 VISUAL MIGRATION WATCHES, 524.0 NET-HOURS

**TOTAL CAPTURES:** 1,795 OF 36 SP; 1,712 BAND (576 TENNESSEE WARBLER), 2 RETURN, 81 REPEAT

### August 2 - August 8 (Week 4)

Warm, overcast, still, and slightly smoky conditions persisted until winds on the last day diminished bird activity. After week 3's unprecedented capture rates, nets 6, 11, 11X, and 12X were opened after census only if capture rates were manageable. By mid-week, nets 5 and 12 were similarly kept closed. To give staff a break, no netting was attempted August 7 despite favourable weather. Since capture rates remained high, the aerals would mostly stay closed until week 8. Regardless of only accumulating 54% of possible net-hours, this was the second busiest week of banding with the most diverse captures and some band sizes ran low. August 6 had the highest capture rate of fall when 302 birds were banded in only 27.25 net-hours when net 3 (normally our least productive net) caught the most birds. Although many birds still foraged as they migrated, there was a higher proportion of overhead migration. American Redstart replaced Tennessee Warbler as the most abundant species. Within 81 identified species was the first Olive-sided Flycatcher and Wilson's Warbler, and the only Least Sandpiper, Yellow-bellied Flycatcher, and LeConte's Sparrow of fall. Peak migration passed for Alder Flycatcher, Red-eyed Vireo, Bank Swallow, Song Sparrow, Red-winged Blackbird, and Northern Waterthrush.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.7, 54 VISUAL MIGRATION WATCHES, 372.3 NET-HOURS

**TOTAL CAPTURES:** 1,274 OF 39 SP; 1,219 BAND (358 TENNESSEE WARBLER), 0 RETURN, 55 REPEAT

### August 9 - August 15 (Week 5)

With some nets closed to keep captures low and frequent high winds, only 43% of net-hours were attained. Overhead migration became more common with Tennessee Warblers and "Myrtle" Warblers, who at times foraged in large mixed flocks with Ovenbirds. The band supply was replenished after prompt order fulfillment by the Bird Banding Office. There were several unusual captures, including a Common Grackle (Figure 8), Blackburnian Warbler, and Chestnut-sided Warbler. Among the 84 species identified were the first American Kestrel, Forester's Tern, Osprey, Baltimore Oriole, and the only Pied-billed Grebe, Pectoral Sandpiper, and Connecticut Warbler. Peak migration passed for Ovenbird, Mourning Warbler, Rose-breasted Grosbeak, and Western Tanager. The fishflies were remarkably populous and coated the nets, flew into our faces, and exploded from vegetation with the slightest disturbance. The sky was often midge-generated white noise sometimes obscuring bird calls.

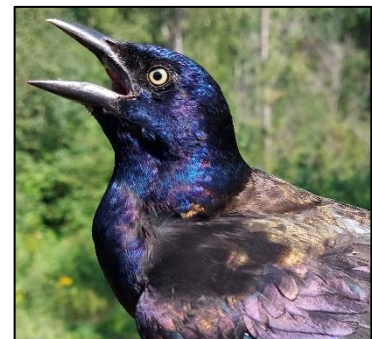


Figure 8. Common Grackle banded Aug 13.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.6, 52 VISUAL MIGRATION WATCHES, 296.5 NET-HOURS

**TOTAL CAPTURES:** 605 OF 32 SP; 571 BAND (156 OVENBIRD), 1 RETURN, 33 REPEAT

### August 16 - August 22 (Week 6)

Frequent high winds and capture rates kept nets closed (46% of possible net-hours). Banding became dominated by Swainson's Thrush, Ovenbird, and Mourning Warbler. A young Varied Thrush was captured early in its pre-formative with plenty of active moult and juvenile feathers (just the seventh captured during fall). Tennessee Warblers continued to migrate, but there was a lull in "Myrtle" Warblers and periods of reverse migration for unknown reasons. With 3,700 gulls driving up the totals, August 17 had the highest number of birds observed in a day for fall monitoring. Among the 85 identified species was the first Solitary Sandpiper, Say's Phoebe, Barn Swallow, Cliff Swallow, and Gray-cheeked Thrush. Migration peaked for Eastern Kingbird and American Crow. Bizarrely, shorebirds flocked up and down the lake, often too quick to identify between gaps in the trees. Some poplars, birch, willow, cherry, wild rose, and grass began yellowing, but it was unclear if the cause was the ongoing dry conditions or the coming of fall as early morning temperatures started to cool.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.7, 52 VISUAL MIGRATION WATCHES, 312.0 NET-HOURS

**TOTAL CAPTURES:** 527 OF 27 SP; 506 BAND (143 SWAINSON'S THRUSH), 1 RETURN, 20 REPEAT

### August 23 - August 29 (Week 7)

Banding slowed mostly because nets were often closed due to either predators, high winds, or rain, accumulating an abysmal 35% of net-hours. The biggest concern was Sharp-shinned Hawks, which foraged as they migrated and were frequently observed terrorizing songbirds. To reduce depredation risk, exposed nets were closed and other nets were checked in 15-minute intervals rather than the usual 30. The second wave of “Myrtle” Warbler migration began and accounted for 26% of all encounters. Migration came in waves, as did the Franklin’s Gulls to make this the busiest week for observations with over 11,000 encounters. Amid the 89 identified species was the first Northern Goshawk, American Pipit, Yellow-headed Blackbird, and the last Yellow-bellied Sapsucker, Philadelphia Vireo, Baltimore Oriole, Cape May Warbler, and Black-throated Green Warbler. Peaks in migration passed for Greater Yellowlegs, Ring-billed Gull, Purple Finch, White-throated Sparrow, Common Grackle, and Wilson’s Warbler.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.4, 48 VISUAL MIGRATION WATCHES, 237.0 NET-HOURS

**TOTAL CAPTURES:** 224 OF 25 SP; 208 BAND (64 SWAINSON’S THRUSH), 1 RETURN, 15 REPEAT

### August 30 - September 5 (Week 8)

Although this period saw the first day of full net-hours since week 1, a stretch of rain mid-week and high winds interfered with netting (48% of possible net-hours). The weather forecast was particularly inaccurate and local radar coverage disappeared. Due to this uncertainty and ominous clouds, the nets were often kept closed through otherwise favourable weather. A steady stream of “Myrtle” Warblers marked the peak of their second wave and accounted for 60% of all birds encountered (Figure 9). Their migration made September 3 the busiest day of fall songbird migration. Black-capped Chickadees began to irrupt as hundreds went south. With netting so frequently interrupted and birds predominantly migrating overhead, there was a dramatic drop in capture rates to around or below the historical average for the rest of the fall monitoring period. The last summer breeders departed and 98% of encounters were actively migrating or dispersing. Diversity was the highest for fall with 92 identified species, of which 23 species were seen for the last time, including American Kestrel, Least Flycatcher, Red-eyed Vireo, Tree Swallow, Tennessee Warbler, Bay-breasted Warbler, Yellow Warbler, Canada Warbler, and Rose-breasted Grosbeak. Season firsts were sparse with just Greater White-fronted Goose, Red-breasted Merganser, Sandhill Crane, “Yellow-shafted” Flicker, Lapland’s Longspur, and Vesper Sparrow. Likewise, migration peaks were few, but included Sharp-shinned Hawk, Lincoln’s Sparrow, and “Myrtle” Warbler.



**Figure 9.** This “Myrtle” Warbler was the 5,000<sup>th</sup> band of fall 2021.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.6, 50 VISUAL MIGRATION WATCHES, 328.5 NET-HOURS

**TOTAL CAPTURES:** 180 OF 30 SP; 172 BAND (85 “MYRTLE” WARBLER), 0 RETURN, 8 REPEAT

### September 6 - September 12 (Week 9)

Shifting winds persisted throughout most of the week with intermittent rains to depress bird activity and led to more leaves than birds in the nets (70% of possible net-hours). Most days saw a few flocks of geese, Sandhill Cranes, Black-capped Chickadees, or “Myrtle” Warblers and only a slow trickle of birds otherwise. The last songbird peak occurred on September 10 when 327 Black-capped Chickadees and 16 Boreal Chickadees irrupted south while 277 “Myrtle” Warblers, 597 Greater White-fronted Geese, and 61 Canada Geese flew overhead (Figure 6). Diversity declined to 72 species with the last Spotted Sandpiper, Eastern Kingbird, Alder Flycatcher, Magnolia Warbler, and Western Tanager, but the first Golden-crowned Kinglet, Horned Lark, American Tree Sparrow, and “Gambel’s” White-crowned Sparrow. Peak counts occurred for Common Tern, Northern Harrier, Ruby-crowned Kinglet, American Pipit, Lapland’s Longspur, Savannah Sparrow, Black-capped Chickadee, Boreal Chickadee, and Orange-crowned Warbler.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.7, 52 VISUAL MIGRATION WATCHES, 477.8 NET-HOURS

**TOTAL CAPTURES:** 153 OF 19 SP; 145 BAND (75 “MYRTLE” WARBLER), 0 RETURN, 8 REPEAT

### September 13 - September 19 (Week 10)

With only one calm day, this week was windier still with trees falling onto the paths and periods of rain preventing mist-netting (45% possible net-hours) and thwarting bird activity. Notably, within the just 50 bands was another Varied Thrush (Figure 10). The Ruffed Grouse were active and one even perched on net 5 (closed from the wind), drooping it down into a comical “V” while seemingly taunting that, once again, all our nets were closed. This was the slowest week for observations with only 988 encounters from 60 species – most of which were Black-capped Chickadees and “Myrtle” Warblers among the last Western Grebe, Savannah Sparrow, Ovenbird, Common Yellowthroat, and Mourning Warbler. Peak migration passed for Red-tailed Hawk, Horned Lark, American Tree Sparrow, and “Gambel’s” White-crowned Sparrow. Fall settled in as the chipmunks engorged on grass and dandelion leaves and the squirrels hauled mushrooms up into the midstory for drying.



Figure 10. Second Varied Thrush banded of fall 2021.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.4, 48 VISUAL MIGRATION WATCHES, 311.5 NET-HOURS

**TOTAL CAPTURES:** 52 OF 18 SP; 50 BAND (16 “MYRTLE” WARBLER), 0 RETURN, 2 REPEAT

### September 20 - September 26 (Week 11)



Figure 11. Golden-crowned Kinglets are a late migrant.

Mist-netting was attempted daily, but winds sometimes closed the more exposed nets (75% possible net-hours). Although the weather appeared favourable for migration, both the lake and sky were often empty. Most movements came from “Myrtle” Warblers overhead, chickadees and kinglets (Figure 11) through the canopy, and a few sparrows along the forest floor. The last sightings of 25 species were among the 64 species identified, including Belted Kingfisher, Peregrine Falcon, American Crow, Swainson’s Thrush, Purple Finch, Song Sparrow, American Redstart, and “Western” Palm Warbler. However, peaks passed for “Slate-coloured” Junco and Pine Siskin, with observations of the first Snow Goose and Common Redpoll. A few surprisingly early Bohemian Waxwing were encountered – the first ever recorded during fall migration monitoring. Frustratingly, a Black-billed Magpie found itself in the far end of net 11, but managed to escape well before there was any hope of a successful extraction.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 3.9, 54 VISUAL MIGRATION WATCHES, 517.0 NET-HOURS

**TOTAL CAPTURES:** 75 OF 15 SP; 69 BAND (26 “SLATE-COLOURED” JUNCO), 2 RETURN, 4 REPEAT

### September 27 - September 30 (Week 12, 4-day period)

Periods of rain and winds sometimes closed the nets, but fall finished without a single hour being lost to cold temperatures. Despite the nets attaining 88% of possible net-hours, only 16 birds were banded (Figure 7), but caught an unusual “Oregon” Junco and a White-breasted Nuthatch. Since September was warm, it is possible some migrants that would normally be observed late in the season had not yet moved in earnest and Canada Goose and “Lesser” Snow Goose migration seemed to start picking up. An American Three-toed Woodpecker stopped briefly in a spruce near net 1 – just the second recorded during fall migration monitoring.



Figure 12. This American Robin was the last band of fall 2021.

**EFFORT:** AVERAGE DAILY COVERAGE CODE 4.0, 32 VISUAL MIGRATION WATCHES, 345.0 NET-HOURS

**TOTAL CAPTURES:** 19 OF 10 SP; 16 BAND (4 “SLATE-COLOURED” JUNCO; FIGURE 12), 0 RETURN, 1 REPEAT

## Monitoring Avian Productivity and Survivorship (MAPS)

Coordinated by the Institute for Bird Populations (IBP), MAPS is a continent-wide program that aims to understand population changes to conserve birds and their habitats. By banding during the breeding season, population parameters such as productivity (young produced), recruitment (young returning to breed), and survival (adults returning to breed) may be estimated. Conservation efforts can then target causes of populations declines, such as poor breeding success or poor habitat quality.

The LSLBO has contributed to MAPS since 1994, with this year marking our 28<sup>th</sup> year. Four MAPS stations are operated: Far and Away (FAWA), Fern Gully (FEGU), Residential (RESI), and Roadside (ROAD). FAWA, FEGU, and ROAD are located in mature deciduous forest near the migration station, while RESI is in more diverse habitats near the Boreal Centre for Bird Conservation. FAWA and ROAD have operated yearly since 1994 (28 years). FEGU has operated from 1994 to 2000, then 2003 to 2021 (25 years), while RESI has operated since 2000 (22 years).

The LSLBO follows protocols detailed in the MAPS Manual (IBP, 2021). Each station is visited six times, once in each 10-day MAPS period, and uses 10 nets over six hours to a maximum of 60 net-hours in a period and 360 net-hours in a summer (Table 6). Period 6 was run somewhat early to free up operators for breeding bird surveys. No station achieved full net-hours in 2021 (Table 6). In periods 5 through 9, net-hours were lost due to poor weather or net repairs. In period 10, capture rates were too high to safely operate all 10 nets with available manpower, so some nets were kept closed (Table 7).

**Table 6.** Dates of operation and net-hours completed for each MAPS period and station.

MAPS Period (Dates)	Station (Net-hours 2021)			
	FAWA (346.0)	FEGU (349.5)	ROAD (357.5)	RESI (331.5)
5 (June 10 – 19)	June 10 (59.5)	June 12 (58.5)	June 12 (60.0)	June 11 (56.0)
6 (June 20 – 29)	June 18 (60.0)	June 19 (60.0)	June 19 (59.5)	June 18 (60.0)
7 (June 30 – July 9)	July 3 (54.5)	July 4 (60.0)	July 4 (60.0)	July 3 (54.5)
8 (July 10 – 19)	July 10 (60.0)	July 12 (60.0)	July 12 (60.0)	July 10 (59.0)
9 (July 20 – 29)	July 22 (60.0)	July 21 (58.0)	July 21 (58.0)	July 20 (60.0)
10 (July 30 – Aug. 8)	July 30 (52.0)	August 1 (53.0)	August 2 (60.0)	July 31 (42.0)

With 862 birds banded (Table 7), MAPS 2021 was the busiest season yet, banding triple the average of 268.5 birds/MAPS season (Table 8). Due mostly to steady captures of migrants in the last two periods, all stations except ROAD banded more birds this year than any previous year. FEGU banded the most birds (278 banded) while ROAD banded the fewest (106). Record numbers were banded for 13 species including Swainson's Thrush, American Redstart, Canada Warbler, and Western Tanager (for all records see Appendix II, page 70). Diversity of banded species was also above average with 31 species (average 25.8 species/season). Unusual captures included the first Nashville Warbler of the MAPS program banded in FAWA and a female Pine Siskin with a brood patch captured in ROAD.

**Table 7.** Capture rates for each period of MAPS 2021.

MAPS Period	5	6	7	8	9	10	Total
New captures	69	54	97	89	208	345	862
Recaptures	41	54	66	44	49	49	303
Total captures	110	108	163	133	257	394	1,165
Capture rate per 100 net-hours	69.0	54.0	97.0	89.0	208.0	345.0	84.1

There were an additional 303 recapture records from 20 species in the MAPS program (Table 8); another record-breaking sum and well above the average of 112.3 recaptures per MAPS season. FAWA had the most recaptures (128 records) while RESI recorded the fewest (32). From these recapture records, the oldest known age birds were Mourning Warblers estimated to be 9 years old or older with one recaptured in RESI and the other in FAWA (see Recaptures, p. 22).

**Table 8.** Number of birds banded and recaptured at the four MAPS stations (taxonomic order), 2021.

Species	FAWA		FEGU		ROAD		RESI		TOTAL	
	Band	Recap	Band	Recap	Band	Recap	Band	Recap	Band	Recap
Sharp-shinned Hawk	0	0	0	0	0	0	0	1	0	1
Yellow-bellied Sapsucker	1	0	0	0	0	0	2	2	3	2
Alder Flycatcher	0	1	1	0	0	0	2	0	3	1
Least Flycatcher	5	0	3	0	1	0	3	0	12	0
Philadelphia Vireo	2	0	1	0	0	0	1	0	4	0
Red-eyed Vireo	6	4	2	2	1	0	5	1	14	7
Black-capped Chickadee	0	0	1	0	2	1	1	0	4	1
Cedar Waxwing	1	0	0	0	0	0	0	0	1	0
Winter Wren	0	0	1	0	0	0	0	0	1	0
Swainson's Thrush	28	4	22	13	20	9	12	4	82	30
Hermit Thrush	0	0	0	0	0	1	0	0	0	1
American Robin	0	0	2	0	1	0	0	0	3	0
Pine Siskin	0	0	0	0	1	0	0	0	1	0
Chipping Sparrow	0	0	0	0	0	0	1	1	1	1
White-throated Sparrow	34	9	31	18	5	9	23	5	93	41
Lincoln's Sparrow	0	0	0	0	0	1	6	2	6	3
Swamp Sparrow	0	0	1	0	0	0	1	0	2	0
Ovenbird	5	1	4	8	16	7	11	4	36	20
Northern Waterthrush	1	1	1	2	0	0	2	0	4	3
Black-and-white Warbler	9	2	19	4	6	12	11	1	45	19
Tennessee Warbler	69	4	59	5	7	2	76	0	211	11
Nashville Warbler	1	0	0	0	0	0	0	0	1	0
Mourning Warbler	6	7	18	8	3	4	7	4	34	23
Common Yellowthroat	0	0	0	0	0	0	1	0	1	0
American Redstart	29	17	46	36	28	17	20	0	123	70
Cape May Warbler	0	0	1	0	0	0	0	0	1	0
Magnolia Warbler	4	3	12	3	4	3	13	2	33	11
Bay-breasted Warbler	0	0	1	0	1	0	0	0	2	0
Yellow Warbler	21	3	12	0	0	0	3	0	36	3
"Myrtle" Warbler	3	1	7	2	2	5	13	2	25	10
Canada Warbler	13	8	26	27	8	7	16	3	63	45
Western Tanager	1	0	5	0	0	0	2	0	8	0
Rose-breasted Grosbeak	7	0	2	0	0	0	0	0	9	0
<b>Total number of captures</b>	<b>246</b>	<b>65</b>	<b>278</b>	<b>128</b>	<b>106</b>	<b>78</b>	<b>232</b>	<b>32</b>	<b>862</b>	<b>303</b>
<b>Average captures (1994-2021)</b>	53.4	22.0	85.5	42.6	56.5	37.3	104.8	19.1	268.6	112.3
<b>Total number of species</b>	<b>20</b>	<b>14</b>	<b>24</b>	<b>12</b>	<b>16</b>	<b>13</b>	<b>23</b>	<b>13</b>	<b>31</b>	<b>20</b>
<b>Grand Total (Captures / Species)</b>									<b>1,165 / 33</b>	



## MAPS Breeding Status

To assess the summer residency of species observed during MAPS, each of the 68 species detected was given a breeding status code (Table 9). Observations were recorded within each station's boundaries during standard operations and combined with mist-netting results. Confirmed breeding species (B) are those with at least one individual observed with an active nest, young fledglings, adults carrying food or nesting material, performing a distraction display, or by persistent territorial singing across periods. If a species is heard singing infrequently, then it is often coded a likely breeder (L). Transient species (T) breed in the wider area but are not likely breeding within the site.

**Table 9. Breeding status of species detected during MAPS, 2021.** "B" indicates a breeding species, "L" a likely breeding species, and "T" a transient species for each site (taxonomic order).

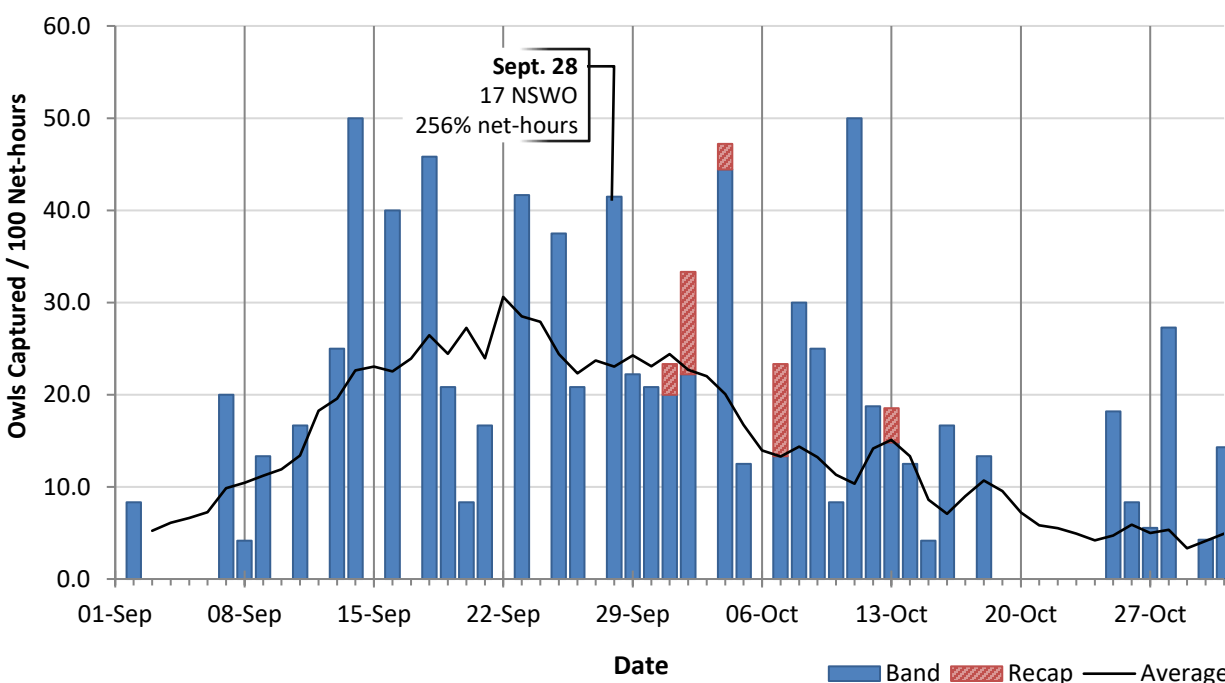
Species	FAWA	FEGU	ROAD	RESI	Species	FAWA	FEGU	ROAD	RESI
Canada Goose	T			T	Swainson's Thrush	B	B	B	B
Mallard	T	T	T	T	Hermit Thrush	T		T	
Common Goldeneye			T		American Robin	B	L	L	B
Common Merganser	T				Evening Grosbeak	T	T	T	
Ruffed Grouse			T	B	Purple Finch	T	T	T	T
Spotted Sandpiper	T				Pine Siskin	T	L	L	L
Lesser Yellowlegs	T				Chipping Sparrow				B
Franklin's Gull		T	T		Clay-coloured Sparrow		T	T	T
Ring-billed Gull	T				White-throated Sparrow	B	B	B	B
Common Loon	T	T	T	T	Song Sparrow	T	T		
Sharp-shinned Hawk				T	Lincoln's Sparrow	T	T	T	L
Bald Eagle	T	T	T		Swamp Sparrow		T		T
Belted Kingfisher	T	T	T	T	Brown-headed Cowbird				T
Yellow-bellied Sapsucker	L			B	Common Grackle	T			
American Three-toed Wo.			T		Ovenbird	B	B	B	B
Downy Woodpecker	L	B	L	L	Northern Waterthrush	L	B		L
Hairy Woodpecker	T	L	L	T	Black-and-white Warbler	B	B	B	B
Pileated Woodpecker				T	Tennessee Warbler	B	B	B	B
Yellow-bellied Flycatcher				L	Nashville Warbler	T			
Alder Flycatcher	B	L	T	B	Mourning Warbler	B	B	B	B
Least Flycatcher	B	L	L	B	Common Yellowthroat	L	T	T	L
Blue-headed Vireo			T	L	American Redstart	B	B	B	B
Philadelphia Vireo	B	L		B	Cape May Warbler		T		
Warbling Vireo				T	Magnolia Warbler	B	B	B	B
Red-eyed Vireo	B	B	B	B	Bay-breasted Warbler		T	T	
Canada (Gray) Jay	T	T	T		Yellow Warbler	B	B	L	B
American Crow	L	L	L	L	"Myrtle" Warbler	B	B	B	B
Common Raven	T	T	T	T	Black-throated Green Wa.				L
Boreal Chickadee				T	Canada Warbler	B	B	B	B
Tree Swallow	T				Western Tanager	L	B	B	B
Ruby-crowned Kinglet		T	T		Rose-breasted Grosbeak	B	B	B	B
Cedar Waxwing	L	L	L	L					
Red-breasted Nuthatch	T	L	L	B	<b>TOTALS</b>	<b>FAWA</b>	<b>FEGU</b>	<b>ROAD</b>	<b>RESI</b>
White-breasted Nuthatch	T				Breeding species (B)	17	17	14	23
Brown Creeper				T	Likely breeding sp. (L)	7	11	9	11
House Wren		L			Transient species (T)	24	17	21	15
Winter Wren		B	T	B	<b>Total species detected</b>	<b>48</b>	<b>45</b>	<b>44</b>	<b>49</b>

## Northern Saw-whet Owl & Boreal Owl Monitoring

Since 2004, the LSLBO has contributed to Project OwlNet, a continent-wide network of Northern Saw-whet Owl banding stations. Along with understanding these owl's population trends, habitat quality of mature forests and population trends of small mammal species may be inferred. Targeted owl banding was performed during favourable weather conditions September 1 to October 31 to monitor the populations of migratory Northern Saw-whet Owls and potentially migratory Boreal Owls.

Two net arrays were used. The Saw-whet Owl array consists of a line of four nets near the Boreal Centre for Bird Conservation in mature deciduous forest (moved to this location in 2013). Another two nets in a nearby stand of conifers makes up the Boreal Owl net array (since 2016). Nets are opened one hour after sunset with standardized call playbacks specific to each species used to attract owls. This was the 18<sup>th</sup> year of fall owl migration monitoring.

Owl banding was performed on 45 out of 61 possible nights, above the average of 41 nights per season. With additional hours beyond the standard 4-hour period on 16 nights (a record high), the Saw-whet array accumulated 702.0 net-hours (average 615.6 net-hours), while the Boreal array accumulated 339.5 net-hours (average 305.4 net-hours) to an average of 17.4 net-hours per night of operation between the two arrays. With 419.5 additional net-hours from non-standard monitoring and the Boreal array, 2021's capture rate of 19.6 owls per 100 net-hours was the fifth highest capture rate yet (average 15.3 owls/100 net-hours, 2004-2021). Due to 26 owls being captured during non-standard hours, 2021's total of 213 Northern Saw-whet Owls and 1 Boreal Owl surpassed the previous banding record of 201 owls in 2006. Of these owls, 180 Saw-whets were captured in the Saw-whet Owl array and 33 Saw-whets and 1 Boreal were captured in the Boreal Owl array. The busiest night was September 28, which captured 17 owls (Figure 13). However, with no additional hours pursued, September 14 and October 11 both saw the highest capture rates of 50.0 owls per 100 net-hours each.



**Figure 13. Capture rates** standardized to 100 net-hours during owl monitoring sessions including both owl net arrays and non-standard banding Sept. 1 to Oct. 31, 2021. Nightly average capture rates from 2004-2021 shown with a moving average of three-day periods. Codes: Northern Saw-whet Owl (NSWO)



## Recaptures



Adult songbirds often cannot be aged as older than 2 when banded. However, by recapturing a bird years later, we can better estimate its age. In 2021, the LSLBO recorded 845 recapture records: 151 during spring migration, 384 during fall migration, 303 during MAPS, and 7 during owl banding. Local breeders are often recaptured multiple times in a year; thus, these 845 records represent 560 individuals of 35 species with 431 birds originally banded this year and 74 banded last year. There were 55 birds banded prior to 2020 (Table 10). The oldest known-age birds were two Mourning Warblers estimated to be 9 years old or older, which is a new international longevity record (previous oldest known-age Mourning Warbler was a 7 year-old). Another interesting recapture was a Hairy Woodpecker captured 8 years and 2 hours to-the-day after it was banded. See Appendix III (p. 73) for help understanding assigned ages.

Figure 13. [Left] Both of the oldest known-aged birds were male Mourning Warblers breeding in our MAPS sites estimated to be 9 years old or older, similar to this younger bird recaptured in June.

**Table 10.** Location (migration monitoring [MM], MAPS sites [FAWA, FEGU, ROAD, RESI]) and approximate age of recaptured birds banded 2019 or earlier and recaptured 2021.

Species	Band Number	Banding Details			Recapture		Age (Years)
		Date	Site	Age	Date (2021)	Site	
American Redstart	2570-16761	July 13, 2019	MM	HY	July 12	FEGU	2
Canada Warbler	2920-33937	August 5, 2019	MM	HY	July 10	RESI	2
White-throated Sparrow	2951-12545	August 1, 2019	MM	HY	June 12	ROAD	2
"Myrtle" Warbler	2820-92914	May 29, 2019	MM	SY	May 10	MM	3
"Myrtle" Warbler	2820-92916	May 30, 2019	MM	SY	May 23	MM	3
American Redstart	2570-16141	June 12, 2019	ROAD	SY	May 21	MM	3
"Myrtle" Warbler	2820-92776	May 22, 2019	MM	SY	August 1	MM	3
American Redstart	2570-16707	June 5, 2019	MM	SY	July 10	FAWA	3
American Redstart	2570-16164	July 3, 2019	ROAD	SY	June 18	FAWA	3
American Redstart	2570-16142	June 14, 2019	FAWA	SY	June 12	FEGU	3
Magnolia Warbler	2570-16139	June 12, 2019	FEGU	SY	July 4	FEGU	3
Sharp-shinned Hawk	1543-06422	July 15, 2019	MM	SY	June 11	RESI	3
White-throated Sparrow	2471-66846	June 12, 2019	FEGU	SY	July 21	FEGU	3
Canada Warbler	2920-33984	August 6, 2019	MM	AHY	June 4	MM	3+
American Redstart	2570-16742	July 13, 2019	MM	AHY	July 13	MM	3+
American Redstart	2570-16192	July 11, 2019	ROAD	AHY	July 21	ROAD	3+
Canada Warbler	2820-92837	August 1, 2019	ROAD	AHY	July 4	FEGU	3+
Swainson's Thrush	2471-66879	July 10, 2019	RESI	AHY	July 3	RESI	3+
Swainson's Thrush	2771-69907	July 20, 2019	RESI	AHY	June 11	RESI	3+
Black-and-white Warbler	2460-13651	May 30, 2018	MM	SY	July 12	MM	4
American Redstart	2570-15884	June 30, 2018	FAWA	SY	June 18	FAWA	4
Canada Warbler	2460-13723	July 12, 2018	MM	SY	June 19	FEGU	4
White-throated Sparrow	2741-70941	June 30, 2018	RESI	SY	July 10	RESI	4
White-throated Sparrow	2771-69675	May 12, 2019	MM	ASY	May 12	MM	4+

Species	Band Number	Banding Details			Recapture		Age (Years)
		Date	Site	Age	Date (2021)	Site	
White-throated Sparrow	2471-66868	June 21, 2019	FEGU	ASY	June 1	MM	4+
Ovenbird	2131-76583	May 25, 2019	MM	ASY	May 31	MM	4+
American Redstart	2570-16186	July 11, 2019	FEGU	ASY	July 12	MM	4+
Canada Warbler	2810-64051	June 21, 2019	ROAD	ASY	June 10	FAWA	4+
Swainson's Thrush	2471-66866	June 21, 2019	FEGU	ASY	July 12	ROAD	4+
Swainson's Thrush	2471-66873	July 3, 2019	FEGU	ASY	July 3	FAWA	4+
White-throated Sparrow	2471-66864	June 21, 2019	FEGU	ASY	June 19	ROAD	4+
Ovenbird	2621-61701	July 15, 2018	MM	AHY	May 23	MM	4+
American Redstart	2570-15174	July 12, 2018	FEGU	AHY	August 29	MM	4+
American Redstart	2570-15181	July 21, 2018	FEGU	AHY	July 12	FEGU	4+
Canada Warbler	2740-83920	June 12, 2017	ROAD	SY	June 4	MM	5
Magnolia Warbler	2570-15514	June 9, 2017	MM	SY	July 19	MM	5
American Redstart	2570-15114	June 26, 2017	FEGU	SY	July 12	FEGU	5
American Redstart	2570-15506	June 6, 2017	MM	SY	June 12	ROAD	5
Black-and-white Warbler	2740-83511	July 28, 2016	MM	HY	May 30	MM	5
Yellow Warbler	2810-12546	July 13, 2017	MM	AHY	May 30	MM	5+
Mourning Warbler	2740-83974	July 13, 2017	FAWA	AHY	July 10	FAWA	5+
Swainson's Thrush	2661-72879	July 10, 2017	RESI	AHY	June 18	RESI	5+
Swainson's Thrush	2661-72891	July 13, 2017	FAWA	AHY	July 30	FAWA	5+
Canada Warbler	2740-83275	June 5, 2016	MM	SY	June 4	MM	6
Swainson's Thrush	2661-72080	July 24, 2015	MM	HY	July 21	MM	6
Red-eyed Vireo	2621-61105	July 17, 2016	MM	AHY	July 14	MM	6+
Canada Warbler	2710-92957	July 2, 2015	FEGU	SY	June 19	FEGU	7
American Redstart	2550-83183	July 3, 2016	FEGU	ASY	June 19	FEGU	7+
Canada Warbler	2740-83241	May 31, 2016	MM	ASY	August 1	FEGU	7+
Swainson's Thrush	2661-72801	June 22, 2016	RESI	ASY	July 31	RESI	7+
Red-eyed Vireo	2591-91720	August 10, 2015	MM	AHY	July 12	FEGU	7+
Mourning Warbler	2710-93936	July 2, 2014	FEGU	SY	June 10	FAWA	8
Hairy Woodpecker	1152-42881	June 3, 2014	MM	TY	June 3	MM	9
Mourning Warbler	2710-92952	June 22, 2014	RESI	ASY	June 10	FAWA	9+
Mourning Warbler	2810-64024	May 7, 2014	MM	ASY	June 11	RESI	9+

## Foreign Recoveries

Though exceptionally rare, recoveries of banded birds at other locations ('foreign' to our station) can suggest migration routes or rates of travel. With four birds found elsewhere in 2021 (Figure 15), a total of 43 of the 99,157 birds we have banded have been recovered. The first recovery of 2021 was a Northern Saw-whet Owl found dead in California that was banded in 2018 and is estimated to have been 4.5 years old. The second recovery was a Swainson's Thrush banded August 6, 2021 and recaptured 21 days later and 2,330 km away at Cedar Grove Ornithological Research Station in Wisconsin. The third recovery met a crueler fate by a cat. Banded on July 25, 2021 this Swainson's Thrush's banded leg and one wing was found in Humboldt, Saskatchewan on August 30. The final recovery was another Northern Saw-whet Owl captured by the Beaverhill Bird Observatory. The LSLBO did not capture any birds banded by another researcher, but a member of the public brought in a deceased Red-tailed Hawk that was banded in Kansas over the winter. This hawk had a transmitter which was removed and returned to Red-tailed Hawk Project researchers and its carcass was donated to the Royal Alberta Museum.



**Figure 15. Band recovery locations** of birds banded by the LSLBO (yellow star) and encountered elsewhere in 2021: [1] Northern Saw-whet Owl found dead, California; [2] Swainson's Thrush recaptured, Wisconsin (photo Sue Kaehler); [3] Swainson's Thrush found dead, Saskatchewan; [4] Northern Saw-whet Owl recaptured, Alberta (photo Shane Abernethy); Google Earth imagery.

## Collaborative Projects

### Vanderwell Breeding Bird Surveys

In 2018, the LSLBO was approached by Vanderwell Contractors (1971) Ltd. for a three-year collaborative research project performing breeding bird surveys in post-harvest forests of various ages and cover types to determine associated avian species diversity and distributions. Following environmental interruptions in surveying 2018-19, this was the final year of data collection. Point counts and habitat assessments were performed at 195 sites between June 8-26, 2021, bringing the project's total sample to 373 sites with roughly even distribution within forest age and cover type categories.

### West Fraser Roadside Owl Surveys

Owls rely on both a healthy prey base and a healthy habitat, which makes them good indicators of overall environmental health. However, since they are so elusive, owls are poorly monitored with most avian surveys and require targeted efforts. The LSLBO assisted STRIX Ecological Consulting in roadside owl surveys using call playbacks on behalf of West Fraser Timber Co. Between March 27 and April 22, 2021, LSLBO and STRIX field staff surveyed 17 routes of 10-12 stops with each stop receiving two nocturnal owl surveys and one diurnal owl survey. This was the sixth such owl survey in the region.



## University of Guelph Flat Fly Collections

Sampling of flat flies (Louse flies, Hippoboscidae) was undertaken throughout all banding programs. These parasites feed on the blood of birds and mammals and tend to be highly specialized to their hosts. Relatively little is known about this group since they are rarely collected. This Canada-wide project coordinated by Valerie Levesque-Beaudin will provide a survey of their diversity, associated hosts, and phenology. Moreover, researchers hope to study the mites that parasitize flat flies and potentially describe new species. At least 281 flat fly samples were collected by the LSLBO in 2021 and a second year of sampling is anticipated.

## Caterpillars Count!

*Caterpillars Count!* is part of *Pheno Mismatch*, a multiagency project to assess if peak insect abundances are becoming asynchronized with avian phenology. Since climate change impacts the timing of leaf out and, by extension, insect activity, it can also impact birds who rely on insects to feed themselves and their offspring. If peak insect abundance becomes out of step with when birds hatch their young, younger birds could become less fit or even starve, thus jeopardizing the species' population stability. In 2021, the LSLBO established 30 *Caterpillars Count!* sites – 15 near the migration station and 15 near RESI. Standardized beat-sheet surveys were used to reveal arthropods which were identified to taxonomic order. We were the northernmost of 52 participating organizations in 2021 and conducted 13 counts at each site between May 5 to September 4.

## Standardized eBird Checklists

Managed by the Cornell Lab of Ornithology, eBird is an online tool to compile global bird observations. Similar to other methods that rely on human population densities, the eBird database underrepresents remote and northern areas. Similarly, eBird is often limited by observer skillsets and motivations. Prior to 2020, most common species were absent from local datasets, yet rarities were generally well reported. By submitting census data every Wednesday of migration monitoring (20 checklists submitted in 2021), the local dataset is improved, which in turn helps researchers and visitors alike. Recently, LSLBO checklist data from 65 species contributed to visualizations of global movements and distributions.

## Royal Alberta Museum (RAM) Specimen Donations

Although bird safety is our top priority, some injuries and even death are unavoidable. Staff take every precaution, but 5-10 deaths occur yearly in < 0.1% of captures. Since northern regions are often under-sampled in specimen collections, as of 2020 these birds are donated to the RAM to advance education and research goals. Staff also collect mortalities from other causes, including window strikes. After the COVID-19 pandemic prevented a drop-off last winter, a total of 57 birds collected between 2020-21 from (predominantly) window strikes, cat depredation, roadkill, and the LSLBO were donated December 2021.

# Publications

One article was published using data collected by the LSLBO and the CMMN celebrates 20 years:

Winger, B. M., & Pegan, T. M. (2021). **Migration distance is a fundamental axis of the slow-fast continuum of life history in boreal birds.** *Ornithology*, 138(4), 1–18.

→ Used Yellow-bellied Sapsucker MAPS capture data 1994-2006 for Annual Adult Survival rates as calculated by the IBP's Vital Rates ([www.VitalRatesOfNorthAmericanLandbirds.org](http://www.VitalRatesOfNorthAmericanLandbirds.org) ).

Canadian Migration Monitoring Network. (2021). **The Canadian Migration Monitoring Network - Réseau canadien de surveillance des migrations: Researching Canada's Landbirds for Twenty Years.** *CMMN-RCSM Scientific Technical Report #3*. Birds Canada, Port Rowan, Ontario.

## Visitors and Education

Educating the public about avian ecology and the importance of research and monitoring is vital to fostering support for conservation initiatives. Visitors to banding operations have a unique opportunity to see birds in-the-hand, reinforcing connections between visitors and local wildlife. Through partnerships with the Lesser Slave Forest Education Society and Alberta Parks, we gain access to educators who help provide positive experiences for visitors while field staff maintain high standards for bird safety and data collection. In addition to many other programs, education staff lead tours of the migration monitoring station and develop new programming.

The COVID-19 pandemic continued to have a major impact on education and outreach programs with the cancellation of spring tours and the annual Songbird Festival. When restrictions were lifted during fall monitoring, small pre-registered tours were welcomed with additional outdoor activities and a GoPro for banding demonstrations to keep visitors from entering the building. In total, the LSLBO received 236 visitors (Table 11). Since 2001, only 2020 had a lower total when visitors were entirely prohibited. With just the University of Alberta's Forest Field School and Roland Michener Secondary School's Biology 30 classes, school tours brought only 32 visitors, while 7 weekly tours and 4 other pre-registered tours brought 140 visitors. With COVID-19 concerns limiting summer travel plans, most visitors were Alberta residents with a few from British Columbia.

**Table 11. Visitors to the bird observatory** during spring migration (SPR), fall migration (FALL), and owl banding (OWL). "Other" includes tours not connected to schools or weekly tours, and unscheduled drop-ins.

	On-site Programs	Adults	Children	Total
SPR	Other	27	0	27
	<b>Total</b>	<b>27</b>	<b>0</b>	<b>27</b>
FALL	Bird observatory tours	50	41	91
	School programs	19	13	32
	Other	41	12	53
	<b>Total</b>	<b>110</b>	<b>66</b>	<b>176</b>
OWL	Family Owl Night	21	9	30
	Other	3	0	3
	<b>Total</b>	<b>24</b>	<b>9</b>	<b>33</b>
	<b>TOTAL</b>	<b>161</b>	<b>75</b>	<b>236</b>
	<b>Average (2001-21)</b>	<b>421</b>	<b>293</b>	<b>742</b>

In addition to tours of the bird observatory and owl banding sessions, we gave off-site presentations about the LSLBO's programs, bird ecology, and conservation for audiences totalling at least 288 people (Table 12). Several interviews were also provided to national publications including the National Post and Canadian Wildlife Magazine.

**Table 12. Audiences of LSLBO presentations and webinars, 2021.**

Off-site Programs	Groups	Adults	Children	Total
<i>Monitoring Birds of the Boreal Forest</i> presentation	3	19	9	28
Webinars: <i>Bird Watching Basics</i> and <i>Winter Bird ID</i>	3	98	0	98
Migratory bird regulations information session	1	14	0	14
Poster contest	1	0	25	25
Curriculum-based school programs	7	10	113	123
<b>TOTAL</b>	<b>15</b>	<b>141</b>	<b>147</b>	<b>288</b>

Lastly, the LSLBO publishes weekly blogs describing our monitoring programs contextualized through facts about bird conservation and ecology. These articles are simultaneously published in the local newspaper, *The Lakeside Leader*, and shared to the LSLBO and Boreal Centre for Bird Conservation Facebook pages. A total of 23 articles were written from April 21 to September 30. To view all our past weekly blogs, visit our website at [www.lslbo.org](http://www.lslbo.org) and look under the "From the Lab" tab.

## Staff and Volunteers

Throughout all core monitoring and maintenance projects, the LSLBO accumulated 414 person-days between staff and volunteers (Table 13). Three full-time, fully permitted field staff managed monitoring with contracts of varying lengths. Robyn Perkins returned for her sixth season overall and third season as Bander-in-Charge, Sachiko Schott was the Assistant Bander for her second season, and Bronwyn Robinson was our Field Assistant for her third season. Cory Cardinal assisted with the second round of roadside owl surveys and his second season of breeding bird surveys. Education and school programs were delivered both on-site and off-site with help from Patti Campsall (LSLBO Executive Director) and staff shared with other organizations, including Laura Brandon (Boreal Educator), Gabby Higney (Interpreter), Erika Seabrook (Information Officer), and Donna Arseneau (Contract Educator). All education staff were repurposed as scribes on our busiest days.

In response to the COVID-19 pandemic, inexperienced volunteers could not participate in spring migration monitoring or MAPS programs. However, dedicated LSLBO members Wayne Bowles and Al Hovan joined the team in an unorthodox Great Canadian Birdathon in the spring. Capable of monitoring unsupervised, our ‘retired’ field staff, Richard and Nicole Krikun volunteered for the last period of MAPS when both MAPS and fall migration monitoring experience high capture rates. After restrictions were lifted and vaccines became available for staff, Melissa Chisholm, Martine Dumont, and Robin Neaves volunteered for 3 to 7 days during fall migration monitoring. Volunteers were fully vaccinated and did not share accommodations with staff. Cory Cardinal volunteered periodically for station maintenance, fall migration monitoring, and owl banding. Most volunteer maintenance days are attributed to Melissa Chisholm who spent approximately 40 hours crafting new bird bags and French seaming our older stock.

**Table 13.** Staff and volunteer person-days contributing to the LSLBO’s core monitoring projects.

	Spring	MAPS	Fall	Owls	Total
<b>Monitoring</b>					
Total person-days (T)	102	36	172	66	376
Staff person-days (%T)	100 (98.0%)	35 (97.2%)	153 (89.0%)	63 (95.5%)	351 (93.4%)
Volunteer person-days (%T)	2 (2.0%)	1 (2.8%)	19 (11.0%)	3 (4.5%)	25 (6.6%)
Days operated	55	24	81	45	205
<b>Maintenance</b>					
Total person-days (M)	6	7	22	3	38
Staff person-days (%M)	2 (33.3%)	4 (57.1%)	12 (54.5%)	3 (100.0%)	21 (55.3%)
Volunteer person-days (%M)	4 (66.7%)	3 (42.9%)	10 (45.5%)	0 (0.0%)	17 (44.7%)
<b>Grand total person-days (T+M)</b>	<b>108</b>	<b>43</b>	<b>194</b>	<b>69</b>	<b>414</b>

## Change-log

The following are notable changes to operations and equipment:

1. Completed CMMN review and necessary revisions of LSLBO Protocols to improve clarity.
2. Created cheat sheets for MAPS measurements and shorebird plumages to improve data quality.
3. Used the MAPS kit during busy periods of migration monitoring so two banders could work simultaneously with one keeping an eye on the netlanes and overhead migration.
4. Added a small pulley beneath the large pulleys on the aerials to keep the ropes from jumping off the topmost pulley, but maintain minimal resistance to opening/closing.
5. Had approximately 50 new bird bags donated.

## Acknowledgements



Sadly, with the passing of Neal Knoot this summer, we lost a dedicated and well-loved board member. Neal was a member of the LSLBO since 2008. He was a kind and generous man who was committed to our programs and our staff. Whether it was heading out on a Junior Bird Club outing, showing up at the crack of dawn to serve up pancakes at Songbird Festival, providing staff safety training, or helping with projects at the banding lab, he was always there in his quiet, unassuming way. Our heart-felt condolences go out to Diane, Melissa, Chad, and all of Neal's family and friends. He will be missed dearly by all of us at the LSLBO.

The LSLBO would like to thank the following people for their dedication and support:

### **LSLBO Board of Directors:**

Bob Deacon (Chair)  
 Terry Kristoff (Vice-chair)  
 Ronda Groom (Fund Raising Director)  
 Brandy Walters (Treasurer)  
 Tyler Flockhart (Director of Field Research)  
 Neal Knoot (Director at Large)  
 Nelson Lutz (Director at Large)  
 Todd Bailey (Director at Large)  
 Tracey Courser (Director at Large)  
 Nicole St. Jean (Director at Large)

### **LSLBO Executive Director:** Patti Campsall

**LSLBO Field Staff:** Robyn Perkins (Bander-in-Charge), Sachiko Schott (Banding Assistant), Bronwyn Robinson (Banding Assistant), and Cory Cardinal (Field Assistant)

**Boreal Centre Staff and Educators:** Laura Brandon (Boreal Educator), Gabby Higney (Interpreter), Erika Seabrook (Information Officer), and Donna Arseneau (Contract Educator)

**Alberta Parks Staff:** Reg Arbuckle, Ceiridwen Robbins, and Shawn Kearney

**Banding Lab Volunteers:** Nicole Krikun, Richard Krikun, Cory Cardinal, Melissa Chisholm, Martine Dumont, and Robin Neaves

**Site Cleaning Crews:** High Prairie Junior Forest Ranger crew

**Our Good Friends:** Wayne Bowles and Al Hovan for another unorthodox Great Canadian Birdathon

### **Information about Migration Monitoring, MAPS, and Project OwlNet can be found at:**

Canadian Migration Monitoring Network (Spring & fall monitoring) [www.birdscanada.org/bird-science](http://www.birdscanada.org/bird-science)  
 Nature Counts (CMMN migration monitoring trend analysis) – [www.naturecounts.ca](http://www.naturecounts.ca)  
 Institute for Bird Populations (MAPS) - [www.birdpop.org](http://www.birdpop.org)  
 Project OwlNet (Northern Saw-whet Owl banding) - [www.projectowl.net](http://www.projectowl.net)

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Changement climatique Canada



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Jobs Program



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# Appendix I. Migration Occurrence Records

The following is a taxonomic summary of weekly occurrences for 26 family groups and 172 species (subspecies in quotation marks) identified throughout spring (S) and fall (F) migration monitoring in 2021. Family accounts are the summation of birds identified to species and those identified only to family. Dates are listed below each month. Weekly averages of daily counts (avg. per day) are followed by the number of days with at least one encounter (days observed). "Processed" summarizes captures in the format *band-return-repeat*. *Band* indicates a new individual banded, *return* is an individual banded in a previous year and recaptured this year, while *repeat* is an individual previously banded or recaptured within 2021. The first, last, and peak encounter dates are included with the number of individuals recorded in brackets. The peak is often the date with the maximum number of individuals recorded and may represent a dispersal event for resident species. The total number of encounters is in black.

## Goose (subfamily total including unidentified)

## *Anserinae sp. (excluding Cygnus sp.)*

		APRIL			MAY							JUNE		
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4		8: 5-10		TOTAL	
Avg. per day		57.4	132.3		6505.6	115.7	5.7	6.7	22.1		16.2		857.7	
Days observed		7	7		7	7	7	7	7		6		55	
		First date: April 17 (24)				Peak date: May 4 (23,817)			Last date: June 10 (5)				48,016	
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.3	0.0	0.1	0.4	4.9	3.7	4.0	27.0	130.9	15.4	16.9	166.8	30.9
Days observed		1	0	1	2	1	4	5	7	6	4	5	4	40
		First date: July 13 (2)				Peak date: September 10 (678)			Last date: September 30 (46)				2,092	

## "Lesser" Snow Goose

## *Anser caerulescens*

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	0.0	2097.9	44.0	0.4	0.0	0.0	0.0	267.8				
Days observed		0	0	3	2	1	0	0	0	6				
		First date: May 3 (6,169)			Peak date: May 4 (6,803)			Last date: May 17 (3)			14,996			
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	70.5	7.1
Days observed		0	0	0	0	0	0	0	0	0	0	2	3	5
		First date: September 20 (70)			Peak date: September 29 (204)				Last date: September 30 (44)				388	

## Greater White-fronted Goose

## *Anser albifrons*

		APRIL		MAY							JUNE			
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		27.4	121.6	4151.6	51.6	0.0	0.0	0.0	0.0	544.0				
Days observed		1	6	5	4	0	0	0	0	16				
		First date: April 21 (192)			Peak date: May 4 (16,588)			Last date: May 14 (75)			30,465			
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	105.4	0.0	0.0	0.0	9.1
Days observed		0	0	0	0	0	0	0	1	4	0	0	0	5
		First date: September 5 (27)			Peak date: September 10 (597)			Last date: September 12 (10)			765			

## Canada Goose

## *Branta canadensis*

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		30.0	10.7	131.4	20.1	5.3	6.7	22.1	16.2	30.3				
Days observed		7	7	7	7	7	7	7	6	55				
		First date: April 17 (24)			Peak date: May 3 (524)			Last date: June 10 (5)			1,682			
		JULY		AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.3	0.0	0.1	0.4	4.9	3.7	4.0	16.0	22.6	10.4	1.7	96.3	13.4
Days observed		1	0	1	2	1	4	5	7	6	4	3	4	38
		First date: July 13 (2)			Peak date: September 27 (296)				Last date: September 30 (2)				834	

**Swan (genus total including unidentified)***Cygnus sp.*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		15.3	11.4	26.4	0.0	0.0	0.0	0.7	0.0	6.7
Days observed		2	5	5	0	0	0	2	0	14
First date: April 20 (6)				Peak date: May 4 (144)			Last date: June 3 (4)			377

**Trumpeter Swan***Cygnus buccinator*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		2.0	0.3	1.4	0.0	0.0	0.0	0.6	0.0	0.5
Days observed		2	1	2	0	0	0	1	0	6
First date: April 20 (6)				Peak date: April 21 (8)			Last date: June 3 (4)			30

**Tundra Swan***Cygnus columbianus*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		12.6	10.6	24.4	0.0	0.0	0.0	0.0	0.0	5.9
Days observed		1	3	3	0	0	0	0	0	7
First date: April 21 (88)				Peak date: May 4 (140)			Last date: May 7 (25)			333

**Duck (subfamily total including unidentified)***Anatinae sp./Aythyinae sp.*

		APRIL				MAY						JUNE														
S		Week 1: 17-23		2: 24-30		3: 1-7		4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10		TOTAL								
Avg. per day		7.6		54.0		80.3		186.0		97.4		51.1		63.6		34.0		71.8								
Days observed		7		7		7		7		7		7		7		6		55								
		First date: April 17 (2)						Peak date: May 12 (306)						Last date: June 10 (16)						3,984						
		JULY				AUGUST					SEPTEMBER															
F		1: 12-18		2: 19-25		3: 26-1		4: 2-8		5: 9-15		6: 16-22		7: 23-29		8: 30-5		9: 6-12		10: 13-19		11: 20-26		12: 27-30		TOTAL
Avg. per day		28.9		18.3		22.3		51.3		24.0		22.7		23.9		26.9		14.6		9.9		13.0		20.5		23.0
Days observed		7		7		7		7		7		7		7		7		6		6		7		4		79
		First date: July 12 (4)						Peak date: August 2 (245)						Last date: September 30 (15)						1,871						

**Blue-winged Teal***Spatula discors*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.3	11.7	0.9	0.1	0.0	0.2	1.6
Days observed		0	0	1	6	4	1	0	1	13
First date: May 6 (2)				Peak date: May 13 (55)			Last date: June 5 (1)			92

**Northern Shoveler***Spatula clypeata*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	5.0	0.0	0.1	0.0	0.0	0.6
Days observed		0	0	0	3	0	1	0	0	4
First date: May 8 (5)				Peak date: May 13 (24)			Last date: May 28 (1)			36

**Gadwall***Mareca strepera*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.3	2.9	0.4	0.0	0.0	0.0	0.4
Days observed		0	0	1	4	1	0	0	0	6
First date: May 6 (2)				Peak date: May 12 (12)			Last date: May 17 (3)			25

**American Wigeon***Mareca americana*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	2.0	4.1	12.7	0.1	0.0	0.3	0.0	2.4
Days observed		0	1	3	6	1	0	1	0	12
First date: April 30 (14)				Peak date: May 9 (29)			Last date: June 3 (2)			135

**Mallard*****Anas platyrhynchos***

		APRIL			MAY						JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4		8: 5-10	TOTAL		
Avg. per day		3.0	18.7		13.7	5.0	3.0	2.7	3.9		1.5	6.4		
Days observed		6	7		7	7	6	7	7		5	52		
		First date: April 17 (2)				Peak date: April 30 (89)			Last date: June 10 (3)			359		
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.3	0.4	7.0	1.1	3.1	5.0	2.4	2.7	2.4	0.7	1.0	2.8	2.4
Days observed		2	3	6	4	5	7	5	4	4	4	2	3	49
		First date: July 13 (1)				Peak date: August 19 (12)				Last date: September 30 (2)				195

**Northern Pintail*****Anas acuta***

		APRIL		MAY					JUNE			
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL		
Avg. per day		0.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.1		
Days observed		1	0	0	1	0	0	0	0	2		
		First date: April 19 (2)			Peak date: May 13 (6)			Last date: May 13 (6)			8	

**Green-winged Teal*****Anas crecca***

		APRIL		MAY					JUNE			
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL		
Avg. per day		0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.0	0.2		
Days observed		0	0	1	3	0	0	0	0	4		
		First date: May 2 (1)			Peak date: May 14 (4)			Last date: May 14 (4)			9	

**Ring-necked Duck*****Aythya collaris***

		APRIL		MAY					JUNE			
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL		
Avg. per day		0.0	0.0	0.4	3.0	0.3	0.0	0.0	0.0	0.5		
Days observed		0	0	1	3	1	0	0	0	5		
		First date: May 4 (3)			Peak date: May 12 (9)			Last date: May 18 (2)			26	

**Lesser Scaup*****Aythya affinis***

		APRIL		MAY					JUNE			
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL		
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0		
Days observed		0	0	0	0	0	1	0	0	1		
		First date: May 28 (2)			Peak date: May 28 (2)			Last date: May 28 (2)			2	

**Surf Scoter*****Melanitta perspicillata***

		APRIL			MAY						JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4		8: 5-10		TOTAL	
Avg. per day		0.0	0.0		3.9	44.6	25.9	9.0	2.0		0.0		10.7	
Days observed		0	0		1	6	6	3	1		0		17	
		First date: May 7 (27)				Peak date: May 12 (109)			Last date: May 29 (14)				597	
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.2
Days observed		0	0	0	0	0	0	0	0	0	1	0	0	1
		First date: September 19 (18)				Peak date: September 19 (18)			Last date: September 19 (18)				18	

**White-winged Scoter*****Melanitta deglandi***

		APRIL		MAY					JUNE			
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL		
Avg. per day		0.0	0.0	0.0	1.9	1.1	0.1	0.0	0.0	0.4		
Days observed		0	0	0	3	3	1	0	0	7		
		First date: May 9 (4)			Peak date: May 10 (8)			Last date: May 22 (1)			22	

**Long-tailed Duck***Clangula hyemalis*

		APRIL		MAY				JUNE		
	\$	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day		0.0	0.0	0.0	9.1	5.3	3.0	0.1	0.0	2.2
Days observed		0	0	0	6	6	4	1	0	17
		First date: May 8 (2)		Peak date: May 14 (21)			Last date: May 30 (1)			123

**Bufflehead***Bucephala albeola*

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.0	0.4	3.1	0.1	0.1	0.0	0.0	0.5	
Days observed		0	0	1	6	1	1	0	0	9	
		First date: May 4 (3)			Peak date: May 8 (6)			Last date: May 27 (1)			27

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.5	0.1
Days observed	0	0	0	0	1	0	0	0	1	0	0	1	3
First date: August 15 (1)				Peak date: September 29 (2)				Last date: September 29 (2)					4

**Common Goldeneye***Bucephala clangula*

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		2.0	2.7	13.7	27.0	14.1	10.9	2.7	3.2	9.5	
Days observed		4	5	7	7	7	7	7	5	49	
		First date: April 18 (2)			Peak date: May 13 (44)		Last date: June 10 (3)			531	

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	3.4	1.3	0.0	0.3	0.3	0.4	0.1	0.3	0.0	0.0	1.3	5.5	1.1
Days observed	6	3	0	1	2	2	1	1	0	0	1	2	19
First date: July 13 (3)				Peak date: September 29 (19)				Last date: September 29 (19)					74

**Merganser (genus total including unidentified)***Lophodytes sp./Mergus sp.*

		APRIL		MAY					JUNE		
	\$	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		2.1	6.1	29.1	44.1	32.9	8.4	34.1	22.5	22.4	
Days observed		2	4	7	7	7	7	6	5	45	
		First date: April 18 (4)			Peak date: May 31 (113)			Last date: June 10 (3)			1,234

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	20.6	12.3	3.3	7.3	3.9	11.0	5.6	11.4	5.4	2.6	3.6	8.8	8.0
Days observed	6	7	5	6	5	7	6	6	6	5	6	4	69
First date: July 12 (3)				Peak date: July 18 (62)				Last date: September 30 (8)					643

**Hooded Merganser***Lophodytes cucullatus*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.1	
Days observed	0	0	0	2	0	0	0	0	2	
	First date: May 8 (2)		Peak date: May 8 (2)			Last date: May 9 (1)			3	

**Common Merganser***Mergus merganser*

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		2.1	6.1	27.3	39.0	28.0	7.3	34.1	22.5	20.8	
Days observed		2	4	7	7	7	7	6	5	45	
		First date: April 18 (4)			Peak date: May 31 (113)			Last date: June 10 (3)			1,143

**Common Merganser*****Mergus merganser***

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	20.6	12.3	3.3	7.3	3.9	11.0	5.6	9.7	5.4	2.6	3.6	8.5	7.8
Days observed	6	7	5	6	5	7	6	6	6	5	6	4	69
First date: July 12 (3)				Peak date: July 18 (62)				Last date: September 30 (8)					630

**Red-breasted Merganser*****Mergus serrator***

	APRIL		MAY				JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	0.0	0.0	1.9	4.7	2.3	0.9	0.0	0.0	1.2
Days observed	0	0	3	6	5	1	0	0	15
First date: May 4 (3)			Peak date: May 12 (11)			Last date: May 22 (6)			68

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.3	0.2
Days observed	0	0	0	0	0	0	0	2	0	0	0	1	3
First date: August 30 (6)				Peak date: September 3 (6)				Last date: September 29 (1)					13

**Ruffed Grouse*****Bonasa umbellus***

	APRIL		MAY				JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	1.4	1.9	1.6	0.9	0.4	0.3	0.3	0.3	0.9
Days observed	7	7	7	6	3	2	2	2	36
First date: April 17 (3)			Peak date: April 26 (3)			Last date: June 8 (1)			49

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.7	1.3	1.1	1.8	0.5
Days observed	0	0	0	0	0	0	1	1	4	6	5	4	21
First date: August 24 (1)				Peak date: September 11 (5)				Last date: September 30 (1)					38

**Pied-billed Grebe*****Podilymbus podiceps***

	APRIL		MAY				JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.1
Days observed	0	0	0	4	0	0	0	0	4
First date: May 8 (1)			Peak date: May 11 (2)			Last date: May 13 (1)			6

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	0	1	0	0	0	0	0	0	0	1
First date: August 12 (1)				Peak date: August 12 (1)				Last date: August 12 (1)					1

**Red-necked Grebe*****Podiceps grisegena***

	APRIL		MAY				JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	0.0	0.0	0.0	1.4	2.7	0.9	1.1	1.5	1.0
Days observed	0	0	0	4	6	3	4	4	21
First date: May 10 (2)			Peak date: May 17 (6)			Last date: June 10 (1)			52

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.3	0.0	3.9	2.3	6.4	0.9	1.7	3.9	1.6	0.3	1.0	0.8	1.9
Days observed	2	0	5	6	6	5	6	5	5	2	4	2	48
First date: July 16 (1)				Peak date: August 13 (20)				Last date: September 30 (2)					158

**Western Grebe***Aechmophorus occidentalis*

		APRIL		MAY				JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.5	1.2
Days observed		0	0	0	0	0	0	2	2	4
		First date: June 3 (45)		Peak date: June 3 (45)		Last date: June 9 (2)				65

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	31.1	0.0	0.1	0.0	0.9	0.4	0.4	0.0	0.0	2.8
Days observed		0	0	0	4	0	1	0	4	2	2	0	0	13
		First date: August 2 (201)				Peak date: August 2 (201)				Last date: September 18 (2)				231

**Mourning Dove***Zenaida macroura*

		APRIL		MAY				JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0
Days observed		0	0	0	1	0	0	0	1	2
		First date: May 8 (1)		Peak date: May 8 (1)		Last date: June 5 (1)				2

**Ruby-throated Hummingbird***Archilochus colubris*

		APRIL		MAY				JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0
Days observed		0	0	0	0	0	1	0	1	2
		First date: May 27 (1)		Peak date: May 27 (1)		Last date: June 7 (1)				2

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days observed		0	0	1	0	0	0	0	0	0	0	0	0	1
		First date: July 30 (1)				Peak date: July 30 (1)				Last date: July 30 (1)				1

**American Coot***Fulica americana*

		APRIL		MAY				JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Days observed		0	0	0	1	0	0	0	0	1
		First date: May 11 (1)		Peak date: May 11 (1)		Last date: May 11 (1)				1

**Sandhill Crane***Antigone canadensis*

		APRIL		MAY				JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		1.0	6.4	35.4	0.0	0.0	0.0	0.0	0.0	5.4
Days observed		1	3	5	0	0	0	0	0	9
		First date: April 20 (7)		Peak date: May 4 (126)		Last date: May 6 (1)				300

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.0	0.0	2.4	0.0	0.4
Days observed		0	0	0	0	0	0	0	1	1	0	2	0	4
		First date: September 2 (4)				Peak date: September 25 (13)				Last date: September 25 (13)				35

**Shorebird (suborder total including Plover, Sandpiper, Snipe, unidentified)***Scolopacidae sp./Charadriidae sp.*

		APRIL		MAY				JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.3	1.6	25.1	25.9	34.0	5.3	2.7	1.3	12.0
Days observed		2	5	7	7	7	7	6	5	46
		First date: April 18 (1)		Peak date: May 17 (186)		Last date: June 10 (1)				672

**Shorebird (suborder total including Plover, Sandpiper, Snipe, unidentified)***Scolopacidae sp./Charadriidae sp.*

	JULY			AUGUST				SEPTEMBER					TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.7	3.9	2.0	5.6	22.3	128.1	69.7	5.3	3.3	4.3	3.0	0.0	20.7
Days observed	3	4	5	6	6	7	7	7	4	1	1	0	51
First date: July 15 (1)				Peak date: August 19 (270)				Last date: September 24 (21)					1,737

**Black-bellied Plover***Pluvialis squatarola*

	APRIL		MAY				JUNE		TOTAL
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	1	0	0	0	0	0	1
First date: May 5 (1)			Peak date: May 5 (1)			Last date: May 5 (1)			1

**American Golden-Plover***Pluvialis dominica*

	APRIL		MAY				JUNE		TOTAL
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.1
Days observed	0	0	0	0	0	1	0	0	1
First date: May 28 (7)			Peak date: May 28 (7)			Last date: May 28 (7)			7

**Killdeer***Charadrius vociferus*

	APRIL		MAY				JUNE		TOTAL
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Days observed	2	0	1	0	0	0	0	0	3
First date: April 18 (1)			Peak date: April 20 (1)			Last date: May 6 (1)			3

**Least Sandpiper***Calidris minutilla*

	JULY			AUGUST				SEPTEMBER					TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	1	0	0	0	0	0	0	0	0	1
First date: August 5 (1)				Peak date: August 5 (1)				Last date: August 5 (1)					1

**Pectoral Sandpiper***Calidris melanotos*

	JULY			AUGUST				SEPTEMBER					TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	0	1	0	0	0	0	0	0	0	1
First date: August 15 (3)				Peak date: August 15 (3)				Last date: August 15 (3)					3

**Dowitcher (genus total including Short-billed, Long-billed, unidentified)***Limnodromus griseus/scolopaceus*

	APRIL		MAY				JUNE		TOTAL
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.5
Days observed	0	0	0	1	0	0	0	0	1
First date: May 12 (27)			Peak date: May 12 (27)			Last date: May 12 (27)			27

	JULY			AUGUST				SEPTEMBER					TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	0	0	0	1	0	0	0	0	0	1
First date: August 29 (1)				Peak date: August 29 (1)				Last date: August 29 (1)					1

**Wilson's Snipe***Gallinago delicata*

	APRIL		MAY				JUNE		TOTAL
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day	0.0	0.1	0.4	0.0	0.1	0.0	0.0	0.0	0.1
Days observed	0	1	2	0	1	0	0	0	4
First date: April 26 (1)			Peak date: May 5 (2)			Last date: May 15 (1)			5

**Spotted Sandpiper***Actitis macularius*

		APRIL			MAY							JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.0		0.0	4.6		5.7		4.1		1.6	1.2	2.1	
Days observed		0	0		0	5		7		7		6	5	30	
First date: May 10 (4)					Peak date: May 17 (25)					Last date: June 10 (1)					119
		JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		0.7	0.7	1.0	2.0	4.1	5.1	3.1	2.4	1.9	0.0	0.0	0.0	1.8	
Days observed		3	3	5	5	4	6	7	6	4	0	0	0	43	
First date: July 15 (1)					Peak date: August 12 (17)					Last date: September 10 (4)					148

**Solitary Sandpiper***Tringa solitaria*

		APRIL			MAY						JUNE													
S	Week 1: 17-23	2: 24-30		3: 1-7		4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10		TOTAL								
Avg. per day	0.0	0.0		0.4		2.3		1.7		0.0		0.0		0.0		0.6								
Days observed	0	0		1		3		3		0		0		0		7								
First date: May 5 (3)				Peak date: May 11 (12)					Last date: May 20 (1)					31										
		JULY			AUGUST					SEPTEMBER														
F	1: 12-18	2: 19-25		3: 26-1		4: 2-8		5: 9-15		6: 16-22		7: 23-29		8: 30-5		9: 6-12		10: 13-19		11: 20-26		12: 27-30		TOTAL
Avg. per day	0.0	0.0		0.0		0.0		0.0		2.4		0.9		0.6		0.0		0.0		0.0		0.0		0.3
Days observed	0	0		0		0		0		3		1		1		0		0		0		0		5
First date: August 16 (8)				Peak date: August 20 (8)					Last date: August 31 (4)					27										

**Yellowlegs (genus total including Lesser, Greater, unidentified)***Tringa flavipes/melanoleuca*

		APRIL			MAY						JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10		TOTAL		
Avg. per day		0.0	0.0		11.9	2.6	1.6	0.1	0.0	0.0		2.0		
Days observed		0	0		3	6	3	1	0	0		13		
First date: May 2 (1)					Peak date: May 4 (56)				Last date: May 26 (1)				113	
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	2.9	0.0	2.0	11.4	56.4	30.6	1.0	0.1	0.0	0.0	0.0	8.7
Days observed		0	1	0	5	5	7	5	4	1	0	0	0	28
First date: July 20 (20)					Peak date: August 19 (138)				Last date: September 10 (1)				731	

**Lesser Yellowlegs***Tringa flavipes*

		APRIL			MAY						JUNE					
S	Week 1: 17-23	2: 24-30		3: 1-7		4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10		TOTAL
Avg. per day	0.0	0.0		0.4		0.4		0.3		0.0		0.0		0.0		0.1
Days observed	0	0		2		3		2		0		0		0		7
First date: May 2 (1)				Peak date: May 4 (2)				Last date: May 18 (1)						8		
		JULY			AUGUST					SEPTEMBER						
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL			
Avg. per day	0.0	0.0	0.0	0.4	3.3	5.3	4.7	0.3	0.0	0.0	0.0	0.0	1.2			
Days observed	0	0	0	2	3	4	4	2	0	0	0	0	15			
First date: August 4 (1)				Peak date: August 23 (27)				Last date: August 31 (1)						98		

**Greater Yellowlegs***Tringa melanoleuca*

		APRIL			MAY							JUNE			
S	Week 1: 17-23	2: 24-30		3: 1-7		4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day	0.0	1.4		0.6		0.1		0.0		0.0		0.0		0.0	0.3
Days observed	0	5		3		1		0		0		0		0	9
First date: April 24 (1)				Peak date: April 30 (3)					Last date: May 11 (1)						15
		JULY			AUGUST					SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL		
Avg. per day	0.0	0.0	0.4	0.7	2.0	7.3	10.1	1.1	0.0	0.0	0.0	0.0	1.8		
Days observed	0	0	1	4	2	6	5	3	0	0	0	0	21		
First date: August 1 (3)				Peak date: August 23 (55)					Last date: September 5 (1)						152



**Gull (family total including unidentified)***Laridae sp.*

		APRIL		MAY						JUNE					
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10			TOTAL			
Avg. per day		2.9	17.6	52.0	27.1	12.3	8.3	3.1	2.8			15.8			
Days observed		6	3	7	7	7	6	4	5			45			
		First date: April 17 (3)			Peak date: May 4 (101)			Last date: June 10 (4)					880		
		JULY		AUGUST					SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		0.9	167.9	470.3	407.3	402.7	598.6	697.6	71.4	10.1	6.3	9.1	0.8	236.9	
Days observed		3	5	6	7	7	7	7	7	7	5	7	2	70	
		First date: July 14 (3)			Peak date: August 17 (3,788)				Last date: September 28 (2)						19,898

**Bonaparte's Gull***Chroicocephalus philadelphia*

		APRIL			MAY						JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4		8: 5-10	TOTAL		
Avg. per day		0.0	0.0		0.4	0.0	0.0	0.0	0.0		0.0	0.1		
Days observed		0	0		1	0	0	0	0		0	1		
First date: May 3 (3)					Peak date: May 3 (3)			Last date: May 3 (3)				3		
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	2.7	0.0	0.0	1.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.4
Days observed		0	3	0	0	1	0	2	0	0	0	0	0	6
First date: July 23 (17)					Peak date: July 23 (17)				Last date: August 26 (1)				30	

**Franklin's Gull***Leucophaeus pipixcan*

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	5.6	27.1	5.9	8.9	2.4	1.3	0.7	6.5				
Days observed		0	1	6	6	6	4	4	2	29				
First date: April 30 (39)				Peak date: May 3 (47)			Last date: June 10 (2)			362				
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	126.4	392.3	337.0	371.1	482.1	496.0	50.7	1.3	0.4	1.0	0.0	188.2
Days observed		0	3	6	7	6	4	7	6	3	2	1	0	45
First date: July 22 (854)					Peak date: August 17 (3,060)				Last date: September 25 (7)				15,809	

**Short-billed (Mew) Gull***Larus brachyrhynchus*

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.0	2.6	1.4	0.0	0.0	0.0	0.0	0.5	
Days observed		0	0	2	1	0	0	0	0	3	
		First date: May 3 (15)			Peak date: May 3 (15)			Last date: May 9 (10)			28

**Ring-billed Gull***Larus delawarensis*

		APRIL		MAY					JUNE					
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10			TOTAL		
Avg. per day		2.0	8.1	12.9	6.3	1.1	4.1	0.9	0.7			4.5		
Days observed		6	2	7	5	4	4	3	2			33		
		First date: April 17 (2)			Peak date: April 30 (44)			Last date: June 10 (2)					252	
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.1	30.6	47.0	16.7	11.6	3.3	98.6	7.4	4.1	3.6	5.4	0.3	19.1
Days observed		1	4	5	5	4	4	5	6	6	5	6	1	52
		First date: July 14 (1)			Peak date: August 25 (260)				Last date: September 27 (1)					1,600

**California Gull***Larus californicus*

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	
Days observed		0	0	1	1	0	0	0	0	2	
		First date: May 6 (1)			Peak date: May 10 (1)			Last date: May 10 (1)			2

**Herring Gull***Larus argentatus*

		APRIL			MAY							JUNE		
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4	8: 5-10	TOTAL
Avg. per day		0.6	1.4		2.0	1.6		1.6		0.4		0.3	0.0	1.0
Days observed		2	2		4	4		4		2		1	0	19
		First date: April 18 (2)				Peak date: May 10 (7)				Last date: June 1 (2)				55
		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.4	0.7	2.0	0.3	0.7	2.0	1.1	1.0	0.7	0.3	1.7	0.0	0.9
Days observed		2	3	2	1	2	3	3	4	4	1	5	0	30
		First date: July 17 (2)				Peak date: August 16 (9)				Last date: September 24 (3)				77

**Tern (subfamily total including unidentified)***Sterna sp.*

APRIL													MAY					JUNE							
S	Week 1: 17-23		2: 24-30		3: 1-7		4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10		TOTAL								
Avg. per day	0.0		0.0		0.0		3.3		1.7		1.1		1.1		0.0		0.9								
Days observed	0		0		0		3		4		3		2		0		12								
First date: May 10 (4)					Peak date: May 11 (15)					Last date: May 31 (4)					51										
JULY													AUGUST				SEPTEMBER								
F	1: 12-18		2: 19-25		3: 26-1		4: 2-8		5: 9-15		6: 16-22		7: 23-29		8: 30-5		9: 6-12		10: 13-19		11: 20-26		12: 27-30		TOTAL
Avg. per day	0.0		0.4		0.4		1.4		8.3		1.6		5.1		9.4		10.7		1.1		0.1		0.8		3.3
Days observed	0		1		1		1		4		1		7		7		7		3		1		1		34
First date: July 25 (3)					Peak date: August 13 (0)					Last date: September 29 (3)					274										

**Black Tern***Chlidonias niger*

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1	
Days observed		0	0	0	0	0	0	1	0	1	
		First date: May 31 (4)			Peak date: May 31 (4)		Last date: May 31 (4)			4	

**Common Tern***Sterna hirundo*

COMMON FORM										SPECIAL FORM				
		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	0.0	0.0	2.3	1.6	1.0	0.0	0.0	0.6				
Days observed		0	0	0	3	4	3	0	0	10				
First date: May 10 (4)				Peak date: May 11 (8)			Last date: May 27 (1)			34				
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.4	0.0	0.0	0.1	0.4	1.7	3.1	9.0	0.4	0.1	0.0	1.3
Days observed		0	1	0	0	1	1	3	6	7	1	1	0	21
First date: July 25 (3)					Peak date: September 12 (29)				Last date: September 24 (1)				108	

**Forster's Tern***Sterna forsteri*

		APRIL			MAY						JUNE													
S	Week 1: 17-23	2: 24-30		3: 1-7		4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10		TOTAL								
Avg. per day	0.0	0.0		0.0		1.0		0.1		0.1		0.0		0.0		0.2								
Days observed	0	0		0		1		1		1		0		0		3								
First date: May 11 (7)				Peak date: May 11 (7)				Last date: May 23 (1)						9										
		JULY			AUGUST					SEPTEMBER														
F	1: 12-18	2: 19-25		3: 26-1		4: 2-8		5: 9-15		6: 16-22		7: 23-29		8: 30-5		9: 6-12		10: 13-19		11: 20-26		12: 27-30		TOTAL
Avg. per day	0.0	0.0		0.0		0.0		0.3		0.7		1.7		4.7		1.1		0.1		0.0		0.0		0.7
Days observed	0	0		0		0		1		1		2		5		5		1		0		0		15
First date: August 9 (2)				Peak date: September 1 (14)				Last date: September 16 (1)						61										

**Common Loon*****Gavia immer***

		APRIL			MAY						JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4		8: 5-10	TOTAL		
Avg. per day		0.0	24.4		3.7	5.1	5.9	13.3	8.0		4.3	8.1		
Days observed		0	3		4	7	7	6	7		6	40		
		First date: April 26 (3)				Peak date: April 28 (167)			Last date: June 10 (6)			449		
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		4.3	4.3	7.9	9.1	9.7	5.3	13.1	7.0	4.0	3.1	6.1	2.3	6.4
Days observed		7	5	7	7	5	6	5	7	4	2	4	3	62
		First date: July 12 (1)				Peak date: August 25 (1)			Last date: September 30 (3)			527		

**Double-crested Cormorant*****Nannopterum auritum***

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.0	0.6	1.3	0.3	1.0	0.0	2.3	0.7	
Days observed		0	0	2	2	1	2	0	1	8	
		First date: May 5 (3)			Peak date: June 7 (14)			Last date: June 7 (14)			36

**American White Pelican*****Pelecanus erythrorhynchos***

		APRIL			MAY						JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21	6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.0		0.0	0.0		0.0	0.0		0.4		0.2	0.1
Days observed		0	0		0	0		0	0		3		1	4
		First date: May 29 (1)				Peak date: May 31 (1)				Last date: June 7 (1)				4
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.6	0.6	0.9	7.6	1.1	3.3	0.6	0.0	0.0	0.0	1.2
Days observed		0	0	2	3	4	7	4	4	3	0	0	0	27
		First date: July 29 (1)				Peak date: August 17 (41)				Last date: September 12 (2)				102

**Great Blue Heron*****Ardea herodias***

		APRIL			MAY						JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21	6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.0		0.3	0.0		0.0	0.0		0.0		0.0	0.0
Days observed		0	0		2	0		0	0		0		0	2
		First date: May 2 (1)				Peak date: May 4 (1)			Last date: May 4 (1)				2	
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0
Days observed		0	0	0	0	0	0	2	1	0	0	0	0	3
		First date: August 23 (1)				Peak date: August 28 (1)			Last date: September 5 (1)				3	

**Raptor (Hawk/Falcon total including unidentified)*****Accipitridae sp./Falconidae sp.***

		APRIL			MAY						JUNE				
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		1.7	11.7		13.4	6.7		5.3		2.0		3.1		2.7	5.8
Days observed		6	7		7	7		7		7		7		6	54
		First date: April 18 (2)				Peak date: April 30 (38)				Last date: June 10 (2)				324	
		JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		1.7	2.1	2.0	3.1	5.3	10.1	20.3	25.7	10.0	7.1	5.4	4.8	8.1	
Days observed		5	4	7	7	7	7	7	7	7	7	7	4	76	
		First date: July 14 (2)				Peak date: September 3 (43)				Last date: September 30 (8)				670	

**Osprey*****Pandion haliaetus***

		APRIL		MAY					JUNE				
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.1				
Days observed	0	1	0	2	0	0	0	0	3				
First date: April 30 (1)			Peak date: May 8 (1)			Last date: May 12 (1)			3				
		JULY		AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1
Days observed	0	0	0	0	1	1	0	1	1	1	1	0	6
First date: August 9 (1)				Peak date: September 6 (1)				Last date: September 22 (1)				6	

**Northern Harrier*****Circus hudsonius***

		APRIL		MAY					JUNE				
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day	0.3	5.7	4.9	1.0	1.3	0.1	0.3	0.2	1.7				
Days observed	2	5	7	5	4	1	2	1	27				
First date: April 21 (1)			Peak date: April 30 (21)			Last date: June 6 (1)			96				
		JULY		AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.1	0.1	0.6	0.7	1.4	1.7	2.4	0.7	0.4	0.8	0.8
Days observed	0	0	1	1	3	5	4	5	6	5	2	2	34
		First date: July 26 (1)			Peak date: September 10 (10)			Last date: September 30 (1)			61		

**Accipiter (genus total including unidentified)*****Accipiter sp.***

		APRIL		MAY					JUNE				
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day	0.1	2.0	2.0	1.0	0.1	0.0	0.3	0.0	0.7				
Days observed	1	6	6	5	1	0	2	0	21				
First date: April 20 (1)			Peak date: April 30 (7)			Last date: June 2 (1)			39				
		JULY		AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.3	0.1	0.3	1.6	4.6	15.0	16.0	2.6	1.7	0.1	1.0	3.6
Days observed	0	2	1	2	5	6	7	7	6	5	1	3	45
First date: July 22 (1)				Peak date: September 3 (32)				Last date: September 30 (1)				300	

**Sharp-shinned Hawk*****Accipiter striatus***

		APRIL		MAY						JUNE			
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day	0.0	1.9	1.7	1.0	0.1	0.0	0.3	0.0	0.6				
Days observed	0	6	5	5	1	0	2	0	19				
Processed	0	1-0-0	1-0-0	1-0-0	0	0	1-0-0	0	4-0-0				
First date: April 25 (1)			Peak date: April 30 (7)			Last date: June 2 (1)			35				
		JULY		AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.3	0.1	0.3	1.4	4.6	14.6	15.6	2.6	1.7	0.1	1.0	3.5
Days observed	0	2	1	2	4	6	7	7	6	5	1	3	44
Processed	0	0	0	1-0-0	1-0-1	2-0-0	4-0-0	7-0-0	1-0-0	1-0-0	0	2-0-0	19-0-1
First date: July 22 (1)				Peak date: September 3 (31)				Last date: September 30 (1)				293	

**Cooper's Hawk*****Accipiter cooperii***

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Days observed		1	0	0	0	0	0	0	0	1	
		First date: April 20 (1)		Peak date: April 20 (1)			Last date: April 20 (1)			1	

**Cooper's Hawk*****Accipiter cooperii***

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.1
Days observed	0	0	0	0	1	0	1	2	0	0	0	0	4
First date: August 10 (1)				Peak date: August 27 (2)				Last date: September 3 (1)					5

**Northern Goshawk*****Accipiter gentilis***

		APRIL		MAY				JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Days observed		0	1	1	0	0	0	0	0	2
		First date: April 29 (1)			Peak date: April 29 (1)		Last date: May 6 (1)			2

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	0	0	0	1	1	0	0	0	0	2
First date: August 26 (1)				Peak date: August 26 (1)				Last date: August 30 (1)					2

**Bald Eagle*****Haliaeetus leucocephalus***

		APRIL		MAY				JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day		1.1	1.4	2.9	1.9	2.3	1.1	1.0	1.7	1.7
Days observed		6	7	7	6	7	6	5	6	50
		First date: April 18 (1)			Peak date: May 4 (6)		Last date: June 10 (2)			92

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	1.4	1.7	1.1	1.4	1.7	2.4	1.9	2.0	4.3	2.9	2.9	2.3	2.2
Days observed	5	3	6	6	5	7	7	6	7	6	7	4	69
First date: July 14 (2)				Peak date: September 14 (7)				Last date: September 30 (3)					175

**Buteo (genus total including unidentified)*****Buteo sp.***

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.9	2.3	1.7	0.1	0.0	0.1	0.2	0.7	
Days observed		0	4	6	4	1	0	1	1	17	
		First date: April 25 (1)			Peak date: May 4 (5)			Last date: June 7 (1)		37	

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.1	0.1	0.0	0.9	1.3	1.0	0.3	1.0	0.3	0.3	0.4
Days observed	0	0	1	1	0	3	5	4	2	4	1	1	22
First date: July 26 (1)				Peak date: August 19 (4)				Last date: September 30 (1)					36

**Broad-winged Hawk*****Buteo platypterus***

		APRIL		MAY				JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day		0.0	0.1	0.4	0.3	0.0	0.0	0.0	0.0	0.1
Days observed		0	1	3	2	0	0	0	0	6
		First date: April 30 (1)			Peak date: May 7 (1)		Last date: May 11 (1)			6

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.6	0.0	0.0	0.0	0.0	0.1
Days observed	0	0	0	0	0	2	4	3	0	0	0	0	9
First date: August 17 (1)				Peak date: August 24 (2)				Last date: September 3 (1)					11

**Red-tailed Hawk***Buteo jamaicensis*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.4	1.0	0.9	0.1	0.0	0.1	0.2	0.3
Days observed		0	3	4	3	1	0	1	1	13
First date: April 25 (1)				Peak date: May 7 (3)			Last date: June 7 (1)			19

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.3	0.3	1.0	0.1	0.3	0.2
Days observed		0	0	0	0	0	1	2	2	2	4	1	1	13
		First date: August 19 (2)				Peak date: September 14 (3)				Last date: September 30 (1)				18

**Rough-legged Hawk***Buteo lagopus*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Days observed		0	2	1	0	0	0	0	0	3
First date: April 26 (1)				Peak date: April 30 (1)			Last date: May 3 (1)			3

**Barred Owl***Strix varia*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Days observed		1	0	0	1	0	0	0	0	2
First date: April 23 (1)				Peak date: April 23 (1)			Last date: May 8 (1)			2

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.1	0.0	0.1
Days observed		1	0	0	0	0	0	0	4	0	0	1	0	6
		First date: July 18 (1)				Peak date: September 3 (3)				Last date: September 22 (1)				8

**Belted Kingfisher***Megasceryle alcyon*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.4	0.9	0.6	0.1	0.1	0.2	0.3
Days observed		0	0	2	4	4	1	1	1	13
First date: May 6 (2)				Peak date: May 13 (3)			Last date: June 10 (1)			16

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.7	0.1	1.0	0.3	0.4	0.3	0.6	0.0	0.3	0.0	0.1	0.0	0.3
Days observed		5	1	6	2	3	2	4	0	2	0	1	0	26
		First date: July 12 (1)				Peak date: July 27 (2)				Last date: September 21 (1)				27

**Woodpecker (family total including unidentified)***Picidae sp.*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		2.3	2.4	9.4	9.1	3.1	2.6	2.3	1.8	4.1
Days observed		7	6	7	7	7	7	7	5	53
First date: April 17 (3)				Peak date: May 9 (18)			Last date: June 10 (2)			230

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	1.4	1.0	2.4	1.6	2.1	0.6	2.3	3.0	2.3	1.1	2.7	3.0	2.0
Days observed	5	4	5	6	6	4	4	5	6	4	6	4	59
First date: July 12 (1)		Peak date: September 5 (8)					Last date: September 30 (2)					156	

**Yellow-bellied Sapsucker*****Sphyrapicus varius***

		APRIL		MAY				JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day		0.0	0.0	1.1	2.0	0.9	0.1	0.3	0.2	0.6
Days observed		0	0	3	6	3	1	2	1	16
		First date: May 5 (2)			Peak date: May 6 (4)		Last date: June 9 (1)			32

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	1	0	1	0	1	0	1	0	0	0	0	0	4
First date: July 16 (1)				Peak date: August 9 (1)				Last date: August 24 (1)					4

**American Three-toed Woodpecker*****Picoides dorsalis***

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Days observed	0	0	0	0	0	0	0	0	0	0	0	1	1
First date: September 27 (1)				Peak date: September 27 (1)				Last date: September 27 (1)					1

**Black-backed Woodpecker*****Picoides arcticus***

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Days observed	0	0	0	0	0	0	0	0	0	0	1	0	1
First date: September 20 (1)				Peak date: September 20 (1)				Last date: September 20 (1)					1

**Downy Woodpecker*****Dryobates pubescens***

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.9	0.7	1.6	1.9	1.0	1.1	1.0	1.0	1.1	
Days observed		6	4	5	7	7	6	7	5	47	
		First date: April 17 (1)			Peak date: May 7 (3)			Last date: June 10 (1)			63

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.7	0.6	1.7	0.6	1.1	0.4	1.9	1.6	0.9	0.7	1.0	0.5	1.0
Days observed	3	3	5	4	5	3	4	5	5	4	5	2	48
Processed	1-0-0	0	0	0	0	0	0	0	0	0	0	0	1-0-0
First date: July 14 (1)				Peak date: August 25 (7)				Last date: September 29 (1)					80

**Hairy Woodpecker*****Dryobates villosus***

		APRIL		MAY				JUNE			
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		1.1	1.6	1.1	0.6	0.6	0.7	0.9	0.5	0.9	
Days observed		5	5	5	4	3	4	5	3	34	
Processed		0	0	0	0	1-0-0	0-0-1	0-1-0	0	1-1-1	
		First date: April 17 (2)			Peak date: April 26 (3)			Last date: June 10 (1)			49

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.6	0.4	0.4	0.7	0.6	0.1	0.1	1.0	1.1	0.3	1.4	2.0	0.7
Days observed	4	2	3	3	4	1	1	4	6	2	5	4	39
Processed	0	0	0	0	0	0	0	0	1-0-0	1-0-0	2-0-0	1-0-1	5-0-1
First date: July 12 (1)				Peak date: September 24 (5)				Last date: September 30 (2)					56

**"Yellow-shafted" Flicker***Colaptes auratus auratus*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.1	4.6	4.4	0.7	0.4	0.0	0.0	1.3
Days observed		0	1	7	7	2	3	0	0	20
Processed		0	0	1-0-0	0	0	0	0	0	1-0-0
First date: April 30 (1)				Peak date: May 9 (12)			Last date: May 28 (1)			72

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0
Days observed		0	0	0	0	0	0	0	2	2	0	0	0	4
		First date: September 3 (1)				Peak date: September 5 (1)				Last date: September 11 (1)				4

**Pileated Woodpecker***Dryocopus pileatus*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Days observed		1	0	0	0	0	1	0	0	2
First date: April 21 (2)				Peak date: April 21 (2)			Last date: May 27 (1)			3

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.1
Days observed	0	0	0	2	1	0	0	1	0	0	1	1	6
	First date: August 3 (1)				Peak date: September 5 (1)				Last date: September 27 (1)				6

**Falcon (including unidentified)***Falconidae sp.*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.1	1.6	1.4	0.7	1.4	0.7	1.3	0.7	1.0
Days observed		1	5	4	4	7	5	5	4	35
First date: April 18 (1)				Peak date: April 30 (5)			Last date: June 8 (1)			55

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.3	0.1	0.3	1.1	1.3	1.4	0.7	4.7	0.3	0.7	1.6	0.5	1.1
Days observed		2	1	2	5	6	7	4	7	2	4	6	1	47
		First date: July 17 (1)				Peak date: August 30 (15)				Last date: September 30 (2)				90

**American Kestrel***Falco sparverius*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.3	0.4	0.0	0.1	0.0	0.3	0.0	0.1
Days observed		0	2	3	0	1	0	2	0	8
First date: April 29 (1)				Peak date: May 5 (1)			Last date: June 4 (1)			8

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.2
Days observed		0	0	0	0	1	0	0	3	0	0	0	0	4
		First date: August 13 (1)				Peak date: August 30 (9)				Last date: September 3 (2)				13

**Merlin***Falco columbarius*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.1	1.3	0.6	0.6	1.3	0.7	0.9	0.7	0.8
Days observed		1	5	3	3	7	5	5	4	33
First date: April 18 (1)				Peak date: April 30 (4)			Last date: June 8 (1)			42



**Merlin*****Falco columbarius***

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.3	0.1	0.3	1.1	1.1	1.4	0.7	2.7	0.3	0.4	1.1	0.5	0.9
Days observed	2	1	2	5	6	7	4	7	2	3	6	1	46
First date: July 17 (1)				Peak date: September 4 (8)				Last date: September 30 (2)					70

**Peregrine Falcon*****Falco peregrinus***

	APRIL		MAY				JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	1	0	0	0	0	0	1
First date: May 5 (1)			Peak date: May 5 (1)			Last date: May 5 (1)			1

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	0.1
Days observed	0	0	0	0	0	0	0	0	0	2	2	0	4
First date: September 14 (1)				Peak date: September 20 (2)				Last date: September 23 (1)					5

**Passerine sp. (order total including unidentified)*****Passeriformes* sp.**

	APRIL		MAY				JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	58.0	533.0	1063.6	877.3	750.7	299.6	768.6	196.5	568.4
Days observed	7	7	7	7	7	7	7	6	55
First date: April 17 (105)			Peak date: April 30 (2,741)			Last date: June 10 (173)			31,634

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	216.6	342.9	925.3	771.3	754.0	629.9	757.6	782.1	336.7	94.6	195.4	106.0	492.7
Days observed	7	7	7	7	7	7	7	7	7	7	7	4	81
First date: July 12 (122)				Peak date: August 4 (790)				Last date: September 30 (101)					41,068

**Flycatcher (family total including Empidonax sp., unidentified)*****Tyrannidae* sp.**

	APRIL		MAY				JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	0.0	0.0	3.1	9.6	17.0	7.4	22.7	12.5	9.0
Days observed	0	0	4	7	7	7	7	6	38
First date: May 3 (2)			Peak date: June 1 (54)			Last date: June 10 (10)			494

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	3.0	8.9	12.7	17.3	16.9	17.0	7.7	2.0	0.6	0.3	0.0	0.0	7.2
Days observed	7	6	7	7	7	6	7	3	4	2	0	0	56
First date: July 12 (1)				Peak date: August 12 (42)				Last date: September 16 (1)					604

**Eastern Kingbird*****Tyrannus tyrannus***

	APRIL		MAY				JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	0.0	0.0	2.1	2.3	0.3	0.1	5.4	1.0	1.4
Days observed	0	0	3	4	1	1	6	2	17
First date: May 5 (6)			Peak date: June 1 (15)			Last date: June 6 (3)			78

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.3	0.1	1.4	7.1	2.4	0.0	0.1	0.0	0.0	0.0	1.0
Days observed	0	0	1	1	4	5	5	0	1	0	0	0	17
First date: July 28 (2)				Peak date: August 21 (23)				Last date: September 10 (1)					81

Olive-sided Flycatcher

Contopus cooperi

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	1	0	0	1	0	0	0	0	0	2
First date: August 5 (1)				Peak date: August 5 (1)					Last date: August 26 (1)				2

Western Wood-Pewee

Contopus sordidulus

	APRIL			MAY						JUNE		
S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL		
Avg. per day	0.0	0.0		0.0	0.0	0.0	0.0	0.3	0.2	0.1		
Days observed	0	0		0	0	0	0	2	1	3		
	First date: May 31 (1)			Peak date: June 1 (1)			Last date: June 7 (1)			3		

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.1	0.1	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Days observed	1	1	3	1	0	0	0	0	0	0	0	0	6
	First date: July 15 (1)			Peak date: July 31 (2)				Last date: August 4 (2)				8	

Empidonax Flycatcher (genus total including unidentified)

Empidonax sp.

	APRIL			MAY						JUNE			
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day	0.0	0.0	0.0	4.4	15.3	6.9	14.0	10.8	6.4				
Days observed	0	0	0	6	7	7	7	6	33				
First date: May 9 (3)			Peak date: May 18 (29)			Last date: June 10 (10)			349				
	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	2.9	8.0	11.6	16.1	14.1	8.6	5.1	1.6	0.4	0.3	0.0	0.0	5.7
Days observed	7	5	7	7	7	6	5	2	3	2	0	0	51
First date: July 12 (1)				Peak date: August 12 (34)				Last date: September 16 (1)				481	

Yellow-bellied Flycatcher

Empidonax flaviventris

	APRIL			MAY					JUNE			
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL			
Avg. per day	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.1			
Days observed	0	0	0	1	0	0	1	2	4			
Processed	0	0	0	0	0	0	1-0-0	1-0-0	2-0-0			
First date: May 9 (1)			Peak date: June 3 (1)			Last date: June 7 (1)			4			

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	1	0	0	0	0	0	0	0	0	1
Processed	0	0	0	1-0-0	0	0	0	0	0	0	0	0	1-0-0
First date: August 3 (1)				Peak date: August 3 (1)				Last date: August 3 (1)				1	

Alder Flycatcher

Empidonax alnorum

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	0.0	0.0	0.0	1.0	1.0	4.4	8.2	1.8				
Days observed		0	0	0	0	4	3	7	6	20				
Processed		0	0	0	0	5-0-0	2-0-0	18-0-0	33-0-0	58-0-0				
First date: May 15 (4)				Peak date: June 7 (13)			Last date: June 10 (8)			94				
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		1.3	1.1	0.7	3.4	2.0	0.7	0.4	0.3	0.1	0.0	0.0	0.0	0.8
Days observed		6	4	4	6	4	4	2	2	1	0	0	0	33
Processed		5-0-0	5-0-1	5-0-0	16-0-0	10-0-0	4-0-0	0	1-0-0	1-0-0	0	0	0	47-0-1
First date: July 12 (1)					Peak date: August 6 (8)				Last date: September 7 (1)				71	

**Least Flycatcher*****Empidonax minimus***

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	0.0	0.0	3.3	11.0	5.1	7.0	2.2	3.6				
Days observed		0	0	0	6	6	7	7	5	31				
Processed		0	0	0	1-0-0	0	0	0	0	1-0-0				
First date: May 9 (1)				Peak date: June 7 (5)			Last date: June 10 (2)			198				
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.6	5.1	7.0	8.9	8.0	4.0	2.0	0.7	0.0	0.0	0.0	0.0	3.0
Days observed		2	5	7	7	7	6	5	2	0	0	0	0	41
Processed		2-0-0	16-0-4	14-0-0	10-0-0	5-0-0	4-0-0	0	0	0	0	0	0	51-0-4
		First date: July 15 (3)			Peak date: August 5 (18)				Last date: September 3 (2)				254	

**Eastern Phoebe*****Sayornis phoebe***

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	0.0	0.9	2.3	1.0	0.3	0.3	0.5	0.7				
Days observed		0	0	3	6	6	2	2	3	22				
Processed		0	0	0	1-0-0	0	0	0	0	1-0-0				
First date: May 3 (1)				Peak date: May 11 (4)			Last date: June 7 (1)			36				
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.4	0.3	0.4	0.4	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.2
Days observed		0	3	2	3	3	2	0	1	0	0	0	0	14
Processed		0	0	0	1-0-0	0	0	0	0	0	0	0	0	1-0-0
First date: July 20 (1)					Peak date: August 7 (1)				Last date: September 4 (2)				15	

**Say's Phoebe*****Sayornis saya***

		APRIL			MAY						JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21	6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.0		0.1	0.1		0.1	0.0		0.0		0.0	0.1
Days observed		0	0		1	1		1	0		0		0	3
		First date: May 3 (1)				Peak date: May 11 (1)				Last date: May 17 (1)				3
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days observed		0	0	0	0	0	2	0	0	0	0	0	0	2
		First date: August 17 (1)				Peak date: August 17 (1)				Last date: August 22 (1)				2

**Vireo (family total including unidentified)*****Vireonidae sp.***

		APRIL			MAY							JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.0		0.1	0.1		3.1		2.4		5.7		8.8	2.6
Days observed		0	0		1	1		7		6		7		6	28
		First date: May 3 (1)				Peak date: June 9 (14)				Last date: June 10 (9)				134	
		JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		9.4	9.6	21.0	16.6	11.3	7.1	5.4	0.9	0.0	0.0	0.1	0.0	6.8	
Days observed		7	7	7	7	7	6	7	2	0	0	1	0	51	
		First date: July 12 (9)				Peak date: August 6 (35)				Last date: September 21 (1)				570	

**Blue-headed Vireo*****Vireo solitarius***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	0.1	1.9	0.4	0.1	0.0	0.3
Days observed		0	0	0	1	5	2	1	0	9
First date: May 14 (1)			Peak date: May 18 (6)				Last date: May 31 (1)			18

Blue-headed Vireo

*Vireo solitarius*

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.1	0.7	0.6	1.1	0.6	0.6	0.3	0.0	0.0	0.1	0.0	0.3
Days observed	0	1	5	2	4	4	3	1	0	0	1	0	21
Processed	0	0	3-0-0	1-0-0	1-0-0	0	0	1-0-0	0	0	1-0-0	0	7-0-0
First date: July 25 (1)				Peak date: August 15 (4)					Last date: September 21 (1)				29

Philadelphia Vireo

*Vireophiladelphicus*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.1	0.0	0.3	0.3	0.3	0.5	0.2	
Days observed	0	0	1	0	1	2	2	3	9	
Processed	0	0	0	0	1-0-0	0	0	0	1-0-0	
First date: May 3 (1)			Peak date: May 21 (2)			Last date: June 10 (1)			10	

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	1.3	1.9	5.0	2.0	2.1	1.7	0.7	0.0	0.0	0.0	0.0	0.0	1.2
Days observed	6	5	6	6	4	5	4	0	0	0	0	0	36
Processed	1-0-0	4-0-0	15-0-0	3-0-1	6-0-0	5-0-0	0	0	0	0	0	0	34-0-1
First date: July 12 (1)					Peak date: August 1 (11)				Last date: August 27 (1)				103

Warbling Vireo

*Vireogilvus*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.1	
Days observed	0	0	0	0	1	2	1	0	4	
	First date: May 21 (1)		Peak date: May 24 (1)			Last date: May 30 (1)			4	

	JULY			AUGUST					SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day	0.0	0.6	2.0	1.3	0.6	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.4	
Days observed	0	3	5	4	3	1	2	1	0	0	0	0	19	
Processed	0	2-0-0	1-0-0	2-0-0	0	0	0	0	0	0	0	0	5-0-0	
First date: July 19 (2)					Peak date: July 31 (5)					Last date: August 30 (1)				36

Red-eyed Vireo

*Vireoolivaceus*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.0	0.0	0.3	0.9	4.6	8.3	1.8	
Days observed	0	0	0	0	2	4	7	6	19	
Processed	0	0	0	0	0	0	3-1-0	11-1-1	14-2-1	
First date: May 16 (1)			Peak date: June 8 (11)			Last date: June 10 (8)			90	

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	7.6	6.1	10.7	11.4	6.7	4.4	3.4	0.4	0.0	0.0	0.0	0.0	4.2
Days observed	7	7	7	7	7	6	6	2	0	0	0	0	49
Processed	15-1-3	14-0-1	16-0-3	16-0-3	7-0-0	4-0-0	2-0-0	1-0-0	0	0	0	0	75-1-10
First date: July 12 (8)					Peak date: August 6 (22)				Last date: August 31 (1)				356

Canada (Gray) Jay

*Perisoreus canadensis*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.1	
Days observed	0	0	0	0	0	0	1	3	4	
	First date: June 4 (1)		Peak date: June 8 (1)			Last date: June 10 (1)			4	

**Blue Jay***Cyanocitta cristata*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.9	1.0	1.1	7.7	3.4	2.3	1.7	0.5	2.3
Days observed		4	5	5	6	5	5	7	2	39
Processed		0	0	0	1-0-0	1-0-0	0	0	0	2-0-0
First date: April 17 (2)				Peak date: May 10 (18)			Last date: June 9 (2)			130

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.3	0.3	1.3	2.1	3.3	3.9	4.0	2.6	1.4	3.3	2.8	2.1
Days observed	0	1	2	5	5	7	7	6	5	4	6	4	52
Processed	0	0	0	0	0	0	0	1-0-0	0	1-0-0	0-1-0	0	2-1-0
First date: July 20 (2)				Peak date: September 24 (12)					Last date: September 30 (1)				168

**Black-billed Magpie***Pica hudsonia*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		1.4	0.9	1.3	0.4	0.9	1.1	0.9	0.8	1.0
Days observed		5	4	4	3	4	4	4	4	32
First date: April 17 (3)				Peak date: May 3 (5)			Last date: June 9 (1)			53

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.7	0.4	1.1	1.3	0.4
Days observed		0	0	0	0	0	0	0	1	6	3	5	3	18
		First date: September 3 (1)				Peak date: September 12 (5)				Last date: September 29 (1)				29

**American Crow***Corvus brachyrhynchos*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		5.9	7.9	10.9	8.1	6.6	4.4	3.9	2.8	6.3
Days observed		7	6	7	7	7	7	7	6	54
First date: April 17 (8)				Peak date: April 30 (25)			Last date: June 10 (2)			350

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		2.3	2.4	17.0	8.4	3.9	26.6	20.7	13.0	0.9	0.4	4.7	0.0	8.4
Days observed		7	7	7	7	7	7	7	7	4	2	3	0	65
		First date: July 12 (2)				Peak date: August 1 (55)				Last date: September 25 (31)				702

**Common Raven***Corvus corax*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		2.3	2.3	2.1	2.1	1.0	1.4	0.9	0.7	1.6
Days observed		7	7	7	7	4	5	4	4	45
First date: April 17 (3)				Peak date: May 22 (6)			Last date: June 10 (1)			89

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.9	1.4	2.0	1.7	6.6	14.7	9.1	3.3	4.1	3.9	7.1	6.3	5.1
Days observed		4	5	6	6	7	7	7	7	7	7	7	4	74
		First date: July 12 (1)				Peak date: August 16 (42)				Last date: September 30 (11)				409

**Black-capped Chickadee***Poecile atricapillus*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		2.9	2.7	2.4	2.9	1.6	2.0	0.4	1.5	2.0
Days observed		7	7	7	7	6	7	2	4	47
Processed		0-2-0	0-0-1	0	0	0-0-1	0	0	0	0-2-2
First date: April 17 (2)				Peak date: May 4 (5)			Last date: June 10 (2)			113

**Black-capped Chickadee***Poecile atricapillus*

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	3.3	2.4	4.6	3.9	2.9	2.6	7.1	25.0	94.7	11.1	15.9	9.5	15.2
Days observed	6	5	7	6	7	7	7	5	7	5	7	4	73
Processed	5-0-0	2-0-1	1-0-0	2-0-0	0	0	1-0-0	12-0-1	20-0-1	2-0-0	14-1-4	0	59-1-7
First date: July 12 (5)				Peak date: September 10 (327)				Last date: September 30 (4)					1,252

**Boreal Chickadee***Poecile hudsonicus*

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.1	0.0	0.1	0.1	0.0	0.0	0.0	1.6	3.6	0.6	1.9	1.5	0.8
Days observed	1	0	1	1	0	0	0	1	4	3	4	4	19
Processed	0	0	0	0	0	0	0	0	0	0	2-0-0	1-0-0	3-0-0
First date: July 12 (1)				Peak date: September 10 (16)				Last date: September 30 (1)					62

**Horned Lark***Eremophila alpestris*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10		TOTAL
Avg. per day	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Days observed	1	2	0	0	0	0	0	0	0	3
First date: April 21 (2)			Peak date: April 24 (3)			Last date: April 30 (2)				7

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.1	0.3	0.0	0.5
Days observed	0	0	0	0	0	0	0	0	1	3	2	0	6
First date: September 11 (14)				Peak date: September 14 (18)				Last date: September 26 (1)					38

**Swallow (family total including unidentified)***Hirundinidae sp.*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10		TOTAL
Avg. per day	0.0	0.3	57.9	13.4	5.7	6.4	41.1	0.8		15.7
Days observed	0	1	6	4	4	3	5	3		26
First date: April 30 (2)			Peak date: May 2 (183)			Last date: June 7 (1)				879

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.4	53.9	8.4	21.0	0.7	9.1	0.0	6.3	0.0	0.0	0.0	0.0	8.3
Days observed	2	2	5	5	2	3	0	3	0	0	0	0	22
First date: July 13 (1)				Peak date: July 20 (276)				Last date: September 4 (2)					699

**Bank Swallow***Riparia riparia*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10		TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	1.3	10.9	0.0		1.5
Days observed	0	0	0	0	0	2	3	0		5
First date: May 24 (1)			Peak date: May 31 (46)			Last date: June 1 (27)				85

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	1.1	12.1	0.1	0.7	0.0	0.3	0.0	0.0	0.0	0.0	1.2
Days observed	0	0	1	3	1	1	0	1	0	0	0	0	7
First date: August 1 (8)				Peak date: August 5 (38)				Last date: September 3 (2)					101

**Tree Swallow***Tachycineta bicolor*

		APRIL			MAY							JUNE							
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10	TOTAL				
Avg. per day		0.0		0.3		53.1		11.4		3.9		1.4		4.4		0.2		9.3	
Days observed		0		1		6		4		3		1		2		1		18	
		First date: April 30 (2)					Peak date: May 2 (183)					Last date: June 6 (1)					523		
		JULY			AUGUST					SEPTEMBER									
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL					
Avg. per day		0.4		46.0		5.6		8.3		0.4		0.0		0.0		0.0		5.1	
Days observed		2		2		3		3		2		0		0		1		13	
		First date: July 13 (1)					Peak date: July 20 (222)					Last date: September 4 (2)					427		

**Northern Rough-winged Swallow***Stelgidopteryx serripennis*

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.1	
Days observed		0	0	0	0	0	0	1	0	1	
		First date: May 31 (3)			Peak date: May 31 (3)			Last date: May 31 (3)			3

**Barn Swallow***Hirundo rustica*

		APRIL			MAY							JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.0		0.0	0.0		0.0		0.0		0.1		0.0	0.0
Days observed		0	0		0	0		0		0		1		0	1
First date: June 1 (1)					Peak date: June 1 (1)				Last date: June 1 (1)					1	
		JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
Days observed		0	0	0	0	0	1	0	0	0	0	0	0	1	
First date: August 22 (8)					Peak date: August 22 (8)				Last date: August 22 (8)					8	

**Cliff Swallow***Petrochelidon pyrrhonota*

		APRIL			MAY						JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21	6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.0		0.0	0.6		0.4	0.6		10.1		0.0	1.5
Days observed		0	0		0	2		1	1		5		0	9
First date: May 11 (2)					Peak date: May 31 (44)				Last date: June 3 (1)					82
		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Days observed		0	0	0	0	0	1	0	0	0	0	0	0	1
First date: August 18 (11)					Peak date: August 18 (11)				Last date: August 18 (11)					11

**Ruby-crowned Kinglet***Corthylio calendula*

		APRIL			MAY						JUNE				
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.0		2.1	3.0		0.4		0.3		0.0		0.0	0.7
Days observed		0	0		7	6		2		1		0		0	16
Processed		0	0		0	4-0-0		0		1-0-0		0		0	5-0-0
First date: May 1 (1)					Peak date: May 10 (6)				Last date: May 23 (2)					41	
		JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		0.3	1.1	2.6	0.7	0.7	0.9	2.0	1.6	2.7	0.6	1.6	1.3	1.3	
Days observed		1	4	7	3	1	5	6	4	6	2	5	3	47	
Processed		0	4-0-0	3-0-0	4-0-0	1-0-0	0	0	1-0-0	0	0	2-0-0	0	15-0-0	
First date: July 18 (2)					Peak date: September 10 (7)				Last date: September 30 (2)					108	

**Golden-crowned Kinglet***Regulus satrapa*

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	1.4	2.8	0.4
Days observed	0	0	0	0	0	0	0	0	2	1	3	3	9
Processed	0	0	0	0	0	0	0	0	0	1-0-0	4-0-0	2-0-0	7-0-0
First date: September 9 (2)				Peak date: September 26 (6)				Last date: September 29 (5)					25

**Bohemian Waxwing***Bombycilla garrulus*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10		TOTAL
Avg. per day	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Days observed	0	1	0	0	0	0	0	0	0	1
First date: April 27 (19)			Peak date: April 27 (19)				Last date: April 27 (19)			19

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Days observed	0	0	0	0	0	0	0	0	0	0	1	0	1
First date: September 26 (3)				Peak date: September 26 (3)				Last date: September 26 (3)					3

**Cedar Waxwing***Bombycilla cedrorum*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10		TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	33.6	34.2		8.5
Days observed	0	0	0	0	0	0	6	6		12
First date: May 29 (9)			Peak date: June 3 (136)				Last date: June 10 (40)			440

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	26.6	31.6	21.0	16.3	13.3	22.4	19.1	11.7	3.0	0.4	0.9	0.8	13.9
Days observed	7	7	7	7	7	7	7	7	4	2	1	1	64
Processed	3-0-0	2-0-0	0	0	0	0	0	2-0-0	1-0-0	0	0	0	8-0-0
First date: July 12 (8)				Peak date: July 24 (82)				Last date: September 30 (3)					1,167

**Red-breasted Nuthatch***Sitta canadensis*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10		TOTAL
Avg. per day	0.7	0.4	1.3	1.3	1.0	1.0	0.4	0.2		0.8
Days observed	4	3	6	6	7	6	3	1		36
First date: April 17 (1)			Peak date: May 6 (3)				Last date: June 10 (1)			44

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.4	0.3	1.4	1.3	0.7	1.1	2.1	0.9	0.9	0.7	1.0	1.0	1.0
Days observed	3	2	6	5	4	5	7	4	5	5	4	3	53
Processed	0	1-0-0	0	2-0-0	0	0	0	0	0	0	0	0	3-0-0
First date: July 13 (1)				Peak date: August 25 (6)				Last date: September 30 (1)					80

**White-breasted Nuthatch***Sitta carolinensis*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10		TOTAL
Avg. per day	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Days observed	1	0	0	0	0	0	0	0		1
First date: April 17 (1)			Peak date: April 17 (1)				Last date: April 17 (1)			1

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.1
Days observed	1	0	1	0	0	0	0	0	2	2	2	1	9
Processed	0	0	0	0	0	0	0	0	0	0	0	1-0-0	1-0-0
First date: July 14 (1)				Peak date: September 17 (1)				Last date: September 29 (1)					9



**Brown Creeper***Certhia americana*

		APRIL		MAY				JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day		0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Days observed		1	0	1	0	0	0	0	0	2
		First date: April 17 (1)			Peak date: April 17 (1)		Last date: May 4 (1)			2

	JULY			AUGUST				SEPTEMBER					TOTAL
	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.6	0.8	0.2
Days observed	1	0	1	1	0	0	0	0	1	0	3	3	10
Processed	1-0-0	0	0	0	0	0	0	0	0	0	2-0-0	0	3-0-0
First date: July 13 (1)				Peak date: September 20 (2)				Last date: September 29 (1)					11

**Wren (family total including unidentified)***Troglodytidae sp.*

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.0	0.1	1.0	1.0	0.7	0.6	0.3	0.5	
Days observed		0	0	1	6	7	4	3	2	23	
		First date: May 3 (1)			Peak date: May 24 (2)		Last date: June 6 (1)			26	

	JULY			AUGUST				SEPTEMBER					TOTAL
	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.9	2.7	0.0	0.0	0.1	0.0	1.3	0.3	0.6	0.3	0.1	0.0	0.5
Days observed	3	4	0	0	1	0	5	2	2	1	1	0	19
First date: July 13 (1)				Peak date: July 20 (7)				Last date: September 23 (1)					44

**House Wren***Troglodytes aedon*

		APRIL		MAY				JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Days observed		0	0	0	0	0	1	1	0	2
Processed		0	0	0	0	0	1-0-0	0	0	1-0-0
		First date: May 24 (1)			Peak date: May 24 (1)		Last date: June 4 (1)			2

	JULY			AUGUST				SEPTEMBER					TOTAL
	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.6	2.3	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.1	0.0	0.0	0.3
Days observed	1	4	0	0	0	0	2	1	1	1	0	0	10
Processed	0	2-0-0	0	0	0	0	1-0-0	0	0-0-1	0-0-1	0	0	3-0-2
First date: July 18 (4)				Peak date: July 21 (6)				Last date: September 13 (1)					26

**Winter Wren***Troglodytes hiemalis*

		APRIL		MAY				JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day		0.0	0.0	0.1	1.0	1.0	0.6	0.4	0.3	0.4
Days observed		0	0	1	6	7	4	3	2	23
		First date: May 3 (1)			Peak date: May 10 (2)		Last date: June 6 (1)			24

	JULY			AUGUST				SEPTEMBER					TOTAL
	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.1	0.4	0.1	0.1	0.0	0.1
Days observed	2	2	0	0	0	0	2	1	2	1	1	0	11
Processed	0	0	0	0	0	0	0	1-0-0	1-0-0	1-0-0	0	0	3-0-0
First date: July 13 (1)				Peak date: September 12 (2)				Last date: September 23 (1)					12

**Gray Catbird***Dumetella carolinensis*

	APRIL		MAY					JUNE	
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.1
Days observed	0	0	0	0	0	1	2	0	3
Processed	0	0	0	0	0	0	1-0-0	0	1-0-0
First date: May 27 (1)			Peak date: June 1 (1)			Last date: June 4 (1)			3

**European Starling***Sturnus vulgaris*

	APRIL		MAY					JUNE	
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	0.6	0.0	0.1	0.4	0.6	0.0	0.7	0.0	0.3
Days observed	1	0	1	2	2	0	1	0	7
First date: April 19 (4)			Peak date: May 16 (3)			Last date: May 31 (5)			17

**Townsend's Solitaire***Myadestes townsendi*

	APRIL		MAY					JUNE	
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.1
Days observed	0	1	0	0	2	0	0	0	3
Processed	0	1-0-0	0	0	0	0	0	0	1-0-0
First date: April 26 (1)			Peak date: May 15 (1)			Last date: May 17 (1)			3

**Catharus Thrush (genus total including unidentified)***Catharus sp.*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.9	5.6	8.6	11.6	25.1	5.8	7.2	
Days observed	0	0	2	6	7	6	7	6	34	
First date: May 6 (5)			Peak date: May 29 (46)			Last date: June 10 (3)			397	

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	11.0	13.6	30.7	38.4	30.9	37.3	27.3	3.4	2.4	1.4	0.7	0.0	16.4
Days observed	7	7	7	7	7	7	7	6	4	5	4	0	68
First date: July 12 (7)				Peak date: August 9 (71)				Last date: September 26 (1)					1,380

**Veery***Catharus fuscescens*

	APRIL		MAY					JUNE	
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Days observed	0	0	0	0	0	0	1	0	1
Processed	0	0	0	0	0	0	1-0-0	0	1-0-0
First date: May 30 (1)			Peak date: May 30 (1)			Last date: May 30 (1)			1

**Gray-cheeked Thrush***Catharus minimus*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.0	0.4	0.3	0.1	0.1	0.0	0.1	
Days observed	0	0	0	2	2	1	1	0	6	
Processed	0	0	0	1-0-0	2-0-0	1-0-0	1-0-0	0	5-0-0	
First date: May 10 (1)			Peak date: May 14 (2)			Last date: June 3 (1)			7	

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.1	0.0	0.0	0.1
Days observed	0	0	0	0	0	1	1	0	2	1	0	0	5
Processed	0	0	0	0	1-0-0	1-0-0	0	1-0-0	1-0-0	1-0-0	0	0	4-0-0
First date: August 21 (1)				Peak date: September 7 (1)				Last date: September 17 (1)					5

**Swainson's Thrush*****Catharus ustulatus***

		APRIL			MAY							JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.0		0.0	3.9		5.9		10.6		16.0		5.3	5.2
Days observed		0	0		0	5		7		6		7		6	31
Processed		0	0		0	14-0-0		15-0-0		31-0-0		67-4-0		15-0-0	142-4-0
First date: May 9 (4)					Peak date: May 27 (26)				Last date: June 10 (3)					286	
		JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		10.7	12.4	29.7	36.9	28.6	34.3	23.4	2.9	1.6	0.6	0.4	0.0	15.1	
Days observed		7	7	7	7	7	7	7	6	4	4	2	0	65	
Processed		22-1-3	29-1-6	115-0-12	138-0-23	90-0-21	143-0-5	64-0-2	6-0-0	7-0-0	3-0-0	0	0	617-2-72	
First date: July 12 (7)					Peak date: August 9 (69)				Last date: September 22 (2)					1,270	

**Hermit Thrush*****Catharus guttatus***

		APRIL			MAY							JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.0		0.1	0.6		0.4		0.1		0.3		0.0	0.2
Days observed		0	0		1	2		2		1		2		0	8
Processed		0	0		0	1-0-0		1-0-0		0		0		0	2-0-0
First date: May 7 (1)					Peak date: May 11 (3)					Last date: June 1 (1)					11
		JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		0.3	0.7	0.6	0.1	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.3	
Days observed		2	2	4	1	2	1	1	1	1	1	1	0	17	
Processed		1-0-0	1-0-0	1-0-1	0	0	0	0	1-0-0	1-0-0	1-0-0	0	0	6-0-1	
First date: July 14 (1)					Peak date: July 20 (3)					Last date: September 24 (1)					22

**American Robin*****Turdus migratorius***

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		3.3	238.6	475.0	31.3	11.1	5.7	5.7	5.5	97.0				
Days observed		5	7	7	7	7	7	7	6	53				
Processed		0	1-0-0	8-0-0	2-0-0	0-0-1	1-0-0	6-0-0	2-0-1	20-0-2				
First date: April 18 (3)				Peak date: April 30 (1,296)			Last date: June 10 (6)			5,428				
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		3.0	1.4	4.1	7.1	3.1	9.1	5.9	3.4	1.0	0.4	3.4	4.8	3.9
Days observed		7	5	6	7	5	6	6	5	4	2	5	2	60
Processed		1-0-1	0	3-0-0	4-0-0	1-0-0	0	0	0	0	0	0	2-0-0	11-0-1
First date: July 12 (4)					Peak date: August 21 (21)			Last date: September 30 (18)					314	

**Varied Thrush*****Ixoreus naevius***

		APRIL			MAY							JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.7		0.1	0.0		0.0		0.0		0.0		0.0	0.1
Days observed		0	3		1	0		0		0		0		0	4
		First date: April 27 (1)				Peak date: April 29 (3)				Last date: May 4 (1)				6	
		JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	
Days observed		0	0	0	0	0	1	0	0	0	1	0	0	2	
Processed		0	0	0	0	0	1-0-0	0	0	0	1-0-0	0	0	2-0-0	
		First date: August 19 (1)				Peak date: September 17 (1)				Last date: September 17 (1)				2	

**American Pipit***Anthus rubescens*

		APRIL			MAY						JUNE			
S		Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10		TOTAL		
Avg. per day		0.0	40.9		8.6	7.3	3.1	0.0	0.0	0.0		7.5		
Days observed		0	7		5	5	3	0	0	0		20		
		First date: April 24 (1)			Peak date: April 30 (179)			Last date: May 18 (13)				419		
		JULY			AUGUST				SEPTEMBER					
F		1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	2.1	16.6	30.1	5.3	4.1	3.3	5.1
Days observed		0	0	0	0	0	0	6	6	7	4	5	4	32
		First date: August 23 (1)			Peak date: September 10 (79)			Last date: September 30 (2)				421		

**Evening Grosbeak***Coccothraustes vespertinus*

		APRIL			MAY							JUNE			
S		Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4	8: 5-10	TOTAL	
Avg. per day		5.4	2.0		8.1	4.7		1.0		0.9		0.7	0.0	2.9	
Days observed		5	5		5	6		5		2		3	0	31	
		First date: April 17 (18)				Peak date: May 4 (20)				Last date: June 4 (1)				160	
		JULY			AUGUST					SEPTEMBER					
F		1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		0.3	0.0	4.6	5.0	2.6	1.4	0.1	0.0	0.1	0.0	0.0	0.8	1.2	
Days observed		1	0	6	6	3	3	1	0	1	0	0	3	24	
		First date: July 16 (2)				Peak date: August 2 (15)				Last date: September 30 (1)				102	

**Finch (family total including unidentified)***Fringillidae sp.*

		APRIL		MAY						JUNE				
S		Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		14.9	28.6	50.1	91.7	70.6	45.7	289.1	38.3	78.6				
Days observed		9	10	14	14	14	14	14	12	101				
		First date: August 4 (43)			Peak date: May 31 (770)			Last date: November 20 (30)			4,365			
		JULY		AUGUST				SEPTEMBER						
F		1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		11.7	85.4	93.1	48.3	61.0	96.7	41.1	17.1	12.3	4.9	114.4	31.0	51.4
Days observed		12	12	14	12	10	12	14	10	8	4	12	8	128
		First date: January 23 (2)			Peak date: September 26 (374)				Last date: July 2 (62)				4,227	

**Purple Finch***Haemorhous purpureus*

		APRIL		MAY					JUNE					
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		2.4	12.6	16.4	16.0	6.7	1.7	0.3	0.0	7.0				
Days observed		4	4	7	7	7	4	2	0	35				
		First date: April 17 (1)			Peak date: April 30 (53)			Last date: June 3 (1)			393			
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.3	1.0	8.7	11.6	8.7	10.6	11.7	1.9	0.6	0.0	0.1	0.0	4.6
Days observed		1	3	4	6	5	5	7	3	3	0	1	0	38
Processed		0	0	0	0	0	0	1-0-0	0	0	0	0	0	1-0-0
		First date: July 16 (2)			Peak date: August 26 (33)				Last date: September 21 (1)				386	

**Common Redpoll***Acanthis flammea*

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	
Days observed		5	0	0	0	0	0	0	0	5	
		First date: April 17 (41)			Peak date: April 17 (41)			Last date: April 21 (2)			60

**Common Redpoll***Acanthis flammea*

	JULY			AUGUST				SEPTEMBER					TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.4
Days observed	0	0	0	0	0	0	0	0	0	0	1	0	1
First date: September 25 (35)				Peak date: September 25 (35)				Last date: September 25 (35)					35

**Crossbill (genus total including Red, White-winged, unidentified)***Loxia curvirostra/leucoptera*

	JULY			AUGUST				SEPTEMBER					TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.0	54.9	7.7	2.6	1.0	1.6	0.0	0.0	0.0	0.0	0.3	0.0	5.7
Days observed	0	4	6	3	2	1	0	0	0	0	1	0	17
First date: July 20 (5)				Peak date: July 24 (348)				Last date: September 26 (2)					476

**White-winged Crossbill***Loxia leucoptera*

	APRIL		MAY				JUNE		TOTAL
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	1	0	0	0	0	0	1
First date: May 2 (1)			Peak date: May 2 (1)			Last date: May 2 (1)			1

	JULY			AUGUST				SEPTEMBER					TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.0	47.3	7.7	2.6	1.0	1.6	0.0	0.0	0.0	0.0	0.3	0.0	5.0
Days observed	0	4	6	3	2	1	0	0	0	0	1	0	17
First date: July 20 (5)				Peak date: July 24 (295)				Last date: September 26 (2)					423

**Pine Siskin***Spinus pinus*

	APRIL		MAY				JUNE		TOTAL
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day	0.7	1.7	8.6	29.6	28.6	20.9	143.6	18.7	31.5
Days observed	1	2	5	6	7	7	7	6	41
Processed	0	0	0	0	1-0-0	0	0	0	1-0-0
First date: April 21 (5)			Peak date: May 31 (385)			Last date: June 10 (13)			1,747

	JULY			AUGUST				SEPTEMBER					TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	5.6	7.9	34.0	11.3	20.3	36.9	7.0	6.6	5.6	2.4	47.3	15.5	16.7
Days observed	6	6	7	5	5	5	5	5	3	2	6	4	59
Processed	0	0	1-0-0	0	0	0	0	0	0	0	0	0	1-0-0
First date: July 12 (1)				Peak date: September 26 (186)				Last date: September 30 (31)					1,355

**American Goldfinch***Spinus tristis*

	APRIL		MAY				JUNE		TOTAL
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.5	0.2
Days observed	0	0	0	0	0	2	3	2	7
First date: May 22 (1)			Peak date: May 30 (2)			Last date: June 10 (2)			9

	JULY			AUGUST				SEPTEMBER					TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Days observed	0	1	0	0	0	0	0	1	0	0	0	0	2
First date: July 21 (1)				Peak date: July 21 (1)				Last date: September 3 (1)					2

**Lapland Longspur***Calcarius lapponicus*

	APRIL		MAY				JUNE		TOTAL
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day	4.1	4.7	0.3	0.0	0.0	0.0	0.0	0.0	1.1
Days observed	3	3	1	0	0	0	0	0	7
First date: April 18 (1)			Peak date: April 21 (24)			Last date: May 5 (2)			64

**Lapland Longspur***Calcarius lapponicus*

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	6.9	0.9	0.3	0.3	0.8
Days observed		0	0	0	0	0	0	0	5	5	3	2	1	16
		First date: August 30 (3)				Peak date: September 10 (17)				Last date: September 29 (1)				70

**Snow Bunting***Plectrophenax nivalis*

	S	APRIL		MAY				JUNE		TOTAL
		Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.1	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.3
Days observed		1	0	1	0	0	0	0	0	2
First date: April 17 (1)				Peak date: May 3 (16)			Last date: May 3 (16)			17

**Sparrow (family total including unidentified)***Passerellidae sp.*

	S	APRIL		MAY				JUNE		TOTAL
		Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		10.1	34.7	47.6	70.3	106.6	44.0	31.4	14.8	44.9
Days observed		7	7	7	7	7	7	7	6	55
First date: April 17 (8)				Peak date: May 18 (343)			Last date: June 10 (18)			2,502

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		22.4	22.6	39.7	36.9	17.0	23.9	52.9	37.6	36.4	34.0	38.3	18.0	31.6
Days observed		7	7	7	7	7	7	7	7	7	7	7	4	81
		First date: July 12 (18)				Peak date: August 27 (80)				Last date: September 30 (14)				2,603

**Chipping Sparrow***Spizella passerina*

	S	APRIL		MAY				JUNE		TOTAL
		Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	4.0	19.0	4.3	1.9	0.7	3.7
Days observed		0	0	0	4	7	7	6	4	28
Processed		0	0	0	1-0-0	1-0-0	1-0-0	3-0-0	0	6-0-0
First date: May 10 (1)				Peak date: May 18 (92)			Last date: June 9 (1)			208

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.4	0.6	2.1	2.6	0.6	0.6	0.4	0.7	0.0	0.0	0.0	0.0	0.7
Days observed	3	2	4	5	2	3	2	3	0	0	0	0	24
Processed	2-0-0	0	3-0-0	7-0-0	1-0-0	0	0	2-0-0	0	0	0	0	15-0-0
First date: July 14 (1)				Peak date: August 1 (8)					Last date: September 4 (1)				56

**Clay-coloured Sparrow***Spizella pallida*

	S	APRIL		MAY				JUNE		TOTAL
		Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	1.4	5.4	8.0	5.3	1.0	2.6
Days observed		0	0	0	2	6	7	7	4	26
Processed		0	0	0	2-0-0	1-0-0	12-0-0	14-0-0	2-0-0	31-0-0
First date: May 13 (6)				Peak date: May 23 (19)			Last date: June 10 (2)			147

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		3.1	1.6	1.9	1.9	0.7	1.7	2.6	1.9	0.1	0.0	0.0	0.0	1.3
Days observed		7	5	6	6	1	4	6	4	1	0	0	0	40
Processed		5-0-0	4-0-1	1-0-0	3-0-0	0	0	0	5-0-0	0	0	0	0	18-0-1
		First date: July 12 (1)				Peak date: August 23 (9)				Last date: September 8 (1)				108

**Fox Sparrow*****Passerella iliaca***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	2.1	0.4	0.0	0.0	0.0	0.0	0.0	0.3
Days observed		0	5	2	0	0	0	0	0	7
Processed		0	0	2-0-0	0	0	0	0	0	2-0-0
First date: April 26 (1)				Peak date: April 29 (6)			Last date: May 4 (1)			18

**American Tree Sparrow*****Spizelloides arborea***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		3.0	3.1	3.1	0.0	0.0	0.0	0.0	0.0	1.2
Days observed		6	6	7	0	0	0	0	0	19
Processed		1-0-0	0	5-0-0	0	0	0	0	0	6-0-0
First date: April 17 (2)				Peak date: April 27 (11)			Last date: May 7 (1)			65

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.1	1.7	1.3	0.4
Days observed		0	0	0	0	0	0	0	0	1	4	6	3	14
Processed		0	0	0	0	0	0	0	0	1-0-0	0	3-0-0	1-0-1	5-0-1
		First date: September 12 (2)				Peak date: September 16 (8)				Last date: September 30 (1)				34

**Dark-eyed Junco (species total including unidentified subspecies)*****Junco hyemalis***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		6.0	21.3	19.9	1.1	0.3	0.0	0.0	0.0	6.1
Days observed		6	7	6	2	2	0	0	0	23
Processed		0	1-0-0	15-0-0	2-0-0	0	0	0	0	18-0-0
First date: April 17 (5)				Peak date: April 27 (85)			Last date: May 21 (1)			340

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.3	0.1	0.1	0.0	0.0	0.1	0.6	4.3	13.3	17.3	25.7	13.0	6.2
Days observed	2	1	1	0	0	1	2	5	6	6	7	4	35
Processed	2-0-0	0	0	0	0	0	0	2-0-0	11-0-0	11-0-0	26-0-0	5-0-1	57-0-1
First date: July 16 (1)				Peak date: September 21 (54)					Last date: September 30 (12)				485

**"Slate-coloured" Junco*****Junco hyemalis hyemalis***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		6.0	20.6	19.9	1.1	0.1	0.0	0.0	0.0	6.0
Days observed		6	7	6	2	1	0	0	0	22
Processed		0	1-0-0	15-0-0	2-0-0	0	0	0	0	18-0-0
First date: April 17 (5)				Peak date: April 27 (80)			Last date: May 17 (1)			334

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.1	0.6	4.3	13.3	17.3	25.7	12.8	6.2
Days observed		0	0	0	0	0	1	2	5	6	6	7	4	31
Processed		0	0	0	0	0	0	0	2-0-0	11-0-0	11-0-0	26-0-0	4-0-1	54-0-1
		First date: August 21 (1)				Peak date: September 21 (54)				Last date: September 30 (11)				480

**"Oregon" Junco*****Junco hyemalis oregonus***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Days observed		0	0	0	0	1	0	0	0	1
First date: May 21 (1)				Peak date: May 21 (1)			Last date: May 21 (1)			1

"Oregon" Junco

Junco hyemalis oregonus

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Days observed	0	0	0	0	0	0	0	0	0	0	0	1	1
Processed	0	0	0	0	0	0	0	0	0	0	0	1-0-0	1-0-0
First date: September 30 (1)				Peak date: September 30 (1)				Last date: September 30 (1)				1	

"Gambel's" White-crowned Sparrow

Zonotrichia leucophrys gambelii

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	2.4	1.6	2.0	0.0	0.0	0.0	0.8	
Days observed	0	0	4	4	4	0	0	0	12	
Processed	0	0	2-0-0	1-0-0	2-0-0	0	0	0	5-0-0	
	First date: May 1 (1)		Peak date: May 5 (9)			Last date: May 19 (2)			42	

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.3	2.1	0.5	0.6
Days observed	0	0	0	0	0	0	0	0	4	6	5	2	17
Processed	0	0	0	0	0	0	0	0	1-0-0	1-0-0	2-0-0	1-0-0	5-0-0
First date: September 8 (2)				Peak date: September 20 (6)				Last date: September 28 (1)				51	

White-throated Sparrow

Zonotrichia albicollis

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.6	18.1	22.9	13.4	10.0	8.8	9.2	
Days observed	0	0	4	7	7	7	7	6	38	
Processed	0	0	1-0-0	16-2-3	33-1-6	22-0-3	10-1-1	2-0-4	84-4-17	
	First date: May 4 (1)		Peak date: May 18 (33)			Last date: June 10 (8)			508	

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	11.6	9.9	22.7	20.7	7.4	12.0	33.1	12.7	9.7	3.6	2.1	0.8	12.2
Days observed	7	7	7	7	7	7	7	7	6	7	6	2	77
Processed	5-0-3	9-0-1	41-0-9	26-0-6	9-0-1	8-0-2	54-0-6	10-0-4	9-0-6	4-0-0	0	0	175-0-38
First date: July 12 (13)				Peak date: August 27 (57)				Last date: September 28 (1)				1,022	

Vesper Sparrow

Poocetes gramineus

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.1	
Days observed	0	0	0	2	0	0	0	0	2	
	First date: May 13 (2)		Peak date: May 13 (2)			Last date: May 14 (1)			3	

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Days observed	0	0	0	0	0	0	0	1	0	1	0	0	2
First date: September 1 (1)				Peak date: September 1 (1)				Last date: September 16 (1)				2	

LeConte's Sparrow

Ammospiza leconteii

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	
Days observed	0	0	1	0	0	0	0	0	1	
	First date: May 7 (1)		Peak date: May 7 (1)			Last date: May 7 (1)			1	

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	1	0	0	0	0	0	0	0	0	1
First date: August 2 (1)				Peak date: August 2 (1)				Last date: August 2 (1)				1	



**Savannah Sparrow*****Passerculus sandwichensis***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	1.6	1.6	2.4	1.0	0.0	0.0	0.0	0.8
Days observed		0	3	4	5	5	0	0	0	17
Processed		0	1-0-0	3-0-0	1-0-0	1-0-0	0	0	0	6-0-0
First date: April 27 (2)				Peak date: May 13 (10)			Last date: May 21 (1)			46

	JULY			AUGUST					SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.7	1.1	0.9	0.0	0.0	0.3
Days observed	0	0	1	0	0	0	1	3	3	4	0	0	12
Processed	0	0	0	0	0	0	0	1-0-0	0	0	0	0	1-0-0
First date: July 31 (2)				Peak date: September 10 (4)					Last date: September 17 (1)				22

**Song Sparrow*****Melospiza melodia***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.1	2.4	3.4	1.6	2.7	1.6	2.2	1.8
Days observed		0	1	6	7	6	7	7	6	40
Processed		0	0	0	1-0-0	0	2-0-0	0	3-0-0	6-0-0
First date: April 30 (1)				Peak date: May 13 (6)			Last date: June 10 (3)			96

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		1.4	1.1	0.7	2.3	0.4	0.4	1.3	0.7	0.6	0.1	0.1	0.0	0.8
Days observed		7	5	4	7	3	3	6	4	4	1	1	0	45
Processed		0-0-1	1-0-0	0	1-0-0	0	0	0	0	0	0	0	0	2-0-1
		First date: July 12 (2)				Peak date: August 7 (6)				Last date: September 20 (1)				65

**Lincoln's Sparrow*****Melospiza lincolnii***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.6	3.1	5.6	3.7	2.1	1.8	2.1
Days observed		0	0	3	6	7	7	6	5	34
Processed		0	0	0	5-0-0	9-0-4	5-0-1	2-0-2	1-0-1	22-0-8
First date: May 5 (2)				Peak date: May 16 (7)			Last date: June 10 (5)			117

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		2.0	2.6	2.7	1.0	0.9	2.3	3.4	4.4	1.4	0.0	0.3	0.3	1.8
Days observed		6	6	6	3	4	6	7	7	4	0	2	1	52
Processed		6-0-2	6-0-7	11-0-5	1-0-0	3-0-0	3-0-0	5-0-0	4-0-0	1-0-0	0	1-0-0	0	41-0-14
		First date: July 12 (2)				Peak date: August 30 (9)				Last date: September 28 (1)				148

**Swamp Sparrow*****Melospiza georgiana***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Days observed		0	0	1	1	0	0	0	0	2
Processed		0	0	1-0-0	0	0	0	0	0	1-0-0
First date: May 4 (1)				Peak date: May 4 (1)			Last date: May 12 (1)			2

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.1	0.4	1.1	0.1	0.1	0.3	0.1	0.3	0.0	0.0	0.0	0.0	0.2
Days observed		1	3	4	1	1	2	1	1	0	0	0	0	14
Processed		1-0-0	3-0-0	7-0-1	1-0-0	1-0-0	2-0-0	1-0-0	1-0-0	0	0	0	0	17-0-1
		First date: July 16 (1)				Peak date: July 31 (4)				Last date: September 3 (2)				19

**Blackbird (family total including unidentified)***Icteridae sp.*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		8.1	147.3	346.9	201.1	150.4	50.6	48.0	12.0	120.6
Days observed		5	7	7	7	6	7	7	6	52
First date: April 17 (16)				Peak date: May 2 (891)			Last date: June 10 (1)			6,739

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		12.0	3.1	51.9	68.1	29.3	16.7	27.0	2.7	4.4	0.6	1.4	5.0	18.5
Days observed		6	4	7	7	6	6	7	3	4	2	4	2	58
		First date: July 12 (1)				Peak date: July 29 (198)				Last date: September 29 (6)				1,541

**Yellow-headed Blackbird***Xanthocephalus xanthocephalus*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.3	0.1	1.0	0.9	0.0	0.7	1.3	0.5
Days observed		0	1	1	2	2	0	2	2	10
First date: April 30 (2)				Peak date: May 11 (6)			Last date: June 7 (6)			29

	JULY				AUGUST				SEPTEMBER				
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	0	0	0	1	0	0	0	0	0	1
First date: August 25 (2)				Peak date: August 25 (2)				Last date: August 25 (2)				2	

**Baltimore Oriole***Icterus galbula*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	0.1	1.1	0.9	3.0	0.0	0.6
Days observed		0	0	0	1	3	5	7	0	16
First date: May 13 (1)				Peak date: May 29 (15)			Last date: June 4 (1)			36

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.1
Days observed		0	0	0	0	1	1	1	0	0	0	0	0	3
		First date: August 14 (1)				Peak date: August 26 (3)				Last date: August 26 (3)				5

**Red-winged Blackbird***Agelaius phoeniceus*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		3.4	20.7	17.1	33.0	18.0	7.6	1.6	0.0	12.7
Days observed		3	4	7	7	6	6	4	0	37
First date: April 17 (12)				Peak date: April 30 (121)			Last date: June 3 (2)			710

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.4	0.0	1.3	11.7	4.0	0.1	0.7	0.0	0.0	0.0	0.0	0.0	1.5
Days observed		3	0	1	4	4	1	1	0	0	0	0	0	14
Processed		0	0	0	0	1-0-0	0	0	0	0	0	0	0	1-0-0
		First date: July 12 (1)				Peak date: August 5 (42)				Last date: August 25 (5)				128

**Brown-headed Cowbird***Molothrus ater*

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.1	0.7	4.9	3.4	3.3	3.4	0.7	2.1
Days observed		0	1	2	5	5	4	7	3	27
First date: April 27 (1)				Peak date: May 13 (19)			Last date: June 9 (1)			115

**Rusty Blackbird*****Euphagus carolinus***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	7.7	4.1	0.3	0.0	1.0	0.0	0.0	1.6
Days observed		0	4	5	1	0	1	0	0	11
		First date: April 25 (1)		Peak date: April 30 (36)			Last date: May 23 (7)			92

**Brewer's Blackbird*****Euphagus cyanocephalus***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Days observed		0	0	2	0	0	0	0	0	2
		First date: May 4 (1)		Peak date: May 4 (1)			Last date: May 6 (1)			2

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.6	0.0	0.1
Days observed		0	0	0	0	0	0	1	0	0	0	1	0	2
		First date: August 26 (3)				Peak date: September 26 (4)				Last date: September 26 (4)				7

**Common Grackle*****Quiscalus quiscula***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.7	49.7	26.3	8.9	5.3	3.0	1.7	0.8	12.1
Days observed		2	3	7	6	5	4	3	3	33
		First date: April 17 (3)		Peak date: April 30 (321)			Last date: June 10 (1)			674

	JULY				AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.1	0.1	8.0	9.9	10.3	4.3	21.3	1.9	0.3	0.0	0.1	0.0	4.7
Days observed		1	1	5	7	5	6	7	2	1	0	1	0	36
Processed		0	0	0	0	1-0-0	0	0	0	0	0	0	0	1-0-0
		First date: July 13 (1)				Peak date: August 26 (85)				Last date: September 21 (1)				394

**Warbler (family total including unidentified)*****Parulidae sp.***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	29.1	67.6	458.3	372.3	125.3	390.0	73.3	189.5
Days observed		0	5	7	7	7	7	7	6	46
		First date: April 26 (6)		Peak date: May 11 (1,804)			Last date: June 10 (62)			10,538

		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		112.4	110.3	624.7	476.0	547.3	365.1	538.1	635.3	129.9	25.6	46.6	30.5	303.5
Days observed		7	7	7	7	7	7	7	7	7	7	7	4	81
		First date: July 12 (63)				Peak date: September 3 (1,835)				Last date: September 30 (12)				25,401

**Ovenbird*****Seiurus aurocapilla***

	APRIL		MAY					JUNE		TOTAL
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	
Avg. per day		0.0	0.0	0.0	0.6	5.6	6.1	7.1	4.7	3.0
Days observed		0	0	0	2	7	7	7	6	29
Processed		0	0	0	0	11-0-0	14-1-0	17-1-4	2-0-2	44-2-6
		First date: May 11 (2)		Peak date: May 29 (11)			Last date: June 10 (6)			164

	JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		3.6	2.9	8.4	12.7	27.0	21.6	7.6	0.9	0.0	0.1	0.0	0.0	7.1
Days observed		7	6	7	7	5	6	7	5	0	1	0	0	51
Processed		9-0-1	11-0-2	47-0-8	58-0-4	156-0-4	111-0-9	29-0-3	2-0-1	0	1-0-0	0	0	424-0-32
		First date: July 12 (5)				Peak date: August 13 (55)				Last date: September 18 (1)				593

**Northern Waterthrush*****Parkesia noveboracensis***

		APRIL			MAY							JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.0		0.0	1.1		2.7		1.4		1.7	0.8	1.0	
Days observed		0	0		0	4		7		4		6	4	25	
Processed		0	0		0	5-0-0		6-0-0		4-0-0		1-0-4	1-0-0	17-0-4	
First date: May 9 (1)					Peak date: May 17 (6)					Last date: June 10 (1)					54
		JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		1.3	1.3	1.7	2.9	2.6	2.7	0.9	0.3	0.1	0.1	0.0	0.0	1.2	
Days observed		6	5	4	5	5	7	4	1	1	1	0	0	39	
Processed		8-0-0	7-0-1	7-0-2	17-0-0	14-0-0	13-0-0	5-0-0	2-0-0	1-0-0	0-0-1	0	0	74-0-4	
First date: July 12 (2)					Peak date: August 13 (7)					Last date: September 13 (1)					97

**Black-and-white Warbler*****Mniotilta varia***

		APRIL		MAY						JUNE			
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day	0.0	0.0	0.0	7.6	10.3	6.7	5.6	4.8	4.4				
Days observed	0	0	0	6	7	7	7	6	33				
Processed	0	0	0	11-0-0	13-1-1	5-1-1	5-1-7	3-1-0	37-4-9				
First date: May 9 (3)			Peak date: May 18 (15)			Last date: June 10 (7)			240				
		JULY		AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	6.0	5.0	20.0	18.4	11.3	6.9	3.6	0.6	0.0	0.0	0.0	0.0	6.0
Days observed	7	6	7	7	7	7	6	4	0	0	0	0	51
Processed	11-1-8	15-0-4	67-0-3	53-0-0	17-0-0	12-0-0	0-0-1	0-0-1	0	0	0	0	175-1-17
		First date: July 12 (12)			Peak date: August 5 (26)			Last date: September 5 (1)			502		

**Tennessee Warbler*****Leiothlypis peregrina***

		APRIL		MAY					JUNE				
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day	0.0	0.0	0.0	0.0	5.4	18.3	54.7	14.5	11.6				
Days observed	0	0	0	0	5	7	7	6	25				
Processed	0	0	0	0	1-0-0	19-0-0	28-0-18	17-1-16	65-1-34				
First date: May 17 (4)			Peak date: May 31 (131)			Last date: June 10 (12)			636				
		JULY		AUGUST			SEPTEMBER						
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	8.4	14.6	182.4	117.6	75.3	90.1	16.4	0.1	0.0	0.0	0.0	0.0	42.1
Days observed	7	7	7	7	7	7	6	1	0	0	0	0	49
Processed	23-0-2	40-0-1	576-0-1	358-0-2	82-0-0	86-0-0	9-0-0	0	0	0	0	0	1174-0-6
First date: July 12 (4)				Peak date: August 18 (343)				Last date: August 31 (1)				3,535	

**Orange-crowned Warbler*****Leiothlypis celata***

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	0.0	0.7	4.7	1.9	0.0	0.0	0.0	0.9				
Days observed		0	0	4	7	2	0	0	0	13				
Processed		0	0	1-0-0	2-0-0	0	0	0	0	3-0-0				
		First date: May 2 (1)			Peak date: May 11 (10)			Last date: May 18 (11)			51			
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.4	0.1	0.1	0.4	2.1	3.1	5.0	1.3	1.0	0.0	1.1
Days observed		0	0	2	1	1	2	5	3	6	4	4	0	28
Processed		0	0	3-0-0	1-0-0	0	2-0-0	1-0-0	3-0-0	8-0-0	1-0-0	1-0-0	0	20-0-0
		First date: July 26 (1)			Peak date: September 10 (13)				Last date: September 24 (1)				96	

**Nashville Warbler*****Leiothlypis ruficapilla***

		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.1	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Days observed		0	1	1	3	0	0	0	0	0	0	0	0	5
Processed		0	1-0-0	1-0-0	3-0-0	0	0	0	0	0	0	0	0	5-0-0
		First date: July 25 (1)				Peak date: August 2 (1)				Last date: August 5 (1)				5

**Connecticut Warbler***Oporornis agilis*

		APRIL			MAY							JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14		5: 15-21		6: 22-28		7: 29-4		8: 5-10	TOTAL
Avg. per day		0.0	0.0		0.0	0.0		0.0		0.0		0.0		0.2	0.0
Days observed		0	0		0	0		0		0		0		1	1
First date: June 9 (1)					Peak date: June 9 (1)				Last date: June 9 (1)					1	
		JULY			AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL	
Avg. per day		0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Days observed		0	0	0	0	1	0	0	0	0	0	0	0	1	
First date: August 12 (1)					Peak date: August 12 (1)					Last date: August 12 (1)					1

**Mourning Warbler***Geothlypis philadelphia*

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	0.0	0.0	0.0	0.0	0.1	4.6	8.8	1.7				
Days observed		0	0	0	0	0	1	7	6	14				
Processed		0	0	0	0	0	1-0-0	15-0-1	31-1-4	47-1-5				
First date: May 27 (1)				Peak date: June 5 (19)			Last date: June 10 (6)			86				
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		2.3	2.9	7.3	6.9	8.7	8.6	2.9	1.1	0.4	0.1	0.0	0.0	3.4
Days observed		6	6	7	6	5	7	5	4	3	1	0	0	50
Processed		4-0-5	7-0-5	23-1-7	32-0-7	39-0-0	30-0-0	3-0-1	3-0-0	0	0	0	0	141-1-25
First date: July 12 (6)					Peak date: August 17 (20)				Last date: September 13 (1)				288	

**Common Yellowthroat***Geothlypis trichas*

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	0.0	0.0	0.0	1.0	2.3	4.9	3.7	1.5				
Days observed		0	0	0	0	4	5	7	6	22				
Processed		0	0	0	0	2-0-0	7-0-0	17-0-0	6-0-1	32-0-1				
First date: May 16 (1)				Peak date: June 1 (10)			Last date: June 10 (1)			79				
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		1.7	1.1	4.3	2.4	2.7	3.9	4.6	3.9	0.9	0.3	0.0	0.0	2.1
Days observed		6	4	6	5	6	7	7	7	2	2	0	0	52
Processed		2-0-0	2-0-0	10-0-2	2-0-0	1-0-0	4-0-0	4-0-2	5-0-0	2-0-0	1-0-0	0	0	33-0-4
First date: July 12 (4)					Peak date: August 29 (12)			Last date: September 18 (1)					180	

**American Redstart***Setophaga ruticilla*

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	0.0	0.0	0.0	6.3	8.0	44.1	12.7	8.9				
Days observed		0	0	0	0	7	7	7	6	27				
Processed		0	0	0	0	3-1-0	2-0-0	72-1-4	15-3-9	92-5-13				
First date: May 15 (4)				Peak date: May 31 (76)			Last date: June 10 (7)			485				
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		18.3	21.7	88.3	61.3	25.6	12.6	9.6	3.9	0.4	0.1	0.1	0.0	20.2
Days observed		7	7	7	7	7	7	7	6	3	1	1	0	60
Processed		32-5-17	49-1-10	281-0-15	153-0-8	32-1-1	34-1-4	5-1-0	2-0-0	0	0	1-0-0	0	589-9-55
First date: July 12 (10)					Peak date: August 1 (187)				Last date: September 24 (1)				1,693	

Cape May Warbler

*Setophaga tigrina*

	JULY			AUGUST					SEPTEMBER				TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.0	0.0	1.4	1.7	0.4	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.4
Days observed	0	0	3	4	2	1	3	0	0	0	0	0	13
Processed	0	0	7-0-0	8-0-0	1-0-0	0	1-0-0	0	0	0	0	0	17-0-0
First date: July 28 (4)				Peak date: August 5 (5)				Last date: August 28 (1)					31

Magnolia Warbler

*Setophaga magnolia*

	APRIL			MAY					JUNE				
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10			TOTAL		
Avg. per day	0.0	0.0	0.0	0.6	1.1	2.0	4.3	1.8			1.2		
Days observed	0	0	0	4	5	7	7	5			28		
Processed	0	0	0	0	1-0-0	6-0-0	4-0-0	1-0-0			12-0-0		
First date: May 11 (1)			Peak date: May 31 (9)			Last date: June 10 (3)					67		
	JULY		AUGUST				SEPTEMBER						
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	2.1	2.4	6.4	2.9	4.4	1.7	2.1	0.3	0.1	0.0	0.0	0.0	1.9
Days observed	6	6	6	5	5	4	4	1	1	0	0	0	38
Processed	3-0-4	10-1-0	31-0-1	16-0-0	15-0-2	7-0-0	3-0-0	2-0-0	0	0	0	0	87-1-7
First date: July 12 (1)				Peak date: July 28 (15)				Last date: September 8 (1)					158

Bay-breasted Warbler

*Setophaga castanea*

	JULY			AUGUST					SEPTEMBER				TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.0	0.1	4.1	3.4	0.7	2.1	0.6	0.1	0.0	0.0	0.0	0.0	0.9
Days observed	0	1	6	4	4	6	2	1	0	0	0	0	24
Processed	0	1-0-0	17-0-0	22-0-0	3-0-0	7-0-0	0	0	0	0	0	0	50-0-0
First date: July 25 (1)				Peak date: August 5 (12)				Last date: September 3 (1)					79

Blackburnian Warbler

*Setophaga fusca*

	JULY			AUGUST					SEPTEMBER				TOTAL
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	
Avg. per day	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	0	1	0	0	0	0	0	0	0	1
Processed	0	0	0	0	1-0-0	0	0	0	0	0	0	0	1-0-0
First date: August 13 (1)				Peak date: August 13 (1)				Last date: August 13 (1)					1

Yellow Warbler

*Setophaga petechia*

	APRIL			MAY					JUNE				
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day	0.0	0.0	0.0	3.7	15.1	6.3	12.9	4.5	5.3				
Days observed	0	0	0	6	7	7	7	6	33				
Processed	0	0	0	1-0-0	9-0-0	2-0-0	5-1-0	4-0-0	21-1-0				
First date: May 8 (1)			Peak date: May 29 (34)			Last date: June 10 (4)			293				
	JULY		AUGUST				SEPTEMBER						
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	18.9	16.6	32.3	18.6	8.1	4.9	6.0	0.9	0.0	0.0	0.0	0.0	8.8
Days observed	7	7	7	7	6	7	7	3	0	0	0	0	51
Processed	60-0-2	52-0-5	97-0-3	45-0-0	8-0-0	1-0-0	0	1-0-0	0	0	0	0	264-0-10
First date: July 12 (3)			Peak date: July 28 (56)			Last date: September 3 (2)			743				

Chestnut-sided Warbler

*Setophaga pensylvanica*

	APRIL			MAY					JUNE				
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0				
Days observed	0	0	0	1	0	0	0	0	1				
	First date: May 14 (1)		Peak date: May 14 (1)			Last date: May 14 (1)			1				
	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days observed	0	0	0	0	1	0	0	0	0	0	0	0	1
Processed	0	0	0	0	1-0-0	0	0	0	0	0	0	0	1-0-0
	First date: August 9 (1)			Peak date: August 9 (1)				Last date: August 9 (1)				1	

**Blackpoll Warbler***Setophaga striata*

		APRIL			MAY							JUNE		
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4		8: 5-10		TOTAL	
Avg. per day		0.0	0.0		0.0	0.0	0.3	0.0	0.1		0.0		0.1	
Days observed		0	0		0	0	1	0	1		0		2	
		First date: May 18 (2)				Peak date: May 18 (2)			Last date: June 2 (1)			3		
		JULY			AUGUST					SEPTEMBER				
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	0.1	0.0	0.0	0.3	0.7	0.7	0.0	0.0	0.0	0.0	0.2
Days observed		0	0	1	0	0	2	5	4	0	0	0	0	12
Processed		0	0	1-0-0	0	0	1-0-0	1-0-0	4-0-0	0	0	0	0	7-0-0
		First date: July 28 (1)				Peak date: August 30 (2)				Last date: September 5 (1)				13

**"Western" Palm Warbler***Setophaga palmarum palmarum*

		APRIL			MAY						JUNE			
	S	Week 1: 17-23	2: 24-30		3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4		8: 5-10	TOTAL		
Avg. per day		0.0	0.0		0.4	1.6	1.7	0.3	0.0		0.0	0.5		
Days observed		0	0		2	6	5	2	0		0	15		
Processed		0	0		1-0-0	2-0-0	0	1-0-0	0		0	4-0-0		
First date: May 5 (2)					Peak date: May 17 (4)			Last date: May 28 (1)				28		
		JULY			AUGUST				SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.3	0.1	0.3	0.0	0.1	1.0	1.0	0.3	0.1	0.1	0.0	0.3
Days observed		0	1	1	1	0	1	3	3	1	1	1	0	13
Processed		0	2-0-0	0	0	0	0	2-0-0	0-0-1	0	0	0	0	4-0-1
First date: July 19 (2)					Peak date: August 30 (4)				Last date: September 24 (1)				24	

**"Myrtle" Warbler***Setophaga coronata coronata*

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	29.1	49.1	338.7	153.3	31.0	23.6	2.2	78.4				
Days observed		0	5	7	7	7	7	7	4	44				
Processed		0	0	0	20-1-0	14-0-2	8-2-3	3-1-0	2-0-1	47-4-6				
First date: April 26 (6)				Peak date: May 11 (1,530)			Last date: June 10 (5)			4,387				
		JULY		AUGUST				SEPTEMBER						
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		34.6	19.0	166.0	140.1	252.3	75.7	404.7	572.9	115.1	20.9	42.9	30.0	156.2
Days observed		7	7	7	7	7	7	7	7	7	7	7	4	81
Processed		95-2-10	40-0-6	151-1-0	124-0-0	37-0-0	4-0-0	5-0-0	85-0-0	75-0-0	16-0-0	7-0-0	0	639-3-16
First date: July 12 (7)					Peak date: September 3 (1,694)				Last date: September 30 (12)				13,029	

**Black-throated Green Warbler***Setophaga virens*

		APRIL		MAY						JUNE				
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL				
Avg. per day		0.0	0.0	0.0	0.4	0.9	0.3	0.1	0.0	0.2				
Days observed		0	0	0	2	4	2	1	0	9				
		First date: May 8 (1)			Peak date: May 15 (3)			Last date: June 3 (1)			12			
		JULY		AUGUST					SEPTEMBER					
	F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day		0.0	0.0	1.9	0.3	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Days observed		0	0	5	1	0	1	1	0	0	0	0	0	8
Processed		0	0	10-0-0	1-0-0	0	0	0	0	0	0	0	0	11-0-0
		First date: July 26 (2)			Peak date: July 28 (6)				Last date: August 27 (1)				17	

**Canada Warbler***Cardellina canadensis*

	APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.0	0.0	0.1	3.1	11.1	9.2	2.9	
Days observed	0	0	0	0	1	7	7	6	21	
Processed	0	0	0	0	0	5-0-0	28-7-1	16-1-2	49-8-3	
	First date: May 20 (1)		Peak date: June 4 (17)			Last date: June 10 (9)			156	

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	5.4	5.7	26.9	17.7	10.9	3.4	1.7	0.3	0.0	0.0	0.0	0.0	6.0
Days observed	6	6	7	7	6	5	5	2	0	0	0	0	44
Processed	11-0-7	16-0-10	115-0-7	63-0-1	18-0-3	5-0-0	2-0-0	2-0-0	0	0	0	0	232-0-28
First date: July 12 (9)				Peak date: July 29 (41)				Last date: September 4 (1)					504

**Wilson's Warbler***Cardellina pusilla*

		APRIL		MAY					JUNE		
	S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day		0.0	0.0	0.0	0.6	0.4	0.0	0.0	0.2	0.1	
Days observed		0	0	0	3	2	0	0	1	6	
		First date: May 11 (1)			Peak date: May 13 (2)		Last date: June 7 (1)			8	

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.0	0.0	0.0	0.3	0.9	0.4	1.1	0.7	0.6	0.7	0.1	0.0	0.4
Days observed	0	0	0	1	3	3	6	3	3	3	1	0	23
Processed	0	0	0	2-0-0	0	0	2-0-0	2-0-0	2-0-0	2-0-0	1-0-0	0	11-0-0
First date: August 6 (2)				Peak date: August 29 (2)				Last date: September 22 (1)					34

**Western Tanager***Piranga ludoviciana*

		APRIL		MAY					JUNE		
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL		
Avg. per day	0.0	0.0	0.0	1.6	2.4	1.1	1.0	0.3	0.8		
Days observed	0	0	0	5	7	4	5	2	23		
		First date: May 8 (2)		Peak date: May 17 (6)			Last date: June 10 (1)		45		

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	1.0	4.4	15.7	13.7	18.3	7.4	2.0	0.6	0.1	0.0	0.0	0.0	5.3
Days observed	5	7	7	7	7	7	5	2	1	0	0	0	48
Processed	0	7-0-0	14-0-0	12-0-0	4-0-0	2-0-0	0	0	0	0	0	0	39-0-0
First date: July 12 (1)				Peak date: August 13 (54)				Last date: September 7 (1)					443

**Rose-breasted Grosbeak***Pheucticus ludovicianus*

		APRIL		MAY					JUNE	
S	Week 1: 17-23	2: 24-30	3: 1-7	4: 8-14	5: 15-21	6: 22-28	7: 29-4	8: 5-10	TOTAL	
Avg. per day	0.0	0.0	0.0	0.7	14.3	6.6	7.3	1.3	3.8	
Days observed	0	0	0	3	7	6	7	6	29	
Processed	0	0	0	0	2-0-0	0	1-0-0	0	3-0-0	
First date: May 11 (1)			Peak date: May 18 (32)			Last date: June 10 (1)			210	

	JULY			AUGUST				SEPTEMBER					
F	1: 12-18	2: 19-25	3: 26-1	4: 2-8	5: 9-15	6: 16-22	7: 23-29	8: 30-5	9: 6-12	10: 13-19	11: 20-26	12: 27-30	TOTAL
Avg. per day	0.6	2.0	11.6	11.9	14.6	9.4	2.7	0.3	0.0	0.0	0.0	0.0	4.4
Days observed	3	6	7	7	7	7	6	1	0	0	0	0	44
Processed	0	3-0-0	13-0-1	9-0-0	4-0-0	10-0-0	2-0-0	0	0	0	0	0	41-0-1
First date: July 13 (1)				Peak date: August 18 (35)				Last date: August 31 (2)					371



## Appendix II. To-date & 2021 Banding Totals

The following is a list of all species with banding records at the LSLBO in taxonomic order. All 2021 projects are summarized with annual averages of new bands across programs since standardized efforts began in 1995 (2011 excluded) and grand totals since trials in 1993. Subspecies are indicated with quotation marks.

Species	Migration		MAPS	Owls	2021 Total	Annual Average	Grand Total (1993-2021)
	Spring	Fall					
Sharp-shinned Hawk	4	19			23	28.8	783
Cooper's Hawk					0	0.2	5
Northern Goshawk					0	0.0	1
Northern Pygmy-Owl					0	0.1	2
Barred Owl					1	0.2	6
Long-eared Owl					0	0.0	1
Boreal Owl				1	1	0.5	14
Northern Saw-whet Owl				213 <sup>H</sup>	213 <sup>H</sup>	74.2	2,003
Belted Kingfisher					0	0.0	1
Yellow-bellied Sapsucker			3		3	8.7	236
American Three-toed Woodpecker					0	0.2	4
Downy Woodpecker		1			1	4.2	113
Hairy Woodpecker	1	5			6	4.0	105
"Yellow-shafted" Flicker	1				1	1.6	47
Pileated Woodpecker					0	0.5	12
American Kestrel					0	0.1	2
Eastern Kingbird					0	0.0	1
Olive-sided Flycatcher					0	0.1	2
Western Wood-Pewee					0	0.8	24
Yellow-bellied Flycatcher	2	1			3	3.1	90
Alder Flycatcher	58	47	3		108	83.8	2,484
Least Flycatcher	60	51	12		123	86.2	2,528
Eastern Phoebe	1	1			2	7.4	193
Blue-headed Vireo		7			7	3.8	104
Philadelphia Vireo	1	34 <sup>H</sup>	4 <sup>H</sup>		39 <sup>H</sup>	9.9	268
Warbling Vireo		5			5	2.9	82
Red-eyed Vireo	14	75 <sup>H</sup>	14 <sup>H</sup>		103 <sup>H</sup>	39.2	1,091
Northern Shrike					0	0.1	2
Canada (Gray) Jay					0	0.2	4
Blue Jay	2	2			4	2.7	77
Black-billed Magpie					0	0.1	2
Black-capped Chickadee		59	4		63	55.7	1,515
Boreal Chickadee		3			3	2.0	59
Ruby-crowned Kinglet	5	15			20	18.9	520
Golden-crowned Kinglet		7			7	4.3	113
Cedar Waxwing		8	1		9	8.2	252

\*Record breaker: the highest (H) or lowest (L) number of individuals banded in a season/year since 1995

## BAND TOTALS

Species	Migration		MAPS	Owls	2021 Total	Annual Average	Grand Total (1993-2021)
	Spring	Fall					
Red-breasted Nuthatch		3			3	5.9	158
White-breasted Nuthatch		1			1	0.4	14
Brown Creeper		3			3	3.2	84
House Wren	1	3 <sup>H</sup>			4	2.1	54
Winter Wren		3	1		4	3.5	92
Marsh Wren					0	0.1	3
Gray Catbird	1				1	0.4	11
Brown Thrasher					0	0.0	1
Northern Mockingbird					0	0.0	1
Townsend's Solitaire	1				1	0.2	5
Veery	1				1	0.3	9
Gray-cheeked Thrush	5	4			9	10.3	269
Swainson's Thrush	142	617 <sup>H</sup>	82 <sup>H</sup>		841 <sup>H</sup>	309.9	8,351
Hermit Thrush	2	6			8	25.9	700
American Robin	20	11	3		34	22.8	633
Varied Thrush		2			2	0.3	8
American Pipit					0	0.7	18
Evening Grosbeak					0	0.1	2
Purple Finch		1			1 <sup>L</sup>	4.4	125
Common Redpoll					0	0.2	4
Hoary Redpoll					0	0.0	1
White-winged Crossbill					0	0.0	1
Pine Siskin	1	1	1		3	6.0	188
American Goldfinch					0	0.1	2
Lapland Longspur					0	0.2	5
Chipping Sparrow	6	15	1		22	79.6	2,122
Clay-coloured Sparrow	31	18			49	44.4	1,177
Fox Sparrow	2				2	3.2	92
American Tree Sparrow	6	5			11	26.4	725
"Unidentified" Dark-eyed Junco		2			2	1.2	32
"Slate-coloured" Junco	18	54			72	75.1	2,168
"Oregon" Junco		1			1	0.8	21
"Gambel's" White-crowned Sparrow	5	5			10	22.2	591
Harris's Sparrow					0	0.3	8
White-throated Sparrow	84	175	93		352	189.3	5,111
Vesper Sparrow					0	0.1	3
LeConte's Sparrow					0	0.4	11
Savannah Sparrow	6	1			7	9.6	263
Song Sparrow	6	2			8	17.6	480
Lincoln's Sparrow	22	41	6		69	50.3	1,369
Swamp Sparrow	1	17	2		20	10.8	303

\*Record breaker: the highest (H) or lowest (L) number of individuals banded in a season/year since 1995

Species	Migration		MAPS	Owls	2021 Total	Annual Average	Grand Total (1993-2021)
	Spring	Fall					
Baltimore Oriole					0	0.2	5
Red-winged Blackbird		1			1	0.3	9
Brown-headed Cowbird					0	0.4	10
Common Grackle		1			1	0.3	7
Ovenbird	44	424 <sup>H</sup>	36		504 <sup>H</sup>	204.2	5,555
Northern Waterthrush	17	74 <sup>H</sup>	4 <sup>H</sup>		95 <sup>H</sup>	36.5	987
Black-and-white Warbler	37	175 <sup>H</sup>	45 <sup>H</sup>		257 <sup>H</sup>	103.0	2,807
Tennessee Warbler	65	1,174 <sup>H</sup>	211 <sup>H</sup>		1,450 <sup>H</sup>	307.1	8,415
Orange-crowned Warbler	3	20			23	73.3	1,957
Nashville Warbler		5	1 <sup>H</sup>		6 <sup>H</sup>	0.8	20
Connecticut Warbler					0	1.2	32
MacGillivray's Warbler					0	0.1	2
Mourning Warbler	47 <sup>H</sup>	141 <sup>H</sup>	34		222 <sup>H</sup>	81.8	2,209
Common Yellowthroat	32	33	1		66	38.3	1,064
American Redstart	92	589	123 <sup>H</sup>		804 <sup>H</sup>	326.9	9,183
Cape May Warbler		17	1		18	7.6	213
Magnolia Warbler	12	87 <sup>H</sup>	33 <sup>H</sup>		132 <sup>H</sup>	47.4	1,306
Bay-breasted Warbler		50 <sup>H</sup>	2		52 <sup>H</sup>	9.7	254
Blackburnian Warbler		1			1	0.1	3
Yellow Warbler	21	264	36 <sup>H</sup>		321	163.9	4,541
Chestnut-sided Warbler		1			1	0.8	24
Blackpoll Warbler		7			7	14.9	396
"Western" Palm Warbler	4	4			8	12.5	334
"Myrtle" Warbler	47	639	25		711	600.7	16,125
"Audubon's" Warbler					0	0.1	2
Black-throated Green Warbler		11			11	5.7	154
Canada Warbler	49	232 <sup>H</sup>	63 <sup>H</sup>		344 <sup>H</sup>	151.4	4,155
Wilson's Warbler		11			11	21.6	642
Western Tanager		39 <sup>H</sup>	8 <sup>H</sup>		47 <sup>H</sup>	12.8	343
Rose-breasted Grosbeak	3	41 <sup>H</sup>	9 <sup>H</sup>		53 <sup>H</sup>	16.1	441
Lazuli Bunting					0	0.0	1
<b>Total number of birds banded, 2021*</b>	<b>983</b>	<b>5,372<sup>H</sup></b>	<b>862<sup>H</sup></b>	<b>214<sup>H</sup></b>	<b>7,432<sup>H</sup></b>	<b>3,526.5</b>	<b>99,157</b>
Average season banded total	<b>937.4</b>	<b>2,280.6</b>	<b>236.5</b>	<b>108.7</b>	<b>3,526.5</b>		
<b>Banded species total, 2021</b>	<b>45</b>	<b>66<sup>H</sup></b>	<b>31</b>	<b>2</b>	<b>75<sup>H</sup></b>	<b>64.4</b>	<b>108</b>
Average season species total	<b>45.5</b>	<b>58.1</b>	<b>25.3</b>	<b>1.5</b>	<b>64.4</b>		

\*Record breaker: the highest (H) or lowest (L) number of individuals banded in a season/year since 1995

## Appendix III. Banding Age Codes

The LSLBO uses age codes that are linked to the calendar year. This means that come January 1, the age code given to all birds changes despite the bird itself not changing at all over the night of December 31. These codes are:

Code	Expansion	Description
<b>HY</b>	Hatching Year	Hatched during the calendar year the bird was banded.
<b>AHY</b>	After Hatching Year	Hatched before the calendar year of banding, but exact year of hatching unknown.
<b>SY</b>	Second Year	Hatched the calendar year before the year of banding. For example, a bird hatched in June 2020 and banded in March 2021 is a SY (1 <sup>st</sup> calendar year = 2020, 2 <sup>nd</sup> = 2021), but is only 9 months old.
<b>ASY</b>	After Second Year	Hatched before the calendar year of banding, but exact year of hatching unknown. In other words, a bird that did not hatch in the previous calendar year, but it is unknown what year it did hatch in.
<b>TY</b>	Third Year	Hatched the calendar year two years before the year of banding. Now in its third calendar year of life (1 <sup>st</sup> calendar year = 2019, 2 <sup>nd</sup> = 2020, 3 <sup>rd</sup> = 2021).
<b>ATY</b>	After Third Year	Hatched prior to two years before the year of banding, now in <i>at least</i> its fourth calendar year of life, but exact age unknown.

Most adult songbird species moult (replace) all the feathers on their body after they have finished breeding such that we can no longer see any juvenile feathers that would indicate a younger bird. We can now only say that this bird is an adult, but we do not know exactly how old it is, unless it has been banded previously. In this case, we use the following age codes:

	JUNE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	
Hatches	<b>HY</b>							<b>SY</b>					First year of life
	↑ Fledging      Fall Migration      Wintering							Spring Migration ↑					
Turns 1 year old	<b>SY</b>		<b>AHY</b>					<b>ASY</b>					Second year of life
	↓ Breeding      Moulting      Fall Migration      Wintering							Spring Migration ↓					
Turns 2+ years old	<b>ASY</b>		<b>AHY</b>					<b>ASY</b>					Third+ year of life

For other species that have more complex moulting strategies, such as owls and woodpeckers, we can sometimes see more than two generations of feathers. This often allows us to use the following age codes:

	JUNE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	
Hatches	<b>HY</b>							<b>SY</b>					First year of life
	↑ Fledging      Fall Migration      Wintering							Spring Migration ↑					
Turns 1 year old	<b>SY</b>							<b>TY</b>					Second year of life
	↓ Breeding      Moulting      Fall Migration      Wintering							Spring Migration ↓					
Turns 2+ years old	<b>TY</b>		<b>ASY</b>					<b>ATY</b>					Third+ year of life