

Lesser Slave Lake Bird Observatory

2004 Annual Report



Prepared by Richard G. Krikun

TABLE OF CONTENTS

Executive Summary	1
MIGRATION MONITORING	2
Spring Migration.....	2
Fall Migration.....	4
Monitoring Avian Productivity and Survivorship (MAPS).....	7
Captures	7
Breeding Status.....	12
Returns of MAPS Birds	13
Coverage	14
Recaptures	15
Person Days	17
Visitors and Education	17
Other Observatory Activities	18
Canada Warbler Project	18
Northern Saw-whet Owl Migration Monitoring.....	19
Recoveries	20
Appendix I. Species arrival and departure dates and maxima at LSLBO in 2004	24
Appendix II. Banding Totals at LSLBO in 2004.....	28

TABLE OF TABLES

Table 1a. Captures at the Far Away (FAWA) MAPS station in 2004.....	8
Table 1b. Captures at the Fern Gulley (FEGU) MAPS station in 2004.....	9
Table 1c. Captures at the Roadside (ROAD) MAPS station in 2004.....	10
Table 1d. MAPS captures at the Residence (RESI) station in 2004.....	11
Table 2. Breeding Status of MAPS birds in 2004.....	12
Table 3. Recaptured birds at MAPS stations in 2004 and the original season of banding.....	13
Table 4a. Summary of effort during spring migration monitoring at LSLBO, 1995 – 2004.....	14
Table 4b. Summary of effort during fall migration monitoring at LSLBO, 1995 – 2004.....	15
Table 5. Recapture data on birds banded before 2003.....	16
Table 6. Person days at the LSLBO in 2004.....	17
Table 7. Number of visitors to the LSLBO banding station in 2004.....	18
Table 8. Canada Warbler nest data.....	19
Table 9. Number of captured Northern Saw-whet Owls by age and sex class in 2004.....	20

TABLE OF FIGURES

Figure 1. The timing of migration of Northern Saw-whet Owls by nightly capture rates in 2004.....	20
--	-----------

EXECUTIVE SUMMARY

The Lesser Slave Lake Bird Observatory (LSLBO) continued migration monitoring for its 11th season in 2004. Spring migration monitoring ran from April 19th to June 10th for 50 days of coverage. 1133 birds were banded at a capture rate of 45.2 birds/100 net hours, which is an increase from 2003. Overall, weather conditions for the season were quite good. Fall migration coverage lasted for 78 days, from July 12th to September 30th. The capture rate was 31.1 birds/100 net hours with a total of 1393 birds banded; the lowest capture rate since 2000. The maximum number of birds banded in one day was 75. Fall migration activity was generally slow, with heavy passage occurring on only a few of days. 164 species were observed during the migration period. Four new species were added to the LSLBO's checklist: Pacific Loon, Eurasian Wigeon, Long-eared Owl, and Lazuli Bunting. A total of 242 species have now been seen at the Observatory.

The Monitoring Avian Productivity and Survivorship (MAPS) program was continued in 2004 with four stations operating. Banding at the FEGU site, which was reactivated in 2003, was continued in 2004. MAPS coverage extended from June 11th to August 3rd with two of the four stations receiving full coverage. A total of 207 birds were banded, 102 birds were recaptured and one bird was released unbanded. All stations captures were lower than 2003. The first Clay-coloured Sparrow of the MAPS program was banded. The first Yellow-bellied Sapsuckers were banded at the FAWA and FEGU sites. Breeding status was determined for 63 species.

A total of 350 birds were recaptured during migration monitoring and MAPS banding in 2004. Of this total, 112 birds were banded before 2004 and only 30 birds were originally banded previous to 2003. A White-throated Sparrow and a Swainson's Thrush were recaptured that were originally banded in 1999.

The Canada Warbler project continued in 2004. This project was expanded to include territory mapping, facial plumage scoring, nest searches, nest monitoring and growth rate measurements of young. Rough territories were mapped out for eight adult males. Six nests were found yielding a total of 21 young. Growth rates were measured for all nestlings and all young were banded. One nest was found at the egg stage. Daily nest monitoring revealed the nest behaviour of both nestlings and adults. 106 Canada Warblers had their facial plumage scored. Work will be done to determine if scoring will aid in aging and sexing adults.

Fall migration monitoring of Northern Saw-whet Owls was initiated in 2004. This was considered a pilot project to determine the timing of passage and the abundance of owls through the area. Monitoring began on August 19th and continued until October 16th for a total of 33 nights of coverage. A total of 91 Northern Saw-whet Owls were banded and two Long-eared Owls escaped unbanded. The peak migration period for the owls was in the second and third weeks of September. This project was considered successful and will be continued in future years.

MIGRATION MONITORING

The LSLBO completed its 11th year of spring and fall migration monitoring with the end of the 2004 field season. Migration monitoring is a core program that the LSLBO conducts. The 2004 migration monitoring was considered a success. The high standard of monitoring efforts and the quality of the data collected remained consistent with previous years. Monitoring highlights and weekly events for both spring and fall migration are summarized below.

Spring Migration

Spring migration monitoring began on April 19 and ended on June 10 for a total of 50 days of coverage. Weather conditions allowed for 65% of the total possible net hours. A total of 1133 birds were banded from 46 species and forms; this is the highest spring banding total since 2001. In addition to the total birds banded another 80 birds were recaptured and 18 birds were released unbanded. The peak banding day was on May 12th with 124 birds banded. Three days had banding totals in the high 90's (May 21, May 27, and June 3). The top banding days corresponded with high passage of migrants recorded on visual observations.

Swainson's Thrushes were the top species captured with 280 banded, a record number for spring banding at the LSLBO. Both Hermit Thrushes and Gray-cheeked Thrushes had their highest spring banding totals with 17 and 23 respectively. Northern Waterthrushes also had a record season with 36 banded. The LSLBO's second Le Conte's Sparrow was banded in this season; the first was banded in 1997. The first Lazuli Bunting recorded at the LSLBO was banded on June 6th.

The weather generally cooperated with banding activities. Early morning temperatures during April and early May were below freezing but warmed up by mid-morning. Early morning temperatures rose above the freezing mark by mid-May and the last snowfall occurred on May 9th. Despite the pleasant local weather patterns, the first sightings of many species were 4-10 days later than recorded in 2003. White-throated Sparrows and Ovenbirds were first observed nine days later than recorded in 2003. Canada Warblers were six days late and Swainson's Thrushes were three days late. Most waterfowl and geese sightings were about ten days earlier than 2003, possibly because ice break-up occurred earlier than in 2003. The timing of swan and crane passage was the same as observed in 2003.

Migration monitoring began on April 19th but with limited coverage as the banding lab was not fully set up for the season. Full coverage began on April 20th with a cool morning; gradually warming up; and heavy snow was still present on the ground. Two large flocks of Tundra Swans, totalling 130 birds, were seen migrating past the station. Waterfowl were absent because the lake was still covered with ice. In addition to the winter resident species there were low numbers of the early migrant species: Killdeer, Northern Harriers, Ruby-crowned Kinglets, American Robins, Yellow-rumped Warblers, and various blackbird species. A Merlin was spotted chasing a large flock of Pine Siskins (more than 150) past the lab.

The last week of April brought warmer weather melting the snow in the net lanes and creating a patch of open water on the lake in front of the lab. Mallards, Northern Pintails, American Wigeon, Common Goldeneyes, Buffleheads, Common Mergansers and Red-breasted Mergansers began to congregate in the open waters. The first Sharp-shinned Hawks were spotted. Northern Harriers passed through on a daily basis reaching a season high of 24 on April 24th. Season high totals were also recorded for both Northern Pintails (40) and Common Goldeneyes (67). New species recorded were: Northern Flickers, Eastern Phoebe, Tree Swallows, Winter Wrens, American Pipits, Song Sparrows, Brown-headed Cowbirds and Evening Grosbeaks. A large movement of American Robins occurred on April 26th with 107 birds recorded. While observations were increasing, banding was very slow with only 6 birds banded by the end of April.

Cool temperatures, wind, rain and snow during the first week of May limited banding activities and only 19 birds were banded. Despite the cool temperatures and wet weather, bird activity increased compared to April. Patches of open water began to grow on the lake which accommodated increasing numbers of waterfowl including Long-tailed Ducks, White-winged Scoters and Surf Scoters. New species included Great Blue Herons, Snow Geese, Osprey, Greater Yellowlegs, Say's Phoebe, Hermit Thrushes, Orange Crowned Warblers, Savannah Sparrows and Fox Sparrows. May 1st brought the season high of Greater White-fronted Geese (1889), American Tree Sparrows (9) and Slate-coloured Juncos (7). May 2nd brought the season high of Sandhill Cranes (495) and Northern Flickers (31). A Long-eared Owl was spotted on May 3rd, the first recorded at the LSLBO.

Daytime temperatures were warmer in the second week of May, but the morning temperatures remained below freezing. New species included Ring-necked Ducks, a Northern Goshawk, a Peregrine Falcon, American Kestrels, Belted Kingfishers and Yellow-bellied Sapsuckers. New passerine species arrived on a daily basis: Least Flycatchers, Swainson's Thrushes, Gray-cheeked Thrushes, Tennessee Warblers, Yellow Warblers, Palm Warblers, Blackpoll Warblers, Northern Waterthrushes, Chipping Sparrows, Lincoln's Sparrows, White-throated Sparrows, White-crowned Sparrows and Rose-breasted Grosbeaks. The only sighting of a Trumpeter Swan occurred on May 8th. May 12th brought the first day of heavy migrant passage. Chipping Sparrows (1353), American Robins (186), Say's Phoebe (4), Hermit Thrushes (19), Tree Swallows (512), Yellow-bellied Sapsuckers (12), Lincoln's Sparrows (10), Red-winged Blackbirds (163) and Rusty Blackbirds (71) all reached their season's high on this day. 80 species of birds were recorded on this day, the highest single day species count of the spring. May 12th also marked the highest banding day total of the spring with 124 birds banded. The only Marsh Wren and Harris's Sparrow of the year were recorded this day.

In the third week in May morning temperatures rose above freezing allowing for full days of banding. Good passage of migrants occurred on a daily basis, however banding was slow with approximately 10 birds banded a day. New species arriving included: Eared Grebes, Western Grebes, Common Terns, Blue-headed Vireos, House Wrens, Western Tanagers, Ovenbirds and Clay-coloured Sparrows. May 16th brought the only sightings of Redheads and Canvasbacks of the season. Swainson's Thrushes (192) and Yellow-rumped Warblers (345) reached their season highs this week. The first Le Conte's Sparrow in six years was banded. Pacific Loon and Eurasian Wigeon were two new species added to the LSLBO's sight records this week.

The fourth week of May began with cooler temperatures, and then warmed for a few days before the skies became overcast and it rained for the last three days of May. A major movement of songbirds occurred on the 27th. Tennessee Warblers, Yellow Warblers, Yellow-rumped Warblers, Chipping Sparrows and Clay-coloured Sparrows moved in large numbers for a banding day of 98 birds. Eastern Kingbirds, American Redstarts, Common Yellowthroats and Canada Warblers were new species this week. Captures remained steady at over 30 birds per day with the exception of a few rain days at the end of the month. Common Loons (18), Canada Geese (108) and Tennessee Warblers (74) peaked this week. A Pacific Loon was seen on 23rd. The last Orange-crowned Warbler was spotted on the 24th. A Barred Owl greeted the banders at the crack of dawn on May 29th.

Late migrants such as Yellow-bellied Flycatchers, Alder Flycatchers, Red-eyed Vireos, Philadelphia Vireos, Cedar Waxwings, Magnolia Warblers, Black-throated Green Warblers, Mourning Warblers, Wilson's Warblers and Baltimore Orioles were greeted with sunny warm weather in June. Tennessee Warblers, Yellow Warblers, American Redstarts, Chipping Sparrows and Clay-coloured Sparrows were still moving north in good numbers, even though migration was expected to be slowing down. 96 birds were banded on June 3rd and a total of 339 birds were banded during the ten days of monitoring in June. Movement slowed down by the last few days of monitoring as birds created territories and tried to find mates. A Chestnut-sided Warbler was banded on June 4th, and the first record Lazuli Bunting for the LSLBO was banded on June 6. 4 Pacific Loons were spotted on June 7th. The only species that peaked during this period was the Common Merganser; a large group (147) was observed swimming along the shoreline.

Fall Migration

Fall migration coverage ran from July 12th until September 30th. It was a very quiet fall with limited banding and movement of birds. A total of 1393 birds were banded, representing 58 species and forms, 168 birds were recaptured and 22 birds were released unbanded. The banding total was the lowest since 1997. Banding effort was excellent with mist nets set for 74.9% of the total possible net hours. The busiest day of banding was on August 1 with 75 birds banded. August 11th was the only other day where more than 50 birds were banded. Movement of passerines was generally slow with only a few of days with heavy passage. The majority of the birds on the heavy movement days remained in the air, and no flocks landed in the nets.

Similar to spring migration, Swainson's Thrushes were the top species of the fall with 200 banded. This is also the highest fall banding total on record. Yellow-bellied Sapsuckers had a record fall with 7 banded. Northern Waterthrushes had a season record of 31 banded, as well as Fox Sparrows with 4 and Sharp-shinned Hawks with 27 banded. The LSLBO banded its second Le Conte's Sparrow of the year, the first recorded in fall migration. The Observatory's first Common Grackle and second Northern Pygmy Owl were also banded.

One factor contributing to lower than expected banding totals may have been the reduced numbers of normally abundant species. Several species that are usually captured in large numbers were virtually absent from banding totals. 79 Yellow-rumped Warblers were banded this fall, usual capture totals range from 400-600. 57 Tennessee Warblers were banded where usually 200-600 are banded. Yellow

Warblers banding totals were low with 85 banded commonly over 150 are banded. It is unknown why banding totals for these species were so depressed.

August temperatures were very warm with daytime highs around 20°C with occasional thundershowers. A cold front moved in at the end of August bringing rain, wind and snow until September 13th. Precipitation fell daily for two weeks; this had a negative effect on banding efforts, limiting net time. After the 13th, temperatures remained mild until the end of September. Morning temperatures fell below freezing on a couple of occasions in late September.

Fall migration monitoring began on July 12th. There was very little activity for monitoring and 9 birds were banded on the first day. Plenty of activity occurred along the census route with Yellow Warblers, American Redstarts and Yellow-rumped Warblers chipping and feeding young. The majority of birds captured in the first week of monitoring were young or adults in their moult. Waterfowl activity was limited, although a large group of Common Mergansers (90) was seen almost daily in front of the lab. The only Broad-winged Hawk of the year was spotted on July 14th. Yellow Warblers had a season high of 30 on July 15th, which was the first indication that the passage of migrants was to be slow. Ring-billed Gulls numbers peaked 172 on July 20th.

Good weather continued in the last week of July. The temperature remained warm with winds usually picking up later in the morning due to the heat. July 22nd was the first day that movement of birds was observed. Banding totals began to increase as did the frequency, numbers and species of birds spotted on visual migration counts. July 28th was the first day of heavy passage and was the season maximum for Red-winged Blackbirds (150), blackbirds (117) and Yellow-rumped Warblers (74). Many other warbler species were observed as well, and a total of 45 birds were banded. July 23rd was the top day for American Redstarts (27) for fall. The first Caspian Tern of the year was observed on the July 23rd. Activity on the lake was still limited to a few individuals of Common Loons, Mallards and Common Goldeneyes. July 31st had the season's only sighting of an Olive-sided Flycatcher. The first Wilson's Warbler was observed on July 30th; a bird virtually absent from spring migration.

Wood warblers began to form mixed flocks during the first week of August with Yellow Warblers, Tennessee Warblers, American Redstarts and Yellow-rumped Warblers were being captured together in the nets. August 1st was the top banding day of the fall with 75 birds banded. Tennessee Warblers had their season high this day, with 21 birds observed. The first Sharp-shinned Hawk was banded on August 1st. August 1st also had the first fall records for both the Cape May Warblers and the Black-throated Green Warblers. Monitoring was limited this week with one day missed because of the absence of staff and rain for the remainder of the week. The rain let up on August 5th and the birds took advantage of it. Movement of sparrows began with Chipping Sparrows (108, the peak day of the fall). Tree Swallows (139) and Franklin's Gulls (1624) also reached their peak. However banding was slow with only 22 birds banded. The last sighting of Ruby-throated Hummingbirds was on August 2nd.

Weather remained warm and calm and sunny for the second week of August, with temperatures peaking above 20°C daily. Mallards, Common Goldeneyes, Common Mergansers, American White Pelicans and Common Loons continued to be the prominent waterfowl, but were still observed in low numbers. Sharp-shinned Hawks became a daily sighting but also in low numbers. Banding totals remained low

with less than 50 birds banded per day. Migrant passage peaked late in the week. Large numbers of warblers were passing through with 533 on August 13th. Pine Siskins (182), Rose-breasted Grosbeaks (13) and Alder Flycatchers (12) reached their peak days during the week and movement of Northern Harriers began. The only Pied-billed Grebe of the year was spotted on the lake on August 14th. The first Connecticut Warbler of the year was banded and first Say's Phoebe was observed on August 12th. The last Eastern Phoebes and Black-throated Green Warblers were observed this week.

Passage slowly tapered during the third week of August, coming to a halt at the end of the week. There was no visible change in the weather and the reason for the reduction in migration activity is unknown. The Common Mergansers peaked at 123 on the 18th. The only flock of Blue-winged Teal (35) was observed and both Swainson's Thrushes (20) and Eastern Kingbirds (5) peaked this week. The last Red-winged Blackbirds, Winter Wrens and Belted Kingfishers were observed this week.

The end of August was very unpleasant. Unstable conditions brought gradually cooler weather and by August 27th it began to rain. It rained constantly until the end of August hampering banding attempts; daily banding totals were less than 20 birds. American Crows began to form their murders, peaking at 42 birds on August 25th. Cedar Waxwings peaked at 102 on August 30th. American Pipits and Orange-crowned Warblers arrived, and an early Dark-eyed Junco was banded on August 26th. A number of species were observed for the last time of this season including Killdeer, Yellow-bellied Flycatchers, Cape May Warblers, Black-and-white Warblers, Mourning Warblers, Chipping Sparrows and Evening Grosbeaks. The LSLBO banded the first Common Grackle on record on August 26th.

The first week of September was literally a washout; it rained all week with the exception of two days. The poor weather conditions may have sped up the departure of many species. Greater White-fronted Geese arrived on September 5th in a number of flocks totalling 579. The only sighting of a Peregrine Falcon occurred on September 4th and a lone Sandhill Crane was heard on the 3rd. Early on September 3rd three Common Nighthawks were observed, the only sighting of the year. Also on the 3rd: Blackpolls peaked (7), the last Canada Warbler and the last Le Conte's Sparrow were observed, and the first Gray-cheeked Thrush of the fall was banded. The last Northern Waterthrushes, White-crowned Sparrows and the last Rose-breasted Grosbeaks were observed on the 4th. The last Tennessee Warbler was observed on Sept 7th. The first and peak observation of Palm Warblers (4) was made on the 6th, as was the first Fox Sparrow observation.

The poor weather continued for much of the second week of September. Rain, snow and strong winds persisted until finally clearing on the 13th of September, when weather becoming warm, sunny and calm. The Bufflehead arrived at the open waters in front of the lab, Bald Eagles had a peak day (5) on the 12th and the Sharp-shinned Hawks peaked (12) on the 9th. The last Osprey was observed on the 11th and the last Red-tailed Hawks and last Merlin were observed on the 9th. Numerous Sandhill Cranes (779) passed over on the 9th. The last Franklin's gull and last Least Flycatcher were observed on the 11th, the last Yellow-bellied Sapsucker, Northern Flicker and Alder Flycatcher were observed on the 14th. The last Blue-headed Vireo and Red-eyed Vireo were also observed this week. The last Yellow Warbler was observed on the 9th, Yellow-rumped Warblers had their peak day (527) on the 14th, the last Blackpoll Warbler was observed on the 9, the last Ovenbird on the 10th, the last common Yellowthroat on the 14th and the last Clay-coloured Sparrow on the 12th. The only LSLBO migration monitoring record of a

Three-toed Woodpecker was made on the 14th. This week the only recorded Golden-crowned Kinglets of the year were observed.

The third week of September was clear and warm. The majority of the songbirds had already passed. The peak day for Greater White-fronted Geese observations (1380) was the 16th; Ruby-crowned Kinglets (8) also peaked this day. The only Snow Geese observed this year were spotted was on the 17th; there were a few flocks totalling 70 birds. Also on the 17th, Northern Harriers (6) peaked and Eastern Kingbirds ended. On the 20th the Sandhill Cranes ended their passage past the lab and the last Gray-cheeked thrush was observed. A large movement on the 21st brought Orange-crowned Warblers to their peak (30). Two days of monitoring were missed because of staff time off, and banding totals fluctuated from a low of 5 to a high of 28 birds. Movement was increasing, but visual counts were low.

The end of September brought warm and moderately windy days. Banding was slow with fewer than 10 birds banded per day. The forest became quiet as the last stragglers of migration passed through; Ruby-crowned Kinglets, Orange-crowned Warblers, Yellow-rumped Warblers, American Redstarts, White-throated Sparrows and White-crowned Sparrows were all observed. The American Tree Sparrows and Dark-eyed Juncos increased in numbers. On September 23rd a Northern Pygmy Owl was captured in a net; this was the second record for the LSLBO and a treat for owl enthusiasts. The first Tundra Swans were spotted on the southerly movement on the 29th. September 29th also marked the only banded Boreal Chickadee.

MONITORING AVIAN PRODUCTIVITY AND SURVIVORSHIP (MAPS)

The MAPS program is the other core banding program that the LSLBO operates. The four MAPS stations are ROAD, FEGU, FAWA, and RESI. The FEGU site is in its second consecutive year of operation, after being reactivated in 2003. ROAD and FAWA have operated for eleven consecutive years; RESI is in its fifth year. Both the RESI and FAWA sites received full coverage in 2004 (360 net hours). ROAD and FEGU received 343.3 due to poor weather conditions during period 8. The dates the stations operated were:

	FAWA	FEGU	ROAD	RESI
Period 5 (Jun 10 - Jun 19)	Jun 12	Jun 13	Jun 15	Jun 11
Period 6 (Jun 20 - Jun 29)	Jun 20	Jun 22	Jun 23	Jun 21
Period 7 (Jul 30 - Jul 9)	Jul 2	Jul 1	Jul 4	Jun 30
Period 8 (July 10 - July 19)	Jul 12	Jul 11	Jul 11	Jul 10
Period 9 (July 20 - July 29)	Jul 20	Jul 21 & 22	Jul 23	Jul 25
Period 10 (July 30 - Aug 8)	Jul 30	Aug 1	Aug 2	Aug 3

Captures

A total of 207 birds were banded, 102 birds were recaptured and only 1 bird was released unbanded during the MAPS program (Tables 1a-1d). Captures from all banding stations were considerably lower

than 2003. Yellow-bellied Sapsuckers were a new species banded at both the FAWA and FEGU sites. The first Clay-coloured Sparrow to be banded at a MAPS site was from the RESI site.

Period 10 is usually the busiest MAPS round coinciding with the dispersal of juveniles, as shown through the high number of young captured in period 10. RESI had the highest capture day of the MAPS stations on the last round with 44 birds banded. A large number of juvenile Tennessee Warblers and Yellow-rumped Warblers were captured. Period 7 had the highest capture day for ROAD, FEGU, and FAWA; the last round had the lowest capture totals for these three sites.

Table 1a. Captures at the Far Away (FAWA) MAPS station in 2004													
Species	2004 Captures			Previous Years' Total Captures									
	Band	Recap	Unband	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03
Yellow-bellied Sapsucker	1												
Downy Woodpecker										1			
Least Flycatcher				3	1						9	1	1
Swainson's Thrush					4	1		1		1		1	
Hermit Thrush													2
American Robin	1			3	1	1			1		1	3	
Cedar Waxwing				1									
Philadelphia Vireo								1					
Red-eyed Vireo				2	2						1		1
Tennessee Warbler					1		1				1	4	2
Yellow-warbler				2			1				2		
Chestnut-sided Warbler				1									
Magnolia Warbler									1				
Yellow-rumped Warbler		2		1			5	3		3	4	4	7
Black-and-white Warbler									1				1
American Redstart	1	1		18	10		2	4	2	8	7	2	7
Ovenbird	4	2		1	1	1	10	1	4	5	4	3	1
Connecticut Warbler									1				
Mourning Warbler	2	1		11	19	1	3	7	9	4		2	5
Common Yellowthroat					1				1				
Canada Warbler	3	7		4	12	2	8	13	15	10	8	7	13
Western Tanager								1				1	
Rose-breasted Grosbeak										1			
White-throated Sparrow	4	6		16	26	12	10	8	10	10	11	7	14
Total	16	19	0	63	78	18	40	39	45	43	49	35	55

Table 1b. Captures at the Fern Gulley (FEGU) MAPS station in 2004.

Species	2004 captures			Previous years' totals						
	band	recap	unband	'94	'95	'96	'97	'98	'99	'03
Northern Saw-whet Owl							1			
Yellow-bellied Sapsucker	1									
Alder Flycatcher				2	3	1				
Least Flycatcher	3			2						3
Blue-headed Vireo						1		1		1
Red-eyed Vireo				1	1			1	1	2
Black-capped Chickadee	2			3	1			3		
Red-breasted Nuthatch				1		1		2		
Winter Wren								2	1	
Swainson's Thrush	4	3		13	7	3	9	14	4	8
Hermit Thrush								1		
American Robin				3					1	1
Cedar Waxwing										1
Tennessee Warbler	3	2		2	8	2	3	13	2	20
Orange-crowned Warbler				1						
Yellow Warbler					5	3		3	2	3
Chestnut-sided Warbler				1				1		
Magnolia Warbler	1			1	2	1	3	5	5	5
Yellow-rumped Warbler		1		7	2		3	10	4	2
Black-throated Green Warbler									1	
Black-and-white Warbler	1			3	2	1	3	1	2	3
American Redstart	12	11		52	69	8	35	25	48	51
Ovenbird	6	1		3	7	2	9	12	8	9
Northern Waterthrush							1			1
Mourning Warbler	3	3		9	7	7	10	14	4	4
Canada Warbler	4	7		14	31	10	12	25	20	36
Western Tanager								1		2
Chipping Sparrow								2		
Song Sparrow							1	4		
Swamp Sparrow									2	
White-throated Sparrow	4	5		24	26	6	10	26	10	17
Pine Siskin							1	1		

Total	44	33	0	142	171	46	101	167	115	169
-------	----	----	---	-----	-----	----	-----	-----	-----	-----

Table 1c. Captures at the Roadside (ROAD) MAPS station in 2004.

Species	2004 Captures			Previous Years' Total Captures									
	Banded	Recap	Unband	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03
Ruffed-Grouse								2					
Yellow-bellied Sapsucker		1		1	3	2							1
Downy Woodpecker													1
Hairy Woodpecker	1												1
Pileated Woodpecker											1		
Yellow-bellied Flycatcher				1									
Alder Flycatcher				1		3		1				1	
Least Flycatcher	1			4				3				2	
Black-capped Chickadee	2			1					1		1	1	4
Red-breasted Nuthatch								1					
Brown Creeper											1		
Winter Wren					1					1			2
Ruby-crowned Kinglet		1											2
Swainson's Thrush	1	5		11	3	1	2	11	8	12	5	8	16
American Robin					1			1				2	
Cedar Waxwing				2				1					
Warbling Vireo								1					
Red-eyed Vireo	1			1	1							1	1
Tennessee Warbler				22	2		2	10	5		1	8	8
Orange-crowned Warbler				1									
Yellow Warbler	1			6								2	
Chestnut-sided Warbler				4									
Magnolia Warbler		2		11	6	4	11	10	24	10	15	8	9
Cape May Warbler								2					1
Yellow-rumped Warbler	1	2		16	5	4	1	22	2	1	1	2	17
Black-throated Green Warbler						1		4		1			1
Palm Warbler				1									
Blackpoll Warbler								2					
Black-and-white Warbler	1			9			2	3	1	3			7
American Redstart	4	3		37	22	12	13	21	15	8	12	31	18
Ovenbird	6	4		6	1		3	22	9	8	12	14	22
Northern Waterthrush						1							1
Mourning Warbler		1		5	2	1	5		2				
Common Yellowthroat								2					
Canada Warbler	7	15		32	19	8	20	13	12	13	13	9	20
Western Tanager				1	1			1					
Rose-breasted Grosbeak				1				3					
Chipping Sparrow				2				4	1			5	4
Song Sparrow				2									
Lincoln's Sparrow		1				1							1

White-throated Sparrow	3	2	22	16	9	18	16	5	3	6	4	9
Purple Finch							1					
Pine Siskin							1					
Total	29	37	200	83	47	77	158	85	60	68	98	146

Table 1d. MAPS captures at the Residence (RESI) station in 2004.

Species	2004 Captures			Previous Year Totals			
	Banded	Recap	Unband	2000	2001	2002	2003
Sharp-shinned Hawk				1			
Ruby-throated Hummingbird						1	
Yellow-bellied Sapsucker				2	3	6	4
Northern Flicker							1
Western Wood-Pewee				1			
Alder Flycatcher					1		
Least Flycatcher	3	2		11	8	14	6
Black-capped Chickadee	3			1		6	5
Red-breasted Nuthatch						1	2
Brown Creeper							2
Winter Wren					1	2	1
Ruby-crowned Kinglet	1						2
Swainson's Thrush	6	1		8	7	7	11
Hermit Thrush	1	1		4	1	2	2
American Robin	2			2			1
Red-eyed Vireo	6				2		
Philadelphia Vireo	1				1		
Warbling Vireo					1		1
Blue-headed Vireo	2				1		
Tennessee Warbler	38	2		9	27	28	42
Orange-crowned Warbler	1						
Yellow Warbler				4	4	3	4
Magnolia Warbler	2			7	2	8	8
Yellow-rumped Warbler	11			7	11	16	71
Black-throated Green Warbler	2			1	1	1	
Bay-breasted Warbler	1			2	3		
Blackpoll Warbler	1				1		
Black-and-white Warbler	2			3	4		
American Redstart	14	1		10	21	13	13
Ovenbird	2		1	5	6	9	3
Northern Waterthrush							1
Mourning Warbler	1			4		1	3
Common Yellowthroat	1				1		
Canada Warbler	4	1		3	7	4	6
Western Tanager	1			1	1		
Rose-breasted Grosbeak	2			1	1	3	
Chipping Sparrow				2		5	4
Clay-colored Sparrow	1						

Lincoln's Sparrow				1		2
White-throated Sparrow	9	5		14	19	23
Purple Finch					14	
Pine Siskin					1	
Total	118	13	1	105	139	218

Breeding Status

Breeding status was determined through banding and observations for each of the 63 species recorded at the MAPS stations (Table 2). Observations were restricted to MAPS banding site visits only.

Table 2 Breeding Status of MAPS birds in 2004									
Species	RESI	ROAD	FEGU	FAWA	Species	RESI	ROAD	FEGU	FAWA
Common Loon		T	T	T	Cedar Waxwing	B	B	L	L
American White Pelican				T	Tennessee Warbler	B	B	B	B
Canada Goose		T			Orange-crowned Warb.	M			
Common Goldeneye			T	T	Yellow Warbler	B	B	B	B
Common Merganser				T	Magnolia Warbler	L	T		
Osprey	T	T	T	T	Yellow-rumped Warb.	B	B	B	B
Bald Eagle			T	T	Black-thrt'd Grn Warb.	B			
Red-tailed Hawk	T				Bay-breasted Warbler	T			
Sharp-shinned Hawk	T		T	T	Blackpoll Warbler	T			
Ruffed Grouse	B	L			Black-and-white Warb.	B	L	B	B
Ring-billed Gull				T	American Redstart	B	B	B	B
Sora	T				Ovenbird	B	B	B	B
Common Snipe	T				Mourning Warbler	L		L	L
Yellow-bellied Sapsucker	B	L	L	L	Common Yellowthroat	T			
Downy Woodpecker				T	Canada Warbler	B	B	B	B
Hairy Woodpecker	L	L	T		Western Tanager	B		L	T
Three-toed Woodpecker		M			Chipping Sparrow			L	
Northern Flicker	L				Clay-colored Sparrow	B		T	
Pileated Warbler	L	L	L	L	Song Sparrow			L	
Alder Flycatcher	L	B	B		Lincoln's Sparrow		B		
Least Flycatcher	B	B	B	B	White-thrt'd Sparrow	B	B	B	B
Eastern Phoebe	L				Rose-breasted Grosbeak	B	T	L	L
Blue-headed Vireo	L				Red-winged Blackbird	T			
Warbling Vireo	L				Brown-headed Cowbird	L			
Philadelphia Vireo	T				Purple Finch	L			
Red-eyed Vireo	B	B	B	B	Pine Siskin		T	T	
American Crow	T	T	T	T	American Goldfinch		T		
Common Raven	T	T	T	T	Evening Grosbeak	T			T
Black-capped Chickadee	B	B	B	L					
Red-breasted Nuthatch	B		L	L					
White-breasted Nuthatch		B							
Brown Creeper	L								
Winter Wren	B	B	B	L	Total sp. Breeder (B)	23	18	14	12
Ruby-crowned Kinglet	B	B	L		Total sp. Likely (L)	13	5	11	8

Swainson's Thrush	B	B	B	B	Total sp Transient (T)	13	9	10	13
Hermit Thrush	L				Total sp. Migrant (M)	1	1		
American Robin	B	B	L	B	Total sp.	50	33	35	33

Returns of MAPS Birds

Very few birds survive to return to their breeding grounds. During the 2004 MAPS banding season 102 birds were recaptured, 55 of these were repeat captures of birds banded during the 2004 season. There were 47 birds recaptured that had been banded in previous seasons; the majority having been originally banded in 2003 or during migration monitoring in 2004. Only 10 birds recovered were banded prior to 2003 (Table 3). The highest returns were for Swainson's Thrushes, American Redstarts, Canada Warblers and White-throated Sparrows. The most noteworthy recovery was a White-throated Sparrow originally banded in 1999 in FEGU. It was recaptured again at the FEGU site.

Table 3. Recaptured birds at MAPS stations in 2004 and the original season of banding.

Species	2004			2003			2002			2001		2000		1999
	Spr	Fall	Spr	MAPS	Fall	Spr	MAPS	Fall	Spr	MAPS		Spr	Fall	MAPS
Least Flycatcher														
Red-eyed Vireo														
Black-capped Chickadee														
Ruby-crowned Kinglet	1													
Swainson's Thrush			3	1	2									
Tennessee Warbler														
Yellow Warbler														
Magnolia Warbler		2												
Yellow-rumped Warbler	2			1										
Black-and-White Warbler														
American Redstart				2	3		1		1	1		1	2	
Ovenbird		1	1				2							
Northern Waterthrush														
Mourning Warbler	1			1										
Canada Warbler				6		2		1						
Chipping Sparrow														
Lincoln's Sparrow	1													
White-throated Sparrow	1	1		5										1

COVERAGE

Since the LSLBO's migration monitoring protocol change in 2000, when banding was extended from 6 to 7 hours, the level of coverage has remained consistent from year to year. The actual number of net hours is the only variable that changes, it is weather dependant.

Coverage for spring migration totalled 50 days from April 19th until June 10th (Table 4a). Two days were missed in April due to the lack of qualified staff. Spring migration accounted for a total of 120 person-days. Banding activities took place on 45 days for an average of 60.5 net hours per day out of a possible 84. This is higher than the 48.9 average daily net hours in 2003, but is consistent with other years. Both census and visual migration counts are conducted daily regardless of weather. 2004 had a daily average of 8.2 visual migration counts.

Fall migration coverage has been relatively consistent since 2000 (Table 4b). Coverage lasted 78 days from July 12th until September 30th for a total of 164 person days. Three days of coverage were missed because of the absence of qualified staff. Banding occurred for 73 of the 78 days with an average of 69.8 net hours per day out of a possible 84. Census and visual migration counts were conducted every day. The average of daily visual migration counts was 7.6. The fall visual migration counts are on average lower than the spring because of busier banding days limiting the time available for visual observations.

Table 4a. Summary of effort during spring migration monitoring at LSLBO, 1995 – 2004.										
SPRING	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Coverage										
First day	28-Apr	04-May	30-Apr	04-May	26-Apr	18-Apr	16-Apr	19-Apr	21-Apr	19-Apr
Last day	09-Jun	07-Jun	17-Jun	09-Jun	12-Jun	13-Jun	11-Jun	11-Jun	10-Jun	10-Jun
# of days	39	28	37	36	46	57	57	54	50	50
Person-days	92	62	67	72	N/A	126	130	125	124	120
Banding1										
First day	30-Apr	06-May	01-May	04-May	29-Apr	20-Apr	16-Apr	20-Apr	21-Apr	20-Apr
Last day	09-Jun	07-Jun	17-Jun	09-Jun	12-Jun	13-Jun	11-Jun	11-Jun	10-Jun	10-Jun
# of days	35	25	34	36	42	52	54	45	39	45
Av daily net-hrs.	65.5	62.1	58.6	74.5	69.1	62	72.9	63	48.9	60.5
Census										
First day	29-Apr	04-May	30-Apr	04-May	27-Apr	18-Apr	16-Apr	19-Apr	21-Apr	20-Apr
Last day	09-Jun	07-Jun	14-Jun	09-Jun	12-Jun	13-Jun	11-Jun	11-Jun	10-Jun	10-Jun
# of days	35	27	34	32	34	55	57	54	50	49
Vis-Migs2										
First day	04-May	06-May	30-Apr	05-May	27-Apr	18-Apr	16-Apr	19-Apr	21-Apr	20-Apr
Last day	08-Jun	07-Jun	14-Jun	21-May	25-May	13-Jun	11-Jun	11-Jun	10-Jun	10-Jun
# of days	22	26	33	8	16	57	57	54	50	49
Av daily	2.8	3.7	4.5	3.8	N/A	8.2	7.8	8.4	8	8.2

Vis-migs

- 1- Protocol changes in 2000 included increasing the six-hour standard banding period to seven hours
- 2- Starting in fall 1999 Vis-Migs were reduced from 10 minutes to five minutes

Table 4b. Summary of effort during fall migration monitoring at LSLBO, 1995 – 2004.

FALL	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Coverage										
First day	17-Jul	27-Jul	05-Aug	14-Jul	10-Jul	07-Jul	14-Jul	13-Jul	12-Jul	12-Jul
Last day	24-Sep	29-Sep	26-Sep	24-Sep	25-Sep	06-Oct	22-Sep	04-Oct	30-Sep	30-Sep
# of days	51	41	35	66	78	91	69	84	77	78
Person-days	116	76	45	126	N/A	207	192	173	158	164
Banding1										
First day	17-Jul	27-Jul	06-Aug	14-Jul	10-Jul	07-Jul	14-Jul	14-Jul	12-Jul	12-Jul
Last day	24-Sep	29-Sep	26-Sep	24-Sep	25-Sep	06-Oct	22-Sep	04-Oct	30-Sep	30-Sep
Number of days	50	35	33	62	76	89	69	78	69	73
Av. daily net-hrs.	50.5	40.1	60.9	48.5	56.7	74	74.6	62.9	73.8	69.8
Census										
First day	17-Jul	27-Jul	06-Aug	19-Jul	10-Jul	07-Jul	14-Jul	13-Jul	12-Jul	12-Jul
Last day	23-Sep	29-Sep	03-Sep	24-Aug	08-Aug	06-Oct	22-Sep	04-Oct	30-Sep	30-Sep
# of days	43	39	8	10	15	90	69	84	77	78
Vis-Mig2										
First day	28-Jul	30-Jul	06-Aug	25-Jul	13-Jul	07-Jul	14-Jul	13-Jul	12-Jul	12-Jul
Last day	31-Aug	29-Sep	26-Sep	02-Sep	25-Sep	06-Oct	22-Sep	04-Oct	30-Sep	30-Sep
Number of days	18	28	29	20	43	91	69	84	77	78
Av. daily Vis-migs	2.7	3.3	1.7	2.8	3.9	7.7	7.9	7.7	7.6	7.6

- 1- Protocol changes in 2000 included increasing the six-hour standard banding period to seven hours
- 2- Starting in fall 1999 Vis-Migs were reduced from 10 minutes to five minutes

RECAPTURES

A total of 350 recapture records were collected in 2004. All recaptured birds were originally banded at the LSLBO. The majority of the recapture records were birds were banded during the 2004 season. 82 recaptures were banded originally in 2003. 30 birds were originally banded during the 2002 season or before (Table 5). Two birds were recaptured that were originally banded in 1999: a White-throated Sparrow that was six years old and a Swainson's Thrush that was five years old. An Alder Flycatcher and an American Redstart were recaptured that were at least five years old.

Table 5. Recapture data on birds banded before 2003

Number	Species	Date	Location	Age	Date	Location	Age
1152-42490	American Robin	Apr 29 '02	MIG	ASY	Jun 10 '04	MIG	4+ years
2160-63097	Alder Flycatcher	Jul 13 '02	ROAD	AHY	Jun 7 '04	MIG	3+ years
2220-41364	Alder Flycatcher	Jul 17 '00	MIG	AHY	Jun 9 '04	MIG	5+ years
2100-07745	American Redstart	Jul 3 '01	ROAD	AHY	Jul 12 '04	MIG	4+ years
2100-07723	American Redstart	Jun 25 '01	ROAD	SY	May 27 '04	MIG	4 years
2100-07805	American Redstart	Jun 14 '02	FAWA	ASY	Jun 12 '04	FAWA	4+ years
2130-38786	American Redstart	Jul 23 '00	MIG	AHY	Jul 11 '04	FEGU	5+ years
2230-71050	American Redstart	Aug 1 '00	MIG	HY	Jun 15 '04	ROAD	4 years
2230-71768	American Redstart	May 28 '01	MIG	AHY	Jul 11 '04	FEGU	4+ years
1671-47675	Black-capped Chickadee	Jun 2 '00	MIG	AHY	May 2 '04	MIG	4+ years
2200-38387	Black-capped Chickadee	Jul 31 '01	MIG	HY	Sep 6 '04	MIG	3 years
2250-13419	Black-capped Chickadee	Jul 27 '02	MIG	HY	Apr 27 '04	MIG	2 years
2160-63081	Canada Warbler	Jul 1 '02	ROAD	AHY	Jul 19 '04	MIG	3+ years
2160-63098	Canada Warbler	Jul 13 '02	ROAD	AHY	Jun 6 '04	MIG	3+ years
2250-12887	Canada Warbler	Jun 4 '02	MIG	AHY	Jun 15 '04	ROAD	3+ years
2250-13214	Canada Warbler	Jun 7 '02	MIG	ASY	Jul 2 '04	FAWA	4+ years
2250-13258	Canada Warbler	Jul 16 '02	MIG	AHY	Jun 13 '04	FEGU	3+ years
2250-12702	Chipping Sparrow	May 20 '02	MIG	AHY	May 26 '04	MIG	3+ years
2250-13206	Myrtle Warbler	Jun 6 '02	MIG	AHY	Jul 21 '04	MIG	3+ years
2181-79010	Ovenbird	Jun 21 '02	ROAD	AHY	Jun 15 '04	ROAD	3+ years
2181-79294	Ovenbird	May 13 '01	MIG	AHY	Jul 12 '04	MIG	4+ years
2181-79666	Red-eyed Vireo	Aug 24 '02	MIG	HY	Jul 23 '04	MIG	2 years
1543-06013	Sharp-shinned Hawk	Aug 20 '02	MIG	HY	May 30 '04	MIG	2 years
1461-11397	Swainson's Thrush	May 24 '01	MIG	SY	May 23 '04	MIG	4 years
1641-32034	Swainson's Thrush	Aug 28 '99	MIG	HY	May 21 '04	MIG	5 years
1451-87993	White-throated Sparrow	Jun 17 '99	FEGU	SY	Jul 22 '04	FEGU	6 years
2200-38564	Yellow Warbler	Aug 11 '01	MIG	HY	Jul 13 '04	MIG	3 years
2230-72832	Yellow Warbler	May 28 '02	MIG	ASY	Jun 8 '04	MIG	4+ years
2250-13340	Yellow Warbler	Jul 21 '02	MIG	AHY	Jun 2 '04	MIG	3+ years
2250-13505	Yellow Warbler	Aug 4 '02	MIG	AHY	May 24 '04	MIG	3+ years

PERSON DAYS

With the creation of the Canada Warbler Project and the Northern Saw-whet Owl migration monitoring project, combined with the core monitoring projects, the 2004 LSLBO staff had a busy season, and worked a total of 271 days (Table 6). The staff had help from a number of volunteers: volunteers worked a total of 127 days. A large portion of the volunteer days were contributed by international volunteers: Sam Marvit and Sharon Balavage from Pennsylvania, and Odyle Cousset from France. We thank all volunteers for their interest in songbird banding and in the LSLBO.

Table 6. Person days at the LSLBO in 2004.						
Staff	Spring	MAPS	Fall	CAWA	NSWO	Total
Tyler Flockhart	45	14	30	21	2	112
Richard Krikun	34	19	58	12	30	153
Jul Wojnowski	2		1			3
Amy Wotton	3		1		3	7
Chris Winarski	1		1			2
Total Staff-days	85	33	91	33	35	277
Volunteers						
Aaron Lehman	6		2		1	9
Alison Douglas	5					5
Susanne Maidment	6					6
Sam Marvit	13		15		2	30
Sharon Balavage	9		15		2	26
Chelsea Martin		4	8	2		14
Marie-Jean Geedts			7			7
Odyle Cousset			28			28
Bryn Spence					1	1
Charles Priestley					1	1
Total Volunteer-days	39	4	75	2	7	127

VISITORS AND EDUCATION

The LSLBO received over 650 visitors throughout the course of the summer (Table 7); this is down from previous years. Annual events, such as the Songbird Festival in June and IBA day in August attracted about 600 visitors. Many visitors stop in to watch banding activities just for the day, or to enjoy the beautiful weather. Observatory staff takes these opportunities to talk to all visitors about the role

banding plays in bird conservation. Banding demonstrations are given whenever possible to highlight biological features of the birds. The Northern Saw-whet Owl migration monitoring project will be used as an education tool. This year was the pilot for this project, but already public interest in owl banding is growing.

Table 7. Number of visitors to the LSLBO banding station in 2004.					
Season	Adult	Children	Seniors	# of groups	Total Visitors
Spring (Apr 21 – Jun 10)	190	71	51	1	312
Summer & Fall (Jun 11 - Sep 30)	218	91	32	3	341
Northern Saw-whet Owl Project	15	2	2		19
Total	423	164	85	4	672

OTHER OBSERVATORY ACTIVITIES

The LSLBO had two additional projects during the 2004 season that are extensions of the core monitoring projects. The Canada Warbler project was continued from the 2003 pilot year. The Northern Saw-whet Owl migration monitoring project was initiated in 2004.

Canada Warbler Project

The Canada Warbler Project began in 2003 as a pilot study. A grid was created in the forest behind the lab; the grid is 200m x 600m divided into 50m cells. Colour bands were placed on captured Canada Warblers and breeding territories were identified through visual identification of marked individuals within the grid. Limited nest searches were conducted in 2003 with no success.

The potential of the project prompted its continuation in 2004. Many changes occurred to the project including expanding the grid to 250m by 650m. Only individuals captured during the MAPS banding or through target mist-netting were colour banded (in 2003 all Canada Warblers captured during spring migration and MAPS were banded). In total, 15 new Canada Warblers were fitted with colour bands in 2004. Territory mapping resulted in the rough boundaries for eight Canada Warblers.

A six meter mist net and an audio lure (consisting of the Canada Warbler breeding call) were used to target band Canada Warblers. The goal was to capture and band Canada Warblers in their breeding territories that were not captured in mist nets during MAPS banding. Four Canada Warblers were captured out of 13 targeted individuals. The time the audio lure was played ranged from 20 seconds to

39 minutes before the targeted Canada Warbler flew into the nets. Observations suggest that the Canada Warblers will not go out of their territory to respond to the call.

Priority was placed on nest searches; this was not an easy task, but six nests were found by the staff (Table 8). The first five nests had young. Limited growth rate data was collected because the majority of these young were ready to fledge. The sixth nest was found still at the egg stage. Growth rate data was collected daily and nest behaviour was recorded on video. It is unknown if the data collected is representative since the sample size is small, but will be presented in the future. The most interesting result was that the young from nest 6 fledged at 8 days old. 21 nestlings were banded in total.

Table 8. Canada Warbler nest data			
Nest #	Location	Nest site	Nestlings
1	FAWA	Pocket under a fallen branch	4 young
2	FEGU	Base of a stump	5 young
3	ROAD	Pocket in ground	3 young
4	FEGU	Base of a mound	1 young
5	ROAD	Base of a stump	5 young
6	FAWA	Base of a stump	4 eggs

The Canada Warbler project was expanded in a number of other ways. Facial scoring of all individuals was done to determine if there is a possibility of determining age and sex classes with any degree of certainty. A total of 106 of individuals were scored by facial plumage. Photographs were taken for most of the individuals for a reference library of the scoring.

The results from the 2004 Canada Warbler project are encouraging. The baseline data collected encompasses many aspects of the breeding biology of this migrant. The research potential for this project is vast and should contribute significantly to the knowledge of this species.

Northern Saw-whet Owl Migration Monitoring

Migration monitoring of Northern Saw-whet Owls was attempted in 2004. The pilot project was designed to determine the abundance of owls that pass through the area and the timing of migration. The goal for 2004 was to establish a pilot project to test if monitoring in the future is worthwhile, and to find the best method for monitoring.

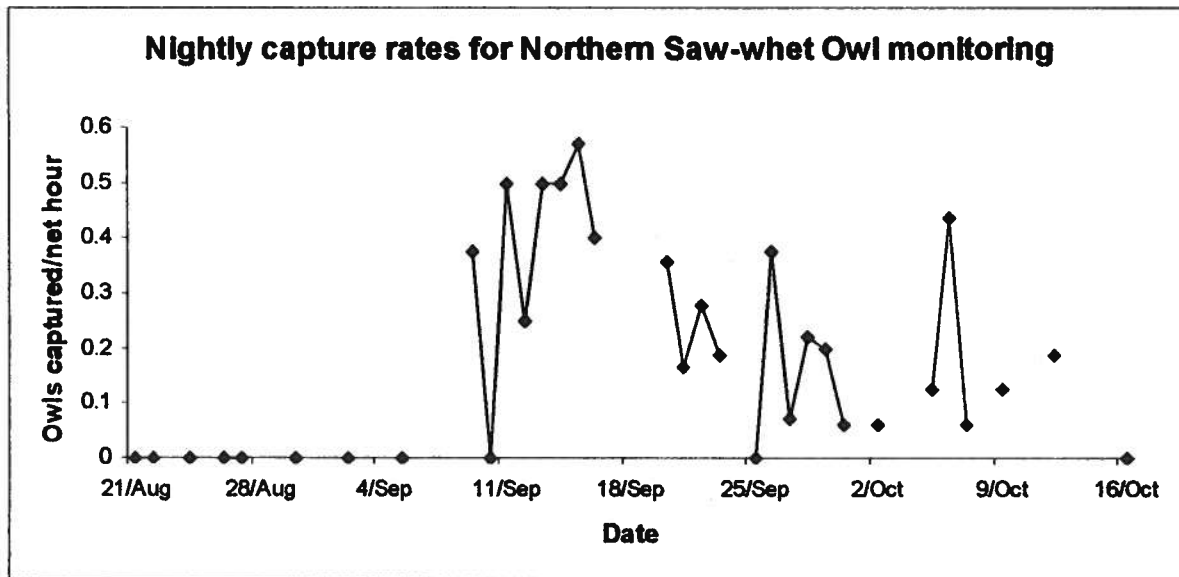
Migration monitoring began on August 21 and continued until October 16. Monitoring was conducted every second night, although banding consecutive nights was done when possible for a total of 33 nights. 91 Northern Saw-whet Owls were banded. The distribution between age and sex classes of the banded owls is shown in Table 9. Two Long-eared Owls were also captured, but escaped from the nets before they could be extracted.

Table 9. Number of captured Northern Saw-whet Owls by age and sex class in 2004

	HY	SY	ASY
Male	4	1	0
Female	45	11	11
Unknown	16	2	1

The project also established the timing of migration for the Northern Saw-whet Owls. Figure 1 shows the capture rates and nights of monitoring. The breaks in the line are those nights when monitoring did not occur. The first owls were captured on September 9th. The last owl was captured on October 12th. Poor weather limited the monitoring in the first week of September, as well as during the middle of October. The capture rate for Northern Saw-whet Owls was highest in the second and third weeks of September.

Figure 1. The timing of migration of Northern Saw-whet Owls by nightly capture rates in 2004



RECOVERIES

The LSLBO received two reports in 2004 of birds recaptured elsewhere fitted with LSLBO bands. The first recovery was a colour banded Canada Warbler. It was recovered on May 18, 2004 by a bander at Little Falls, Minnesota. The Canada Warbler was originally banded on June 24, 2003 as an after hatch-year male. The second recovery was of a Northern Saw-whet Owl that had been banded on September 12 during the owl monitoring project. It was recovered on October 1st by an owl hobby-bander on the outskirts of Millet. Both birds were released in good condition after being recaptured.

RECOMMENDATIONS

The LSLBO has developed new projects over the years to increase the research aspect of its activities. These projects consume considerable time in both collection and analysis of data. Unfortunately, projects such as the MAPS extension initiated in 2003 and the analysis moult data collected in 2004 are now on hold. New projects that require a minimum of extra time and expense are those that branch off of core monitoring programs, for example, the moult project. The two projects initiated in 2004 are independent of the core programs and take considerable extra effort in addition to core banding duties. The high quality of data collection essential to the success of these projects is dependant on increasing personnel. An additional field assistant will be needed during the Canada Warbler project and owl monitoring programs. Owl monitoring overlaps with fall migration monitoring and it is overly difficult for one person to manage both projects.

Increasing volunteer support is recommended. Priority should be put on attracting experienced volunteers to the LSLBO, especially during busy times when multiple projects overlap. Accommodations are now available to house a number of volunteers at once. Focus should be placed on attracting volunteers from the local community as well. The time that local residents can commit can be more than what is reasonable for volunteers from farther away in the province.

It is also recommended that a staff member enter the banding data from prior to 2000 into the Band Manager database, and possibly enter some other data as well. This is a time consuming project, but is worthwhile as it will facilitate analysis of long term monitoring trends at the LSLBO. This project could be completed by banding staff in the off season.

ACKNOWLEDGEMENTS

The success LSLBO enjoyed in 2004 is largely due to all the assistance received from partners, organizations, and dedicated individuals. The following are thanked for all their help:

The staff of LSLBO: Amy Wotton, Tyler Flockhart, and Chris Winarski.

The LSLBO board for their guidance and direction in all aspects of the organization. They are: Bob Deacon (chair), Ronda Groom, Peter Moore, Stefan Jungkind, Chelsea Martin, Richard Knapton, and Chris Sepos. Their volunteer efforts are commended.

The administration and staff of Lesser Slave Lake Provincial Park for logistical support.

Last but not least, I would like to thank all the volunteers who assisted in the field operation of LSLBO core programs. They are: Aaron Lehman, Alison Douglas, Susanne Maidment, Sam Marvit, Sharon Balavage, Chelsea Martin, Marie-Jean Geedts, Odyle Cousset, Bryn Spence, and Charles Priestley.

APPENDICES

Appendix I. SPECIES ARRIVAL AND DEPARTURE DATES AND MAXIMA AT LSLBO IN 2004

The following list includes seasonal first and last dates and maximum total (in bold) for each species in Spring (April 19 - June 10) and Fall (July 12 - September 30) encountered in 2004. Unless otherwise stated, all sightings are from the migration monitoring station in Lesser Slave Lake Provincial Park.

Common Loon: S: Apr 30 - 1; Jun 10; **18** - May 23; F: Jul 12 - 1; Sep 27 - 1; **9** - Jul 30
Pacific Loon: S: May 15 - 1; Jun 7 - 4; First record for the LSLBO
Pied-billed Grebe: F: Aug 14 - 1
Red-necked Grebe: S: May 2 - 8; Jun 4 - 2; **22** - May 22; F: Jul 19 - 1; Sep 29 - 1; **7** - Jul 30
Horned Grebe: S: May 26 - 1
Eared Grebe: S: May 16 - 6; F: Sep 8 - 6; Sep 13 - 6; **6** - 3 dates
Western Grebe: S: May 19 - 3; May 29 - 2; **14** - May 27; F: Jul 12 - 1; Sep 30 - 1; **10** - Aug
American White Pelican: S: May 20 - 2; May 31 - 4; **6** - May 24; F: Jul 12 - 3; Sep 23 - 1; **20** - Aug 9
Double-crested Cormorant: S: June 6 - 1
Great Blue Heron: S: May 4 - 1; June 6 - 1; **3** - May 23; F: Aug 16 - 1; Aug 29 - 1
Tundra Swan: S: Apr 20 - **130**; Apr 27 - 1; F: Sep 29 - 3; Sep 30 - **66**
Trumpeter Swan: S: May 9 - 1
White-fronted Goose: S: Apr 21 - 60; May 8 - 13; **1889** - May 1; F: Sep 5 - 579; Sep 24 - 20; **1380** - Sep 16
Snow Goose: S: May 1 - 11; May 7 - 11; F: Sep 17 - 70
Canada Goose: S: Apr 19 - 3; Jun 10 - 5; **108** - May 31; F: Aug 14 - 2; Sep 29 - 4; **70** - Aug 21
Green-winged Teal: S: May 4 - 5; Jun 10 - 1; F: Aug 18 - 1; Sep 13 - 2
Mallard: S: Apr 21 - 2; Jun 10 - 6; **20** - May 2; F: Jul 13 - 1; Sep 30 - 2; **30** - Aug 30
Northern Pintail: S: Apr 26 - **40**; May 14 - 2; F: Aug 18 - 1; Sep 26 - 3
Blue-winged Teal: S: May 7 - 6; Jun 9 - 1; **17** - May 12; F: Aug 19 - **35**
Northern Shoveler: S: May 1 - 2; Jun 6 - 6; **26** - May 7
Gadwall: S: May 2 - 4; May 21 - 2; **9** - May 16
American Wigeon: S: Apr 26 - 4; Jun 10 - 2; **27** - May 1; F: Jul 20 - 12; Aug 26 - 3
Eurasian Wigeon: S: May 15 - 1; first record for LSLBO
Canvasback: S: May 16 - 2
Redhead: S: May 16 - 4
Ring-necked Duck: S: May 14 - 4; May 22 - 1
Greater Scaup: S: May 8 - 3
Lesser Scaup: S: May 19 - 1; F: Aug 19 - 7
Long-tailed Duck: S: May 6 - 1; May 27 - 2; **75** - May 19
Surf Scoter: S: May 6 - 6; May 31 - 6; **88** - May 16
White-winged Scoter: S: May 4 - 6; May 25 - 3; **9** - May 15
Common Goldeneye: S: Apr 21 - 1; Jun 10 - 5; **67** - Apr 30; F: Jul 12 - 1; Sep 30 - 13; **28** - Sep 27
Bufflehead: S: Apr 25 - 1; Jun 4 - 1; **8** - May 6; F: Sep 11 - 9; Sep 30 - 16; **38** - Sep 25 & 27
Common Merganser: S: Apr 22 - 2; Jun 9 - 12; **147** - Jun 5; F: Jul 14 - 90; Sep 30 - 1; **123** - Aug 18
Red-breasted Merganser: S: Apr 27 - 5; Jun 10 - 14; **24** - Apr 30; F: Aug 12 - 1
Osprey: S: May 1 - 1; Jun 10 - 1; **3** - May 7; F: Jul 12 - 4; Sep 11 - 1
Bald Eagle: S: Apr 19 - 2; Jun 9 - 2; **7** - May 23; F: Jul 12 - 3; Sep 30 - 1; **5** - Sep 12
Northern Harrier: S: Apr 20 - 1; May 29 - 2; **24** - Apr 24; F: Aug 12 - 1; Sep 27 - 1; **6** - Sep 17
Sharp-shinned Hawk: S: Apr 21 - 1; Jun 4 - 1; **2** - 3 dates; F: Jul 13 - 1; Sep 28 - 2; **12** - Aug 30 & Sep 12

Northern Goshawk: S: May 9 - 1; F: Aug 18 - 2; Sep 23 - 1; 3 - Sep 21
Broad-winged Hawk: F: Jul 14 - 1
Red-tailed Hawk: S: Apr 19 - 1; May 26 - 1; 2 - May 6 & 19; F: Aug 18 - 1; Sep 9 - 2
Rough-legged Hawk: S: Apr 23 - 1; May 7 - 1; 1 - 2 dates
American Kestrel: S: May 13 - 2; Apr 21 - 1
Merlin: S: Apr 20 - 1; Jun 6 - 1; 2 - May 7 & 22; F: Jul 16 - 1; Sep 9 - 1; 1 - several dates
Peregrine Falcon: S: May 8 - 1; May 20 - 1; F: Sep 4 - 1
Ruffed Grouse: S: Apr 20 - 1; Jun 7 - 1; 3 - 3 dates; F: Sep 14 - 1; Sep 30 - 2; 4 - Sep 25 & 29
Sandhill Crane: S: Apr 24 - 6; May 18 - 30; 495 - May 3; F: Sep 3 - 1; Sep 20 - 20; 779 - Sep 9
Killdeer: S: Apr 19 - 1; Jun 10 - 1; 7 - May 12; F: Jul 21 - 1; Aug 29 - 1
Greater Yellowlegs: S: May 2 - 7; Jun 4 - 1; 31 - May 12; F: Aug 26 - 2; Sept 25 - 3
Lesser Yellowlegs: S: May 12 - 76; May 21 - 3
Solitary Sandpiper: S: May 11 - 2; May 26 - 1; 4 - May 12; F: Aug 12 - 2
Spotted Sandpiper: S: May 13 - 1; Jun 10 - 3; 11 - May 29; F: Jul 14 - 2; Sep 17 - 2; 6 - Set 13
Least Sandpiper: F: Aug 18 - 5
Common Snipe: S: May 7 - 1; Jun 4 - 1; 1 - 7 dates
Bonaparte's Gull: S: Apr 30 - 25; May 2 - 10
Franklin's Gull: S: Apr 30 - 50; May 28 - 30; 306 - May 11; F: Jul 20 - 6; Sep 11 - 1; 1624 - Aug 5
Mew Gull: S: May 7 - 4; May 16 - 6; 8 - May 8
Ring-billed Gull: S: Apr 26 - 4; Jun 7 - 1; 30 - May 8; F: Jul 12 - 16; Sep 30 - 1; 172 - Jul 20
California Gull: S: May 12 - 1; F: Jul 12 - 2
Herring Gull: S: Apr 24 - 2; Jun 6 - 3; 14 - Apr 30; F: Jul 20 - 1; Aug 27 - 1; 2 - Aug 5 & 6
Caspian Tern: F: Jul 23 - 1; Aug 20 - 1
Common Tern: S: May 19 - 4; Jun 5 - 2; 20 - May 27; F: Jul 25 - 8
Forster's Tern: S: May 24 - 5; Jun 10 - 5; 8 - Jun 8; F: Jul 14 - 3; Sep 26 - 8; 11 - Jul 24
Mourning Dove: S: May 11 - 1; Jun 5 - 1; 1 - 4 dates
Long-eared Owl: S: May 3 - 1; first record for the LSLBO
Barred Owl: S: May 29 - 1
Northern Pygmy Owl: F: Sep 23 - 1
Common Nighthawk: F: Sep 3 - 3
Ruby-throated Hummingbird: F: Jul 16 - 1; Aug 2 - 1; 1 - 4 dates
Belted Kingfisher: S: May 11 - 1; Jun 2 - 1; 2 - May 12 & 21; F: Aug 16 - 1; Aug 20 - 1; 1 - 4 dates
Yellow-bellied Sapsucker: S: May 11 - 2; Jun 10 - 1; 12 - May 12; F: Jul 12 - 2; Sep 14 - 1; 5 - Jul 23
Downy Woodpecker: S: Apr 26 - 1; Jun 4 - 1; 2 - May 4; F: Jul 25 - 1; Sep 30 - 1; 2 - Sep 26
Hairy Woodpecker: S: Apr 21 - 1; Jun 5 - 1; 2 - May 19; F: Jul 29 - 1; Sep 30 - 1; 1 - several dates
Three-toed Woodpecker: F: Sep 14 - 1
Northern Flicker: S: Apr 24 - 1; Jun 10 - 1; 31 - May 2; F: Jul 19 - 1; Sep 14 - 1; 1 - several dates
Pileated Woodpecker: S: Apr 19 - 1; Jun 10 - 1; 2 - Apr 26 & May 2; F: Jul 13 - 1; Sep 27 - 1; 1 - many dates
Olive-sided Flycatcher: F: Jul 31 - 1
Western Wood-Pewee: S: May 28 - 1
Yellow-bellied Flycatcher: S: Jun 10 - 2; F: Jul 13 - 1; Aug 23 - 1; 2 - Aug 13
Alder Flycatcher: S: Jun 1 - 2; Jun 10 - 7; 9 - Jun 9; F: Jul 13 - 2; Sep 14 - 1; 15 - Aug 14
Least Flycatcher: S: May 10 - 2; Jun 9 - 1; 12 - Jun 1; F: Jul 13 - 2; Sep 11 - 1; 9 - Aug 4
Eastern Phoebe: S: Apr 24 - 1; Jun 6 - 3; 4 - May 11; F: Jul 29 - 1; Aug 11 - 1
Say's Phoebe: S: May 3 - 1; May 21 - 1; 4 - May 12; F: Aug 12 - 1; Sep 14 - 1; 1 - 3 dates
Eastern Kingbird: S: May 24 - 1; Jun 10 - 1; F: Aug 12 - 4; Sep 17 - 1; 5 - Aug 16
Blue-headed Vireo: S: May 15 - 1; May 29 - 1; 1 - 3 dates; F: Aug 10 - 1; Sep 9 - 2
Warbling Vireo: F: Jul 14 - 1; Aug 4 - 1; 1 - 3 dates

Philadelphia Vireo: S: Jun 9 - 1; Jun 10 - 1; F: Aug 13 - 1; Sep 1 - 1
Red-eyed Vireo: S: Jun 1 - 2; Jun 10 - 4; 6 - Jun 5 & 6: F: Jul 12 - 1; Sep 14 - 1; 10 - Jul 23
Gray Jay: F: Sept 26 - 1
Blue Jay: S: May 10 - 2; May 27 - 1; 10 - May 12: F: Aug 2 - 1; Sep 29 - 1; 3 - Sep 16
American Magpie: S: May 2 - 1; Jun 7 - 1; 9 - Jun 4: F: Jul 25 - 1; Sep 30 - 1; 10 - Sep 9
American Crow: S: Apr 19 - 2; Jun 10 - 4; 18 - May 10: F: Jul 12 - 4; Sep 4 - 1; 42 - Aug 25
Common Raven: S: Apr 19 - 5; Jun 10 - 1: F: Jul 12 - 4; Sep 30 - 1; 9 - Sep 5
Tree Swallow: S: Apr 24 - 1; Jun 4 - 1; 512 - May 12: F: Jul 28 - 2; Aug 12 - 61; 139 - Aug 5
Bank Swallow: S: May 11 - 60; Jun 6 - 1; 60 - May 11: F: Jul 29 - 3
Cliff Swallow: F: Aug 18 - 3
Barn Swallow: S: May 14 - 1; May 25 - 2; 6 - May 17: F: Jul 31 - 4; Sep 11 - 1; 4 - Jul 31 & Aug 4
Black-capped Chickadee: S: Apr 19 - 2; Jun 10 - 1: F: Jul 12 - 6; Sep 30 - 2; 17 - Sep 13
Boreal Chickadee: F: Aug 18 - 1; Sep 29 - 1; 3 - Sep 16
Red-breasted Nuthatch: S: Apr 19 - 1; Jun 10 - 1; 2 - 3 dates: F: Jul 13 - 1; Sep 24 - 2; 4 - Aug 13
White-breasted Nuthatch: F: Sep 23 - 3
House Wren: S: May 21 - 1; Jun 3 - 1; 1 - 3 dates: F: Aug 4 - 1; Aug 11 - 1
Winter Wren: S: Apr 30 - 1; Jun 7 - 1; 1 - several dates: F: Jul 13 - 1; Aug 15 - 1; 1 - 10 dates
Marsh Wren: S: May 12 - 1
Golden-crowned Kinglet: F: Sep 8 - 2
Ruby-crowned Kinglet: S: Apr 19 - 2; Jun 10 - 2; 7 - Apr 26: F: Jul 13 - 1; Sep 29 - 1; 9 - Sep 16
Gray-cheeked Thrush: S: May 11 - 2; May 25 - 2; 6 - May 21: F: Sep 3 - 1; Sep 20 - 1; 1 - 3 dates
Swainson's Thrush: S: May 11 - 5; Jun 10 - 3; 192 - May 21: F: Jul 12 - 1; Sep 30 - 1; 20 - Aug 18
Hermit Thrush: S: May 4 - 1; Jun 5 - 1; 19 - May 12: F: Aug 9 - 2; Sep 30 - 1; 3 - Sep 20
American Robin: S: Apr 19 - 24; Jun 10 - 3; 186 - May 12: F: Jul 13 - 2; Sep 30 - 4; 20 - Sep 23
American Pipit: S: Apr 26 - 15; May 23 - 2: F: Aug 28 - 1; Sep 30 - 6; 37 - Sep 17
Cedar Waxwing: S: Jun 1 - 1; Jun 10 - 26; 100 - Jun 5: F: Jul 12 - 5; Sep 29 - 2; 102 - Aug 30
Tennessee Warbler: S: May 13 - 2; Jun 10 - 2; 74 - May 27: F: Jul 13 - 2; Sep 7 - 1; 21 - Aug 1
Orange-crowned Warbler: S: May 3 - 1; May 24 - 2; 28 - May 12: F: Aug 26 - 1; Sep 29 - 1; 30 - Sep 21
Yellow Warbler: S: May 10 - 3; Jun 10 - 10; 27 - Jun 3: F: Jul 12 - 5; Sep 9 - 1; 30 - Jul 15
Magnolia Warbler: S: Jun 1 - 1; Jun 10 - 3; 4 - Jun 5 & 6: F: Jul 12 - 1; Sep 21 - 1; 2 - 8 dates
Chestnut-sided Warbler: S: Jun 4 - 1
Cape May Warbler: F: Aug 1 - 1; Aug 26 - 1
Yellow-rumped Warbler: S: Apr 20 - 1; Jun 10 - 5; 345 - May 18: F: Jul 13 - 35; Sep 23 - 21; 527 - Sep 14
Black-throated Green Warbler: S: Jun 4 - 1: F: Aug 1 - 1; Aug 13 - 1; 2 - Aug 2
Palm Warbler: S: May 11 - 1; Jun 3 - 1; 6 - May 13: F: Sep 6 - 4; Sept 16 - 1
Bay-breasted Warbler: F: Aug 26 - 3
Blackpoll Warbler: S: May 12 - 1; Jun 4 - 1; 6 - Jun 1: F: Jul 28 - 2; Sep 9 - 1; 7 - Sep 3
Black-and-white Warbler: S: May 8 - 1; Jun 10 - 3; 7 - Jun 7: F: Jul 13 - 5; Aug 26 - 5; 5 - 5 dates
American Redstart: S: May 25 - 1; Jun 10 - 6; 47 - Jun 3: F: Jul 12 - 20; Sep 23 - 1; 27 - Jul 23
Ovenbird: S: May 20 - 1; Jun 10 - 3; 10 - Jun 1 & 3: F: Jul 12 - 2; Sep 10 - 1; 9 - Aug 27
Northern Waterthrush: S: May 11 - 2; Jun 4 - 1; 9 - May 21 & 22: F: Jul 15 - 1; Sep 4 - 3; 8 - Aug 8
Connecticut Warbler: F: Aug 12 - 1
Mourning Warbler: S: Jun 3 - 3; Jun 10 - 3: F: Jul 12 - 1; Aug 26 - 2; 2 - 4 dates
Common Yellowthroat: S: May 25 - 1; Jun 9 - 2; 8 - Jun 6: F: Jul 13 - 1; Sep 14 - 1; 5 - Jul 23 & Aug 27
Wilson's Warbler: S: Jun 4 - 1: F: Jul 30 - 1; Sep 26 - 1; 3 - Aug 26
Canada Warbler: S: May 31 - 1; Jun 10 - 2; 15 - Jun 5: F: Jul 12 - 1; Sep 3 - 1; 11 - Aug 4
Western Tanager: S: May 17 - 1; Jun 4 - 1; 1 - several dates: F: Jul 22 - 2; Aug 30 - 1; 14 - Aug 14
American Tree Sparrow: S: Apr 20 - 2; May 13 - 1; 9 - May 1: F: Sep 24 - 1; Sep 30 - 5; 8 - Sep 29

Chipping Sparrow: May 10 - 1; Jun 10 - 4; 1353 - May 12: F: Jul 13 - 3; Aug 28 - 2; 108 - Aug 5
Clay-colored Sparrow: S: May 16 - 1; Jun 10 - 8; 51 - May 27: F: Jul 13 - 5; Sep 12 - 1; 6 - Jul 14 & 23
Vesper Sparrow: S: May 24 - 1; Jun 5 - 1; 1 - 3 dates
Savannah Sparrow: S: May 1 - 1; May 30 - 1; 8 - May 19: F: Aug 18 - 1; Aug 29 - 1
Le Conte's Sparrow: S: May 12 - 10; May 24 - 2: F: Aug 18 - 1; Sep 3 - 1; 1 - 4 dates
Fox Sparrow: S: May 5 - 1; May 13 - 1; : F: Sep 16 - 1; Sep 29 - 1; 1 - 5 dates
Song Sparrow: S: Apr 21 - 1; Jun 10 - 2; 8 - May 21: F: Jul 12 - 1; Aug 29 - 2; 8 - Jul 17
Lincoln's Sparrow: S: May 11 - 1; Jun 10 - 2; 10 - May 12: F: Jul 15 - 1; Sep 23 - 1; 9 - Jul 29
Swamp Sparrow: S: May 12 - 2; May 23 - 1: F: Aug 14 - 1; Sep 3 - 2
White-throated Sparrow: S: May 11 - 1; Jun 10 - 8; 31 - May 21: F: Jul 12 - 4; Sep 25 - 1; 12 - Aug 16
White-crowned Sparrow: S: May 8 - 3; May 28 - 1; 4 - May 13: F: Sep 4 - 1; Sep 27 - 1; 3 - 5 dates
Harris's Sparrow: S: May 12 - 1
Dark-eyed Junco: S: Apr 20 - 1; May 12 - 1; 7 - May 1: F: Aug 26 - 1; Sep 30 - 7; 23 - Sep 29
Lapland Longspur: S: May 12 - 4: F: Sep 9 - 2; Sep 23 - 2; 35 - Sep 14
Lazuli Bunting: S: Jun 6 - 1; first record for the LSLBO
Snow Bunting: S: May 6 - 6; May 9 - 2
Rose-breasted Grosbeak: S: May 12 - 3; Jun 10 - 1; 15 - May 27: F: Jul 28 - 3; Sep 4 - 1; 13 - Aug 11
Red-winged Blackbird: S: Apr 20 - 2; Jun 10 - 4; 163 - May 12: F: Jul 24 - 11; Aug 16 - 32; 150 - Jul 28
Yellow-headed Blackbird: S: May 27 - 1; Jun 3 - 6
Rusty Blackbird: S: Apr 26 - 6; May 19 - 2; 71 - May 12: F: Aug 29 - 16
Common Grackle: S: Apr 19 - 1; Jun 1 - 4; 4 - Apr 25 & Jun 1: F: Aug 2 - 1; Sep 23 - 1; 12 - Aug 29
Brown-headed Cowbird: S: Apr 22 - 2; Jun 9 - 1; 30 - May 18; F: Jul 16 - 3
Baltimore Oriole: S: Jun 1 - 2; Jun 2 - 1
Purple Finch: S: Apr 21 - 1; May 13 - 1; 15 - Apr 26: F: Aug 17 - 1; Aug 25 - 1; 5 - Aug 19
Pine Siskin: S: Apr 20 - 156; Jun 2 - 3: F: Jul 13 - 2; Sep 30 - 2; 182 - Aug 12
American Goldfinch: S: May 1 - 1; Jun 10 - 2
Evening Grosbeak: S: Apr 21 - 1; Jun 5 - 1; 14 - Apr 23: F: Jul 23 - 6; Aug 27 - 1; 13 - Aug 13

Appendix II. Banding Totals at LSLBO in 2004.

Species	Spring Migration	MAPS	Fall Migration	Total
Swainson's Thrush	280	11	200	491
American Redstart	64	31	169	264
Yellow-rumped Warbler	81	12	79	172
Tennessee Warbler	55	41	57	153
Yellow Warbler	53	1	85	139
Ovenbird	21	18	101	140
White-throated Sparrow	47	20	42	109
Chipping Sparrow	97		11	108
Alder Flycatcher	19		84	103
Orange-crowned Warbler	36	1	61	98
Canada Warbler	23	18	53	94
Clay-colored Sparrow	72	1	8	81
Northern Waterthrush	36		31	67
Least Flycatcher	25	7	35	67
Black-and-White Warbler	16	4	41	61
Lincoln's Sparrow	21		31	52
Mourning Warbler	13	6	18	37
Magnolia Warbler	11	3	20	34
Sharp-shinned Hawk	3		27	30
Ruby-crowned Kinglet	16	1	16	33
Black-capped Chickadee		7	23	30
Red-eyed Vireo	5	7	19	31
Hermit Thrush	17	1	12	30
Gray-cheeked Thrush	23		3	26
Common Yellowthroat	10	1	14	25
Blackpoll Warbler	8	1	14	23
Slate-colored Junco	7		16	23
Rose-breasted Grosbeak	4	2	16	22
Wilson's Warbler			20	20
Song Sparrow	7		9	16
Gambel's White-crowned Sparrow	7		8	15
Western Tanager		1	14	15
Yellow-bellied Sapsucker	5	2	7	14
American Robin	8	3	1	12
American Tree Sparrow	6		2	8
Eastern Phoebe	8			8
Swamp Sparrow	4		4	8
Savannah Sparrow	6		1	7
Western Palm Warbler	5		2	7
Yellow-bellied Flycatcher	2		5	7

Blue Jay	4		2	6
Blue-headed Vireo		2	4	6
Cedar Waxwing	1		5	6
Fox Sparrow	1		4	5
Bay-breasted Warbler		1	3	4
Black-throated Green Warbler		2	1	3
Pine Siskin			3	3
House Wren	1		1	2
Le Conte's Sparrow	1		1	2
Philadelphia Vireo	1	1		2
Red-breasted Nuthatch			2	2
Boreal Chickadee			1	1
Cape May Warbler			1	1
Chestnut-sided Warbler	1			1
Common Grackle			1	1
Connecticut Warbler			1	1
Hairy Woodpecker		1		1
Harris's Sparrow	1			1
Lazuli Bunting	1			1
Northern Pygmy-Owl			1	1
Purple Finch			1	1
Warbling Vireo			1	1
Yellow-shafted Flicker			1	1
Ruffed Grouse				0
Total number of birds banded	1133	207	1393	2733
Total number of species banded	46	29	57	64