Lesser Slave Lake Bird Observatory 2004 Annual Report



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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 Phoebes, 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 Phoebes, Hermit Thrushes, Orange Crowned Warblers, Savannah Sparrows and Fox Sparrows. May 1st brought the season high of Greater White-fronted Geese (1889), Amercian 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 Phoebes (4), Hermit Thrushes (19), Tree Swallows (512), Yellow-bellied Sapsuckers (12), Lincoln's Sparrows (10), Redwinged 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 27^{th} . 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 23^{rd} . The last Orange-crowned Warbler was spotted on the 24^{th} . A Barred Owl greeted the banders at the crack of dawn on May 29^{th} .

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 22^{nd} 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 28^{th} 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 23^{rd} was the top day for American Redstarts (27) for fall. The first Caspian Tern of the year was observed on the July 23^{rd} . Activity on the lake was still limited to a few individuals of Common Loons, Mallards and Common Goldeneyes. July 31^{st} had the season's only sighting of an Olive-sided Flycatcher. The first Wilson's Warbler was observed on July 30^{th} ; 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 Redwinged 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 Graycheeked 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 a				A) MA	APS s								
Species	2004 Captures				Previous Years' Total Captures					ires			
	Band	Recap	Unband	'94	' 95	' 96	'97	'98	'99	'00	'01	'02	'03
Yellow-bellied	1												
Sapsucker													
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