



**Beaverhill Bird Observatory
Spring Report 2008**

by

Robin Pimm

Migration Monitoring

Migration Monitoring was conducted from May 2nd to June 9th 2008. We captured 38 species this year which is similar to other years with comparable net hours. Our capture rate was 20.9 which was down from last year but higher than recent previous years (Table 1, Fig 1). We captured a total of 382 birds, 288 of which were banded (Table 2).

The top 5 species captured represent 54.5% of the total birds caught and were (with their respective numbers caught): Least Flycatcher (84), Yellow Warbler (37), Brown-headed Cowbird (35), Myrtle Warbler (27), and Swainson's Thrush (25). This is very different from previous years as House Wrens were in the top 5 species for the last 2 years, and none were caught this year, and Brown-headed Cowbirds have steadily been increasing their capture rate over the years and replaced Clay-colored Sparrows in the top 5 species captured this year. Some less common species that wandered into our nets this spring include a Sharp-Shinned Hawk, a Wilson's Warbler, a Northern Waterthrush, a Mourning Warbler and 2 Canada Warblers.



Mating pair of Rose-Breasted Grosbeaks caught together



Mourning Warbler

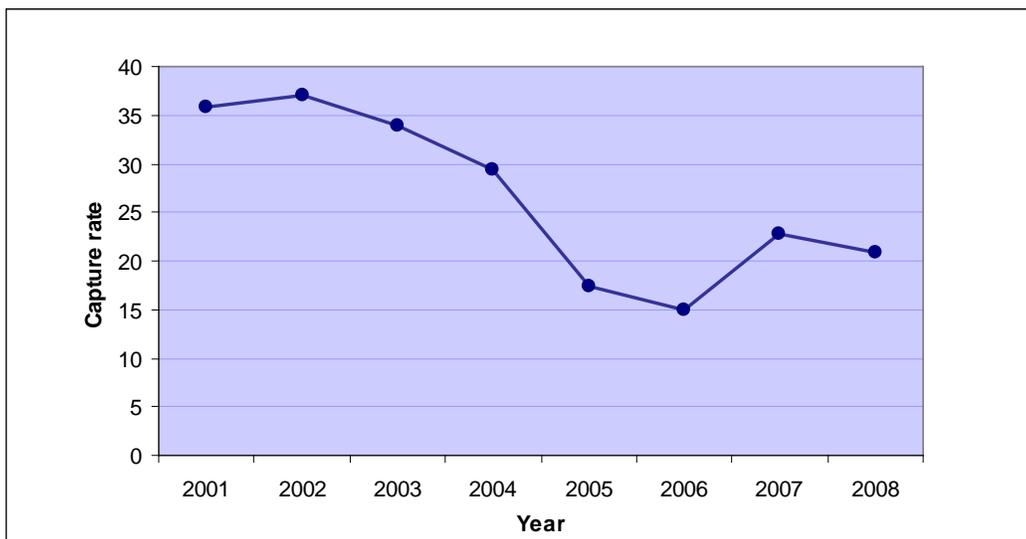
We banded a total of 1828 net hours this year out of a possible 3042. We did not band due to weather on 14 days; nets were shut down in rainy or windy conditions, days off taken by staff (8 days), and a licensed bander not being available. Also the aerial net (43x) top line was broken for some of the spring banding season and this too brought our hours down.

A census was carried out daily and observations were documented throughout the day to monitor birds in the area that were not caught in the nets. Notable species documented from this include Great Blue Herons, waterfowl, raptors, Ruffed Grouse, Sandhill Cranes, shorebirds, gulls, kinglets, Purple Finches, Mourning Doves, and Northern Flickers. Other wildlife also calls the natural area of the BBO home, and many mule deer, elk, white-tailed deer, flying squirrels, wood frogs, coyotes, and weasels were seen or heard around the area.



Table 1: Spring Migration Monitoring 2008 results compared to previous years at the BBO								
Year	2001	2002	2003	2004	2005	2006	2007	2008
Birds Captured	629	950	754	532	276	242	408	371
Birds Banded	472	740	546	424	196	169	318	288
Net Hours	1755.5	2568.75	2218.75	1809	1569.5	1615.25	1812.85	1867.50
Capture rate (birds/100NH)	35.83	36.98	33.98	29.41	17.46	14.98	22.84	20.90
Species Captured	39	55	44	38	32	31	44	38

Fig 1: Comparison of capture rates during Spring Migration Monitoring at the BBO



A less common Wilson's Warbler



A Sharp-shinned Hawk



A common Myrtle Warbler

Table 2: Birds caught in mist nets during spring Migration Monitoring at the BBO

Species	Banded	Recovery ¹	Return ²	Foreign ³	Other ⁴	Total
Alder Flycatcher	6	0	0	0	0	6
American Goldfinch	6	0	0	0	0	6
American Robin	5	0	0	0	0	5
American Tree Sparrow	8	1	0	0	0	9
Baltimore Oriole	6	5	0	0	0	11
Black-and-White Warbler	3	0	0	0	0	3
Black-capped Chickadee	4	4	2	0	0	10
Blackpoll Warbler	3	0	0	0	0	3
Brown-headed Cowbird	19	14	1	0	1	35
Canada Warbler	2	0	0	0	0	2
Chipping Sparrow	14	1	0	0	0	15
Clay-colored Sparrow	14	2	0	0	3	19
Gray Catbird	2	0	0	0	0	2
Hairy Woodpecker	1	0	0	0	0	1
Hermit Thrush	5	0	1	0	0	6
Least Flycatcher	58	21	4	0	1	84
Lincoln's Sparrow	4	0	0	0	0	4
Mourning Warbler	1	0	0	0	0	1
Myrtle Warbler	26	0	0	0	1	27
Northern Waterthrush	1	0	0	0	0	1
Orange-crowned Warbler	5	0	0	0	0	5
Ovenbird	1	0	0	0	0	1
Purple Finch	3	0	0	0	0	3
Red-breasted Nuthatch	1	0	0	0	0	1
Rose-breasted Grosbeak	2	0	0	0	0	2
Savannah Sparrow	1	0	0	0	0	1
Sharp-shinned Hawk	1	0	0	0	0	1
Slate-colored Junco	12	0	0	0	0	12
Song Sparrow	5	1	0	0	0	6
Swainson's Thrush	25	0	0	0	0	25
Tennessee Warbler	1	0	0	0	0	1
Tree Swallow	5	0	0	0	0	5
Veery	0	0	4	0	0	4
Warbling Vireo	0	1	4	0	0	5
White-crowned Sparrow	4	0	0	0	0	4
White-throated Sparrow	16	1	0	0	1	18
Wilson's Warbler	1	0	0	0	0	1
Yellow Warbler	17	14	6	0	0	37
Total	288	65	22	0	7	382

Net Hours: 1828 NH

Capture Rate: 20.9 birds/ 100 NH

- 1 Banded recently (within 90 days) at the BBO.
Banded at the BBO > 90 days prior to recapture
- 2 (e.g. in a previous year).
- 3 Banded at a location other than the BBO.
Caught in a mist-net but not banded (e.g. escaped net).
- 4

Nest Site Banding

The BBO staff was accompanied this year by Shern Kier, a student from Cornell University, who came to monitor the Tree Swallow grid. He collected data almost continuously from when he arrived on June 3 to beyond the spring season. Before Shern arrived, we visited the swallow grid 4 times to check up on the nests and band any adults we could capture. Some wren nests were encountered and subsequently removed if there were no eggs. The first swallow eggs were documented on May 26th, and by the end of the spring season, 21 birds were banded and 15 recaps were documented (none of which were banded this year).

We also monitored the bluebird trail and found three Mountain bluebird and ten Tree Swallow nests. Most had young and/or eggs by June 3rd, but we did not band any of these birds until after the Spring season. Around the natural area we were only able to find two Yellow Warbler nests by June 10th.

I was also fortunate enough to accompany Chuck Priestley to Saw-whet owl nests to band four young and two adult owls.



Shern Kier with Tree Swallows



Female Mountain Bluebird on her nest



Chuck Priestley with a Saw-whet Owl

Other Work

The lab went through a makeover this spring with the porch being extended into the new banding lab and the old inside of the building being converted into a kitchen and living area exclusively.

This year the staff participated in “Plant Watch” recording leafing and flowering dates for various species of plant in order to compare these dates with previous years and between different locations.



Asters

Events

The BBO held the ever popular Big Birding Breakfast this year on May 31st, which was an excellent opportunity for the staff to flex their interpreting skills and show off the area to the diverse crowd that attended. We caught eight species and 27 birds in total, the most exciting of which was a very untimely Tree Sparrow which are usually all but finished migrating at the beginning of May. As usual Janos Kovac graced us all with a lovely crepe breakfast, and afterward many participants followed Chuck Priestley to check up on Saw-whet nest boxes in the area, unfortunately only getting to witness the cleaning out of said boxes with no birds or squirrels to put on a show.

Fifteen people from the NAIT Naturalist Club came out to see us band on May 27th which was a very successful day with 29 birds of eight species, and it was good to see that both skilled birdwatchers and beginners alike enjoyed the BBO.



Some people from the NAIT group and me, getting to relax

(Photo by Lisa Priestley)

Acknowledgements

Much of the events and banding at the BBO could not have happened without the dedication of its volunteers. We would like to thank Hedwig LanKau for volunteering at the station to help band, Shern Kier for all his work on the existing and new (thanks to him) swallow grid, Janos Kovac and James and Keegan Sheppard for helping at the Big Birding Breakfast, Chuck and Lisa Priestley for everything they do for us all season long, and Matt Hanneman, Katie Calon, Anna Daku, and Brent Daku for banding and running the station when the staff couldn't. The BBO couldn't run the same without you, and your contributions are greatly appreciated.

Finally I'd like to thank my head bander Jonathan Martin DeMoor for his encouragement, patience and dedication towards teaching me all I need to know.



The happy 2208 BBO
banders Robin Pimm and
Jonathan Martin-DeMoor

(Photo by Lisa Priestley)

* All photos by Robin Pimm unless otherwise specified



Summer Report 2008

by

Jonathan Martin-DeMoor

August 2008

Abstract

Three MAPS stations were operated by Beaverhill Bird Observatory staff (Jonathan Martin-DeMoor and Robin Pimm) from June 10th to July 31st. 219 birds were captured from 19 species, and 137 of these were banded. The overall capture rate of 24.33 birds per 100 net hours was higher than last year, though still lower than most previous years. Point count surveys were conducted and resulted in 1176 detections. Tree Swallow banding was conducted by a Cornell University researcher (Shern Kier) with the aid of observatory staff. Additional activities included monitoring Bluebird boxes, nest searching, and observations of other plant, mammal, and butterfly species.

MAPS Research Program

Monitoring Avian Productivity and Survivorship (MAPS) is a cooperative effort among banding agencies and individuals throughout North America to provide long-term data on population and demographic parameters for several species of land birds. Data on vital rates (productivity and survivorship) allow researchers to test whether population changes are the



result of changes in birth rates, death rates, or both. This data can be used to develop effective management and conservation plans and to evaluate implemented strategies. Habitat and regional-specific data on vital rates can be combined with local habitat assessments to allow identification of habitat conditions that result in population 'source' or population 'sink' dynamics (DeSante et al. 2007). Beaverhill Bird Observatory has been participating in the MAPS program since its pilot year, and now operates three stations (BLAB (est. 1989), PARK (est. 1996) and WEIR (est. 1994)) in the Beaverhill Natural Area each year.

Mist Netting Summary

Constant effort mist-netting is the main method of data collection for MAPS. Mist nets (12m long, 30mm mesh) were set up at sunrise and monitored for 6 hours for one morning at each station in each ten day period for the duration of the summer. Banding only occurred during standard weather conditions, with temperatures between 0°C and 27°C and wind speed less than 20 km/h, or Beaufort scale value of 3, described as leaves and twigs in constant motion.

900 hours of mist netting were conducted from 12 June to 22 July. This represents 100% of the possible effort for the MAPS period. No net hours were lost due to weather or other causes, therefore there were no net hours that were made up during the period.

219 birds from 19 species were captured during the MAPS season, of which 137 were banded. Appendix A provides details of all captures during the MAPS period, broken down by species, station and capture type. The most common species caught, by far, was the Least Flycatcher. Flycatchers



accounted for 145 captures, or 66.2% of the total. 88 Flycatchers were banded. The next most common captures were Brown-headed Cowbird (14, 6.4%), Hermit Thrush (12, 5.5%), Yellow Warbler (10, 4.6%) and Black-capped Chickadee (9, 4.1%). The total capture rate (24.33/100 net hours) was higher than last year, but still lower than 6 of the past 10 years. The jump in capture rate was mainly due to a large increase in captures at the PARK station, although all three stations saw an increase over last year. In addition, a more conservative definition of an “other” capture (unbanded birds) was used for the first time this year which, while reducing the apparent capture rate relative to previous years, aligns BBO more closely to the standard used at other observatories.

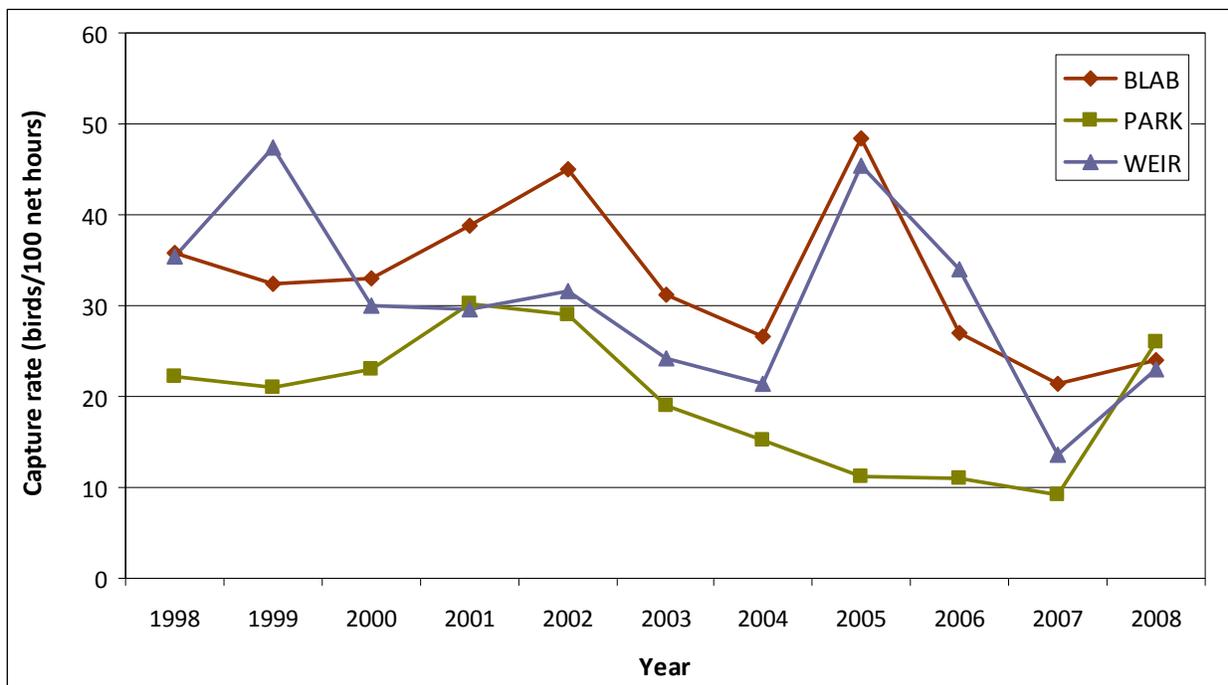


Figure 1. Comparison of MAPS capture rates at each station from 1998 to 2008.

BLAB Station

Banding at the BLAB station (Lat 52° 22' 50" Lon 112° 31' 39") occurred on June 12, 20 and 30, and July 12 and 20. No net hours were missed, for a total of 300nh. The habitat structure is described as young poplar, aspen, and willow adjacent to a riparian habitat¹. However, due to low lake levels the station is no longer adjacent to a riparian area, and no riparian species were captured.



72 birds from 10 species were caught, and 34 of these birds were banded. The station's capture rate was 24 birds per 100 net hours. Least Flycatchers accounted for 49 (68%) of the total number of captures. Veerys were the next most common capture (6, 8%) followed by Brown-headed Cowbirds (5, 7%). Appendix 1 provides a breakdown of all the captures at BLAB. A male Ruffed Grouse was observed drumming near the station during the first several rounds, and was eventually captured in a net. He was released

unbanded as the appropriate band size was not available.

PARK Station

Banding at the PARK station (Lat 53° 22' 34" Lon 112° 31' 45") occurred on June 14 and 24, and July 3, 14, and 22. No net hours were missed, for a total of 300nh. The habitat structure of the station is described as balsam poplar, aspen, and willow with no shrub layer¹. A shrub layer is beginning to fill in some areas of the station, mostly wild raspberry and snowberry, but overall the habitat description is still accurate.

78 birds from 9 species were caught, and 52 of these birds were banded. This represents the highest capture rate of the three MAPS stations at 26 birds per 100 net hours. Least Flycatchers were the most common capture (54, 69%), followed by Hermit Thrushes (8, 10%) and Brown-headed Cowbirds (6, 8%). Appendix 1 provides a breakdown of all the captures at PARK. The increased capture rate at PARK this year may be due to the use of four new 5-tier (rather than 4-tier) nets. These nets have much larger pockets when mounted on standard 10 foot poles, increasing the probability that a bird will get tangled rather than bouncing off the net. The PARK station was the first station to produced fledged, hatch-year birds—2 young Clay-colored Sparrows and 2 young Least Flycatchers were captured on the 14th of July.



WEIR Station

Banding at the WEIR station (Lat 53° 22' 48" Lon 112° 30' 19") occurred on June 13 and 23, and July 1, 12, and 21. No net hours were missed, for a total of 300nh. The habitat structure of the stations is described as balsam poplar, aspen and willow adjacent to a riparian habitat¹. There was sufficient water in Lister lake this year, although much lower than in previous years, for this description to remain accurate. However, no riparian species were captured.



69 birds from 13 species were caught, and 51 of these birds were banded. Although WEIR had the lowest capture rate of the three MAPS stations (23 birds per 100 net hours) it had the highest diversity of species caught. Least Flycatchers were still the most dominant capture (42, 61%), followed by Black-capped Chickadee (9, 13%) and Yellow Warbler (5, 7%). Appendix 1 provides a breakdown of all the captures at WEIR. An unexpected capture at the WEIR station was a female Ruby-throated Hummingbird. As a small enough band was not available, she was released unbanded.



Productivity

An important research objective of the MAPS program is to determine the avian productivity of the stations. By calculating the proportion captures were that juvenile birds by the total number of captures, an estimate of nesting success can be determined.

Overall productivity was 7.31% (16 juveniles/219 total) which is less than in recent years. Productivity was highest at the WEIR station (11.6%) followed by PARK (9.0%) and BLAB (1.4%). It is hard to say the cause of the difference in productivity between stations, especially because the differences are not consistent between years. It is also likely that the estimates are limited by the fairly low sample sizes.



Point Counts

Standard 10-minute point count surveys were conducted at 9 locations at each station on one morning during each of the five 10-day periods during the summer MAPS season. Although this data is no longer collected by MAPS program coordinators, they remain a valuable part of the long-term population monitoring of the Beaverhill Bird Observatory. Point count surveys are especially important for monitoring species that are less likely to be trapped in the mist nets.



1176 birds were detected during point count surveys from 53 species. The BLAB station had the most detections (504) with PARK and WEIR with nearly identical counts (335 and 337, respectively) (Figure 2). The number of detections tended to decrease during the course of the summer at all stations (Figure 2), as the male birds (who are most readily detected) started concentrating more on feeding newly hatched young rather than singing to attract mates and defend their territories.

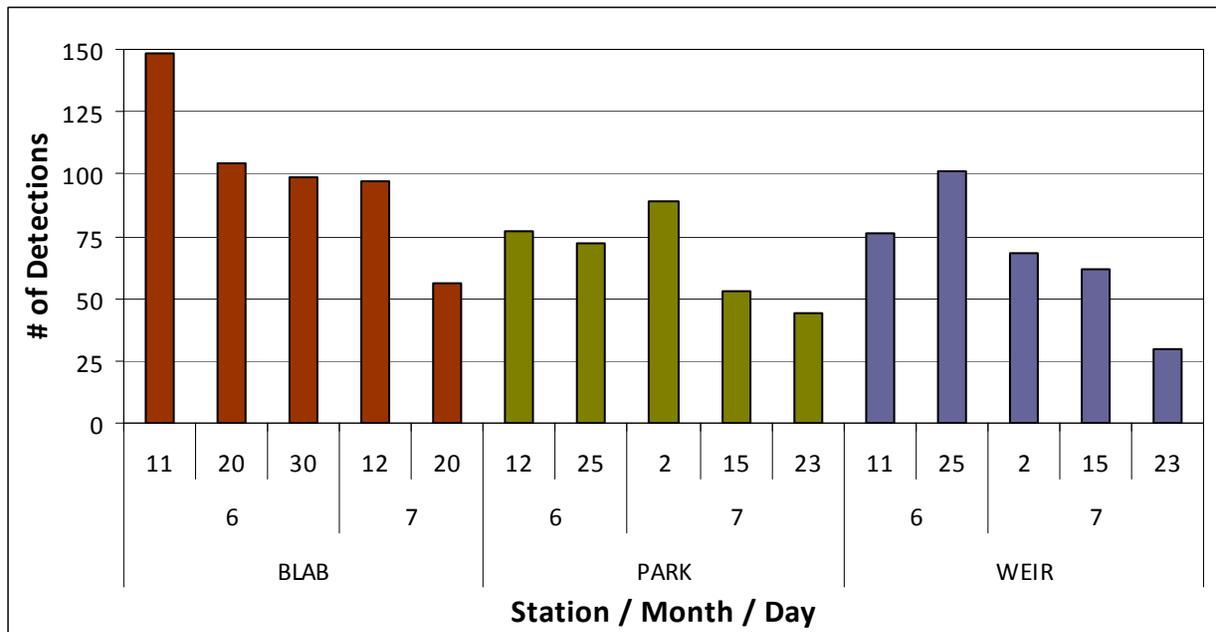


Figure 2. Total number of birds observed during point count surveys.

The species most often detected was the Least Flycatcher (385, 33%), followed by Yellow Warblers (133, 11%) and Warbling Vireos (106, 9%). The top ten species also include (in descending order) Brown-headed Cowbird, American Goldfinch, Black-capped Chickadee, House Wren, Tree Swallow, Baltimore Oriole, and Red-winged Blackbird (Figure 3)

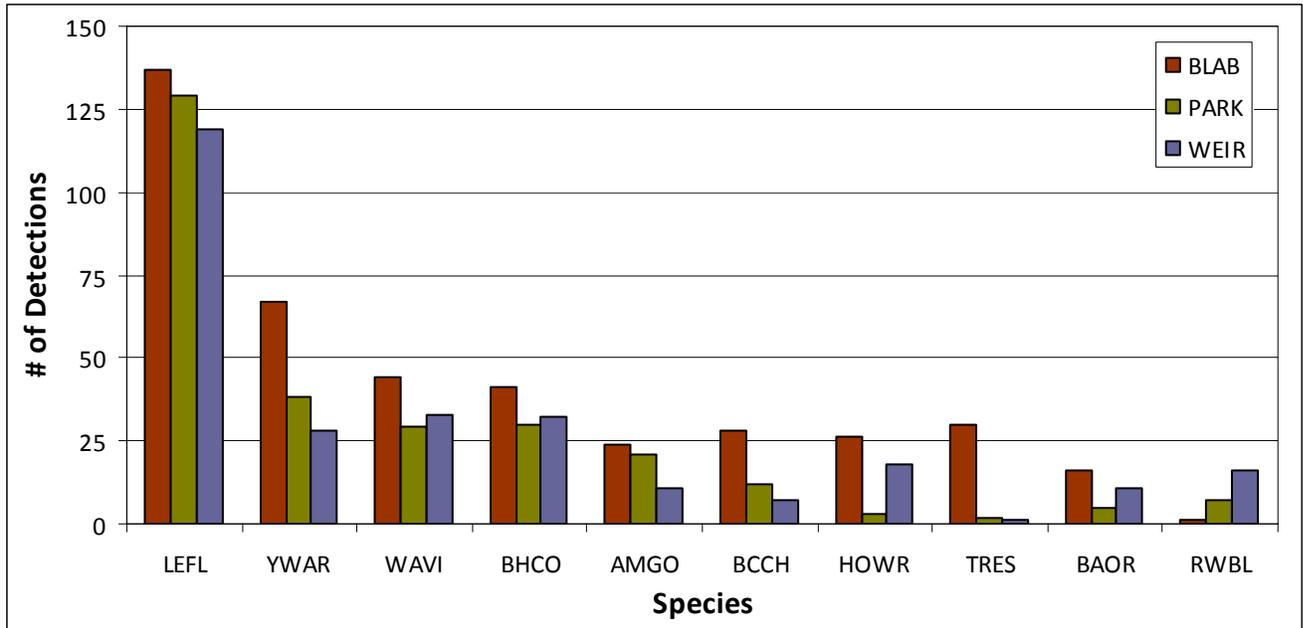


Figure 3. Top ten species detected during point count surveys, by station.

Nest Side Banding

Tree Swallow Grid

There are 49 nest boxes in the Tree Swallow grid, plus an additional one on the road to the lab. This year the primary responsibility for the Tree Swallow grid was taken over by Shern Kier of Cornell University. Shern

monitored the nest boxes daily from the beginning of June until all the young were fledged, following protocols and taking measurements consistent with the “Golandrinas” project coordinated by Cornell. BBO staff began banding adult swallows on May 12th and provided additional assistance to Shern throughout the summer.

In total, 125 Tree Swallows were banded including 45 juveniles banded from the boxes. Of the 50 available nest boxes, swallows were banded out of 45 of them, although only 26 boxes successfully raised young birds. The average clutch size was 5.6 and several boxes hatched 7 young birds.



Bluebird Boxes

Staff checked the nest boxes along the “Bluebird Trail” on four occasions during the summer (May 28, June 3 and 19, and July 7). Of the 18 boxes monitored only four had nesting



Mountain Bluebirds, and only three of these successfully fledged young. The rest of the boxes contained Tree Swallow nests (10), House Wrens (2), or remained empty (3). The three successful bluebird nests appear to have fledged five young birds each, while the fourth nest was started late (end of June) and abandoned with 4 unhatched eggs remaining. All of the young bluebirds from two of the boxes, and two of the five from the third box, were banded on the 20th of June.

Nest Searching

Seven natural nests were found within the Natural Area in the course of MAPS activities. A nest card was submitted to the Prairie Nest Records Scheme for each nest found in the Natural Area. This data is used to study breeding biology as well as monitor distributional changes and nesting success of birds in the prairie provinces. Table 1 provides details of the observed nest contents and outcomes. None of the nestlings were banded.



Species	Young	Cowbirds	Outcome
Yellow Warbler	5	1	success
Yellow Warbler	.	.	unknown
Ruby-throated Hummingbird	.	.	unknown
Yellow Warbler	2	1	failure
Clay-colored Sparrow	3	0	unknown
Savannah Sparrow	2	0	unknown
Hermit Thrush	2	1	failure

Table 1. Nest content and outcome for nests found during MAPS season.

Other Monitoring

Butterflies

Unfortunately, no systematic monitoring of butterfly species was conducted this year. Casual observations yielded a list of species as detailed in Table 2.

Species
SKIPPER sp.
Cdn. Tiger Swallowtail
Cabbage White
WHITE sp.
Clouded Sulphur
SULPHUR sp.
Greenish Blue
BLUE sp.
Gr. Spangled Fritillary
BOLORIA sp.
Northern Crescent
CRESCENT sp.
White Admiral
Northern Pearly Eye
Common Wood-Nymph
Alpine sp.



Table 2. List of butterfly species observed

Plant Watch

Staff continued to make note of first bloom and mid-bloom dates for several target plant species within the Natural Area. This data is compiled by the Federation of Alberta Naturalists and is used to track the effects of climate change across the province.



Other Activities

Regular data entry and report writing activities were completed as required, and general maintenance of the lab and bunkhouses performed. A new system for entering MAPS point count data was devised to allow for more detailed analyses in the future. Casual observations of many plant, mushroom, and mammal species were recorded. Cows that had wandered into the Natural Area occasionally needed to be chased out of the Swallow grid. Late in the summer staff spent time installing fresh new net poles for the migration monitoring nets.



Volunteers/Visitors



Visitors to the lab this summer were mainly family members of observatory staff. Brook and Doris Pimm, and Carolyn Cummings Pimm came out to watch the swallow banding. Joanna, Gabriel and Caleb DeMoor-Tannor, Lisa and Juniper Martin-DeMoor, and Michael DeMoor all came out one morning to catch the songbird banding at the BLAB station. Several other visitors dropped by the lab shortly as they walked their way through the Natural Area looking for birds, including two elderly gentlemen visiting from Vancouver who hiked all the way in to the lab (carrying spotting scopes and cameras) on a day where the temperature topped above 30 degrees!

Acknowledgements

Thanks are due again to the volunteer board of the BBO who keep the observatory running season after season. We are grateful to Shern Kier for all his efforts on the Tree Swallow grid this year—that's a lot of boxes to monitor by yourself. And finally, I'd like to thank Robin Pimm for her all her help throughout the season.



References

1. Institute for Bird Populations MAPS Website. <http://www.birdpop.org/maps.htm> accessed on August 30, 2008.
2. Peach W.J., Buckland ST, Baillie SR. 1996. The use of constant effort mist-netting to measure between-year changes in the abundance and productivity of common passerines. *Bird Study*. 43(2): 142-156.



Appendix 1

Species	WEIR				WEIR Total	PARK				PARK Total	BLAB				BLAB Total	Grand Total
	new	rep	ret	other		new	rep	ret	other		new	rep	ret	other		
Least Flycatcher	26	12	4		42	38	16			54	24	17	8		49	145
Brown-headed Cowbird	2		1		3	4	1	1		6	2	3			5	14
Hermit Thrush	1				1		5	3		8	1	1	1		3	12
Yellow Warbler	5				5	2				2	1	1	1		3	10
Black-capped Chickadee	9				9											9
Veery											1	2	3		6	6
Swainson's Thrush						3				3	1				1	4
American Goldfinch						1				1	2				2	3
Clay-colored Sparrow						2				2	1				1	3
Warbling Vireo	2				2						1				1	3
Baltimore Oriole	1				1	1				1						2
Alder Flycatcher	1				1											1
Downy Woodpecker	1				1											1
House Wren	1				1											1
Red-eyed Vireo						1				1						1
Song Sparrow	1				1											1
White-throated Sparrow	1				1											1
Ruffed Grouse														1	1	1
Ruby-throated Hummingbird				1	1											1
Grand Total	51	12	5	1	69	52	22	4	0	78	34	24	13	1	72	219

Details of captures during MAPS period broken down by station and capture type. New bands (new) are previously unbanded birds, Repeats (rep) are recaptured birds previously captured at BBO within the past 90 days, Returns (ret) are recaptured birds banded at BBO that have not been captured in the previous 90 days (i.e. last seen in a previous year), and Other (other) captures include birds that were caught in a mist net but not banded. There were no birds captured that had been banded at other stations.

Appendix 2

Rank	Spp Code	BLAB	PARK	WEIR	Grand Total
1	LEFL	137	129	119	385
2	YWAR	67	38	28	133
3	WAVI	44	29	33	106
4	BHCO	41	30	32	103
5	AMGO	24	21	11	56
6	BCCH	28	12	7	47
7	HOWR	26	3	18	47
8	TRES	30	2	1	33
9	BAOR	16	5	11	32
10	RWBL	1	7	16	24
11	UNDU	23			23
12	CAGO	20			20
13	CCSP	13		4	17
14	REVI	5	10		15
15	BLTE		3	10	13
16	CORA	1	3	7	11
17	HETH		10	1	11
18	AMRO		4	6	10
19	AMCR		7	1	8
20	RUGR	2	3	3	8
21	ALFL	3		2	5
22	COSN	1		4	5
23	HAWO	2	2	1	5
24	RBGU	2	3		5
25	OVEN	3		1	4
26	RTHU	4			4
27	WTSP			4	4
28	MODO	1	1	1	3
29	MYWA		3		3
30	AMRE			2	2
31	BHVI		2		2
32	COYE	1		1	2
33	DOWO	1		1	2
34	GRYE	1		1	2
35	MAWA			2	2
36	RBGR	1	1		2
37	RBNU		2		2
38	TEWA			2	2
39	VEER	2			2
40	YBSA		2		2
52	WEWP	1		1	2
41	AMCO			1	1
42	CEDW			1	1
43	CHSP	1			1
44	COWA		1		1
45	NOFL			1	1
46	PBGR			1	1
47	PUFI		1		1
48	SAVS	1			1
49	SORA			1	1
50	SSHA			1	1
51	SWTH		1		1
53	WILL	1			1
	Grand Total	504	335	337	1176

Details of point count detections during MAPS period, broken down by station. See <http://www.birdpop.org/AlphaCodes.htm> for explanation of the species codes.

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Fall Report 2008

by

Lisa Priestley

November 2008

Abstract

Songbird migration monitoring was conducted from August 1 through October 9, 2007. There were 892 birds captured (26.2 birds/100 net hours). Saw-whet owl nets were set from September 9 through November 11 on 47 days. We caught 131 saw-whet owls (capture rate of 19.6 owls/100 net hours). We participated the Forest Explorers event in Manning, which had over 200 kids come through the displays and listen to our presentation. The Steaks and Saw-whets event was a huge success again with over 100 people coming out to the lab to observe saw-whet owl banding. There were also a variety of visitors observing the songbird and saw-whet owl banding through the fall. We had two fires on the dry lakebed which missed our lab but burned the new fenceposts.



Photo of the first Pileated Woodpecker captured and banded at Beaverhill Bird Observatory.

All photos by Lisa Priestley unless otherwise noted.

Songbird Fall Migration Monitoring

Fall migration at Beaverhill Bird Observatory in 2008 was very low compared to previous years. Only 892 birds were captured, a capture rate of 26.2 birds/100 net hours (the lowest rate ever) (Table 1, Figure 1). A total of 3399.50 net hours were run, 62.3% of the total 5460 net hours that were possible. Four full days were missed due to poor weather (mostly wind), nine days were missed because no licensed bander was on site, and 7 days were missed for staff days off.

Table 1. 2008 fall songbird banding results from Beaverhill compared to previous nine years.

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Birds Captured	2745	1740	2095	1734	1315	975	1256	1969	1079	892
Birds Banded	2172	1433	1758	1464	1093	818	1089	1525	952	723
Net Hours	2533.50	2843.25	3678.5	4173.75	3818.25	3228.50	2787.25	3476.00	3534.00	3399.50
Capture rate (birds/100NH)	108.3	61.2	56.9	41.2	34.4	30.2	45.1	56.6	30.5	26.2
Species Captured	58	55	56	62	57	60	59	63	52*	58*

* includes Ruffed Grouse caught in net but not banded

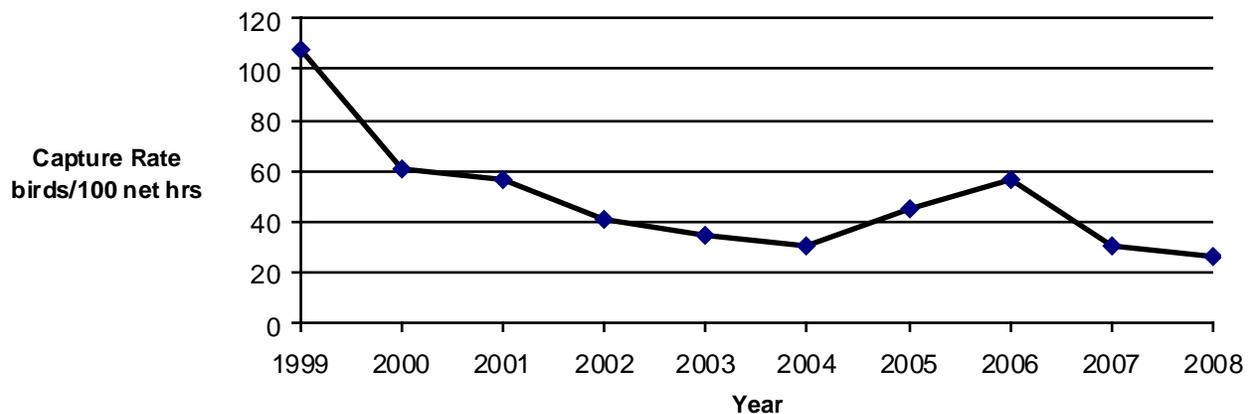


Figure 1. A comparison of capture rates (songbirds/100 net hours) between 1999 and 2008.

Top five species representing 69.1% of the captures were: Myrtle Warbler (171), Least Flycatcher (121), Black-capped Chickadee (114), Slate-colored Junco (109), and American Tree Sparrow (101). Unusual species captured in the fall of 2008 include: a Pileated Woodpecker, a Townsend's Solitaire, three Varied Thrushes, a Black-billed Magpie, and three White-breasted Nuthatches. The species diversity was quite average this year, 58 compared to the between 51 and 63 species captured in other years. There were very low numbers of many warbler species, for example only eleven Tennessee Warblers. There were 19 Red-breasted Nuthatches banded, a new record.



Table 2. Birds caught in mist nets at Beaverhill Bird Observatory fall 2008.

Species	Banded	Repeat	Return	Foreign	Other	Total
Alder Flycatcher	1	0	0	0	0	1
American Goldfinch	2	2	0	0	0	4
American Redstart	8	0	0	0	0	8
American Robin	2	1	0	0	0	3
American Tree Sparrow	91	6	0	0	4	101
Baltimore Oriole	1	0	0	0	0	1
Black-and-White Warbler	4	1	0	0	0	5
Black-billed Magpie	1	0	0	0	0	1
Bay-breasted Warbler	1	0	0	0	0	1
Black-capped Chickadee	49	58	3	0	4	114
Blue-headed Vireo	1	0	0	0	0	1
Blue Jay	1	0	0	0	0	1
Blackpoll Warbler	4	0	0	0	0	4
Brown Creeper	3	0	0	0	0	3
Canada Warbler	2	0	0	0	0	2
Clay-colored Sparrow	4	0	1	0	0	5
Cedar Waxwing	3	0	0	0	0	3
Chipping Sparrow	1	0	0	0	0	1
Cape May Warbler	1	0	0	0	0	1
Cooper's Hawk	0	0	0	0	1	1
Downy Woodpecker	6	4	0	0	0	10
Eastern Phoebe	1	0	0	0	0	1
Fox Sparrow	1	0	0	0	0	1
Hairy Woodpecker	0	1	1	0	0	2
Hermit Thrush	9	1	0	0	0	10
House Wren	2	0	0	0	0	2
Least Flycatcher	98	21	1	0	1	121
Lincoln's Sparrow	5	0	0	0	0	5
Magnolia Warbler	5	1	0	0	2	8
Myrtle Warbler	163	4	1	0	3	171
Northern Waterthrush	1	0	0	0	0	1
Orange-crowned Warbler	22	1	0	0	1	24
Oregon Junco	1	0	0	0	0	1
Ovenbird	13	1	0	0	1	15
Pileated Woodpecker	1	0	0	0	0	1
Purple Finch	2	1	0	0	0	3
Red-breasted Nuthatch	19	0	0	0	0	19
Red-eyed Vireo	3	0	0	0	0	3
Ruby-crowned Kinglet	8	0	0	0	1	9
Ruffed Grouse	0	0	0	0	2	2
Savannah Sparrow	1	0	0	0	0	1
Slate-colored Junco	84	15	0	0	10	109
Song Sparrow	4	1	0	0	0	5
Sharp-shinned Hawk	1	0	0	0	0	1
Swamp Sparrow	1	0	0	0	0	1
Swainson's Thrush	6	0	0	0	0	6
Tennessee Warbler	10	1	0	0	0	11
Thrush sp.	0	0	0	0	1	1
Townsend's Solitaire	1	1	0	0	0	2
Traill's Flycatcher	8	1	0	0	0	9
Varied Thrush	3	0	0	0	0	3
Warbling Vireo	4	1	1	0	0	6
White-breasted Nuthatch	3	1	0	0	0	4
White-crowned Sparrow	1	0	0	0	1	2
Western Wood-Pewee	1	0	0	0	0	1
Wilson's Warbler	3	0	0	0	1	4
White-throated Sparrow	10	0	0	0	0	10
Yellow-bellied Flycatcher	4	0	0	0	0	4
Yellow Warbler	38	4	0	0	0	42
Total	723	128	8	0	33	892

¹ Repeat indicates it was captured with the last 90 days at the bird observatory

² Return indicated it was captured over 90 days before at the bird observatory

³ Other Captures include escaped birds, released without banding

Raptor Traps

The raptor traps were not run full time in 2008 due to no raptor banding permitted staff being on site. We did set a Swedish Goshawk trap to target some Short-eared Owls that were in the area on ten nights while we were running Saw-whet Owls, but were unsuccessful in catching them.

Saw-whet Owl Migration

Beaverhill Bird Observatory

Northern Saw-whet Owl fall migration monitoring began on September 9 and was completed on November 11. A total of 47 days were covered amounting to 669.50 net hours. We caught 131 saw-whet owls (capture rate of 19.6 owls/100 net hours), the second lowest capture rate since we started in 2002 (Table 3, Figure 2). Feathers were collected for isotopes and sexing. Two Long-eared Owls were also captured, and up to five were observed around the lab and along Accipiter Alley. The resident male Great Horned Owl was heard many evenings and two Short-eared Owls flew over on a number of nights.

Table 3. Number of Northern Saw-whet Owls captured at Beaverhill Lake 2002-2008 (Sept 9- Nov 14).

Year	Number of Nights	Number of Net Hours	Number of Owls Captured	Number of Owls/ 100 Net Hours
2002	55	953.00	142	14.9
2003	48	753.00	150	19.9
2004	59	996.00	306	30.7
2005	37	600.00	135	22.5
2006	42	551.50	149	27.0
2007	50	675.00	184	27.3
2008	47	669.50	131	19.6
Total	--	--	1197	--

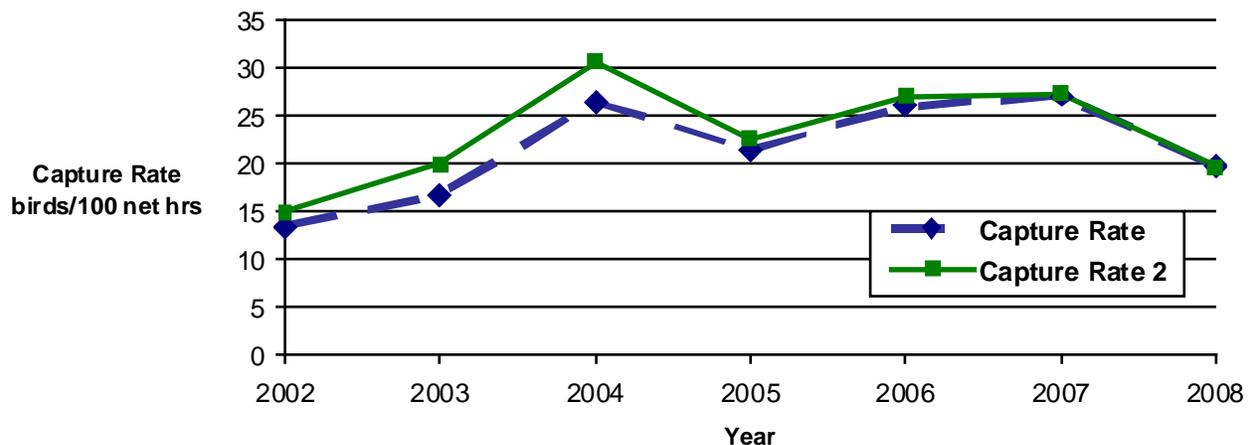


Figure 2. A comparison of capture rates (saw-whets/100 net hours) between 2002 and 2008: capture rate (all captures), capture rate 2 (September 9 to November 14 only).

Pletz Park

Hardy Pletz spent 17 nights (159 net hours) trapping for saw-whets at his acreage Pletz Park, south of Millet, and caught 60 saw-whet owls (37.7/100 net hour).

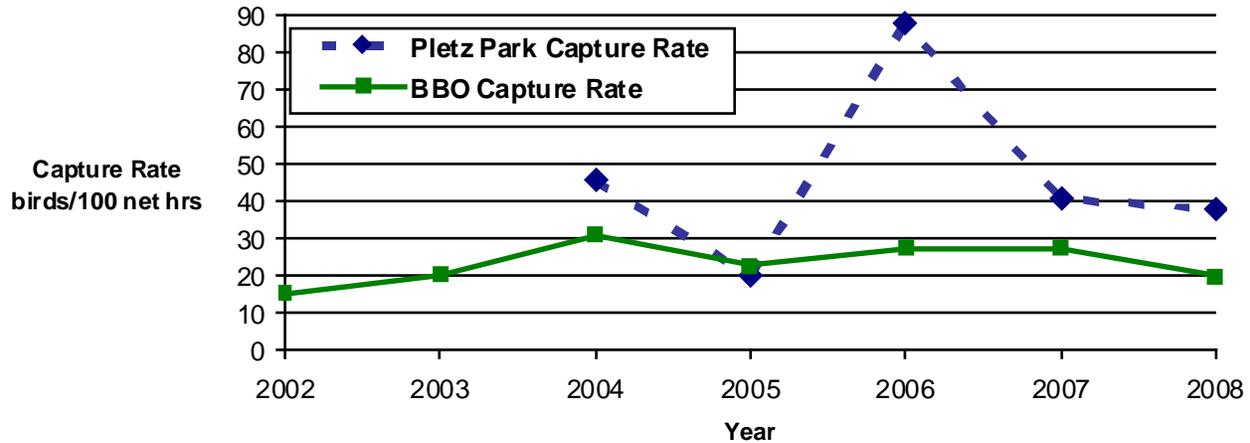


Figure 3. A comparison of saw-whet capture rates of Pletz Park and Beaverhill Bird Observatory.

Interpretation

On site tours were popular this fall. For songbirds we had 9 people from the Edmonton Nature Club and Red Deer River Naturalists, 20 people on another day from the Edmonton Nature Club, and two families with home school children. In the evenings we had 20 people from the University of Alberta Student Chapter of the Wildlife Society, two families with home school children, and four smaller groups of people. There were also 30 casual visitors to the Natural Area observing songbird and owl banding throughout the fall 2008 season.



One of the big highlights of the fall interpretation events was the annual Steaks and Saw-whets barbeque. This public event features a steak and chicken barbeque with all the fixings followed by netting of saw-whet owls. There were 42 and 54 visitors that came to the lab on a Friday and Saturday in early October. We were fortunate to catch owls on both nights for the visitors to see. We hope you will be able to make the event next year, tentative dates are October 2 and 3, remember to reserve early as we book up quickly.

Forest Explorers was attended in Manning, Alberta (north of Peace River). This two day event included representatives from various forestry and environment groups from northern and central Alberta. The BBO had a display set up about our programs with a focus on the Nocturnal Owl Survey. Over 200 high school and junior high children came through to view the displays. We also presented a talk to 95 kids, and the displays were open to the public on one evening.



Scientific Publications and Presentations

We had two publications this fall, one in the Blue Jay on the invasion of Short-eared Owls at Beaverhill Lake in 2005-06 and one in Nature Alberta on phenology of the Boreal and Saw-whet Owl based on nest record cards. We also attended the Raptor Research Foundation's annual meeting in Missoula Montana and presented a poster on Northern Saw-whet Owl band re-encounters from Alberta and Saskatchewan, and a talk on Short-eared Owl invasions in Alberta. BBO also supported Enrique Valdez (from Mexico) and his poster on the Clarion Burrowing Owl.

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Beaverhill Bird Observatory photos of fall 2008.

