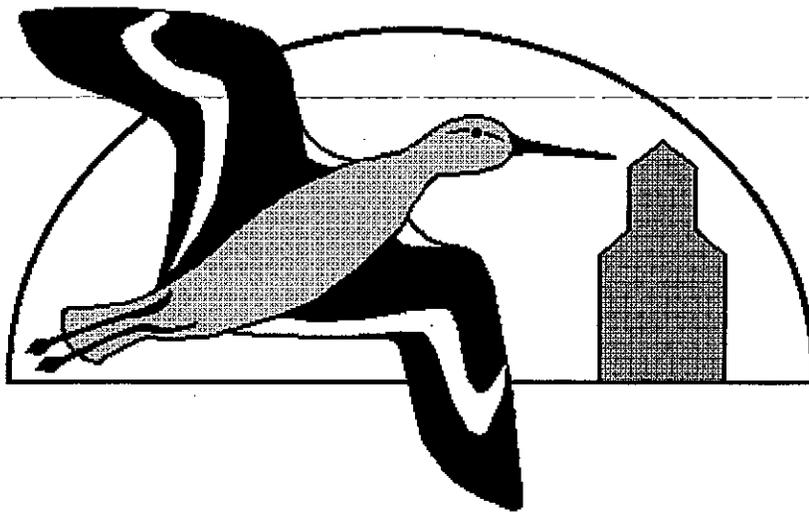


Beaverhill Bird Observatory

1993
Annual Report

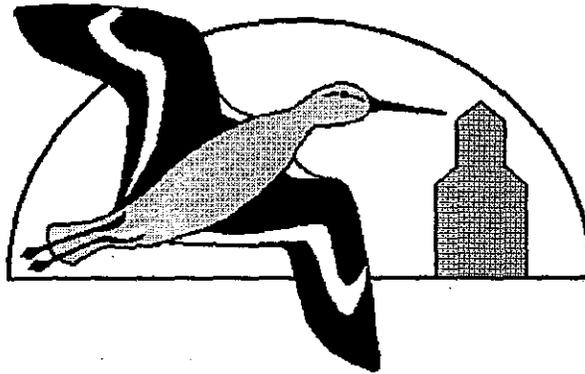


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Beaverhill Bird Observatory Society
P.O. Box 1418
Edmonton, AB

1995

Editor: Jason Duxbury

WANTED



BIRD SIGHTINGS FROM BEAVERHILL LAKE

AREA: SOUTH OF HWY 16; NORTH OF HWY 14
EAST OF ROAD 834; WEST OF NORTH/SOUTH ROAD THAT
RUNS DOWN EAST SIDE OF LAKE

YOU CAN HELP BY:

1. WRITING YOUR SIGHTINGS IN THE GUEST BOOK AT THE BBO LAB
2. PHONING YOUR SIGHTINGS OF THE DAY TO THE COMPILER
3. COLLECTING SEVERAL CHECKLISTS OVER A SEASON AND MAIL TO COMPILER.
4. LISTING YOUR SIGHTINGS IN THE NOTEBOOK PROVIDED AT ONE OF THE BIRD BLINDS (FRANCIS VIEWPOINT; WEIR)

**Send sightings to: Record Compiler, Beaverhill Bird Observatory,
P.O. Box 1418, Edmonton, AB T5J 2N5**

(ANNONYMOUS SIGHTINGS WILL NOT BE ACCEPTED, PLEASE LEAVE NAME, ADDRESS, PHONE NUMBER AND DATE OF SIGHTINGS)

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Introduction - Josh Bilyk

Beaverhill Lake is a large, shallow body of water situated in an aspen-parkland surrounding. Located near the town of Tofield and approximately 70 km SE from Edmonton, it is a popular place to bird watch. Due to the large mudflats, extensive willow bushes and aspen forests, the area around Beaverhill Lake is a haven for many species of wildlife. In the spring and fall this area is a staging ground for waterfowl, shorebirds and migratory passerines. Because of the rich diversity of wildlife at Beaverhill, many studies have been conducted out at the lake by people like William Rowen, Robert Lister (Lister, 1979) Dick Dekker (1991), and Roy Fairweather (1993). Ducks Unlimited also has completed waterfowl projects, such as creating waterfowl staging areas in the spring and breeding islands in Lister Lake. Beaverhill has gained an international reputation under the RAMSAR agreement for its importance as a wetland site and has been declared a Natural Viewpoint by the Canadian Nature Federation. The Alberta Government has also declared the southeast corner, Pelican and Dekker Islands as Natural Areas.

The Beaverhill Bird Observatory (BBO) was founded in 1984 as a joint committee of the Edmonton Bird Club and Edmonton Natural History Club. Now an individual society, the BBO is a non-profit, volunteer organization that conducts a variety of projects at the observatory situated at the southeast corner of Beaverhill Lake. The primary function of the BBO laboratory is bird banding as part of the Migration-Monitoring, and Monitoring of Avian Productivity and Survivorship (MAPS) programs. Other projects carried out by BBO personnel in 1993 are the monitoring of Tree Swallow populations and a grassland grid survey. The Society has also been responsible for being the Steward of the Natural Area.

This report summarizes the activities, bird sightings and banding information gathered at the BBO during the year of 1993. Due to the help of the members and other volunteers, the year was a successful one in which a great deal of valuable data was gathered.

1993 Chairman's Report - Geoff Holroyd

Activities through the Bird Observatory just keep getting better! This year marked our second summer of Migration Monitoring according to the current Canadian standards produced by Long Point Bird Observatory. Jason Duxbury and Josh Bilyk were stationed at Beaverhill Lake and were able to band a very large number of birds. Jason also completed the *Manual for Monitoring Bird Migration* (at the Beaverhill Bird Observatory) which will help ensure that our data is of the highest calibre.

Stefan Jungkind and Steve Lane did some experimental banding at Lesser Slave Lake Provincial Park with the encouragement of Frank Fraser. The initial results were very promising - a great number of boreal warblers.

In February, Petra Rowell, Helen and Phil Trefrey and I travelled to eastern Guatemala for two weeks to study birds and scout possible study sites for subsequent years of study. We worked with staff from the local conservation group FUNDAECO and visited Chandler Robins (co-author of the Golden Field Guide) and Barbara Dowell, both of the US National Biological Survey. We banded birds in a rain forest on Cerro Coral and on a sand peninsula Punta de Manabique. Our conclusion was that there was great potential for cooperative conservation work in Guatemala.

Back at home, the executive of the BBO continued to work hard. Rick Chabaylo organized the largest Baillie Birdathon yet. Elson Olorenshaw kept the finances in order and Stefan Jungkind organized our banding reports for the national bird banding office - an ever growing task. Secretary Alan Hingston always had executive meeting minutes delivered promptly, and Roy Fairweather compiled our bird sightings. Jim Faragini and Al DeGroot kept the buildings and equipment in order, and the annual Pancake Breakfast was a success despite my cooking!

The Bird Observatory is rapidly maturing. Our projects are proving valuable in collecting critical data on songbird populations. Our efforts to maintain a rigorous and detailed protocol will yield many rewards in the future. Although unmarked, this was the Observatory's tenth year of cooperative banding at Beaverhill Lake!

Our thanks to the hardworking executive and field staff. Also, many thanks to our funders: Canadian Wildlife Service, James L. Baillie Memorial Fund, Student Temporary Employment Program (STEP), Summer Employment / Experience Development (SEED) and many private donors.

Treasurer's Report - Elson Olorenshaw

Beaverhill Bird Observatory Society
 INCOME Jan 1, 1993 TO Dec 31, 1993

REVENUE

REVENUE		
Memberships		780.00
Grant-Alta Govt Step	3,247.20	
Grant-Baillie Fund	2,000.00	
Grant-CWS Songbird	2,250.00	
Grant-Can Govt SEED	<u>2,890.00</u>	
Total Grants		10,387.20
Donations	7,894.82	
Donation Box- Gate	44.13	
Donation Box- Lab	<u>9.45</u>	
Total Donations		7,948.40
Baillie Fund Pledges		1,040.76
Interest		24.53
GST Refund		137.45
Sales- Prairie Waters	136.38	
Sales- Calendars	1,538.00	
Sales- Pins	4.00	
Sales- T-Shirts	0.00	
Sales- Pancake B'fast	115.00	
Sales- Nat'l Geo Birdbook	55.00	
Snow Goose Fest. Income	<u>69.00</u>	
Net Sales		<u>1,917.38</u>
TOTAL REVENUE		<u>22,235.72</u>
TOTAL REVENUE		<u>22,235.72</u>

EXPENSE

EXPENSES		
Office- Mail Box	98.44	
Office- Stationery	43.02	
Office- Postage	254.45	
Office- Printing	565.68	
Office- Misc	<u>26.10</u>	
Total Office Supplies		987.69
Insurance		130.00
Property Taxes		79.34
Bank Charges		55.00
Repairs & Maintenance		483.64
Nets & Poles		551.42
Memberships		0.00
Bands & Equipment		389.14
Snow Goose Fest. Expense	54.41	
Sale Items- Prairie Waters	0.00	
Sale Items- Calendars	1,416.30	
Pancake Breakfast	40.20	
Sale Items- Book Nat Geo	395.29	
Sale Items- Misc	<u>31.00</u>	
Sale Item Cost - Total		1,937.20
Display Board Mntce		108.28
Wages	8,767.74	
UI Expense	663.80	
CPP Expense	<u>351.32</u>	
Total Wages & Benefits		9,782.86
Travel Expense- Exec	2,946.23	
Travel Expense- Gua.	<u>5,987.14</u>	
Total Travel Expense		8,933.37
TOTAL EXPENSES		<u>23,437.94</u>
TOTAL EXPENSE		<u>23,437.94</u>
INCOME		<u>1,202.22</u>

Beaverhill Bird Observatory Society
 BALANCE SHEET Dec 31, 1993

ASSETS

CURRENT ASSETS

Bank	3,349.45	
Cash: Total		3,349.45
TOTAL CURRENT ASSETS		3,349.45

FIXED ASSETS

Building	1,400.00	
Computer	600.00	
Donation Boxes	541.00	
Banding Equipment	1,100.00	
Display Board	527.00	
Refrigerator	577.04	
TOTAL FIXED ASSETS		4,745.04
TOTAL ASSETS		4,745.04

TOTAL ASSETS		8,094.49
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LIABILITIES

CURRENT LIABILITIES

TOTAL CURRENT LIABILITIES	0.00
----------------------------------	-------------

TOTAL LIABILITIES

0.00

EQUITY

EQUITY

Capital	9,296.71
Current Earnings	1,202.22
TOTAL EQUITY	8,094.49

TOTAL EQUITY

8,094.49

LIABILITIES AND EQUITY

8,094.49

Tours, Events, and Visitors - Josh Bilyk

There were a variety of activities that occurred at the BBO during the year of 1993. Once again, in the spring large crowds of birders 'flocked' to the BBO to catch a glimpse of some of the early migrants. On March 23, Jim Butler brought out his Forestry Wildlife class of 23 students, and on April 9, Stephan Jungkind and company reported seeing a vast assortment of waterfowl and raptors, and one Song Sparrow. Rainer Ebel brought his Northern Alberta Institute of Technology class of Biological Science students out to the lake on April 19. Due to poor road conditions, they parked at the Bait Station turn-off and hiked in from there. Some birds of interest seen that day were 11 Rough-legged Hawks, about 90 Tundra Swans, 7 Red-breasted Mergansers, 4 Sandhill Cranes and a Pied-billed Grebe. The second annual Snow Goose Festival, this year held on the 24 and 25 of April, is when our visitor numbers peaked. During this weekend, Geoff Holroyd, who was volunteering at the lab, recorded twelve tours with about 15-17 people in each that visited the lab for information and refreshments. Another 25 people that arrived on their own for a weekend total of 217 visitors. May 27 saw a group of about 70 Grade 3 students and 10 adults from Tofield paid the BBO lab a visit, and shortly after that, on May 30 we held our Pancake Breakfast in which about 30 people attended. Petra Rowell brought out her class of about 15 seniors on June 2 to do some birding.

Another BBO event that occurred during the summer was a study conducted by Brenda Dale from the Canadian Wildlife Service. She was comparing the margin of error occurring between measurements taken by a trainee and trainer (unfortunately the report is still being completed and will be included in the 1994 annual report).

Overall, the BBO was visited by a wide range of people from a variety of places. We had people from Calgary, Grimshaw, and the Edmonton area. Some of our out of province visitors included some banders that ran a MAPS station (Monitoring Avian Productivity and Survivorship) at Revelstoke, B.C. We were also visited by a couple from Victoria, and a lady from Denver, Colorado. In 1993, our furthest travelled visitors were from Holland. In total, there were about 525 people recorded at the BBO station between February 28 and October 13. Several hundred more people likely visited the Natural Area during this time. In addition to this total, a number of members and friends returned to the BBO over the year to band or to bird.

Migration Monitoring Report for Beaverhill Bird Observatory - Stefan Jungkind

Project description, past and present

"Migration monitoring" at the BBO field station started in 1984 as one of the main reasons for initiating a cooperative banding station. It has continued to be a central part of the observatory's activities and has evolved, expanded and improved by steps right up to the present. Some of the important features of the project developed as follows:

- in 1984, weekend mist netting in spring (Apr. 8 - Jun. 17) and Fall (Aug. 17 - Sep. 30) for a total of 23 days. Record of daily net-hours maintained but no distinction made between "woodland" and other (shore, grassland etc.) net-lane usage. Sightings recorded but no systematic daily totals or census route.

- in 1986 and 1987 students hired as field staff were hired to conduct some mist netting, assist graduate students, and conduct public tours. Weekend mist netting was aimed particularly at the more productive periods of spring and fall and notes were kept to differentiate "woodland" net-hours from other mist netting effort. Starting from 1986, "woodland" mist nets were used for at least one day out of each week every year for the main spring migration (May 6 - Jun. 9) and fall migration (Jul. 15 - Sep. 1) periods.

- in 1988 field staff again conducted mist netting during migrations. The "woodland" net-lanes were labelled and for each bird captured the net-lane it came out of was recorded along with the other pertinent data. This has been continued up to the present.

- in 1989 and 1990 field staff were employed in the summer specifically to expand the migration banding to a daily schedule as opposed to the primarily weekend activity it had been up to that point. (Prior to 1989 field staff had been employed primarily for other activities at the field station and had done migration banding and sight records only sporadically.)

- in 1992 the BBO adapted the official systematic Migration Monitoring protocol, as set by the Long Point Bird Observatory, that consists of daily banding, running of a census route and recording of daily estimated totals. Field staff were employed to carry out the project with assistance from the volunteers. Mist netting in the project was restricted to a group of 12 "primary" net-lanes and data recording was standardized to a greater degree than before.

- in 1993 the project proceeded with only minor adjustments - two net-lanes out of the 12 were replaced with more productive ones.

Schedule of banding

Once again, the daily migration monitoring banding coverage was excellent during the main spring and fall migration periods - primarily because of the efforts of the field staff, Jason Duxbury and Josh Bilyk. However, "early spring" migration monitoring was virtually nonexistent (it was the first year since 1988 that the April 29 to May 5 week was completely missed!) and "late fall" migration monitoring was also sparse (see below).

In total, migration monitoring banding was attempted on:

- 1 day (April 25) prior to May 6 - "early spring"
- 24 days (out of 35 possible) between May 6 and June 9- "spring"
- 17 days (out of 35 possible) between June 10 and July 14 - "summer"
- 34 days (out of 49 possible) between July 15 and September 1 - "fall"
- 8 days (Sep. 2, 3, 5, 6, 12, 19, 30 and Oct. 13th) after Sep. 1 - "late fall"

for a total of 84 days.

Although there are always a few days missed because of inclement weather, it is clear that there is still room for improvement to reach the goal of full daily coverage even for the main "spring" and "fall" migration periods. By concentrating the field activity on the weeks that have been covered most consistently in previous years, it is possible to make meaningful comparisons to the results from those years (dating back at least to 1986). Extending the main fall migration by at least two weeks (up to September 15) would also be very desirable. There is comparable data (mist-netting at least once per week) going back as far to 1989 for these periods.

By far, most of the migration monitoring was accomplished by the field staff, with volunteer licensed banders accounting for 10 days when the field staff were not present. Volunteers (both licensed and "apprentice") also assisted the field staff on 12 days. Now that the field staff program is working so well for the migration monitoring program, it would be nice to see more involvement again from the experienced volunteer banders who brought the project to its current high standards with their hard work and dedication in previous years.

Analysis of results- comparison with previous years

For ease of comparison with data from previous years, the focus in this report will be on capture rates from the mist netting component of the project. This year, a shift was made in splitting up the seasons for the analysis process from 10 day periods (see Ten Year summary report, "Songbird migration at Beaverhill Lake, 1980-91" and previous annual reports for example) to seven day periods, to correspond more closely to the schedule of activities of both Field Assistants and volunteers.

Since 1986, every week during the main spring (May 6 - June 9) and fall (July 15 - September 1) migration has had at least one day of mist netting each year - an outstanding

accomplishment considering the extremely small group of individuals who have kept the project going by either doing the fieldwork themselves (as in 1991) or making the considerable effort to employ Field Assistants! Because of this, it is possible to make year to year comparisons using average weekly capture rates rather than lumping all the captures and net-hours for a season together to obtain a seasonal "capture rate" as has been done in the past. Splitting the seasons into ten day periods had left some of the periods dark (no mist netting on any day for that period) for some years, thus precluding the possibility of using ten-day-period averages in previous analyses of the data. Using weekly averages is preferable since it reduces the possibility of skewing the data with excessive variation in mist-netting effort from year to year.

The claim by this year's field personnel that the spring migration was virtually nonexistent compared to 1992 was fully borne out by the figures (Table 1 and Figure 1). Indeed it was the poorest spring on record at the BBO, but only marginally worse than most of the pre 1991 spring seasons. The particularly good spring migrations of 1991 and 1992 made this year seem worse than it was. In spite of the poor capture rates, certain species made a good showing in spring compared to most years and compared to the fall migration (see below).

While the fall capture rate was also below average and substantially down from the last two years, it was better than the average for pre 1991 years (Table 1 and Figure 2). In terms of timing, the spring peak capture rate week was a week later (the week starting May 27 rather than May 20) than the 1986-92 average peak, while the fall peak was a week earlier (the week starting August 12 rather than August 19)(Figure 3).

To give a picture of the year as a whole, figure 4 incorporates 1993 MAPS banding also (the other graphs do not).

	1993	1986-90	1986-92
Spring	32.2	40.7	52.2
Fall	80.3	67.3	99.8

Table 1. Comparison of spring and fall capture rates at the BBO between 1993, 1986-1990 average and 1986-1992 average

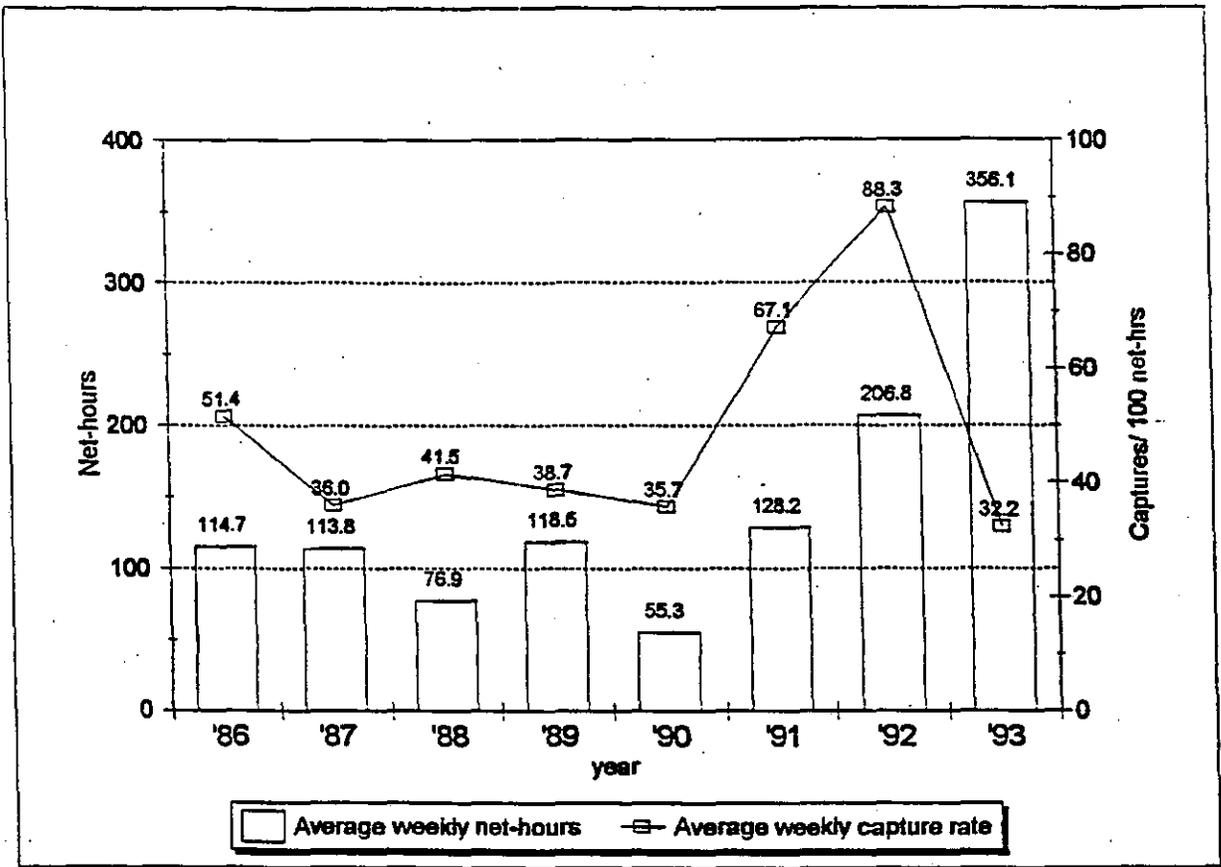


Figure 1 - Spring mistnet effort and capture rate at the BBO, 1986-93 (May 6 - Jun 9)

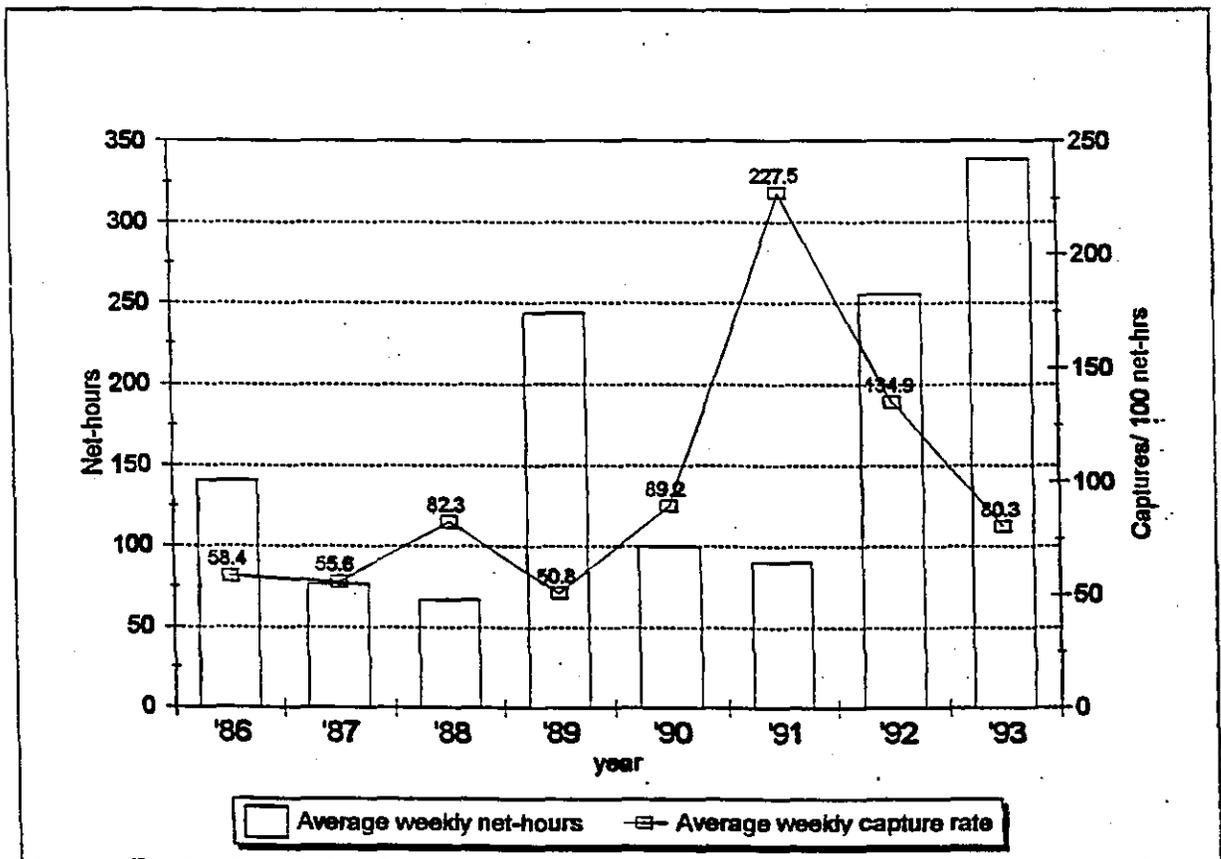


Figure 2 - Fall mistnet effort and capture rate at the BBO, 1986-93 (Jul 15 - Sep 1)

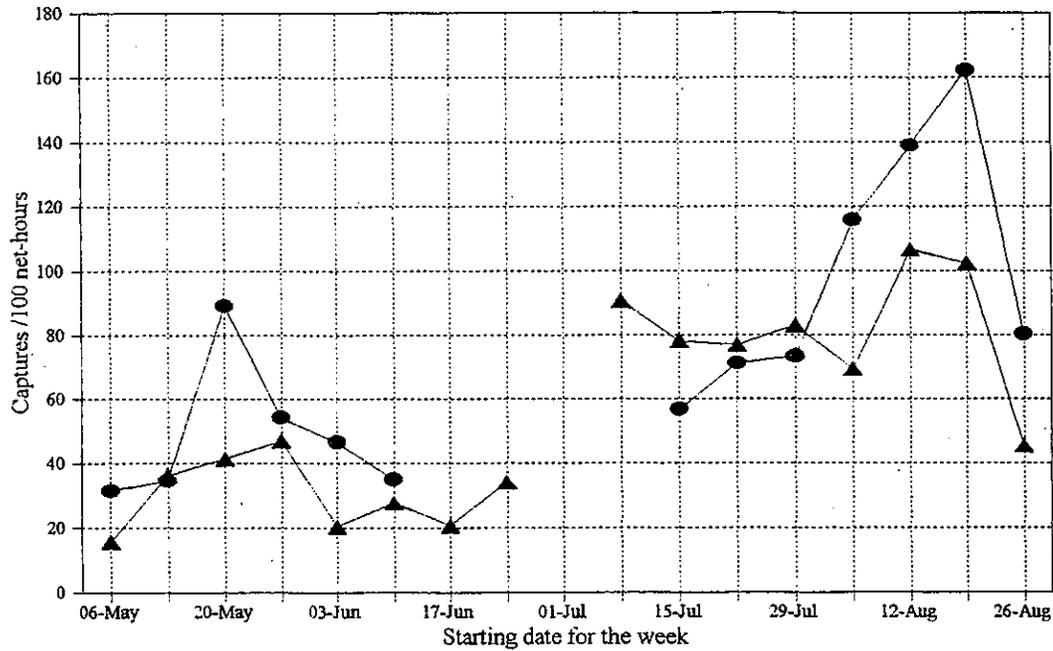


Figure 3. Weekly capture rates for 1993 and 1986-1992 average at the BBO

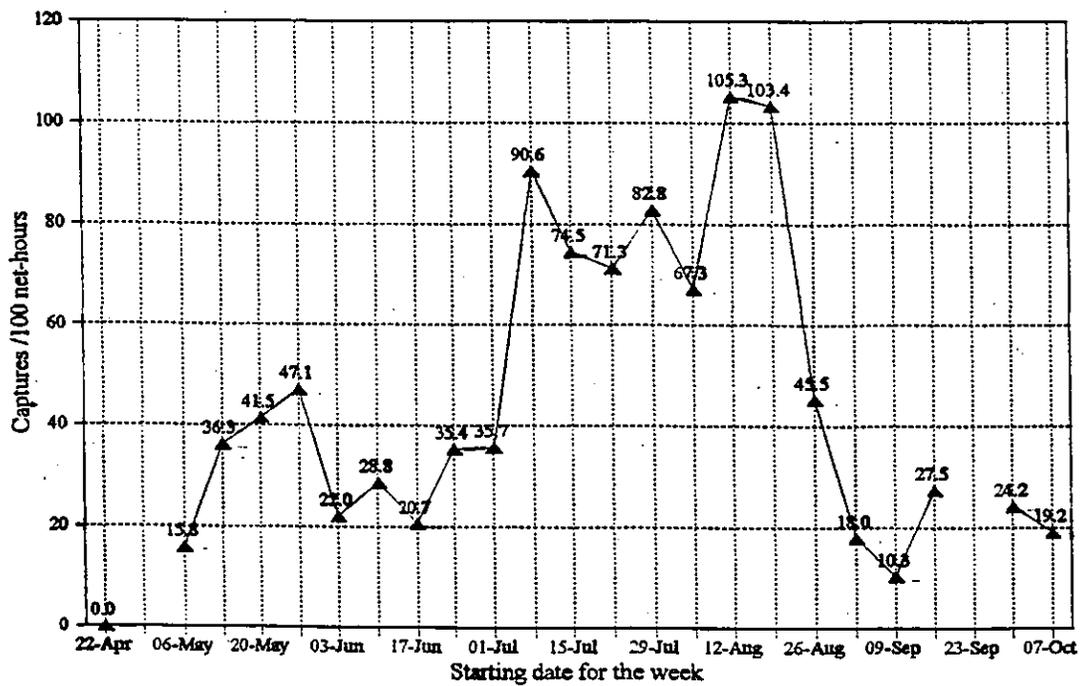


Figure 4. Weekly capture rates for 1993 (including MAPS banding) at the BBO

Analysis of results - migration timing for twelve species

In Jungkind (1993a), yearly comparisons of capture rates from 1986 to 1991 at the BBO were presented for 10 species (5 breeding and 5 transient). For 1993 I have compiled individual species capture rates through the season for 9 of those species and 3 additional species (Figures 5a - 5l). The species chosen were the six most frequently caught breeding species and transient species for 1993.

There is a definite spring peak in capture rates prior to departure for all the breeding species except Black-capped Chickadee (which does not depart) and Warbling Vireo (which arrives late). These peaks must indicate the main body of birds passing through on migration but include locally breeding individuals. The mid summer peaks may indicate main fledging times for the locally breeding populations - the weeks of July 8 and July 29 for Least Flycatcher, July 1 for Black-capped Chickadee, July 8 for Warbling Vireo, June 25 and July 8 for Yellow Warbler and June 17, July 8 and July 22 for Clay-colored Sparrow.

The figures for the transient species showed some surprises. First, three of the most frequent six transient species (Swainson's Thrush, Blackpoll Warbler and Chipping Sparrow) had higher spring migration than fall migration in spite of this being the poorest spring (in terms of capture rates) in 8 years. The second surprise is the early peak in the Tennessee Warbler capture rate (July 8). If other years show similar results for this species, the BBO (and other migration monitoring stations in the Prairie Provinces) may have to rethink the fall time period for running migration monitoring programs. Compiling the weekly capture rates for individual species was possible this year because of using accurate and detailed daily log sheet records and simpler and more efficient data entry programs. With enough time and labor doing similar analyses on previous year's will be possible (and future year's) data.

Personnel involved

Many thanks are due to the volunteers who put in time and effort to make the 1993 Migration Monitoring program a success. The volunteers were (number of days in brackets): Stefan Jungkind (12), Geoff Holroyd (5), Jim Faragini (3), Gerry McKeating (2), Rick Chabaylo (1), Gerry Lund (1), Tristan MacDonald (1), Kevin Hento (1) and Jim Cristie (1). Also a special thanks you to the Field Assistants - Jason Duxbury and Josh Bilyk, and (in late August) the volunteer field assistants Ross Dixon (10), Rechel Amores (6), Richard Biel (6) and Bob Carroll (2).

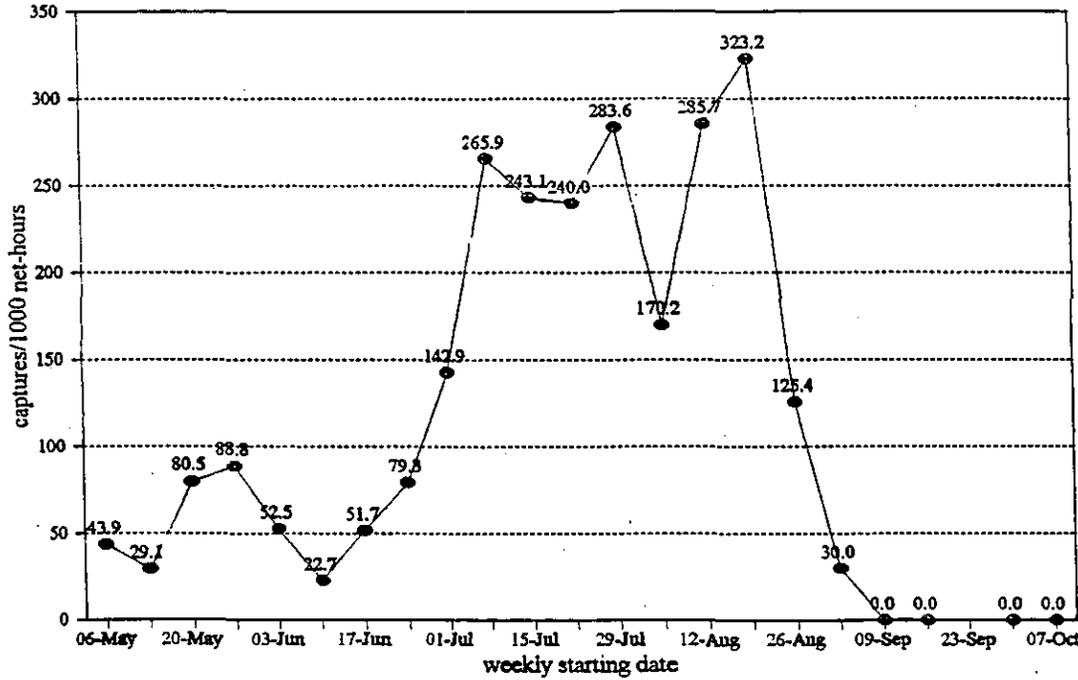


Figure 5a - 1993 weekly capture rate of the Least Flycatcher at the BBO

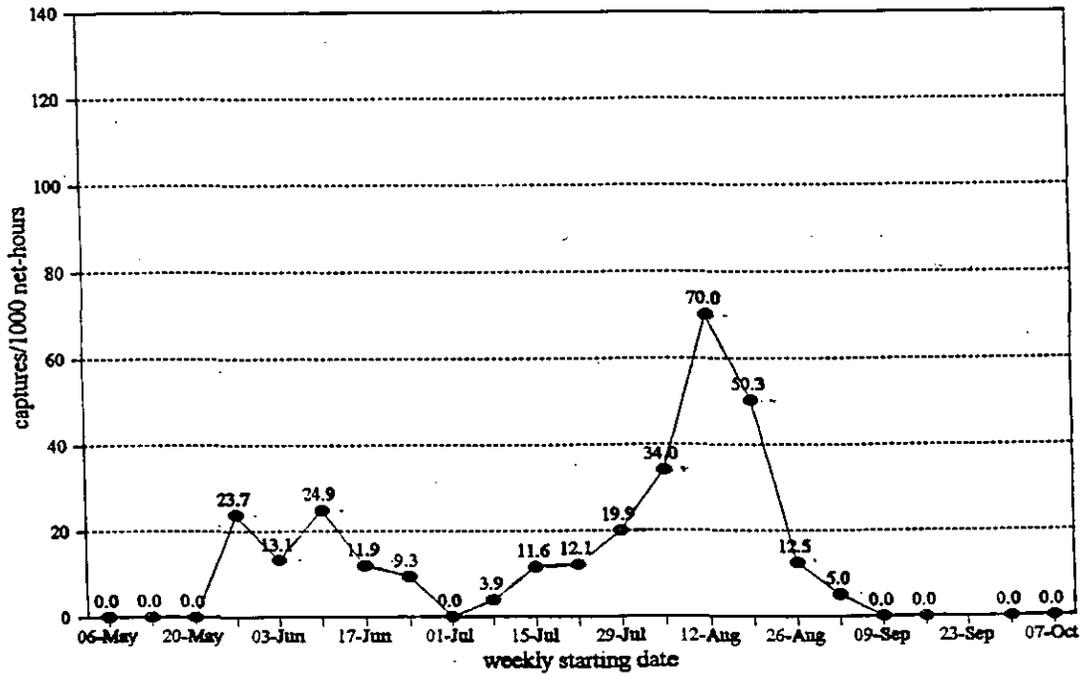


Figure 5b - 1993 weekly capture rate of the Alder Flycatcher at the BBO

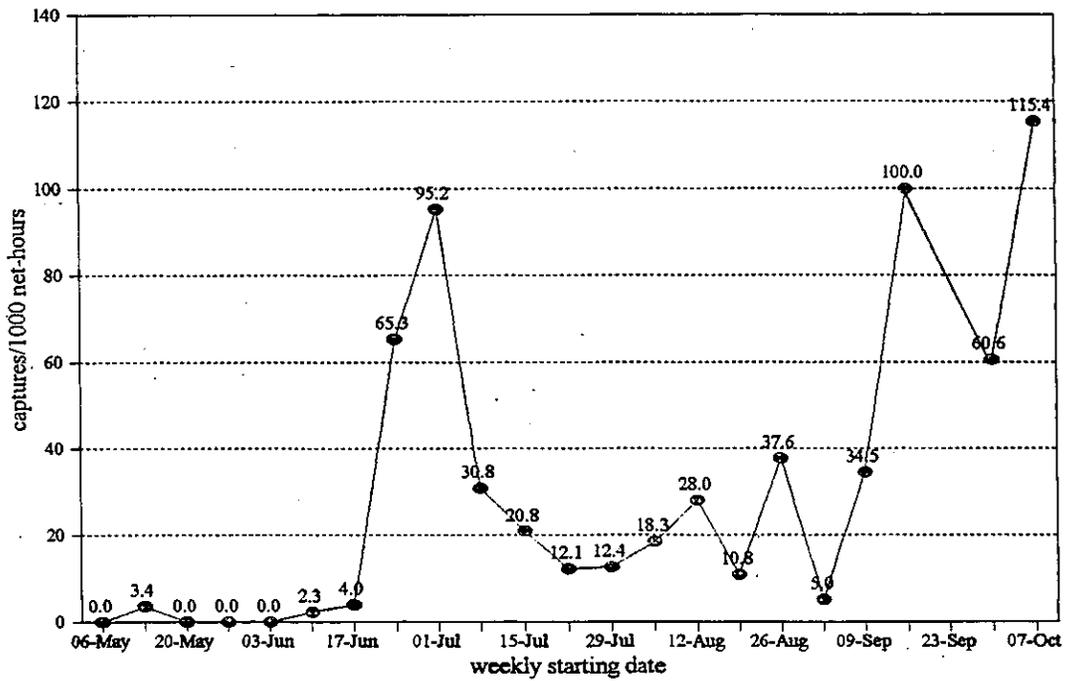


Figure 5c - 1993 weekly capture rate of the Black-capped Chickadee at the BBO

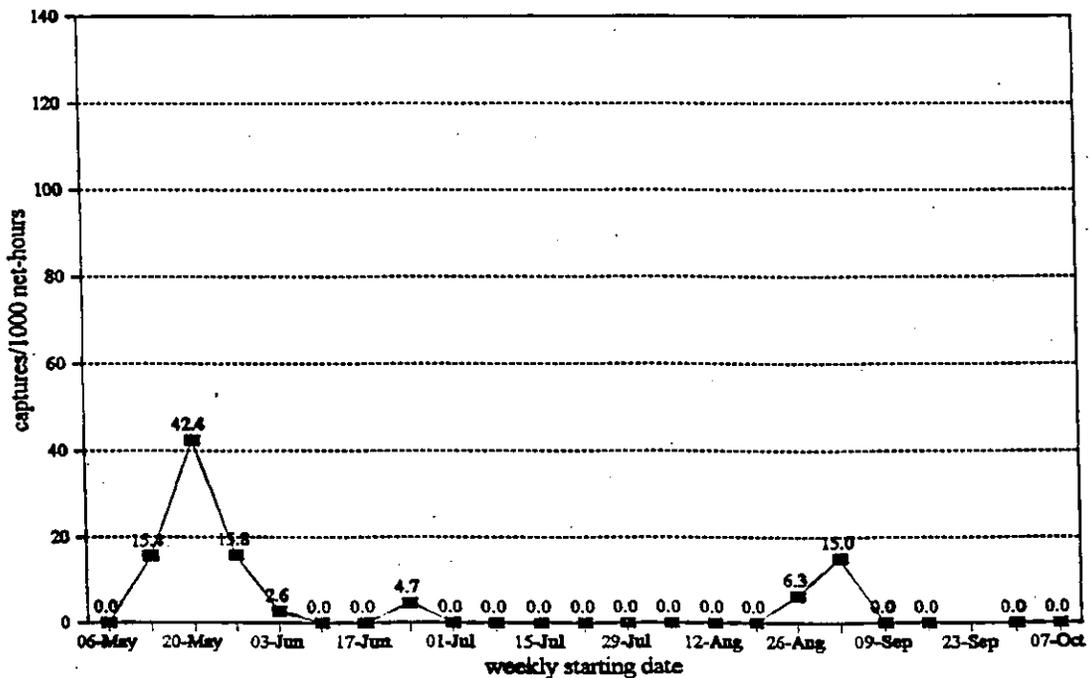


Figure 5d - 1993 weekly capture rate of the Swainson's Thrush at the BBO

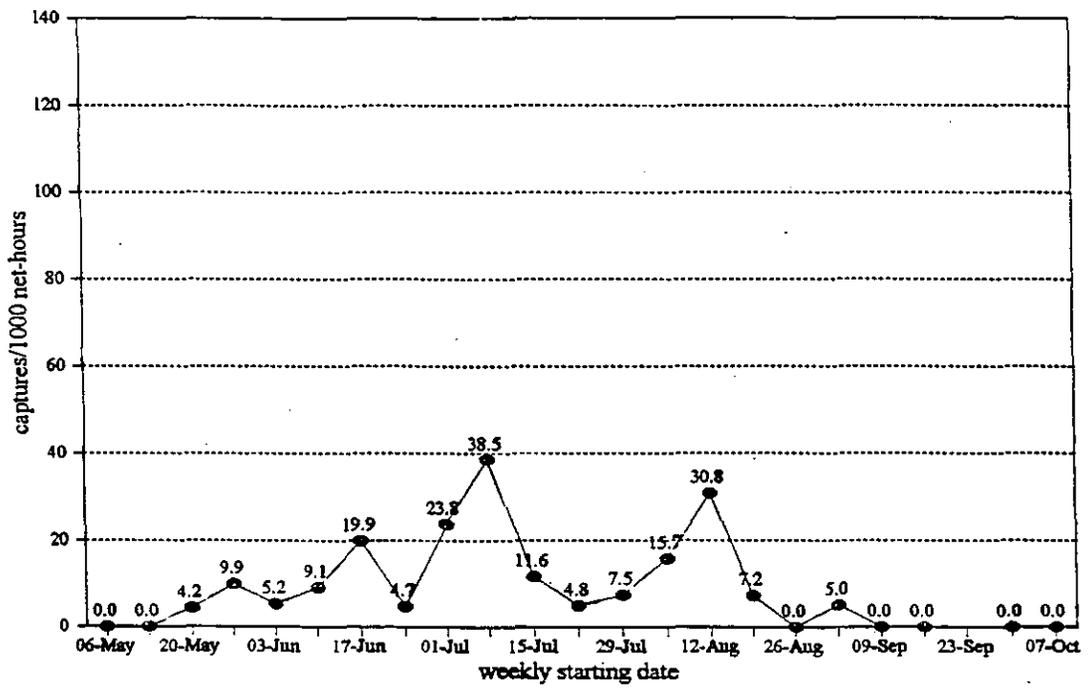


Figure 5e - 1993 weekly capture rate of the Warbling Vireo at the BBO

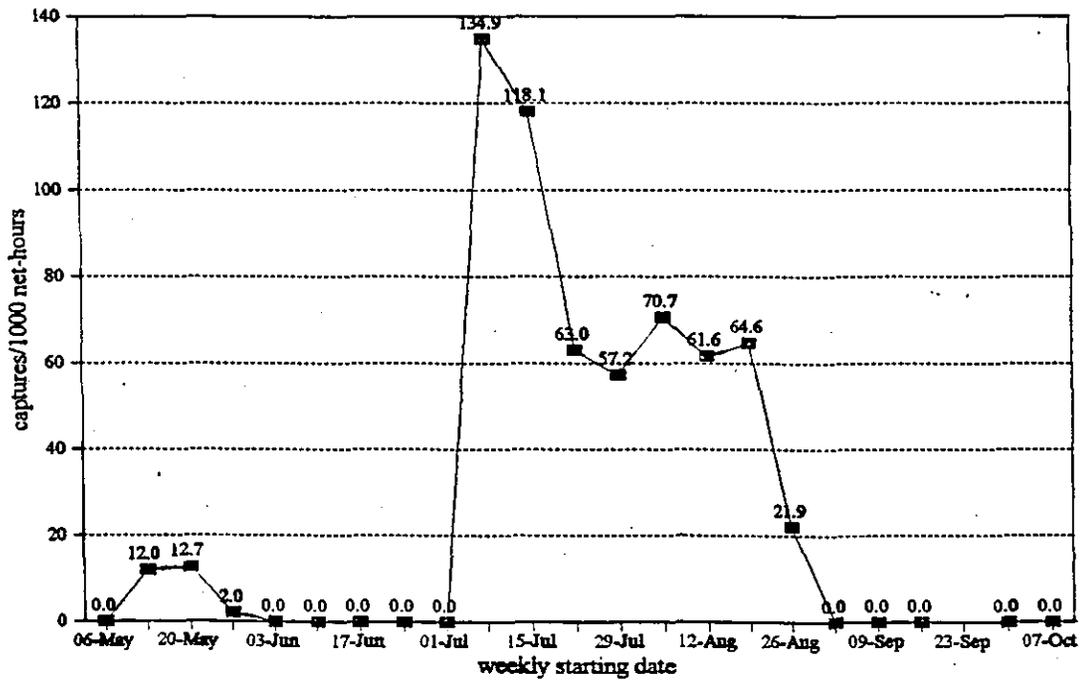


Figure 5f - 1993 weekly capture rate of the Tennessee Warbler at the BBO

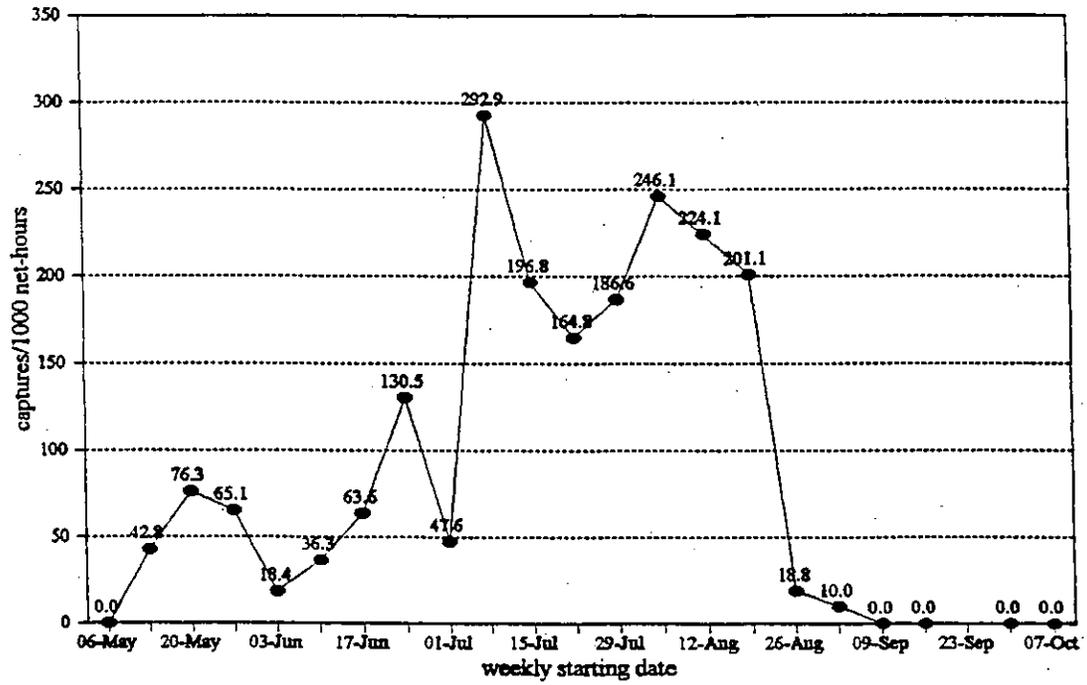


Figure 5g - 1993 weekly capture rate of the Yellow Warbler at the BBO

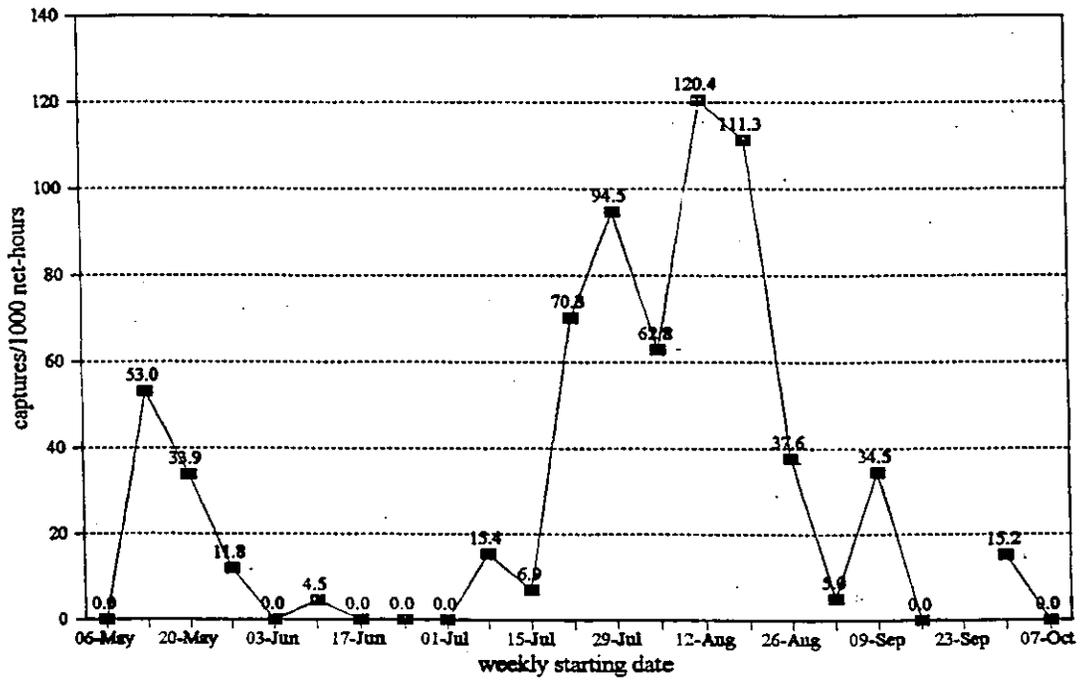


Figure 5h - 1993 weekly capture rate of the Myrtle Warbler at the BBO

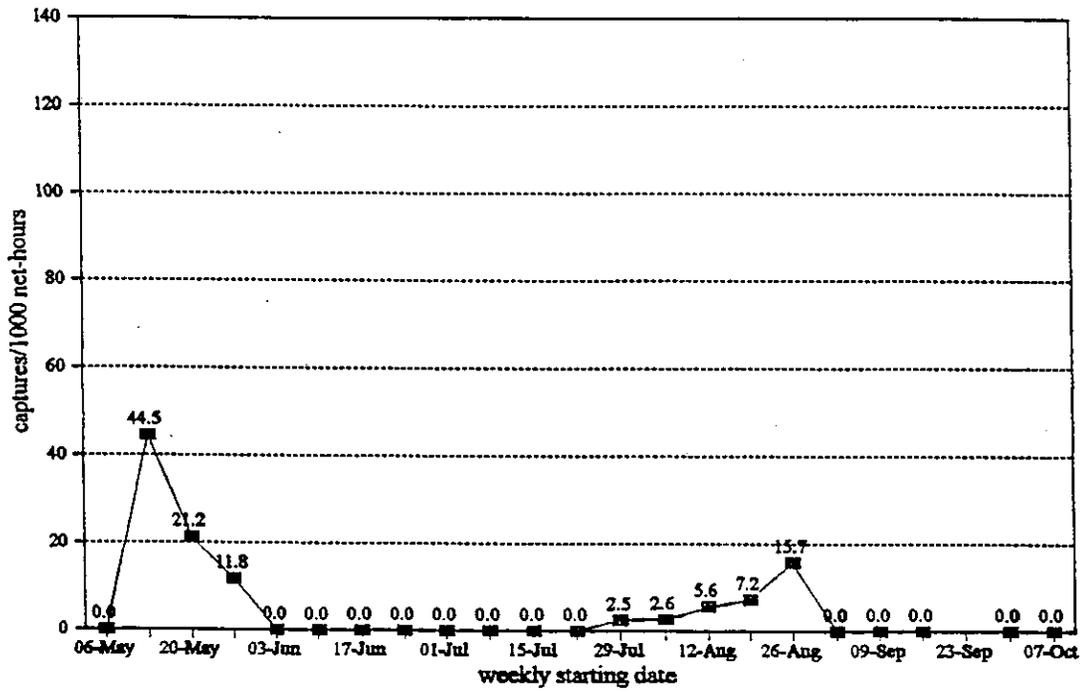


Figure 5i - 1993 weekly capture rate of the Blackpoll Warbler at the BBO

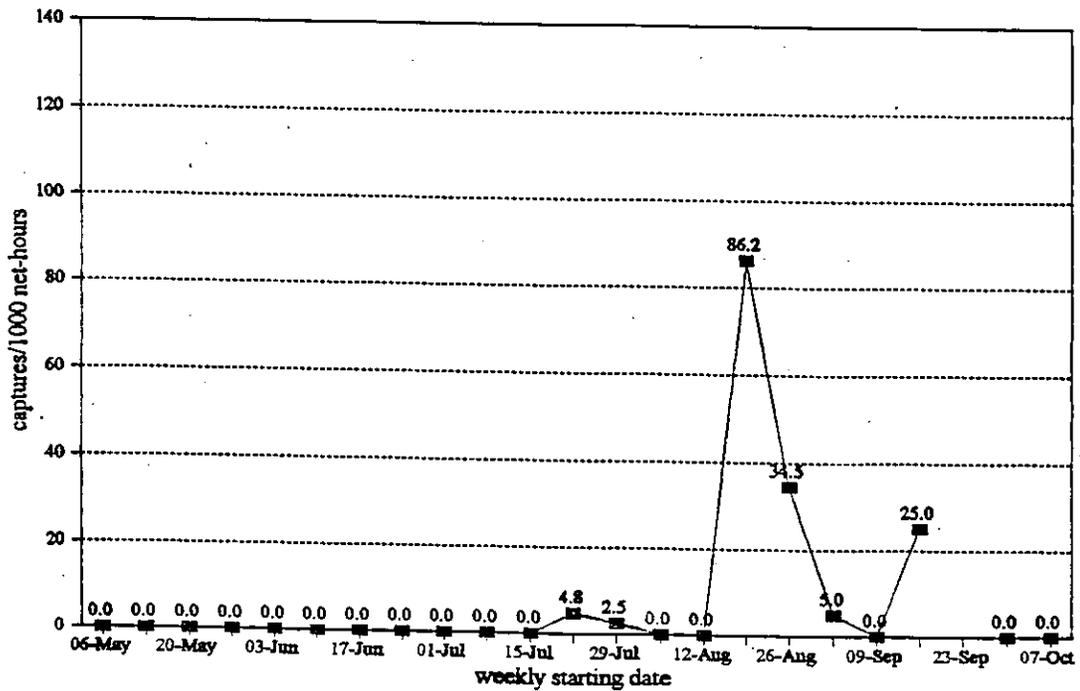


Figure 5j - 1993 weekly capture rate of the American Redstart at the BBO

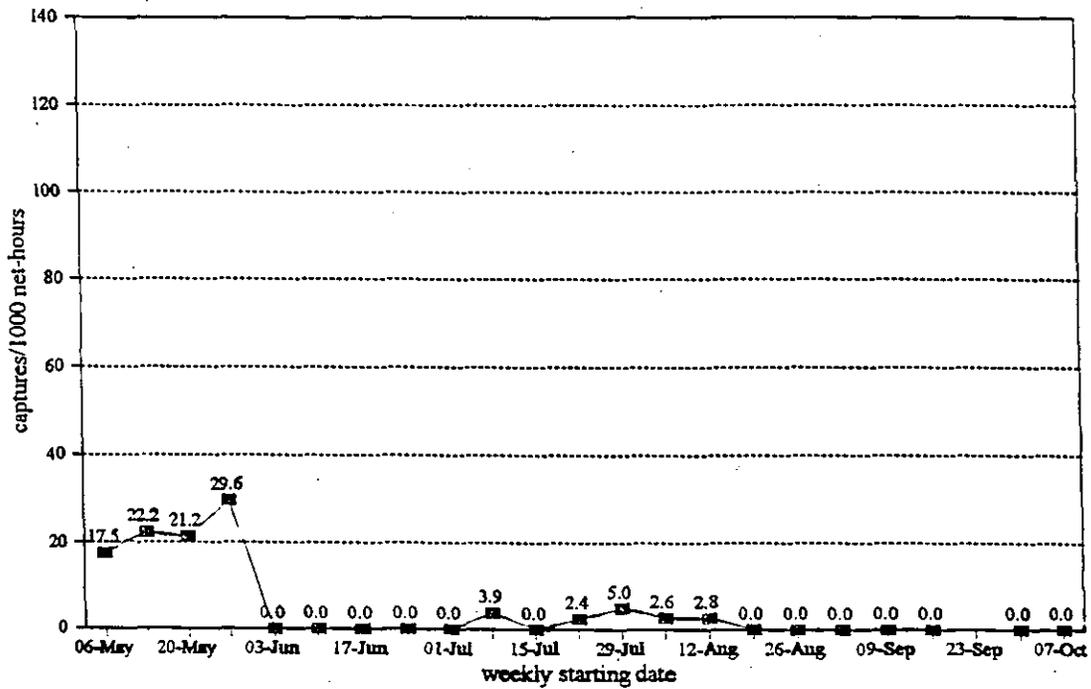


Figure 5k - 1993 weekly capture rate of the Chipping Sparrow at the BBO

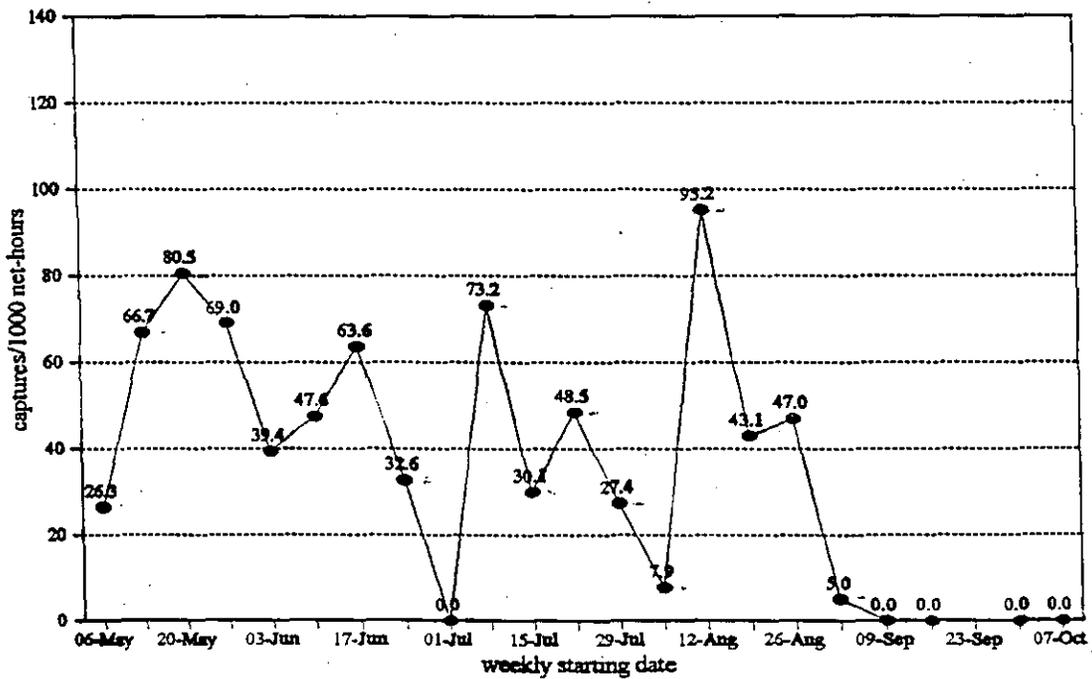


Figure 5l - 1993 weekly capture rate of the Clay-colored Sparrow at the BBO

Monitoring Avian Productivity and Survivorship (MAPS) - Jason Duxbury

Once again the Beaverhill Bird Observatory has taken part in the continent wide MAPS project. This marks the fifth year the BBO has conducted the MAPS program using the protocol as set by the Institute for Bird Populations at Point Reyes, California. The protocol calls for standardized use of at least 6 mist nets, one day out of a 10 day period, for 6 of these 10 day periods during the time between the spring and fall migrations. The periods are to fall between migrations in order to ensure that the species' populations that are being monitored are of those breeding in the area and not those that are transient. The project measures the rise in population during the summer (the increase due to the hatch year birds) = productivity, and keeps track of the subsequent returns of those birds banded in previous years = survivorship (DeSante and Burton 1994).

Least Flycatchers and Yellow Warblers were the most frequently caught species in the summer of 1993 (Table 2). Nice surprises of the summer were a Yellow-bellied Flycatcher, a Solitary Vireo and a Gray Catbird.

Thanks go to those banders that participated in the MAPS program in 1993: Joan DeGeer, Stefan Jungkind, Josh Bilyk and Jason Duxbury.

Species	Banded	Retraps	Total
Least Flycatcher	40	16	56
Yellow Warbler	21	15	36
Tennessee Warbler	19	2	21
American Redstart	10	-	10
Myrtle Warbler	7	1	8
Black-capped Chickadee	6	4	10
Alder Flycatcher	6	3	9
Wilson's Warbler	5	-	5
House Wren	4	7	11
Eastern Phoebe	3	2	5
Warbling Vireo	3	3	6
Clay-colored Sparrow	3	2	5
Yellow-rumped Warbler	2	1	3
Yellow-bellied Flycatcher	1	-	1
Magnolia Warbler	1	-	1
Song Sparrow	1	-	1
Ovenbird	1	1	2
Solitary Vireo	1	-	1
Gray Catbird	1	-	1
Swainson's Thrush	1	-	1
Brown-headed Cowbird	1	-	1
Cedar Waxwing	1	-	1
Downy Woodpecker	-	1	1
TOTAL INDIVIDUALS:	138	58	196
TOTAL SPECIES:	22	13	23

Table 2. Birds banded at Beaverhill Lake during MAPS in 1993.

Overall Banding Totals at the Beaverhill Lake Bird Observatory in 1993

- Jason Duxbury & Stefan Jungkind

Although the final total number of birds banded did not reach 3868 of 66 species as they did in 1992 (Jungkind 1993b), 1993 was still another phenomenal year, with 3034 birds of 65 species banded (Table 3). This year's banding data once again included input from multiple projects conducted by dedicated volunteers and staff members: Migration Monitoring, MAPS, Jim Faragini banding at a different site in the Natural Area, nest-site banding (mostly from the Tree Swallow grid near the south shore of Beaverhill Lake), some mist netting near the south shore, the nestlings from the many nests on the lab and bunkhouse, and birds caught with the blackbird trap (this method was not used much in 1993 due to some technical difficulties).

A small surprise in the banding totals this year was the reordering of the top 5 bird species banded in 1993 as compared to 1992 (Jungkind 1993b); Least Flycatchers were #1 in 1993 at 727 up from #2 in 1992 at 606, with Yellow Warblers dropping to second with a total of 510 in 1993 (they were #1 in 1992 at 744). Staying in the third position were Clay-colored Sparrows with a total of 274 in 1993, although they numbered 542 in 1992. The big surprise was that Tennessee Warblers made it into the top 5 in the fourth position with a total of 222 (168 in 1992) displacing Myrtle Warblers from fourth in 1992 at 431 to fifth in 1993 at 221. In 1992 Tree Swallows were number five with a total of 293 and Tennessee Warblers were in the sixth position with 168. The top five species of 1993 only contributed 40.4% of the whole total, whereas in 1992 the top five made up 68% of the total.

The unique species banded in 1993 included a Cooper's Hawk, an Eastern Kingbird, a Veery, a Philadelphia Vireo, and 3 Sharp-tailed Sparrows.

Repeats, Returns and Recoveries - Jason Duxbury

In 1993, there were almost 3500 birds processed in the BBO laboratory. Of these birds, over 500 (around 16%) were retraps - birds banded previously and have once again been caught in the mist nets. These retraps can then fall into 3 categories; repeats, returns and recoveries. The repeats are simply birds banded in the 1993 field season and then recaptured again sometime that summer.

The next category is the returns (Table 4). These birds were also found in the mist nets already banded, but they were banded at the BBO before 1993. In other words, these birds have flown back to their wintering grounds and have made it back at least once, or managed to survive at least one central Alberta winter. As examples of birds that have lasted longer than just a few years, there

Species	MM*	MAPS**	JF***	Other	Total
Cooper's Hawk	0	-	1	-	1
Yellow-bellied Sapsucker	1	-	-	-	1
Downy Woodpecker	3	-	-	-	3
Hairy Woodpecker	1	-	-	-	1
Olive-sided Flycatcher	0	-	-	-	0
Western Wood Pewee	1	-	1	-	2
Yellow-bellied Flycatcher	2	1	1	-	4
Trail's Flycatcher	90	6	10	-	106
Least Flycatcher	642	40	45	-	727
Eastern Phoebe	6	3	-	8	17
Eastern Kingbird	1	-	-	-	1
Tree Swallow	4	-	-	202	206
Cliff Swallow	0	-	-	24	24
Barn Swallow	0	-	-	11	11
Black-capped Chickadee	37	6	6	-	49
Red-breasted Nuthatch	14	-	-	-	14
House Wren	53	4	7	-	64
Ruby-crowned Kinglet	3	-	-	-	3
Veery	1	-	-	-	1
Gray-cheeked Thrush	2	-	-	-	2
Swainson's Thrush	34	1	3	-	38
Hermit Thrush	3	-	-	-	3
American Robin	5	-	-	-	5
Gray Catbird	4	1	-	-	5
Cedar Waxwing	5	1	-	-	6
Solitary Vireo	3	1	-	-	4
Warbling Vireo	47	3	7	-	57
Philadelphia Vireo	1	-	-	-	1
Red-eyed Vireo	12	-	1	-	13
Tennessee Warbler	197	19	6	-	222
Orange-crowned Warbler	22	-	2	-	24
Yellow Warbler	444	21	45	-	510
Magnolia Warbler	14	1	1	-	16
Cape May Warbler	1	-	-	-	1
Myrtle Warbler	209	9	3	-	221
Western Palm Warbler	2	-	-	-	2
Blackpoll Warbler	48	-	3	-	51
Black-and-White Warbler	3	-	1	-	4
American Redstart	30	10	6	-	46

Table 3. Birds Banded at Beaverhill Lake in 1993 by BBO Personnel

Species	MM*	MAPS**	JF***	Other	Total
Ovenbird	3	1	1	-	5
Northern Waterthrush	4	-	1	-	5
Mourning Warbler	5	-	4	-	9
Common Yellowthroat	8	-	-	-	8
Wilson's Warbler	16	5	2	-	23
Canada Warbler	2	-	1	-	3
Rose-breasted Grosbeak	1	-	-	-	1
American Tree Sparrow	7	-	-	-	7
Chipping Sparrow	41	-	3	-	44
Clay-colored Sparrow	239	3	32	-	274
Vesper Sparrow	2	-	-	-	2
Savannah Sparrow	21	-	1	13	35
LeConte's Sparrow	1	-	-	-	1
Sharp-tailed Sparrow	0	-	-	3	3
Song Sparrow	15	1	1	-	17
Lincoln's Sparrow	7	-	1	-	8
White-throated Sparrow	11	-	4	1	16
White-crowned Sparrow	1	-	-	-	1
Slate-colored Junco	9	-	-	-	9
Red-winged Blackbird	32	-	-	2	34
Yellow-headed Blackbird	8	-	-	1	9
Brown-headed Cowbird	18	1	-	-	19
Baltimore Oriole	7	-	1	-	8
Purple Finch	1	-	-	-	1
Pine Siskin	2	-	-	-	2
American Goldfinch	24	-	-	-	24
TOTAL INDIVIDUALS:	2430	138	201	265	3034
TOTAL SPECIES:	60	21	30	9	65
<p>* Migration Monitoring ** Monitoring Avian Productivity and Survivorship *** Jim Faragini</p> <p>"Other" Consists of: Nest-site: EAPH - 8; TRES - 202; BARS - 9 Shore nets: SAVS - 13; STSP - 3; SOSP - 2; EAKI - 1 Trap: YHBL - 1; RWBL - 2 Lab: BARS - 2; WTSP - 1</p>					

Table 3. Continued.

Species	No. Returns from:						Total	Total	Total	% Return
	1987	1988	1989	1990	1991	1992		Returns '81-'93	Banded '81-'92	
Eastern Phoebe						2	2	2	33	6.06%
Least Flycatcher				1	2	18	21	63	2023	3.11%
Trail's Flycatcher						2	2	7	257	2.72%
Tree Swallow						1	1	130	3051	4.26%
Barn Swallow							-	1*	35	2.86%
Black-capped Chickadee					1	1	2	19	496	3.83%
House Wren							-	8	1112	0.72%
Warbling Vireo						2	2	9	221	4.07%
Red-eyed Vireo							-	1	60	1.67%
Yellow Warbler	2		1	1	8	31	43	123	1703	7.22%
Myrtle Warbler						4	4	4	1180	0.34%
Clay-colored Sparrow					3	6	9	35	1135	3.08%
Song Sparrow						1	1	1	58	1.72%
Red-winged Blackbird							-	31	299	10.37%
Brown-headed Cowbird						5	5	26	142	18.31%
American Goldfinch				1	1	3	5	15	104	14.42%
Total (12 Species Caught in '93)	2	0	1	3	15	76	97	434	10403	4.17%
Total (All Species)								474	11909	3.98%

Table 4. Returns at the Beaverhill Bird Observatory in 1993.

were 2 retrapped Yellow Warblers banded in 1987, making them at least 6 years old in 1993! One was banded by Geoff Holroyd and recaptured by Jason Duxbury, the other was banded by Debra Belmonte and recaptured by Josh Bilyk (Table 5).

The final category is the foreign recoveries. To say that it is rare to have a bird banded at the BBO found somewhere other than around Beaverhill Lake is an understatement. From the thousands of birds released at the BBO with bands on, only 6 have been recovered to date (Jungkind 1993c). No new recoveries have been reported in the last 3 years. However, due to the very high numbers of birds banded in 1992 and 1993, we can hope that there will be some new recoveries in the near future.

Species/Band Number	Banding Data			1993 Return Data:	
	Age/Sex	Date	Bander:	Age/Sex	Bander:
Yellow Warbler 1750 53798	AHY/M	1987	Geoff Holroyd	ASY/M	Jason Duxbury
Yellow Warbler 1750 53504	AHY/M	1987	Debra Belmonte	AHY/M	Josh Bilyk
Yellow Warbler 1820 19348	HY/U	1989	Corinne Tastayre	ASY/M	Jason Duxbury
Yellow Warbler 1850 62844	HY/U	1990	Jim Faragini	AHY/U	Josh Bilyk
American Goldfinch 1850 62196	AHY/M	1990	Petra (Stubbs)	ASY/M	Josh Bilyk
Least Flycatcher 1850 62976	HY/U	1990	Rowell Linda Campbell/ Stefan Jungkind	AHY/F	Josh Bilyk

Table 5. Noteworthy Returns (1990 or previous).

Lesser Slave Lake Bird Observatory: a feasibility study - Stefan Jungkind

Introduction

To expand the horizons of the BBO, I looked into the possibility of initiating a bird banding station in Lesser Slave Lake Provincial Park. During 1993, Frank Fraser, Steve Lane and I attempted of bird banding in the park during migration to determine:

- 1) whether there was sufficient bird movement through the park during migration to warrant setting up a migration monitoring station,
- 2) whether there was a site where suitable net-lane sites could be located for capturing adequate numbers of songbirds to make bird banding an integral part of such a station
- 3) if the species composition was significantly different from that at the only other bird observatory in the region the Beaverhill Bird Observatory, 70 km southeast of Edmonton, and
- 4) if there was sufficient local interest to develop a strong volunteer core locally in the future.

Site selection and times of activity

We chose a spot along the northeast shore of Lesser Slave Lake for the study site because we believe that large bodies of water act as barriers to songbirds (and other) migration resulting in concentrations and/or heavy migration movement along the shores. This site was at the south end of a long strip (about 3 or 4 km. at least) of "edge" habitat between the mature mixed wood boreal forest and the lake shore. This strip, averaging about 80 metres in width, consisted of (from shore to forest): a thin strip of mature willows, poplars and alder, up to 10 metres in height; the right of way (open "grassland"); and a wider strip of shrubbery (alder, willow, dogwood, young spruce etc.) interspersed with open spaces.

Nets were set up in both strips of shrubbery to intercept north-south movement of birds. Five consecutive days in late spring (May 29 to June 2), one day in midsummer (July 19) when post breeding season dispersal and fall migration generally begins and three days in mid fall (August 31 to September 2) were spent at this site. In addition, one day (July 20) was spent banding at a second site a few km. north west along the shore and two early mornings were spent observing birds at Marten River Campground at the height of the fall migration (August 5 & 6).

Results

A total of 290 birds (35 species) were banded during the ten days of (bird banding) field activity (Table 6). Considering the total net-hours (295.5) and the non-optimum timing of the operation (the last two weeks of May and the first three weeks of August are likely to be the time of heaviest songbird migration here) the results were very promising. With the exception of the three days in mid fall, the capture rates

Species banded	May 29 to Jun 2	Jul 19 to Jul 20	Aug 31 to Sep 2	Total
Yellow-bellied Sapsucker	1	-	-	1
Yellow-bellied Flycatcher	1	-	-	1
Alder (Traill's) Flycatcher	9	15	2	26
Least Flycatcher	17	-	10	27
Black-capped Chickadee	1	1	1	3
Red-breasted Nuthatch	-	-	1	1
Ruby-crowned Kinglet	1	-	-	1
Swainson's Thrush	3	1	1	5
American Robin	3	-	-	3
Cedar Waxwing	-	5	-	5
Solitary Vireo	1	-	-	1
Philadelphia Vireo	1	-	1	2
Red-eyed Vireo	8	5	2	15
Tennessee Warbler	1	2	1	4
Orange-crowned Warbler	-	-	7	7
Yellow Warbler	8	18	11	37
Magnolia Warbler	2	2	2	6
Yellow-rumped Warbler	3	6	6	15
W. Palm Warbler	-	-	1	1
Black-and-white Warbler	1	2	-	3
American Redstart	30	6	7	43
Ovenbird	1	-	-	1
N. Waterthrush	-	-	2	2
Mourning Warbler	1	1	-	2
Common Yellowthroat	7	3	5	15
Wilson's Warbler	6	1	2	9
Canada Warbler	19	2	-	21
Chipping Sparrow	2	-	-	2
Clay-colored Sparrow	7	3	-	10
Song Sparrow	2	4	-	6
Lincoln's Sparrow	3	4	1	8
Swamp Sparrow	-	1	-	1
White-throated Sparrow	2	1	1	4
White-crowned Sparrow	-	-	1	1
Purple Finch	-	1	-	1
Total species:	27	21	20	35
Total individuals:	141	84	65	290

Table 6. Species banded at Lesser Slave Lake in 1993.

were higher than those for equivalent time periods at the Beaverhill Bird Observatory for 1986-91 (Table 7). In addition, the top twelve species banded were for the most part quite different from the top twelve species banded at Beaverhill Lake for 1986 to 1991 (Table 8), although this could be partially explained by the seasonal timing of the banding activity.

Of particular interest were:

a) The large number of **Canada Warblers** banded (more than the 12-year total -1980 to 1991 - at the Beaverhill Bird Observatory). Most of these were caught during the late spring session.

b) First confirmed breeding at Lesser Slave Lake for **Wilson's Warbler** - a newly fledged young was caught along with a retrapped adult on July 19.

c) Almost equal numbers of **Least and Alder (Trail's) Flycatchers** banded. At Beaverhill Lake, the ratio averages about 7:1 in favour of Least Flycatchers.

Visual observations during the bird banding visits and during an additional visit August 5th and 6th yielded the following interesting records:

a) **Caspian Tern** - one seen flying and diving for fish (in typical Tern fashion) close to shore along the NE shore of Lesser Slave Lake, July 20. (Rainer Ebel observed one near Marten River Campground in 1992).

b) **Rosy Finch (Gray-crowned)** - a pair seen foraging together and possibly collecting nesting material on "Marten Mountain" just east of L. Slave Lake, June 2. This was by far my most surprising sighting of the year (closest Rocky Mountains are almost 400 km away) and was another first for L. Slave Lake.

c) Heavy songbird migration through Marten River Campground on August 5 & 6 including Am. Robin, Swainson's Thrush, Western Tanager, all four species of Vireo, Tennessee Warbler (250++), Yellow Warbler, Myrtle Warbler, American Redstart (80++), Common Yellowthroat, Canada Warbler, Blackpoll Warbler, Bay-breasted Warbler, Mourning Warbler, White-throated Sparrow (40+), Least and Alder Flycatcher. A brief stop at the mist-netting site near Lily Creek Campground later in the morning revealed comparable numbers of songbirds moving through that area also.

Locations and Time Periods	Net-hours	Captures	Cap./100 net-hours
BBO, May 21 -Jun 9	1931	839	43.45
LSL, May 29 - Jun 2	139	141	101.44
BBO, Jul 10 -Jul 19	1515	887	58.55
LSL, Jul 19 - 20	53	89	167.92
BBO, Aug 29 - Sep 7	1068	933	87.36
LSL, Aug 31 - Sep 2	103.5	65	62.80

Table 7. Comparison of capture rates between the BBO (1986-1991) and Lesser Slave Lake (1993).

Beaverhill Lake (entire year)		Lesser Slave Lake (nine days)	
Top 12 species	Average 1986-91	Top 12 species	1993
Least Flycatcher	200	* American Redstart	43
Yellow Warbler	143	Yellow Warbler	39
Yellow-rumped Warbler	121	Least Flycatcher	27
Clay-colored Sparrow	84	Alder (Traill's) Flycatcher	26
Tennessee Warbler	63	* Canada Warbler	21
Black-capped Chickadee	47	* Red-eyed Vireo	15
American Redstart	30	Yellow-rumped Warbler	15
Traill's Flycatcher	29	* Common Yellowthroat	15
Am. Tree Sparrow	27	Clay-colored Sparrow	10
Warbling Vireo	24	* Wilson's Warbler	9
Red-winged Blackbird	19	* Lincoln's Sparrow	8
Blackpoll Warbler	12	* Orange-crowned Warbler	7
* - species for which the totals are already greater at LSL than the 1986-91 average at the BBO			

Table 8. Comparison of species banded at Beaverhill Lake (1986-91) and Lesser Slave Lake (1993)

Conclusion and recommendations

The 1993 investigation strongly supported the expectation that a migration monitoring station along the northeast shore of Lesser Slave Lake is likely to provide significant data on northern breeding populations of land birds if a full season of field activity was accomplished. The likelihood of sufficient volunteer input both locally and from Edmonton seems high, especially considering the positive attitude and support of the Parks personnel in Slave Lake regarding volunteer participation.

Personnel involved in the banding activity included myself, Steve Lane and Frank Fraser assisted by Caroline Wagenaar, Cheryl Dash, Andrew Lukat, as well as my wife, Debra Belmonte. A very positive aspect of the project was the support, assistance and acknowledgement of our efforts from the Provincial Parks and District Offices, especially June Markwart and Grant Kihn. The interest and enthusiasm in the project locally bodes well for future such activities at Lesser Slave Lake Provincial Park.

Grass-Sedge Wetland Breeding Bird Census - Jason Duxbury and Geoff Holroyd

Introduction

On top of the continuation of the Migration Monitoring and MAPS projects, the BBO also conducted the second year of breeding bird census in the grass-sedge wetland area northeast of the laboratory site. The technique involves the recording of bird songs, calls and sightings on a map of a grid laid down in the grassland area. From the assumption that the above bird activities are territory defence and mate attraction mechanisms during the breeding season, one can then roughly estimate the size and number of territories belonging to the different species using the mapped out area as breeding habitat.

Methods

The grid surveyed in 1992 went unaltered in 1993. The total area within the grid remained at 18.9 hectares made up of 50m x 50m quadrants. Again in 1993 the grid was surveyed by sight and sound, by either of 2 people walking down either east-west transects or north-south transects (alternating on different days) on 8 mornings (June 8, 11, 16, 17, 21, 22, 25, 28) starting approximately ½ hour after dawn.

Vegetation Analysis: The grid area vegetation was surveyed in 1992. It was assumed that no major changes occurred to the grid area as a whole. However, one cannot assume that there was no succession at all and this may affect the results in a slight way. The southern boundary of the grid is dense willow scrubland with an understorey of sedge spp., perennial sow thistle, aster spp., *Potentilla anserina*, and rush spp., and this area is slowly invading the grasslands. Concurrently, the lake shore is moving farther and farther north as the lake is drying up, leading to a northerly movement in dead rush (*Scirpus* spp.) stems, new rush stems, sedge, bedstraw, and cattail (*Typha latifolia*). The interior of the grassland is still a sedge-grassland with mint, goatsbeard, perennial sow thistle, aster spp. and other herbaceous plants (Holroyd 1992). However, since the lake edge has moved north, the survey area changed from a wet grassland area to a drier habitat.

Results

The final tabulations show some differences between the two years (Table 10). The only noticeable changes were the relative declines of Savannah and Sharp-tailed Sparrow territories, as well as the absence of nests of some species of ducks. Other species that had territories in the grassland remained relatively the same between the two years. However, there was an observable increase in the number of Red-winged Blackbird nests found. Finally, an interesting addition to year two was that of a Northern Harrier nest.

Species	1992 Territories*	1992 Nests*	1993 Territories	1993 Nests
Savannah Sparrow	48	2	35	-
Red-winged Blackbird	16.5	3	17	8
Sharp-tailed Sparrow	9	-	7	-
Clay-colored Sparrow	6	1	5	-
LeConte's Sparrow	4	-	6	-
Yellow Warbler	2	-	2	-
Mallard	4	4	6	6
Wilson's Phalarope	11	1	5	5
Common Yellowthroat	1.5	-	2.5	-
Northern Harrier	-	-	1	1
Blue-winged Teal	3	3	-	-
Lesser Scaup	6	6	-	-
Northern Shoveller	1	1	-	-
Yellow-headed Blackbird	3	-	-	-
Duck Sp.	6	6	2	2
Totals	121	26	96.5	23

Table 9. Total number of territories and nests observed in 1992 and 1993.

(* Holroyd 1992)

Discussion

Conducting a study for only two years does not make for very valid conclusions. Although, the small differences between the two years may indicate possible trends, the reduction in the number of territories of some species of sparrows and ducks may be due to the grasslands becoming drier. Savannah and Sharp-tailed Sparrows as well as the duck species that are missing in 1993 (Blue-winged Teal, Northern Shoveller, and Lesser Scaup) usually prefer to nest in grass that is relatively moist (Godfrey 1976, Salt and Salt 1976). However, the only real conclusion that can be made is that further study of the area is required. Only then will one determine if the changes in the number of territories are real trends, or only natural fluctuations not dependent upon changes in the habitat.

Tree Swallow Project - Josh Bilyk and Jason Duxbury

The Tree Swallow grid on the north shore of the Natural Area was first set up in 1985 by Geoff Holroyd. These nest boxes, plus two additional grids were later used in a study conducted by Peter Dunn, a Zoology graduate of the University of Alberta. His study consisted of food abundance, polygyny, and male parental care in Tree Swallows as a part of his PhD thesis field work to see if the Tree Swallows had varying clutch sizes if they were found in different locations. Now part of the original grid is monitored by the field staff as one of the ongoing BBO projects. Each year the staff records and monitors the progress of each nest box throughout the season. Nest record cards are filled out and the young are banded as a part of this project.

During the summer of 1993, our Tree Swallow grid had a variable success rate. In the spring there were 49 boxes out of a possible 58 occupied by a pair of Tree Swallows. A total of 319 eggs were laid averaging 6.4 eggs per nest box and ranging 3 to 11 eggs per nest. 267 of the eggs produced viable young giving an 83.7 % hatch rate. Of the 267 hatchlings, only 189 fledged successfully (70.8%), giving a ratio of 189 fledglings to 319 eggs (59.2% fledge rate). The supposition of successful fledgling is based upon the lack of evidence of predation around the nest (nestling blood, bone or feathers), and/or the absence of dead chicks in or around the nests. However, 77 swallow hatchlings were found dead in the nests. There was only one pair of Tree Swallows in the grid that had a second brood.

The low success rate may be attributed to two main factors. The primary factor affecting the success of the Tree Swallow grid may have been the weather. Because of the ill timing of a long, drawn-out period of continuous rain during the time of young development, it may have been impossible for the adult swallows to capture food for their young. The consequence was the poor development of feathers (evident by some juveniles developing fault bars on their primary feathers), and more severe, the death of some individuals or a complete loss of the clutch. The other influencing factor that may have affected the success of a nest was ground predation during the duration of brooding. This can be concluded since there were some instances of shell fragments on the ground near or in some nests without any nestlings inside the nests.

Because of the poor condition of many of the nest boxes, and their constant need of repair, we are always looking for any extras someone might have. So, if you would like to give a home to a fine pair of Tree Swallows, we would appreciate your donations.

Nest Record Cards - Jason Duxbury

Research on the distribution, habitat preference, and productivity of birds can be greatly assisted by the recording of nesting data. The Canadian Wildlife Service's Prairie Nest Record Scheme provides cards for keeping an account of nests found, along with specific information on each nest. For each nest, the cards call for the recording of clutch size (from subsequent days during the breeding season), the number of hatchlings, and the final outcome of each nest. They also ask for a description of each nest (the size, height from ground, materials it consists of) as well as the location of the nest (locality and habitat).

In 1993 there were 69 nests recorded on the nest record cards (Table 10). As in previous years, the bulk of these cards (49) consists of cards for the nests of the Tree Swallows found in the grid near the shore, north of the lab.

Species	Number of Nests	Ave. Clutch Size	Max/Min Clutch	Total Eggs Laid	Young Fledged	% Fledged
From T. Swallow Grid						
Tree Swallow	50*	6.4	11/4	319	189	59%
From Grasslands						
Mallard	6	9	10/8	54	35	65%
Wilson's Phalarope	3	3.7	4/3	11	7	64%
Lesser Scaup	1	7	7/7	7	7	100%
Blue-winged Teal	1	11	11/11	11	11	100%
Northern Harrier	1	4	4/4	4	0	0%
From Marsh						
Red-winged Blackbird	7	3.6	4/3	25	7	28%
From Willows						
Yellow Warbler	1	5	5/5	5	5	100%
Clay-colored Sparrow**	1	3	3/3	3	0	0%
Brown-headed Cowbird	1	2	2/2	2	0	0%
On Buildings						
Barn Swallow	2 broods	4.5	5/4	9	9	100%
Eastern Phoebe	2	5	5/5	10	8	80%
In Aspen Woods						
Ruffed Grouse	1	12	12/12	12	12	100%

* includes one 2nd brood

** nest contained the recorded Cowbird data

Table 10. Summary of Nest Record Card Data.

Guatemala Expedition '93 - Petra Rowell

Having spent the better part of two seasons working at Beaverhill, rarely had I given any thought to the wintering grounds of the many songbirds banded in the summer. Sure, we all know that many of our birds travel "south" for the cold months, but how often do we really think about these winter locations?

Not surprisingly, the news of a band recovery from a Least Flycatcher recorded at Beaverhill in 1989 and found in Central America in 1991, created a major ripple in the BBO. Having corresponded with the band's finder, Dan Weber, Geoff Holroyd began preparations for the BBO's First Guatemala Expedition!

On 6:00 a.m., January 29, 1993, Phil and Helen Trefry and I boarded a plane at Edmonton International bound for Dallas where we caught up with our intrepid leader, Geoff who had just finished a search for Burrowing Owls in northern Mexico. We then boarded a second plane that carried us over the Gulf of Mexico and into Guatemala City for our first evening in Central America.

We wasted little time the next morning, quickly purchasing supplies and driving to Puerto Barrios, a small town situated at the base of Amatique Bay on the eastern coast. The next two days were committed to preparing for our first banding excursion and meeting several members of the local conservation group, FUNDAECO.

Finally, on February 2, we travelled to and began a three-day censusing effort at Punta Manabique, a small peninsula separating the Amatique Bay from the Caribbean Sea. After much slashing and sloshing through thick, wet mangrove swamps we got several mist-nets up and were quickly rewarded for our efforts. Some of the migrants caught included Common Yellowthroat, Yellow-breasted Chat, Ovenbird, and Swainson's Thrush. Many local species were also banded including Mangrove Vireo, Northern Bentbill, Spot-breasted Wren, and a number of doves. Hummingbirds were particularly numerous and included several species such as Berylline, Black-chinned, and Ruby-throated (Table 11).

After four days at Punta Manabique we were ready to leave behind the swamp, although it was much harder to say good-bye to the warm Caribbean waters that had provided us the opportunity to swim and fish. We returned to Puerto Barrios and spent a day cleaning up and restocking supplies.

Our second censusing location was much different from the first. Leaving behind the sea, we travelled southeast across the Rio Montagua and then followed the ascending height of land into the hills to Cerro Coral where a small collection of farms are interspersed among plots of forest, very near the Honduras border.

We made our camp in the bottom of a farmer's pasture and spent the next few days banding and censusing the local bird populations. We set up our nets in what was virgin, or at least very old forest and were pleasantly surprised by a number of exotic species including the Blue-crowned Mot-mot, Tody Motmot, Royal Flycatcher and again a number of hummingbirds. Migrant species caught

Date: 1993, Feb:	Banded at Punta Manabique					Banded at Cerro Coral					Total
	2	3	4	5	Sum	7	8	9	10	Sum	
Species:											
White-tipped Dove			1		1		1			1	2
Ruddy Quail Dove			2	1	3						3
Grove-billed Ani				1	1						1
Long-tailed Hermit						4	2	3	1	10	10
Little Hermit						3	2			5	5
Violet Sabrewing									1	1	1
Crowned Woodnymph						3				3	3
White-bellied Emerald							3	2	1	6	6
Berylline Hummingbird	4	3	18	4	29						29
Roufous-tailed Hummingbird							1		1	2	2
Band-tailed Barbthroat							1		1	2	2
Ruby-throated Hummingbird		1	3	1	5						5
Black-chinned Hummingbird		1			1						1
Tody Motmot							2	2		4	4
Blue-crowned Motmot						1	1	1		3	3
Green Kingfisher							1			1	1
Pygmy Kingfisher			1		1						1
Plain Xenops						2	1			3	3
Tawny-winged Woodcreeper						1		1		2	2
Wedge-billed Woodcreeper								2		2	2
Ivory-billed Woodcreeper										1	1
Ocre-bellied Flycatcher		1	1		2	2	3	5	1	11	13
Sepia-capped Flycatcher									1	1	1
Northern Bentbill		1			1						1
Northern Royal Flycatcher								1		1	1
Yellow-bellied Flycatcher						1		1	1	3	3
White-collared Manakin		7	1		8		1	2		3	11
Red-capped Manakin						1		2		3	3
Yellow-olive Flycatcher								1		1	1
Ruddy-tailed Flycatcher								1		1	1
Spot-breasted Wren	2		1		3						3
White-breasted Wood Wren						1	1		1	3	3
Swainson's Thrush			1		1				1	1	2
Wood Thrush		2	1		3	1	2	1		4	7

Table 11. Birds Banded in Guatemala - 1993.

Date: 1993, Feb:	2	3	4	5	Sum	7	8	9	10	Sum	Total
Species:											
Clay-colored Robin						1				1	1
Gray Catbird	1	1	2	2	6	2	2	1		5	11
Mangrove Vireo	1	1	2		4						4
Magnolia Warbler		1		1	2		1			1	3
American Redstart									1	1	1
Worm-eating Warbler								1		1	1
Ovenbird		1	1		2		1			1	3
Northern Waterthrush				1	1		1	1		2	3
Louisiana Waterthrush	1				1	1				1	2
Kentucky Warbler								1		1	1
Common Yellowthroat	3	1		1	5						5
Hooded Warbler						1	1		1	3	3
Yellow-breasted Chat	1	1			2						2
Olive-backed Euphonia								2		2	2
Red-throated Ant-tanager							1	1		2	2
Summer Tanager								1		1	1
Blue-black Grosbeak								2		2	2
Indigo Bunting			1		1						1
Variable Seedeater						1			1	2	2
Bright -rumped Attila							1			1	1
Totals 54 Species					83					105	188

Table 11. Continued

here included Yellow-bellied Flycatcher, Hooded Warbler and Worm-eating Warbler. Throughout our stay we were constantly watched by the villagers, especially the children who judging from their laughter, must have thought we were some "crazy gringos" indeed!

Our censusing work completed, we returned to Guatemala City and spent the remaining week of our journey playing turista. Driving through several towns in western Guatemala, we could see the influence of the Spaniards and the Catholic church on local architecture and custom. We then took a flight north to Tikal, a national park in north central Guatemala, where the Mayan ruins and jungle fauna provided hours of fantastic viewing.

After three weeks of travelling, we all looked forward to boarding the plane for home, each of us taking a few mementos and favourite memories along with us. Although we had been drawn to this unique country by one small Least Flycatcher, we never actually saw this species during our stay - but the wealth of other birds and sights made up for this small fact and made us even more determined to return to Guatemala again, soon!

The following observers initials appear in Table A of this report:

Hugh Campbell (HC)	Ed Jones (EJ)
M. Campbell (MC)	Stefan Jungkind (SJ)
Bob Carroll (BC)	P. Kennedy (PK)
D. Chalifouk (DC)	G. Kinsman (GK)
Al DeGroot (ADG)	Rick Lancelot (RLt)
Dick Dekker (DD)	J. Lake
Ross Dickson (RD)	Jim Lange (JL)
Jason Duxbury (JDx)	Pat Nolan (PN)
Rainer Ebel (RE)	Jack Morgan (JM)
Roy Fairweather (RF)	Bruce Morrison (BM)
Jim Faragini (JF)	Robert Swallow (RS)
Gordon Garford (GG)	Bruce Tate (BTt)
Ken Gariepy (KG)	Bruce Turner (BT)
Jim Henry (JH)	Mike Yaciuk (MY) (farm one mile west of zone)
Geoff Holroyd (GH)	

BBO - refers to 'Daily Estimated Totals' which includes sight and banding records and are limited to a zone of 1 sq.km. around the BBO lab.

By far the most DETs were compiled by Jason Duxbury (JDx) & Josh Bilyk (JB).

Other participants aiding with the DETs were:

R. Amores (RA)	Jim Faragini (JF)
Michelle Beauchamp (MB)	Kevin Hento (KH)
Richard Beil (RB)	Geoff Holroyd (GH)
Rick Chabaylo (RC)	Stefan Jungkind (SJ)
Jim Christe (JC)	G. Lathram (GL)
Joan DeGeer (JD)	Gerry McKeating (GMK)
Ross Dickson (RD)	Carmen Pollack (CP)
Rainer Ebel (RE)	Mikolaj Warszywski (MW)

The following names are referred to in the Previous Records:

Peter Dunn (PD)	John McNab (JM)
Warren Finlay (WF)	Martin McNicholl (MM)
Frank Fraser (FF)	R. Middleton (RM)
Peter Haddock (PH)	Cathy Mowat (CM)
Kevin Hento (KH)	Dave Nadeau (DN)
Otto Hohn (OH)	Elson Olorenshaw (EO)
Brian Hornby (BH)	Dodie Pollard (DP)
Art Hughes (AH)	Glen Riel (GR)
Richard Klauke (RK)	Len Shandruk (LS)
Cliff Kulak (CK)	Ron Slagter (RS)
Peter Lepson (PL)	Petra Stubbs (Rowell) (PS)
Gerry Lunn (GL)	Terry Thormin (TT)
Chel Macdonald (CMc)	Eric Tull (ET)
Ed Mah-Lim (EML)	Jim Wolford (JW)
Brenda McIntyre (BM)	BHLC - refers to 1992 BHL Conference

1993 Noteworthy Sightings

COMMON LOON	- one heard April 29 (Jack Morgan)
TUNDRA SWAN	- summer sighting July 27 (Bob Carroll)
SNOW GOOSE	- summer sightings July and August
GREATER SCAUP	- May 13 (BBO) & May 30 (MSC)
SURF SCOTER	- 4 on May 12 (Bob Carroll)
BARROW'S GOLDENEYE	- 2 on May 17 & 2 on June 20 (Bob Carroll)
COMMON MERGANSER	- April 24 (SGF); April 28 (BC) & 16 on Aug 30 (BBO)
RED-BREASTED MERGANSER	- several spring sightings
OSPREY	- May 21 (Dick Dekker)
BROAD-WINGED HAWK	- May 6 & August 3 (Bob Carroll)
FERRUGINOUS HAWK	- May 10 (BBO) & May 16 (Dick Dekker)
GOLDEN EAGLE	- April 1 (Dick Dekker) adult
SHARP-TAILED GROUSE	- May 29 (Edgar T. Jones) & June 8 (Bob Carroll)
YELLOW RAIL	- June 8 (Bob Carroll) two miles north of Hwy 16
BLACK-BELLIED PLOVER	- summer sightings
SEMIPALMATED PLOVER	- summer sightings
PIPING PLOVER	- June 3 (Dick Dekker) pair; June 17 nest with 4 eggs; July 6 adults with 2 chicks
	- July 4 (Bob Carroll) two adults with three young
BLACK-NECKED STILT	- June 12 (Jason Duxbury)
WILLET	- two chicks May 27 (Ken Gariepy)
SOLITARY SANDPIPER	- May 17, August 12 & 14 (Bob Carroll)
UPLAND SANDPIPER	- July 30 (Stefan Jungkind)
RED KNOT	- summer sightings
SANDERLING	- summer sightings
RUDDY TURNSTONE	- May 29 (MSC) & July 27 (Bob Carroll)
WESTERN SANDPIPER	- 4 reported on July 2 (Andrew Holte)
WHITE-RUMPED SANDPIPER	- May 15 (Dick Dekker) & May 28 (Bob Carroll)
DUNLIN	- May 3 (Roy Fairweather/Dick Dekker); May 12 (BC) & May 15 (BBO)
BUFF-BREASTED SANDPIPER	- 30 on May 24 (Dick Dekker) & May 29 (MSC) & Sept. 22 (BC)
RUFF	- 1 male on April 25 (Ferry Thormin)
RED-NECKED PHALAROPE	- 4000 on May 30 (Edgar T. Jones)
HERRING GULL	- possibly nesting (Bob Carroll)
JAEGER SPECIES	- June 16 (Bob Carroll)
PARASITIC JAEGER	- Sept. 18 (Dick Dekker) pursuing a ring-billed gull
NORTHERN HAWK OWL	- November 13 (Al DeGroot)
LONG-EARED OWL	- 2 on May 10 (BBO)
COMMON NIGHTHAWK	- May 30 (MSC)
PILEATED WOODPECKER	- May 30 (Jim Henry)
YELLOW-BELLIED FLYCATCHER	- June 2 (BBO), August 6 (BBO) & late August (Edgar T. Jones)
WILLOW FLYCATCHER	- July 29 (Geoff Holroyd)
SAY'S PHOEBE	- several sightings in May
WESTERN KINGBIRD	- June 28 (Bob Carroll)
N. ROUGH-WINGED SWALLOW	- 10 on May 21 (Jim Faragimi)
WHITE-BREASTED NUTHATCH	- October 7 (Al DeGroot)
SEDGE WREN	- June 20 (Bob Carroll)
GOLDEN-CROWNED KINGLET	- May 14 (BBO)
VEERY	- May 18 and June 11 (BBO); late August (Edgar T. Jones)
GRAY-CHEEKED THRUSH	- May 14 & 15 (BBO)
GRAY CATBIRD	- many sightings through summer (nesting?)
NORTHERN MOCKINGBIRD	- July 29 (Jason Duxbury / Josh Bilyk)
CEDAR WAXWING	- wintering in Tofield
NORTHERN SHRIKE	- Jan 3 (CBC); April 9 & November 13 (Bob Carroll)
CAPE MAY WARBLER	- August 17 (BBO) & late August (Edgar T. Jones)
BL-THROATED GREEN WARBLER	- August 12 (Bob Carroll) & late August (Edgar T. Jones)
BLACK-AND-WHITE WARBLER	- August 4 & 9 (BBO) & late August (Edgar T. Jones)
OVENBIRD	- August 5, 11 & 27 (BBO) & late August (Edgar T. Jones)
CONNECTICUT WARBLER	- May 30 (MSC)
MOURNING WARBLER	- May 28, 30 & August 17 (BBO)
MACGILLIVRAY'S WARBLER	- one banded August 20 & two on Aug 27 (BBO)
CANADA WARBLER	- May 30 (MSC); August 13 & 17 (BBO)
WESTERN Tanager	- August 16 (Stefan Jungkind)
RUSTY BLACKBIRD	- nest with 3 young July 4 (Bob Carroll)

1993 BEAVERHILL LAKE SIGHT RECORDS

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
RED-THROATED LOON	NO RECORD 1993				PR.REC. OCTOBER 3,1979 (DD); AUG 12,1992 (BC)
COMMON LOON	*APRIL 29 (JM)	(HEARD CALL)			PR.REC. APRIL 21,1991 (DN); MAY 11,1992(SJ)
PIED-BILLED GREBE	MAY 10 (BBO)			SEPT. 22 (BC)	BREEDING
HORNED GREBE	APRIL 24 (GH)			SEPT. 28 (BC)	BREEDING
RED-NECKED GREBE	APRIL 24 (GH)			AUG 31 (BBO)	BREEDING
EARED GREBE	APRIL 24 (SGF)			SEPT 28 (BC)	BREEDING
WESTERN GREBE	MAY 12 (BC)			SEPT. 22 (BC)	BREEDING
CLARK'S GREBE	NO RECORD 1993				PR.REC. SEPTEMBER 15,1990 (EML)
AM WHITE PELICAN	APRIL 24 (GH)			AUG 30 (BC)	BREEDING
DOUBLE-CRESTED CORMORANT	APRIL 24 (SGF)			AUG 6 (BBO)	BREEDING
AM BITTERN	MAY 10 (BBO)	JUNE 16 (BBO)	-----	-----	BREEDING
GREAT BLUE HERON	APRIL 17 (JL)			SEPT. 22 (BC)	SUMMER RES.
GREAT EGRET	NO RECORD 1993				PR.REC. JUNE 7-11,1987 (PD); MAY 30,1991 (JH)
SNOWY EGRET	NO RECORD 1993				PR.REC. JUNE 1984 (CMc)
BLACK-CROWNED NIGHT HERON	APRIL 17 (JL)			AUG 11 (BBO)	BREEDING
TUNDRA SWAN	APRIL 14 (JC)	APRIL 28 (BC)	SEPT 3 (BC)	OCT 31 (RD/BC)	TRANSIENT - SUMMER SIGHTING JULY 27 (BC)
TRUMPETER SWAN	NO RECORD 1993				TRANSIENT - PR.REC. MAY 30,'92 (RF); OCT 7,'92 (BC)
GR WHITE-FRONTED GOOSE	APRIL 9 (RF/SJ)	MAY 17 (BC)	SEPT 28 (BC)	OCT 20 (BC)	TRANSIENT - SUMMER SIGHTING AUGUST 24 (BBO)
SNOW GOOSE	APRIL 9 (BC)	JUNE 18 (BBO)	SEPT 12 (BBO)	OCT 20 (BC)	TRANSIENT - SUMMER SIGHTINGS IN JULY & AUGUST
SNOW GOOSE (BLUE)	APRIL 9 (BC)	MAY 6 (BC)	-----	*SEPT 22 (BC)	TRANSIENT
ROSS'S GOOSE	NO RECORD 1993				TRANSIENT - PR.REC. SEPT 7, 1992 (DD)
BRANT	NO RECORD 1993				PROBABLE SIGHTING(1991);PRE.REC.MAY 8,SEPT13,SEPT24 1978 (DD)
CANADA GOOSE	MARCH 21 (GG)			OCT 31 (BC)	BREEDING
WOOD DUCK	NO RECORD 1993				PR. REC. MAY 29,1985 (DD)
GREEN-WINGED TEAL	APRIL 9 (RF/SJ)			OCT10 (BC)	BREEDING
AM BLACK DUCK	NO RECORD 1993				PR.REC. AUGUST 23,1987 (BT); AUG 12, 1992 (BC)
MALLARD	APRIL 9 (RF/SJ)			OCT 31 (BC)	BREEDING
NORTHERN PINTAIL	APRIL 9 (RF/SJ)			OCT 20 (BC)	BREEDING
BLUE-WINGED TEAL	APRIL 16 (RF)			OCT 10 (BC)	BREEDING
CINNAMON TEAL	APRIL 24 (GH)	AUG 31 (BBO)	-----	-----	BREEDING
NORTHERN SHOVELER	APRIL 9 (RF/SJ)			OCT 20 (BC)	BREEDING
GADWALL	APRIL 9 (RF/SJ)			OCT 20 (BC)	BREEDING
EURASIAN WIGEON	NO RECORD 1993				PR.REC. SEPT 26, 1990 (RK)
AM WIGEON	APRIL 9 (RF/SJ)			OCT 20 (BC)	BREEDING
CANVASBACK	APRIL 9 (RF/SJ)			OCT 20 (BC)	BREEDING
REDHEAD	APRIL 9 (RF/SJ)			OCT 10 (BC)	BREEDING
RING-NECKED DUCK	APRIL 9 (RF/SJ)			AUG 14 (BC)	TRANSIENT
GREATER SCAUP	*MAY 13 (BBO)	*MAY 30 (MSC)	-----	-----	PR.REC. APR 8 '90 (DN); APR 14 '91(DN); JUN 5 '92 (SJ)
LESSER SCAUP	APRIL 9 (RF/SJ)			OCT 20 (BC)	BREEDING
HARLEQUIN DUCK	NO RECORD 1993				PR.REC. SEPT 21,1991(TT); UNDATED RECORD(S&S)
OLD SQUAW	NO RECORD 1993				PR.REC. APRIL 29,1984 (RE)
BLACK SCOTER	NO RECORD 1993				PR.REC. MAY 15,1982 (EJ)
SURF SCOTER	*MAY 12 (BC)				PR.REC. MAY 19,1986 (PD); MAY 26,1991 (PS)
WHITE-WINGED SCOTER	MAY 6 (BC)	JULY 19 (BC)	-----	-----	BREEDING
COMMON GOLDENEYE	APRIL 9 (RF/SJ)			OCT 20 (BC)	BREEDING
BARROW'S GOLDENEYE	*MAY 17 (BC)	*JUNE 20 (BC)	-----	-----	PR.REC. UNDATED RECORDS (S&S); MAY 26, 1992 (BC)
BUFFLEHEAD	APRIL 16 (RF)			OCT 20 (BC)	BREEDING?
HOODED MERGANSER	NO RECORD 1993				TRANSIENT - PR.REC. MAY 27, 1992 (RF); SEPT 26, 1992 (BHLC)
COMMON MERGANSER	*APRIL 24 (SGF)	APRIL 28 (BC)	*AUG 30 (BBO)	-----	TRANSIENT
RED-BREASTED MERGANSER	APRIL 9 (BC)	MAY 12 (BC)	-----	-----	TRANSIENT
RUDDY DUCK	APRIL 24 (GH)			OCT 3 (BC)	BREEDING

TABLE A (1)

1993 BEAVERHILL LAKE SIGHT RECORDS

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
RUDDY TURNSTONE	*MAY 29 (MSC)	-----	*JULY 27 (BC)	-----	TRANSIENT
SURFBIRD	NO RECORD 1993				PR.REC. SEPT 21, 1975 (RK)
RED KNOT	MAY 12 (BC)	-----	*JULY 10 (BC)	*AUG 10 (SJ)	TRANSIENT; SINGLE BIRDS SIGHTED ON JUNE 30 & JULY 10
SANDERLING	MAY 12 (BC)	JUNE 8 (BC)	AUG 14 (BC)	OCT 2 (BC)	TRANSIENT; SUMMER SIGHTINGS: JUNE 30, JULY 10 & 19
SEMPALMATED SANDPIPER	MAY 3 (RF)	JUNE 4 (BC)	JULY 4 (BC)	OCT 10 (BC)	TRANSIENT
WESTERN SANDPIPER	*JULY 2 (AH) ?				PR.REC. MAY 20, 1990 (RE); 1993 - 4 RECORDED BY ANDREW HOLTE (FROM 'HOTLINE' RECORDS)
LEAST SANDPIPER	MAY 6 (RF)	JUNE 3 (BBO)	JULY 4 (BC)	AUG 30 (BC)	TRANSIENT
WHITE-RUMPED SANDPIPER	MAY 12 (BC)	*MAY 28 (BC)	-----	-----	TRANSIENT
BAIRD'S SANDPIPER	MAY 12 (BBO)	MAY 29 (MSC)	JULY 5 (BC)	SEPT 22 (BC)	TRANSIENT
PECTORAL SANDPIPER	MAY 12 (BC)	*MAY 21 (BBO)	JULY 4 (BC)	OCT 13 (SJ)	TRANSIENT
SHARP-TAILED SANDPIPER	NO RECORD 1993				PR.REC. SEPT 27, 1987 (EML)
DUNLIN	*MAY 3 (RF/DD)	*MAY 15 (BBO)	-----	-----	TRANSIENT
STILT SANDPIPER	MAY 12 (BC)	MAY 29 (MSC)	JULY 4 (BC)	AUG 14 (BC)	TRANSIENT
BUFF-BREASTED SANDPIPER	MAY 24 (DD)	MAY 29 (MSC)	-----	*SEPT 22 (BC)	TRANSIENT
RUFF		*APRIL 25 (TT)			PR.REC. MAY 8, 1978 (DD)
SHORT-BILLED DOWITCHER	MAY 10 (BBO)	MAY 28 (BC/BBO)	JUNE 28 (BBO)	AUG 29 (RD/BC)	TRANSIENT
LONG-BILLED DOWITCHER	MAY 3 (RF)	-----	JULY 10 (BC)	AUG 14 (BC)	TRANSIENT
(DOWITCHER SP.)	MAY 6 (RF)	MAY 29 (BBO)	JULY 10 (BC)	OCT 10 (BC)	SUMMER - 3 SIGHTED JUNE 14 (BBO)
COMMON SNIPE	APRIL 24 (GH)			SEPT 22 (BC)	BREEDING
WILSON'S PHALAROPE	MAY 10 (BBO)	JULY 19 (BC)	-----	-----	BREEDING; NO RECORDS AFTER JULY 19
RED-NECKED PHALAROPE	MAY 12 (BC)	JULY 19 (BC)	-----		TRANSIENT; 4000 - MAY 30 (EJ); NO RECORDS AFTER JULY 19
RED PHALAROPE	NO RECORD 1993				PR.REC. SEPT 27, 1990 (DD)
PARASITIC JAEGER	-----	-----	*SEPT 18 (DD)	-----	PR.REC. OCTOBER 15, 1983 (BBO)
LONG-TAILED JAEGER	NO RECORD 1993				PR.REC. SEPT 8-12, 1977 (DD)
(JAEGER SP.)	-----	*JUNE 16 (BC)	-----	-----	
FRANKLIN'S GULL	APRIL 16 (RF)			OCT 2 (BC)	BREEDING
LITTLE GULL	NO RECORD 1993				PR.REC. AUGUST 26, 1989 (DD)
BONAPARTE'S GULL	APRIL 28 (BC)			OCT 20 (BC)	TRANSIENT
MEW GULL	NO RECORD 1993				PR.REC. AUG 8, 1988 (DD); SEPT 7, 1991 (DD)
RING-BILLED GULL	APRIL 1 (RF)			OCT 31 (BC)	BREEDING
CALIFORNIA GULL	APRIL 9 (RF/SJ)			SEPT 3 (BC)	BREEDING
HERRING GULL	MAY 28 (BC)	AUG 2 (BBO)	SEPT 13 (BC)	OCT 10 (BC)	TRANSIENT
ICELAND GULL	NO RECORD 1993				PR.REC. OCTOBER 22, 1926 (RL)
GLAUCOUS GULL	NO RECORD 1993				PR.REC. MARCH 31, 1985 (GH); MAY 11, 1992 (SJ)
BLACK-LEGGED KITTIWAKE	NO RECORD 1993				PR.REC. MAY 15, 1988 (RE)
SABINE'S GULL	NO RECORD 1993				PR.REC. SEPT 5, 1975 (DD); SEPT 21 & OCT 13, 1991 (TT)
CASPIAN TERN	NO RECORD 1993				PR.REC. MAY 4, 1985 (RE); JULY 8, 1991 (BC)
COMMON TERN	MAY 12 (BC)	JULY 19 (BC)	-----	*SEPT 28 (BC)	BREEDING
ARCTIC TERN	NO RECORD 1993				PR.REC. MAY 11, 1985 (RE)
FORSTER'S TERN	MAY 28 (BC)	JULY 19 (BC)	-----	-----	BREEDING
BLACK TERN	MAY 12 (BBO)			AUG 30 (BC)	BREEDING
ANCIENT MURRELET	NO RECORD 1993				PR.REC. OCTOBER 2, 1983 (DD)
ROCK DOVE	YEAR ROUND RESIDENT - CAN BE FOUND IN AREA FARMS AND IN TOFIELD ANY DAY OF YEAR				
MOURNING DOVE	MAY 11 (BBO)	JULY 19 (BC)	-----	OCT 30 (DD)	BREEDING?
BLACK-BILLED CUCKOO	NO RECORD 1993	BREEDING; PR.REC. BANDED 1986 & 1987; NEST 1987; 1992 ONE REPORTED ONE MILE WEST OF ROAD 834 (PH)			
GREAT HORNED OWL	APRIL 24 (GH)			SEPT 30 (SJ)	YEAR ROUND RESIDENT; JAN 4, 1994 (RF)
SNOWY OWL	-----	-----	OCT 7 (DD)	OCT 31 (BC)	TRANSIENT WINTER VISITOR
NORTHERN HAWK OWL				*NOV 13 (ADG)	PR.REC. OCTOBER 13, 1973 (DD)
BURROWING OWL	NO RECORD 1993				PR.REC. MAY 1983 (RS)
GREAT GRAY OWL	NO RECORD 1993				PR.REC. SPRING 1925 (ROWAN)(RL); SEPT 1, 1992 (FF)
LONG-EARED OWL	*MAY 10 (BBO)				PR. REC. OCT 2, 1988 (BBO); 1992 - NEST WITH 3 YG
BOREAL OWL	NO RECORD 1993				PR.REC. MAY 15, 1983 (EJ) - FOUND DEAD
SHORT-EARED OWL	APRIL 24 (GH)	MAY 29 (MSC)	-----	-----	YEAR ROUND RESIDENT
NORTHERN SAW-WHET OWL	NO RECORD 1993				TRANSIENT; ONE NEST RECORDED 1987 (RE); SEPT 6, 1991 (EJ) BANDED

TABLE A (3)
REVISED MAY 2, 1994

1993 BEAVERHILL LAKE SIGHT RECORDS

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
COMMON NIGHTHAWK		*MAY 30 (MSC)			PR. REC. AUGUST 28, 1988(BBO); MAY 31, 1992 (SJ)
RUBY-THROATED HUMMINGBIRD	MAY 30 (MSC)			AUG 11 (BBO)	VAGRANT
BELTED KINGFISHER	NO RECORD 1993				PR.REC. MAY 22, 1990 (RD)
RED-HEADED WOODPECKER	NO RECORD 1993				PR.REC. MAY 24, 1987 (DN)
YELLOW-BELLIED SAPSUCKER	*MAY 28 (BC)	*JUNE 28 (BBO)	-----	*AUG 12 (BC)	TRANSIENT
DOWNY WOODPECKER	APRIL 24 (SGF)			SEPT 22 (BC)	YEAR ROUND RESIDENT
HAIRY WOODPECKER	APRIL 24 (GH)			DEC (MY)	VAGRANT
NORTHERN FLICKER	APRIL 24 (SGF)			DEC (MY)	BREEDING
PILEATED WOODPECKER		*MAY 30 (JH)			PR.REC. APRIL 30, 1988 (EML); OCT 18, 1992 (DN)
OLIVE-SIDED FLYCATCHER	NO RECORD 1993				PR.REC. MAY 26, 1991 (SJ); MAY 31, 1991 (BBO)
WESTERN WOOD-PEWEE	MAY 17 (BC)			AUG 16 (BBO)	BREEDING?
YELLOW-BELLIED FLYCATCHER	-----	*JUNE 2 (BBO)	-----	*AUG 6 (JD/JB)	TRANSIENT
ALDER FLYCATCHER	MAY 28 (BBO)			SEPT 5 (BBO)	BREEDING
WILLOW FLYCATCHER			*JULY 29 (GH)		MAY HAVE BEEN RECORDED ALONG WITH ALDER AS TRAILL'S
(TRAILL'S FLYCATCHER)	MAY 30 (BBO)			AUG 25 (EJ)!	
LEAST FLYCATCHER	MAY 10 (BBO)			SEPT 5 (BBO)	BREEDING
EASTERN PHOEBE	APRIL 25 (GH)			SEPT 3 (BBO)	BREEDING
SAY'S PHOEBE	MAY 1 (BT)	MAY 24 (BC)	-----	-----	TRANSIENT
GREAT CREASTED FLYCATCHER	NO RECORD 1993				PR.REC. JULY 12, 1987 (RE)
WESTERN KINGBIRD	JUNE 28 (BC)				PR. REC. JUNE 7, 1979 (RK)
EASTERN KINGBIRD	MAY 24 (BC)			SEPT 3 (BC)	BREEDING
HORNED LARK	MARCH 10 (RF)	MAY 30 (MSC)	SEPT 22 (BC)	OCT 2 (BC)	BREEDING
PURPLE MARTIN	MAY 21 (JF)			JUNE 20 (BC)	BREEDS (TOFIELD)
TREE SWALLOW	APRIL 25 (GH)			AUG 13 (BBO)	BREEDING
N. ROUGH-WINGED SWALLOW		*MAY 21 (JF)			PR.REC. MAY 27, 1991 (EJ); JUNE 23, 1991 (DN)
BANK SWALLOW	*MAY 14 (BBO)	-----	JULY 30 (BBO)	AUG 19 (BBO)	TRANSIENT
CLIFF SWALLOW	MAY 29 (MSC)			AUG 14 (BC)	BREEDING
BARN SWALLOW	MAY 6 (RF)			AUG 31 (RD)	BREEDING
GRAY JAY	NO RECORD 1993				ONLY RECORD: OCT 18, 1992 (PH)
BLUE JAY	MAY 29 (MSC)			AUG 12 (BC)	TRANSIENT; WINTER FEEDER BIRD
BLACK-BILLED MAGPIE	MARCH 21 (GG)			OCT 31 (BC)	YEAR ROUND RESIDENT
AMERICAN CROW	MARCH 30 (PN)			SEPT 13 (BC)	BREEDING
COMMON RAVEN	APRIL 24 (GH)			OCT 31 (BC)	TRANSIENT; SIGHTINGS THROUGHOUT SUMMER
BLACK-CAPPED CHICKADEE	APRIL 9 (RF/SJ)			NOV 5 (BC)	YEAR ROUND RESIDENT
BOREAL CHICKADEE	NO RECORD 1993				TRANSIENT; JULY 31, 1991 (ED); OCTOBER 6, 1991 (BC); MAY 1992 (EJ)
RED-BREASTED NUTHATCH	-----	-----	AUG 18 (BBO)	SEPT 30 (SJ)	BREEDING?
WHITE-BREASTED NUTHATCH			*OCT 7 (ADG)		PR.REC. MAY 12, 1990 (DN); SEPT 7, 1991 (DN); AUG 25, 1992 (CM)
BROWN CREEPER	NO RECORD 1993				PR.REC. SEPT 28, 1990 (EJ); SEPT 23, 1992 (BC)
HOUSE WREN	MAY 10 (BBO)			SEPT 5 (SJ)	BREEDING
SEDGE WREN		*JUNE 20 (BC)			BREEDING
MARSH WREN	MAY 3 (PK)			AUG 18 (BBO)	BREEDING
GOLDEN-CROWNED KINGLET		*MAY 14 (BBO)			PR.REC. OCTOBER 2, 1989 (BBO); SEPT 28, 1991 (DN); OCT 16, 1992 (PH)
RUBY-CROWNED KINGLET	-----	-----	AUG 25 (EJ)!	SEPT 30 (SJ)	TRANSIENT
MOUNTAIN BLUEBIRD	APRIL 9 (RF/SJ)	JUNE 16 (BC)	-----	*OCT 2 (BC)	BREEDING; (ONLY ONE BIRD SIGHTED AFTER JUNE 16)
TOWNSEND'S SOLITAIRE	NO RECORD 1993				PR.REC. APRIL 11, 1981 (DD)
VEERY	*MAY 18 (BBO)	*JUNE 11 (BBO)	-----	*AUG 25 (EJ)!	BREEDING
GRAY-CHEEKED THRUSH	*MAY 14 (BBO)	*MAY 15 (BBO)			PR.REC. MAY 1985, '86 (EJ); MAY 29, 1991 (EJ); MAY 29, 1992 (EJ); JUNE 5, 1992 (SJ)
SWAINSON'S THRUSH	MAY 16 (BBO)			SEPT 13 (BC)	BREEDING
HERMIT THRUSH	*APRIL 2 (GH)	-----	AUG 25 (EJ)!	SEPT 30 (BBO)	TRANSIENT; BREEDING?
AMERICAN ROBIN	APRIL 5			OCT 10 (BC)	BREEDING
GRAY CATBIRD	MAY 31 (BBO)			SEPT 2 (BBO)	BREEDING?; SIGHTINGS THROUGHOUT SUMMER
NORTHERN MOCKINGBIRD			*JULY 29 (JDx/JB)		PR.REC. MAY 14, 1975 (DD)
BROWN THRASHER	NO RECORD 1993				BREEDING (EJ); PR.REC. 1988(EJ); MAY 20, 1991 (EML); MAY 30, 1992 (GH)

1993 BEAVERHILL LAKE SIGHT RECORDS

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
AMERICAN (WATER) PIPIT	APRIL 10 (JL)	MAY 12 (BC)	AUG 29 (BBO)	SEPT 30 (SJ)	TRANSIENT
SPRAGUE'S PIPIT	MAY 29 (MSC)	JULY 27 (BC)			BREEDING
BOHEMIAN WAXWING	JAN 3 (CBC)			DEC (TOFIELD)	WINTER TRANSIENT
CEDAR WAXWING	MAY 24 (BC)			DEC (TOFIELD)	BREEDING; LAST REGULAR SIGHTING - OCT 10 (BC)
NORTHERN SHRIKE	*JAN 3 (CBC)	APRIL 9 (BC)		*NOV 13 (BC)	WINTER TRANSIENT
LOGGERHEAD SHRIKE	NO RECORD 1993				BREEDING; SEE ATLAS OF BREEDING BIRDS OF ALBERTA
EUROPEAN STARLING	MARCH 21 (GG)			OCT 20 (BC)	YEAR ROUND RESIDENT
SOLITARY VIREO	*MAY 26 (BBO)	JULY 17 (BBO)	AUG 3 (BBO)	AUG 25 (EJ)!	TRANSIENT
WARBLING VIREO	MAY 17 (BC)			SEPT 5 (BBO)	BREEDING
PHILADELPHIA VIREO	*JUNE 8 (BBO)	*JULY 20 (JD/JB)	*AUG 18 (BBO)	*AUG 25 (EJ)!	TRANSIENT
RED-EYED VIREO	MAY 24 (BC)			AUG 29 (BBO)	BREEDING
TENNESSEE WARBLER	MAY 13 (BBO)	MAY 29 (MSC)	JULY 11 (BBO)	SEPT 17 (EJ)	TRANSIENT; (one summer record on June 11 (SJ))
ORANGE-CROWNED WARBLER	MAY 11 (BBO)	JUNE 3 (BBO)	JULY 19 (BBO)	SEPT 19 (BBO)	TRANSIENT
NASHVILLE WARBLER	NO RECORD 1993				ONLY RECORD: AUG 1992 (EJ) banded
YELLOW WARBLER	MAY 10 (BBO)			SEPT 5 (BBO)	BREEDING
CHESTNUT-SIDED WARBLER	NO RECORD 1993				PR.REC. AUG 30,1990 (SJ);SEPT 21,1991 (EML);AUG 31,1992(EJ)
MAGNOLIA WARBLER	MAY 26 (BBO)	MAY 31 (BBO)	AUG 21 (BBO)	SEPT 2 (BBO)	TRANSIENT
CAPE MAY WARBLER	-----	-----	AUG 17 (BBO)	AUG 25 (EJ)!	TRANSIENT
BL.-THROATED BLUE WARBLER	NO RECORD 1993				ONLY RECORD: OCTOBER 4,1928 (S&S)
YEL-RUMPED(MYRTLE)WARBLER	MAY 3 (RF)	JUNE 11 (BBO)	JULY 12 (BBO)	OCT 2 (BC)	TRANSIENT
YEL-RUMPED(AUDUBON'S)WARB.	NO RECORD 1993				TRANSIENT; BANDED - AUG 19 (SJ) & SEPT 2,1992 (JDG/CM)
TOWNSEND'S WARBLER	NO RECORD 1993				PR.REC. AUG 10 (JF) & AUG 24,1991(SJ) ; AUG 24,1992 (KH)
BL.-THROATED GREEN WARBLER	*AUG 12 (BC)	*AUG 25 (EJ)!			PR.REC. MAY 25,1991 (EJ); SEPT 5,1991 (EJ); AUG 19 (SJ) & FALL 1992(EJ)
BLACKBURNIAN WARBLER	NO RECORD 1993				PR.REC. AUG 24,1989 (SJ); AUG 31,1992 (EJ)
PALM WARBLER	MAY 12 (BBO)	MAY 30 (MSC)	*AUG 18 (BBO)	*SEPT 17 (EJ)	TRANSIENT
BAY-BREASTED WARBLER	NO RECORD 1993				TRANSIENT;PR.REC. SEPTEMBER 21,1991 (EML); AUG 31,1992(EJ)
BLACKPOLL WARBLER	MAY 13 (BBO)	JUNE 8 (BBO)	AUG 4 (BBO)	SEPT 13 (BC)	TRANSIENT
BLACK-AND-WHITE WARBLER	-----	-----	AUG 4 (BBO)	AUG 25 (EJ)!	TRANSIENT
AMERICAN REDSTART	MAY 14 (BBO)	MAY 29 (MSC)	JULY 22 (BBO)	SEPT 19 (BBO)	TRANSIENT; BREEDING?
OVENBIRD	-----	-----	AUG 5 (BBO)	AUG 25 (EJ)!	TRANSIENT
NORTHERN WATERTHRUSH	MAY 16 (BBO)	MAY 25 (BBO)	AUG 12 (BBO)	SEPT 18 (ADG)	TRANSIENT
CONNECTICUT WARBLER	*MAY 30 (MSC)				NO RECORD BEFORE 1991
MOURNING WARBLER	MAY 28 (BBO)	MAY 30 (BBO)	*AUG 17 (BBO)	-----	TRANSIENT
MACGILLIVRAY'S WARBLER			*AUG 20 (BBO)	*AUG 27 (BBO)	PRE.REC. MAY 25,1992 (GH) & AUG 23,1992 (SJ)
COMMON YELLOWTHROAT	MAY 15 (GH)			SEPT 22 (BC)	BREEDING
WILSON'S WARBLER	MAY 28 (BBO)	MAY 29 (MSC)	AUG 9 (BBO)	AUG 31 (BBO)	TRANSIENT
CANADA WARBLER	*MAY 30 (MSC)	-----	*AUG 13 (BBO)	*AUG 17 (BBO)	TRANSIENT
SCARLET Tanager	NO RECORD 1993				PR.REC. MAY 11,1985 (PD)
WESTERN Tanager			*AUG 16 (SJ)		TRANSIENT
ROSE-BREASTED GROSBEAK	MAY 13 (BBO)			AUG 3 (BBO)	TRANSIENT; BREEDING?
INDIGO BUNTING	NO RECORD 1993				PR.REC. MAY 24,1990 (EJ)

Re: August 25 (EJ)!

Refers to Edgar T. Jones banding records August 21 to August 30

(CBC) - CHRISTMAS BIRD COUNT records

1993 BEAVERHILL LAKE SIGHT RECORDS

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
AMERICAN TREE SPARROW	APRIL 9 (RF/SJ)	APRIL 24 (GH)	SEPT 13 (BC)	OCT 13 (SJ)	TRANSIENT
CHIPPING SPARROW	MAY 11 (BBO)			SEPT 13 (BC)	BREEDING
CLAY-COLOURED SPARROW	MAY 10 (BBO)			SEPT 22 (BC)	BREEDING
VESPER SPARROW	MAY 3 (BM)			SEPT 22 (BC)	BREEDING
LARK SPARROW	NO RECORD 1993				ONLY RECORD: MAY 18,1991 (TT)
LARK BUNTING	NO RECORD 1993				PR.REC. MAY 15,1984 (RE); JUNE 15,1991 (EO); MAY 26,1992 (BC)
SAVANNAH SPARROW	APRIL 28 (BC)			SEPT 28 (BC)	BREEDING
BAIRD'S SPARROW	NO RECORD 1993				PR.REC. MAY,1989 (RE)
LECONTE'S SPARROW	MAY 10 (BBO)			AUG 30 (BC)	BREEDING
SHARP-TAILED SPARROW	JUNE 4 (BC)			AUG 18 (BBO)	BREEDING
FOX SPARROW	NO RECORD 1993				TRANSIENT
SONG SPARROW	APRIL 9 (RF/SJ)			OCT 10 (BC)	BREEDING
LINCOLN'S SPARROW	MAY 12 (BBO)	*JULY 11 (BBO)	AUG 19 (BBO)	SEPT 28 (BC)	TRANSIENT
SWAMP SPARROW	-----	-----	SEPT 13 (BC)	SEPT 28 (BC)	BREEDING
WHITE-THROATED SPARROW	MAY 10 (BBO)	JUNE 16 (BBO)	AUG 25 (EJ)!	SEPT 28 (BC)	BREEDING
GOLDEN-CROWNED SPARROW	NO RECORD 1993				ONLY RECORD: APRIL 4,1992 (WF)
WHITE-CROWNED SPARROW	*MAY 3 (BBO)	MAY 12 (BC)	SEPT 13 (BC)	SEPT 28 (BC)	TRANSIENT
HARRIS' SPARROW	NO RECORD 1993				TRANSIENT; JAN 12,1992 (DN) @ YACIUK FEEDER; OCT 3,1992 (JL)
DARK-EYED JUNCO	APRIL 9 (RF/SJ)	MAY 25 (BBO)	AUG 25 (EJ)!	OCT 10 (BC)	TRANSIENT
MC COWAN'S LONGSPUR	NO RECORD 1993				PR.REC. SEPT 12,1977 (MM)
LAPLAND LONGSPUR	APRIL 9 (BC)	MAY 12 (BC)	-----	OCT 13 (SJ)	TRANSIENT
SMITH'S LONGSPUR	NO RECORD 1993				TRANSIENT; SEPT 1991 (DD) RECORDED AS A PROBABLE SIGHTING
CHESTNUT COLLARED LONGSPUR	NO RECORD 1993				BREEDING?; PR.REC. UNDATED (S&S)
SNOW BUNTING	MARCH 21 (GG)	MAY 28 (BC)	OCT 20 (BC)	OCT 31 (BC/RD)	TRANSIENT
BOBOLINK	MAY 23 (BBO)	JUNE 28 (BBO)	-----	-----	BREEDING
RED-WINGED BLACKBIRD	APRIL 9 (RF/SJ)			OCT 31 (BC)	BREEDING
WESTERN MEADOWLARK	APRIL 17 (JL)			SEPT 28 (BC)	BREEDING
YELLOW-HEADED BLACKBIRD	APRIL 17 (JL)			OCT 2 (BC)	BREEDING
RUSTY BLACKBIRD	*JUNE 4 (BC)	*JULY 4 (BC)	SEPT 22 (BC)	OCT 10 (BC)	TRANSIENT
BREWER'S BLACKBIRD	APRIL 24 (GH)			OCT 2 (BC)	BREEDING
COMMON GRACKLE	*JUNE 8 (BC)	*JUNE 16 (BC)	-----	-----	BREEDING
BROWN-HEADED COWBIRD	APRIL 25 (GH)			AUG 12 (BC)	BREEDING
NORTHERN ORIOLE	MAY 15 (BBO)			AUG 11 (BBO)	BREEDING
PINE GROSBEAK	NO RECORD 1993				WINTER RESIDENT; PR. REC. JAN 12,1992 (DN)
PURPLE FINCH	APRIL 24 (GH)	*JULY 16 (BBO)	-----	*SEPT 13 (BC)	TRANSIENT
RED CROSSBILL	NO RECORD 1993				ONLY RECORD: 3 BANDED JULY 31,1992 (KH/JDx)
WHITE-WINGED CROSSBILL	NO RECORD 1993				WINTER VAGRANT; JAN 12,1992 (DN)
COMMON REDPOLL	JAN 3 (MY)	APRIL 9 (BC)	OCT 13 (BC)	DEC (MY)	WINTER RESIDENT
HOARY REDPOLL	*JAN 3 (MY)			DEC (MY)	WINTER RESIDENT
PINE SISKIN	*MAY 13 (BBO)	*JUNE 10 (BBO)	JULY 22 (BBO)	OCT 10 (BC)	TRANSIENT
AMERICAN GOLDFINCH	MAY 14 (BBO)			OCT 10 (BC)	BREEDING
EVENING GROSBEAK	NO RECORD 1993				TRANSIENT
HOUSE SPARROW	MARCH 21 (GG)			DEC (MY)	YEAR ROUND RESIDENT

COMMENTS:

* indicates a single record

(MSC) - from May Species Count records

(SGF) - from Snow Goose Festival records

(BBO) - from Beaverhill Bird Observatory 'Daily Estimated Totals' records

PR.REC. - previous records are from the following sources:

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The Beaverhill Bird Observatory Society is a non-profit organization consisting of volunteers from all walks of life who are dedicated to research, recreation and education in birds and other natural history. Elected directors take care of the administrative side of running the field station as a bird banding, research and interpretive centre through regular meetings and donated time and effort.

Membership is open to anyone and includes a subscription to *The Willet*, the BBO newsletter (at least 3 issues per year), the opportunity to participate in BBO activities and events (and assist in planning them) and the possibility of training in bird banding. Two full membership meetings are held each year - one in spring and one in the fall.

The BBO provides support to amateur, student and professional field naturalists in pursuing studies of bird life and related fields at Beaverhill Lake. Student field staff are employed to man the station during the summer months.

Membership fees are:

Individual	\$10
Family	\$20
Corporate	\$25
Supporting	\$25
Sustaining	\$100
Life	\$500

Tax deductible donation receipts are available. If you wish to join, please send your name, address and phone number, along with a cheque for the appropriate amount (made out to the Beaverhill Bird Observatory) to:

The Treasurer,
Beaverhill Observatory
P.O. Box 1418
Edmonton, AB
T5J 2N5

The following publications have resulted from the research at the BBO field station.

- Campbell, L. (ed.) 1991. *Beaverhill Bird Observatory 1990 Annual Report*. Beaverhill Bird Observatory, Edmonton.
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Look for bird bands!

Why?

Every year, millions of birds are banded by amateur and professional researchers across North America (including between 2 and 3 thousand by Beaverhill Bird Observatory personel) in an effort to determine migration routes, wintering and breeding grounds and longevity among other topics. Each bird receives its own individual band number so that if you find a banded bird it can be traced to a banding location and date. Every band number traced in this way can provide important information about the topics mentioned above.

How?

Any bird that can be handled (dead or alive) should be checked for bands on its leg - but take care not to injure a live one or jeopardize it's chance of survival. Road and window casualties, predator (including cats) victims, weather and building mortalities can all provide possibilities of finding a bird band.

When?

Banded birds can be found any time, but migration (March - June and August - October) is the most likely time. Right after storms or low pressure systems are good times to look for bird casualties that might have bands on their legs:

What do you do if you find one?

Please write down the following information on any banded bird that you find:

- 1) All the numbers on the band
- 2) When (date) the bird was found
- 3) Location (geographic) where it was found
- 4) Species (if you can determine)
- 5) Condition of bird (if dead - how it died)
- 6) How you found the bird (e.g. cat brought it in)

and send this information to:

Bird Banding Office
Canadian Wildlife Service
Ottawa, Ontario
K1A 0E7

In return you will receive a certificate acknowledging your find and information on the origin (location and date) of the bird.