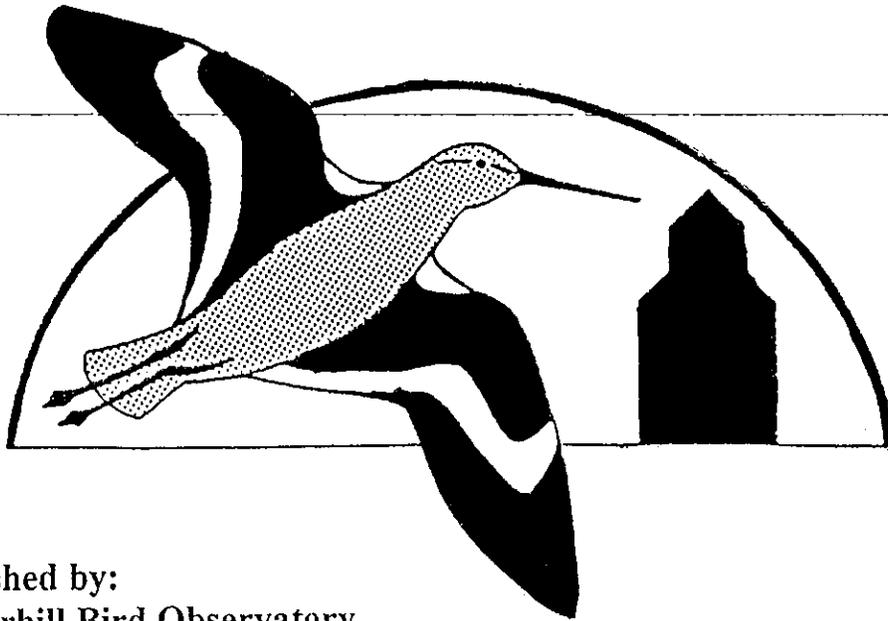


Beaverhill Bird Observatory

1994 Annual Report



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Editors: Jason Duxbury
Petra Rowell

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 and elsewhere. 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 Bird Observatory
P.O. Box 1418
Edmonton, AB
T5J 2N5

DEDICATION

The *Beaverhill Bird Observatory 1994 Annual Report* is dedicated to the Beaverhill Bird Observatory's first Honorary Lifetime Member, Dr. Geoffrey L. Holroyd.



Geoff Holroyd has been an keen and enthusiastic birder since he started banding during his teenage years at Long Point Bird Observatory in Ontario. A doctoral thesis on Swifts and work on an extensive bio-physical inventory of Banff/Jasper were just a couple of projects Geoff was involved in before he, with a handful of other banders, founded the Beaverhill Bird Observatory (BBO) in the early 1980's. Today, Geoff holds the position of Research Scientist with the Canadian Wildlife Service, but many of his friends know him better for his work in his spare time. As a volunteer, Geoff has been active with the BBO, Edmonton Natural History Club, Federation of Alberta Naturalists, Long Point Bird Observatory, World Wildlife Fund and other organizations for over a decade. His commitment to natural history issues at the local, national and international level is to be commended. In 1994, after completing his term as Chairman of the BBO, Dr. Geoff Holroyd was awarded the BBO's first Honorary Lifetime Membership.

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INTRODUCTION - By Josh Bilyk and Jason Duxbury

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 of Edmonton, it is a popular place to bird watch. With its large mudflats, extensive grassland/willow complexes and surrounding aspen forest, this area is a haven for many species of wildlife. In the spring and fall, the lake provides a staging ground for waterfowl, shorebirds and migratory passerines. Because of the rich diversity of wildlife at Beaverhill, many studies have been conducted here by people like William Rowen and Robert Lister (Lister, 1979), Dick Dekker (1991), and Roy Fairweather (1993). Ducks Unlimited has also completed several waterfowl projects in the area, such as providing spring waterfowl staging areas and breeding islands in Lister Lake. Beaverhill Lake has gained international recognition under the RAMSAR wetland agreement and has been declared a Natural Viewpoint by the Canadian Nature Federation. The Alberta Government has also declared the southeast corner and Pelican and Dekker Islands as Natural Areas, with the Beaverhill Bird Observatory as steward.

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 laboratory situated at the southeast corner of Beaverhill Lake (Figure 1).

1994 also marked the start of full operations at the Lesser Slave Lake Bird Observatory (LSLBO). The LSLBO station was initiated in 1993 as a pilot project of the BBO and the Lesser Slave Lake Provincial Park. This site is located on the east shore of Lesser Slave Lake, in Lesser Slave Lake Provincial Park (Figure 2). The area around the site seems to be one containing a high concentration of migrating birds in the spring and fall, with a composition of summer resident birds different from that of Beaverhill Lake. This area is nestled in between the large Lesser Slave Lake and Marten Mountain, the highest point in the Pelican Mountain area. These two obstacles may funnel the birds through the site during migration.

The primary function of both stations is bird banding as part of the Migration Monitoring, and Monitoring of Avian Productivity and Survivorship (MAPS) programs. This annual report will summarize these and other activities at the BBO and the LSLBO in 1994.

1994 BEAVERHILL BIRD OBSERVATORY COMMITTEE REPORTS

1. EXECUTIVE COMMITTEE

The goal of the Executive Committee is to use financial, human and physical resources effectively and responsibly to ensure the growth and continuation of the Beaverhill Bird Observatory Society.

1a. The 1994 Executive (prior to November elections).

Chairman	Geoff Holroyd
Vice-chair	Petra Rowell
Treasurer	Elson Olorenshaw
Recording Secretary	Alan Hingston
Directors:	
	Rick Chabaylo (Birdathon Coordinator)
	Stefan Jungkind (Migration Monitoring)
	Al Degroot (Director-at-large)
	Ross Dickson (Sightings Compiler)
	Jim Faragini (Facilities)
	Joan Degeer (MAPS Project)
	Roy Fairweather (Natural Areas)
	Brian Hornby (Brochures)

1b. Chairman's Year End Report - By Geoff Holroyd

What an astonishing year we had! A new station at Lesser Slave Lake, a full season at Beaverhill Lake, a major expedition to Guatemala, Canada's 4th largest Birdathon and more....read on!

The banding season started for some of us in February. In the tropical lowland rainforest of eastern Guatemala, 11 Canadians toiled to survey and band birds. The project's objective was to inventory the birds of a mountain reserve with FUNDAECO, a Guatemalan conservation group. The project was under the leadership of Chandler Robbins and Barbara Dowell of the U.S. National Biological Survey. After banding a Red-legged Honeycreeper on his first day, Jim Faragini declared that the bird was worth the airfare already. And the year was still early!

In May, a new migration monitoring station was started at Lesser Slave Lake Provincial Park with Jason Duxbury and Lisa Zuberbier as the first employees. The northern warblers soon made their appearance and proved the value of our efforts. Along the shore, migrants flew parallel to the waters edge heading north, providing an opportunity

to monitor daytime migration. This visible migration was a special bonus of this site and is absent at Beaverhill Lake. The migration monitoring protocol from Beaverhill Lake was modified to include the "vis-mig" data, and more jargon for banders to use. By the end of the year Jason had drafted a new manual for Lesser Slave Lake including migration monitoring, vis-migs and MAPS. Thus this manual approaches an operations manual for the station. But do not worry about the jargon, visit this new station and you will fall in love with it too.

Meanwhile, back on the home front, aka Beaverhill Lake, Josh Bilyk, Rachel Amores, Kevin Hento and Carla Palaschuk completed a full season of migration monitoring and added a second MAPS site to our operation. Their enthusiasm and Josh's superior pancakes made the Pancake Breakfast a great success. The BBO members were active leaders in the Snow Goose Festival in April and over 200 people enjoyed refreshments at the BBO station. One banding highlight was the retrapping of a Baltimore Oriole, 9 years after it was banded by Jim Faragini. Unusual birds were an Osprey (last reported at Beaverhill in 1984) and a Turkey Vulture (last reported in 1967). Among our many visitors were birdwatchers from Germany and Scotland.

Your hardworking executive continued to do an outstanding job of keeping the observatory in motion. Rick Chabaylo organized the fourth largest (in terms of funds raised) Birdathon in Canada. Congratulations and thanks to Rick, the Birdathon teams and to all the Birdathon supporters. Frank Fraser and others did a great deal of work to start the Lesser Slave Lake station. Elson Olorenshaw continued to keep our finances in good order, processed accounts promptly and maintained the payroll for our increased staff. Stefan Jungkind kept our banding permit paperwork in good shape. Petra Rowell assisted with several activities throughout the year and became Chairman in November. Alan Hingston audited our financial books and assisted with minutes of executive meetings. Jim Faragini and Al Degroot ordered and organized equipment including opening and closing the station and helped with banding at Beaverhill Lake. Roy Featherweather attended meetings of the Beaverhill Lake Stakeholders Committee which includes local landowners, provincial agencies and the town of Tofield. My thanks to all these executive and others who kept the observatory active and growing.

We held two successful day-long members meetings at the University of Alberta. At the spring meeting Connie Downes and Brenda Dale presented the international and national bird monitoring programs and BBO members described the BBO's program plans for 1994.

The BBO is very grateful to its financial supporters. The Alberta Recreation, Parks and Wildlife Foundation, J.B. Baillie Memorial Fund, Canadian Wildlife Service, Employment and Immigration Canada (SEED) and Alberta Advanced Education and Career Development (STEP) provided funding for our summer staff. In addition, Lesser Slave Lake Provincial Park was instrumental in providing a site and permission to locate the new station and the park staff assisted the program there in many ways.

2. FINANCIAL/ FUNDRAISING COMMITTEE

The goal of this committee is to develop and maintain a strong financial position to support all BBO activities - to provide adequate funds for BBO operations and projects.

2a. Fundraising Report/ 1994 Sponsors

Work conducted in 1994 would not have been possible without the support of the Alberta Recreation, Parks and Wildlife Foundation, J.B. Baillie Memorial Fund, Canadian Wildlife Service, Employment and Immigration Canada (SEED), Alberta Advanced Education and Career Development (STEP), and the Lesser Slave Lake Provincial Park.

2b. Treasurer's Report - Elson Olorenshaw

Beaverhill Bird Observatory Society BALANCE SHEET Dec 31, 1994			
ASSETS		LIABILITIES	
CURRENT ASSETS		CURRENT LIABILITIES	
Bank	4,761.02	TOTAL CURRENT LIABILITIES	0.00
Cash: Total	<u>4,761.02</u>		
TOTAL CURRENT ASSETS	4,761.02	TOTAL LIABILITIES	0.00
FIXED ASSETS		EQUITY	
Building	1,400.00	EQUITY	
Computer	600.00	Capital	8,094.49
Donation Boxes	541.00	Current Earnings	<u>1,411.57</u>
Banding Equipment	1,100.00	TOTAL EQUITY	9,506.06
Display Board	527.00		
Refrigerator	<u>577.04</u>		
TOTAL FIXED ASSETS	4,745.04	TOTAL EQUITY	9,506.06
TOTAL ASSETS	4,745.04	TOTAL EQUITY	9,506.06
	<u>9,506.06</u>	LIABILITIES AND EQUITY	9,506.06
TOTAL ASSETS	9,506.06		9,506.06
	=====		=====

Beaverhill Bird Observatory Society
 INCOME Jan 1, 1994 TO Dec 31, 1994

REVENUE

REVENUE

Memberships		810.00
Grant- Alta Govt Step	3,286.80	
Grant- Baillie Fund	6,400.00	
Grant- CWS Songbird	12,140.00	
Grant- Can Govt SEED	5,308.00	
Grant- Can Govt Seed LSL	2,450.00	
Grant- RPW LS Lake	<u>6,000.00</u>	
Total Grants		35,584.80
Donations	15,988.96	
Donation Box- Gate	45.04	
Donation Box- Lab	<u>38.58</u>	
Total Donations		16,072.58
Baillie Fund Pledges		2,022.78
Interest		12.93
Sales- Prairie Waters	19.00	
Sales- Calendars	200.00	
Sales- Pins	12.00	
Sales- T-Shirts	48.00	
Sales- Pancake B'fast	71.00	
Sales- Misc	670.00	
Sales- Nat'l Geo Birdbook	<u>330.00</u>	
Net Sales		<u>1,350.00</u>
TOTAL REVENUE		<u>55,853.09</u>
TOTAL REVENUE		<u>55,853.09</u>

EXPENSE

EXPENSES

Office- Mail Box	101.65
Office- Stationery	12.90
Office- Postage	75.80
Office- Printing	213.42
Office- Network	153.38
Office- Reports/manuals	1,282.88
Telephone	37.56
Office- Misc	<u>18.00</u>
Total Office Supplies	1,895.59
Insurance	430.00
Property Taxes	76.58
Bank Charges	75.00
Repairs & Maintenance	534.31
Nets & Poles	923.48
Bands & Equipment	0.00
Snow Goose Fest. Expense	87.66
Sale Items- Prairie Waters	0.00
Sale Items- Calendars	209.93
Pancake Breakfast	40.83
Sale Items- Misc	<u>600.00</u>
Sale Item Cost - Total	938.42
Educational Courses	100.00
Memberships	65.00
Travel Exp - LS Lake	2,661.92
Travel Expense- BBO	945.00
Travel Expense- Gua.	<u>19,943.14</u>
Total Travel Expense	23,550.06
Fundaeco	1,989.46
GST Expense	0.00
Wages- LS Lake	10,996.00
Wages- BBO	11,569.59
UI Expense	887.19
CPP Expense	<u>410.84</u>
Total Wages & Benefits	23,863.62
TOTAL EXPENSES	<u>54,441.52</u>

TOTAL EXPENSE

54,441.52

INCOME

1,411.57

3. SCIENTIFIC RESEARCH/ PROJECTS COMMITTEE

The goal of this committee is to develop, promote, implement and publish quality, field-oriented surveys and research on birds and other wildlife at Beaverhill Lake and elsewhere.

3a i) Overall Bird Banding Totals at the Beaverhill Bird Observatory in 1994.

Bird banding activities at Beaverhill Bird Observatory were carried out on 75 days in 1994. Although spring banding was late getting started (May 9), the season was extended later into the fall (October 3) than previous years. Overall, a total of 4,540 net hours saw 2,911 capture events and 2,373 new birds banded (Table 1).

The number of species captured in 1994 was 62. The top five species with the highest numbers caught were Least Flycatcher (558), Yellow Warbler (422), Yellow-rumped Warbler (286), Tennessee Warbler (165), and Clay-colored Sparrow (124). Interesting captures included a Great-crested Flycatcher, Brown Creeper, Northern Shrike, Chestnut-sided Warbler, and a Fox Sparrow.

Banding effort was a combination of staff and volunteer commitment in 1994. Field personnel Josh Bilyk, Rachel Amores, Carla Palaschuk and Kevin Hento did an excellent job overseeing breeding and migration programs. As well, a number of volunteers provided invaluable assistance over the summer including C. Baker, Ursula Banasch, Michelle Beauchamp, Andy Bezener, Sarah Carr, Doug Collister, Jim Faragini, Brenda Dale, Al Degroot, Angie Degroot, Krystal Degroot, Ross Dickson, Jason Duxbury, Dave Ealey, Roy Fairweather, Al Gendron, Heidi Hargrove, Geoff Holroyd, Sharon Irwin, Stefan Jungkind, Jim Lange, Jon McCracken, Bill Murphy, Craig Myers, Elson Olorenshaw, John Pollock, Petra Rowell, Al Smith, and Sandy Tober.

Table 1. Birds banded at Beaverhill Bird Observatory in 1994.

Species	# Banded	Species	# Banded
Cooper's Hawk	1	Chestnut-sided Warbler	1
Sharp-shinned Hawk	3	Magnolia Warbler	14
Downy Woodpecker	2	Cape May Warbler	5
Northern Flicker	2	Yellow-rumped Warbler	286
Olive-sided Flycatcher	1	Western Palm Warbler	3
Great-crested Flycatcher	1	Blackpoll Warbler	19
Yellow-bellied Flycatcher	1	Black and White Warbler	7
Traill's Flycatcher	61	American Redstart	70
Least Flycatcher	558	Ovenbird	7
Eastern Phoebe	7	Northern Waterthrush	8
Barn Swallow	12	McGillivray's Warbler	1
Black-capped Chickadee	78	Common Yellowthroat	4
Boreal Chickadee	3	Wilson's Warbler	31
Brown Creeper	1	Canada Warbler	6
Red-breasted Nuthatch	7	American Tree Sparrow	52
House Wren	24	Chipping Sparrow	27
Golden-crowned Kinglet	4	Clay-colored Sparrow	124
Ruby-crowned Kinglet	29	Vesper Sparrow	1
Swainson's Thrush	20	Savannah Sparrow	35
Hermit Thrush	5	Song Sparrow	4
American Robin	7	Lincoln's Sparrow	16
Gray Catbird	1	Swamp Sparrow	1
Cedar Waxwing	1	Fox Sparrow	1
Northern Shrike	1	White-throated Sparrow	12
Solitary Vireo	4	White-crowned Sparrow	5
Warbling Vireo	48	Slate-colored Junco	33
Philadelphia Vireo	1	Red-winged Blackbird	14
Red-eyed Vireo	6	Brown-headed Cowbird	23
Tennessee Warbler	165	Baltimore Oriole	14
Orange-crowned Warbler	43	Pine Siskin	8
Yellow Warbler	422	American Goldfinch	22
Total Individuals			2373
Total Species			62

3a ii) Migration Monitoring

Although monitoring the movement of spring and fall migrants through Beaverhill Lake has always been a central part of the BBO's activities, a formal Migration Monitoring Protocol was adopted in 1992 (Duxbury 1994). Similar to the Long Point Bird Observatory protocol, daily banding totals, census tallies and estimated daily totals are combined to estimate spring and fall migration numbers.

In 1994, spring migration was monitored on 21 days between May 9 and June 11. Approximately 500 birds of 31 species were caught during this period with a capture rate of 35 birds per 100 net hours. Although this rate was slightly better than the spring capture rate of 1993 (32 birds per 100 net hours), it was overall a poor spring migration and was well below average (Jungkind, 1990).

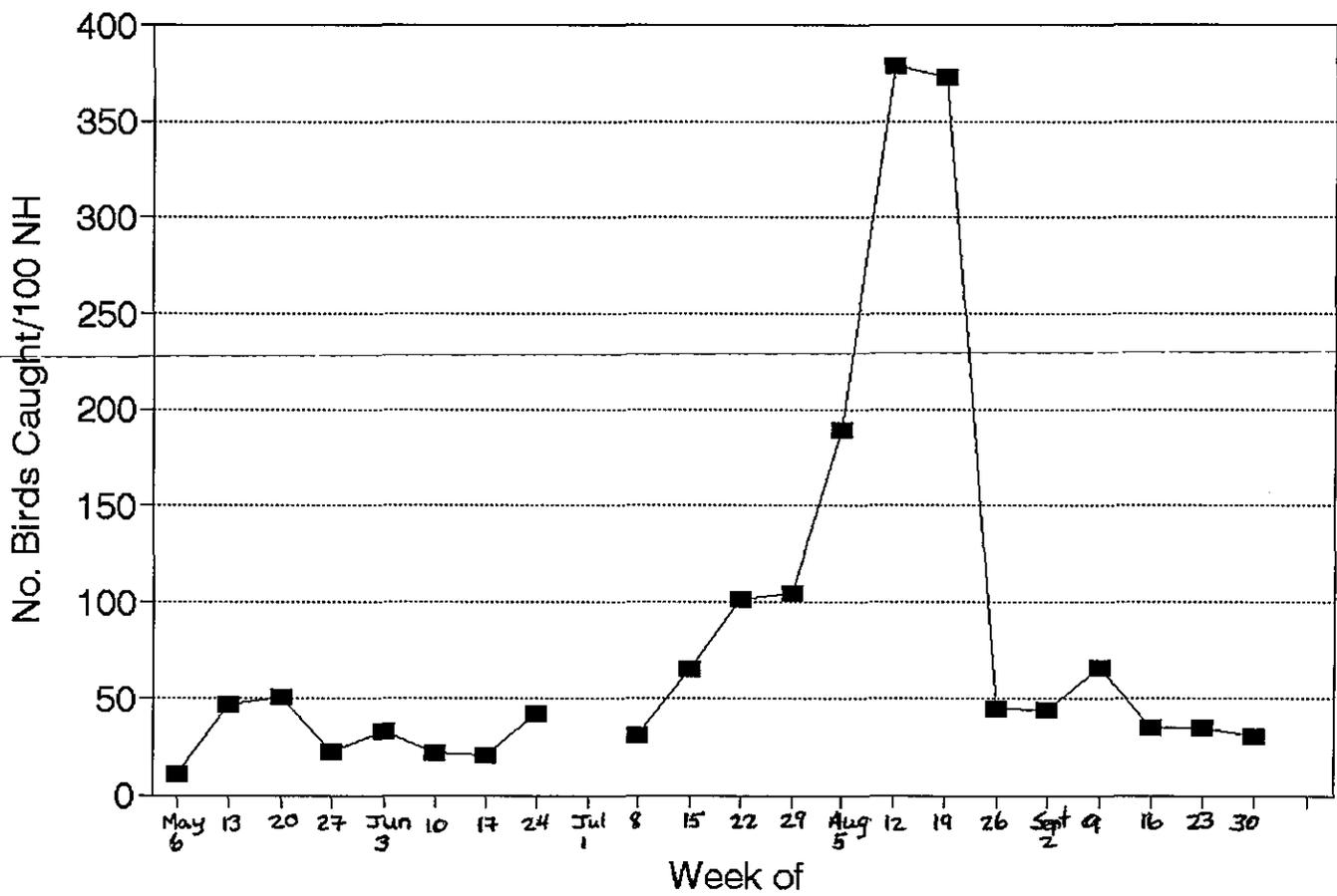
As expected, numbers improved in the fall indicating a successful breeding season. Fall migration was monitored on 45 days in 1994 (between July 8 and October 2). Approximately 2300 birds of 48 species were caught during this period. With a fall capture rate of 92 birds per 100 net hours, the 1994 fall migration appeared similar to past years.

3a iii) Monitoring Avian Productivity and Survivorship Project (MAPS)

For the sixth year in a row, the BBO participated in the continent wide MAPS project. This project, organized by the Institute for Bird Populations in Point Reyes, California, uses a standardized protocol of 6 mist nets used one day out of each 10 day period for 6 periods through the breeding season. The project measures the rise in population during the summer (the increase due to the hatch year birds or productivity) and keeps track of the subsequent returns of those birds banded in previous years (survivorship).

MAPS banding was conducted on 8 days at the BBO in 1994. A new station across the weir was added and 4 new netlanes were added to the existing lab station. Approximately 234 individuals of 16 species were banded during the MAPS period. Results for 1994 have not yet been published, however Desante & Burton (1994) have written a report of the first four years of the project, 1989-1992.

Fig. 3 Weekly Capture Rates
at the BBO in 1994.



3b. Repeats, Returns and Recoveries

Almost 3000 capture events were recorded at the BBO in 1994. For the most part, captures were of unbanded birds handled for the first time. However, approximately 530 (19%) of captures were retraps - banded birds found in the nets. These retraps fall into three categories; repeats, returns and foreign encounters.

Repeats, birds caught and banded, then recaptured in the same summer, made up the bulk of retraps (64%). Returns, birds found in the mist nets with bands from previous years, provide interesting survivorship information. These birds, banded at the BBO, have migrated at least once to their wintering grounds, or managed to survive at least one central Alberta winter, and returned once more to be recaptured at Beaverhill Bird Observatory. Well known for their site fidelity, several Yellow Warblers have returned to Beaverhill six or seven years after they were originally banded. In 1994, 84 individuals were retrapped as returns. The oldest of these was a Red-winged Blackbird banded in 1989, making it at least 5 years old in 1994.

"Foreign encounters" are birds retrapped at the BBO that were originally banded by someone other than BBO members or BBO members banding somewhere other than at the observatory. Although finding a foreign bird in the nets at the BBO is a rare event, it does happen on occasion (Table 4).

Equally rare are events where a bird banded by the BBO is found somewhere other than at Beaverhill Lake. Table 4 outlines some interesting recoveries to date. Most recently, Jim Faragini was said to exclaim "Two in one lifetime!" when discovering that a Mourning Warbler, banded on the east side of Beaverhill Lake (Mundare Beach) in the fall, was recovered eleven days later at Whitewater, Manitoba. Jim's first recovery involved a Myrtle Warbler wintering near Macon, Georgia.

Species	Band Number	Year Banded	Age/Sex at Banding	Year of Return	Minimum Age
Yellow Warbler	1750 53798	1987	AHY/M	1993	7
American Goldfinch		1987	AHY/M	1992	5
Red-winged Blackbird	762 34167	1987	ASY/M	1991	6
Tree Swallow		1987		1992	5

Table 2. Some noteworthy age records for birds banded and returned to Beaverhill Lake.

Species	Number of returns from:					Total
	1989	1990	1991	1992	1993	
Least Flycatcher				7	19	26
Traill's Flycatcher				1		1
Tree Swallow					1	1
Black-capped Chickadee					4	4
Warbling Vireo				2	2	4
Red-eyed Vireo					1	1
Yellow Warbler		1	4	15	7	27
Myrtle Warbler			1		4	5
Clay-colored Sparrow		1	1	1	1	4
Red-winged Blackbird	1		2	2		5
Brown-headed Cowbird				1	4	5
American Goldfinch					1	1
Total	1	2	8	29	44	84

Table 3. Returns at the Beaverhill Bird Observatory in 1994.

Birds banded by BBO but recovered elsewhere:					
Species	Banding Data:			Recovery data:	
	Age/Sex	Date		Location	Date
Marbled Godwit	AHY/F	June 15/83		Monterey Bay, Calif.	Mar. 25/84
Least Flycatcher	U/U	Aug. 13/89		Chiquimula, Guatemala	Apr. 15/91
Tree Swallow	L/U	Jul. 3/89		Long Lake, Minnesota	Jun. 28/90
Black-capped Chickadee	HY/U	Jun. 29/88		Tofield, Alberta	Jul.29/89
Black-capped Chickadee		Jun 27/90		Cooking Lake, Alta.	Jun. 18/ 95
Yellow Warbler		Jul.29/89		Beaverhill Lake (east side)	May 25/95
Myrtle Warbler	HY/U	Sept.8/90		Macon, Georgia	Jan 19/91
Mourning Warbler	HY/U	Aug.18/94		Whitewater Lake, Man.	Aug. 29/94
Purple Finch	AHY/F	Jul.13/88		Lougheed Alta.	Apr. 24/89
Foreign Encounters (Birds recovered at BBO but banded elsewhere)					
Species	Banding Data:				Recovered at the BBO:
	Age/Sex	Date	Bander	Location	
Tree Swallow	HY/U	Jun 21/88	H. Pletz	Kingman, Alta.	Jun. 7/89
Tree Swallow	SY/F	Jun 25/82	C. Finlay	Cooking Lake, Alta.	Jun. 3/87

Table 4. Recoveries and Foreign Encounters of the BBO.

3c. Bird Sightings for 1994 - By Ross Dickson

Despite the receding water levels, birders were still able to find 206 species in the Beaverhill Lake reporting area. A Varied Thrush September 26 is apparently the first sight record at the Lake, increasing the total species from that listed by Fairweather (1993) to 287.

Habitat changes along the lakeshore round the lake are reflected in the reduced variety and numbers of birds reported. Drier ground and growing trees and shrubs have reduced the number of wetland edge passerines seen or banded. Distance to the lake makes it difficult for BBO census takers to count shorebirds, gulls and terns, most of which were seen at Mundare Beach or from the north shore. Colonial nesting species such as pelicans, cormorants and some gulls did not nest at the lake; all are considered as visitors rather than summer residents. Their former nesting area Pelican Island is now connected to the mainland, and within reach of predators which destroyed all nests in 1993.

SOME NOTEWORTHY RECORDS

Dates and observers are listed here. See also the species calendar comments for previous records.

Common Loon	May 3 (B Carroll) - 4 flying over
Pied-billed Grebe	Aug 4 (B Carroll), Aug 28(J Lange) the only two records
Geese (sp.)	May 2 (B Turner of CWS) 110,000 "white" geese and 40,000 "dark", during an aerial survey
Ross' Goose	Apr 23 (T Thormin), May 8 (R Dickson/ E Mah-Lim)
American Black Duck	October 4 (B Carroll)
Eurasian Wigeon	May 8 (E Mah-Lim, R Dickson)
Wigeon (sp.)	May 8(EM-L, RD). Imm. male Eurasian? Yellow crown stripe, head sides were pinkish grey. Body plumage resembled Eurasian male.
Turkey Vulture	May 29 (J Bilyk, R Amores, H Hargrove)
Broad-winged Hawk	Aug 30 (R Amores, C Palaschuk)
Prairie Falcon	Aug 4 (J Bilyk)
Piping Plover	May 14 (B. Carroll)
Hudsonian Godwit	June 25 (J Bilyk), June 28 (B Carroll)
Dunlin	Apr 22 (E Mah-Lim)
Long-eared Owl	May 30 (J Bilyk, R Amores, C Palaschuk)
Short-eared Owl	Oct 15 (E Mah-Lim, R Dickson) 2 hunting west side
Olive-sided Flycatcher	Aug 15 (J Bilyk, C Palaschuk) banded
Say's Phoebe	Aug 4 (B Carroll) unusual fall record
Common Raven	status change - now seen most days all year
White-breasted Nuthatch	Aug 28 (R Amores)
Brown Creeper	Sep 26 (K Hento) first BBO banding record
Sedge Wren	Aug 2 (J Bilyk, R Amores) 2 heard near weir - the only record
Varied Thrush	Sep 26 (K Hento) first BBO sight record
Northern Shrike	Oct 5 (K Hento) first BBO banding record
Cape May Warbler	Aug 19-Sep 1- unusually numerous, 27 banded by E Jones

Observers who contributed to sighting records included BBO staff (Rachel Amores, Josh Bilyk, Kevin Hento, Carla Palaschuk), Jim Lange, Ross Dickson, Ed Mah-Lim, Elson Olorenshaw, Petra Rowell, Geoff Holroyd, Fred Whiley, Robert Storms, Edgar Jones, Jack Park, Heidi Hargrove, Bruce Turner, Gerry Beyersbergen, (Snow Goose Festival). Special thanks to Bob Carroll who frequently visited Mundare Beach and the north side, and without whom the sightings list would be much shorter.

The number of bird species recorded near Beaverhill Lake in 1994 was down slightly from 1993 and 1992. The annual variation within that species total indicates that many species depend on the lake area as a locally important migration stopover location. The following brief comparison shows species recorded in only one of the past two years. All are considered to be uncommon to rare at the Lake, however some may be relatively common in the Cooking Lake Moraine wooded uplands west of Highway 834 (Pileated Woodpecker, Boreal Chickadee, Bohemian Waxwing, Pine Grosbeak). Sharp-tailed Grouse has been recorded historically as a breeding species in the recording area but it has been seen only rarely recently (Dekker 1991). Black-necked Stilt has bred once (1977) at the lake. Willow Flycatcher is still combined by some observers with the much more common Alder Flycatcher as Traill's Flycatcher due to field identification difficulty, so its presence may be undercounted.

IN 1993 ONLY (18 species)

Greater Scaup
 Ferruginous Hawk
 Sharp-tailed Grouse
 Black-necked Stilt
 Solitary Sandpiper
 Western Sandpiper
 Ruff
 Jaeger (sp.)
 Northern Hawk Owl
 Common Nighthawk
 Pileated Woodpecker
 Willow Flycatcher
 Western Kingbird
 Northern Rough-winged Swallow
 Veery
 Gray-cheeked Thrush
 Northern Mockingbird
 Bohemian Waxwing

IN 1994 ONLY (14 species)

Ross' Goose
 Eurasian Wigeon
 Hooded Merganser
 Turkey Vulture
 Whimbrel
 Great Crested Flycatcher
 Boreal Chickadee
 Varied Thrush
 Nashville Warbler
 Chestnut-sided Warbler
 Townsend's Warbler
 Blackburnian Warbler
 Fox Sparrow
 Pine Grosbeak

Twenty-nine of the 206 species (14%) were reported on only one day in 1994. There is probably a correlation between the declining annual species total and the number of reports turned into BBO. If based upon a current rather than historical perspective, these species fit into three main categories: breeding regularly just outside the recording territory (Broad-winged Hawk, Purple Martin, White-breasted Nuthatch); very uncommon regionally (Turkey Vulture, Prairie Falcon, Olive-sided Flycatcher, Great Crested Flycatcher, Varied Thrush); and possibly present at some time every year in very small numbers, although not always reported: (Common Loon, Surf Scoter, Barrow's Goldeneye, Cooper's Hawk, Rough-legged Hawk, Piping Plover, Dunlin, Long-eared Owl, Short-eared Owl, Bank Swallow, Sedge Wren, Nashville Warbler, Townsend's Warbler, Black-throated Green Warbler, Blackburnian Warbler, Bay-breasted Warbler, Connecticut Warbler, McGillivray's Warbler, Western Tanager, Rose-breasted Grosbeak).

SPLITTERS CHANGE THE CHECKLIST, SO CHECK THOSE SHOREBIRDS!

The American Ornithological Union decided in 1993 to change the names and status of four species which have been reported in Alberta. There is now a change to the BBO checklist. Lesser Golden-Plover has now been split into **American Golden-Plover** and **Pacific Golden-Plover**. The evidence that these birds are separate species comes from a study by Peter Connors, Brian McCaffrey and John Maron, "Speciation in Golden-Plovers, (*Pluvialis dominica* and *P. fulva*: Evidence from the Breeding Grounds" (Auk 1993, 110:9-20). The authors found that even where the breeding ranges overlap in Alaska, the two forms mated only with their own kind. There are differences in vocalizations, plumage and body structure, and nesting habitat. Both are known to wander during migration but the Pacific Golden-Plovers are mostly confined to the Pacific Coast. So if you see a Golden-Plover at Beaverhill Lake or elsewhere in Alberta, is it automatically an American Golden-Plover? No! *P. fulva* specimens which have brighter plumage than *P. dominica* have been collected in southern Alberta. Maybe you will be the first to document a Pacific Golden-Plover at Beaverhill Lake.

Green-backed Heron now reverts back to **Green Heron** (*Butorides virescens*) because of a taxonomic split involving a species Striated Heron found in the Caribbean area. Rosy Finch is re-split into three species: **Gray-crowned Rosy-Finch** (*Leucosticte tephrocotis*), Black Rosy-Finch and Brown-capped Rosy-Finch. In both of these cases, no evidence of hybridization has been presented so the "species lumping" was considered to be hasty, if not erroneous. Neither of the Heron or Rosy-Finch have yet been found at Beaverhill Lake.

SNOW GOOSE FESTIVAL - April 23-24, 1994

The second annual Snow Goose Festival, organized by Tofield and the Canadian Wildlife Service attracted 4500 human visitors to see a spectacular part of spring migration - thousands of geese on their way to northerly breeding grounds. Jackie Kallal, Tofield's economic development director and Gerry Beyersbergen of Canadian Wildlife Service deserve considerable credit for coordinating this event. Approximately 50,000 geese were in the area centred on Dusty Lake south of Rley that weekend. Peak numbers occurred a few days later after the Beaverhill Lake ice cover melted. During their May 2 aerial survey Bruce Turner of CWS and a U.S. Fish and Wildlife Service officer estimated 110,000 "white" geese (Snow & Ross) on the Lake along with another 40,000 "dark" geese (Canada & White-fronted). This does not include another 30,000 geese (50% white forms) at Dusty Lake and 75,000 (mostly Snow) geese at Wavy Lake near Vegreville seen the same day.

Through the efforts of many tour leaders and interested birders, an unofficial checklist of 80 species was compiled for the Festival weekend. Many were firsts for the year within the Beaverhill Lake reporting area. Of the species reported that weekend, only a few were apparently NOT INSIDE the "official" area used for the Species Calendar elsewhere in this report: Common and Red-breasted Merganser; Ring-necked Pheasant; Sandhill Crane; American Avocet; Greater Yellowlegs; California Gull; and Purple Finch.

TOFIELD CHRISTMAS BIRD COUNT - December 18, 1994

BBO activities cover May through September, but some birds are found near the Lake throughout the year, while other species show up only when temperatures are cold. The Tofield CBC was begun in 1987 by Roy Fairweather, and now is compiled by Pat Jones. Nineteen species (just below the average) were found in 1994: Bald Eagle 1; Northern Goshawk 1; Gray Partridge 13; Ring-necked Pheasant 1; Ruffed Grouse 1; Rock Dove 165; Great Horned Owl 4; Downy Woodpecker; Hairy Woodpecker 8; Pileated Woodpecker 1; Blue Jay 24; Black-billed Magpie 155; Common Raven 7; Black-capped Chickadee 78; White-breasted Nuthatch 5; Snow Bunting 255; Pine Grosbeak 15; Evening Grosbeak 4; and House Sparrow 276. The eagle was a count first.

The count is centred on the town, so that one quarter of the circle is in the BBO reporting area. The "wide-open spaces" and lack of bird feeders fringing Beaverhill Lake produced nine species: Rock Dove; Great Horned Owl; Downy and Hairy Woodpeckers; Black-billed Magpie; Black-capped Chickadee; Snow Bunting; Pine Grosbeak; and House Sparrow.

1994 Beaverhill Lake Species Sight Records Calendar

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
COMMON LOON	May 3 #				Pr. Rec. Apr 29, 1993
PIED-BILLED GREBE (B)			Aug 4	Aug 28	1994 breeding status unknown
HORNED GREBE (B)	SGF			Aug 4	
RED-NECKED GREBE (B)	SGF			Aug 19	
EARED GREBE (B)	May 3			Aug 28	
WESTERN GREBE (B)	May 8	May 15			visitor only in 1994
AM. WHITE PELICAN (B)	SGF			July 26	visitor only in 1994
DOUBLE-CR. CORMORANT (B)	Apr 12	June 10			visitor only in 1994
AMERICAN BITTERN (B)	SGF	June 21			
GREAT BLUE HERON (B)	SGF			Aug 28	no breeding records in >50 yrs
BLACK-CR. NIGHT-HERON (B)	SGF			Aug 9	
TUNDRA SWAN	Apr 17	SGF	Sep 29	Oct 23	
GR. WHITE-FRONTED GOOSE	Apr 17	May 11	Sep 10	Oct 10	
SNOW GOOSE	SGF	May 13	Sep 10	Oct 15	
SNOW GOOSE (Blue race)	SGF	May 8			
ROSS' GOOSE	SGF	May 8			Pr. Rec. Sep 7 1992
CANADA GOOSE (B)	Apr 6			Oct 23	
GREEN-WINGED TEAL (B)	Apr 11			Oct 15	
AMERICAN BLACK DUCK				Oct 4 #	Pr. Rec. Aug 12, 1992
MALLARD (B)	Apr 6			Oct 23	
NORTHERN PINTAIL (B)	Apr 6			Oct 23	
BLUE-WINGED TEAL (B)	SGF			Sep 17	
CINNAMON TEAL (B)	SGF	May 29			
NORTHERN SHOVELER (B)	Apr 17			Oct 23	
GADWALL (B)	SGF			Oct 11	
EURASIAN WIGEON	May 8 #				Pr. Rec. Sep 26, 1990
AMERICAN WIGEON (B)	Apr 6			Oct 15	
CANVASBACK (B)	Apr 17			Oct 15	
REDHEAD (B)	Apr 17			Oct 4	
RING-NECKED DUCK	Apr 17	May 8		Oct 4 \$	
LESSER SCAUP (B)	Apr 6			Oct 11	
SURF SCOTER				Oct 11 #	reported May 12, 1993
WHITE-WINGED SCOTER (B)	May 3	May 31			visitor only in 1994
COMMON GOLDENEYE (B)	Apr 6			Oct 11	
BARROW'S GOLDENEYE			Aug 4 #		reported May 17 & Jun 20, 1993
BUFFLEHEAD (B)	Apr 17			Oct 11	
HOODED MERGANSER			Jul 20	Aug 4	Pr. Rec. Sep 26, 1992
RED-BREASTED MERGANSER	Apr 17 #				reported Apr & May 1993
RUDDY DUCK (B)	SGF			Oct 11	
TURKEY VULTURE	May 29 #				Pr. Rec. Aug 26, 1967
OSPREY	May 13	May 24			reported May 22, 1993
BALD EAGLE			Sep 30	Oct 15	
NORTHERN HARRIER (B)	Apr 6			Oct 15	
SHARP-SHINNED HAWK (B)	SGF			Sep 11	
COOPER'S HAWK (B)	SGF #				reported spr & fall 1993
BROAD-WINGED HAWK				Aug 30 #	reported spr & fall 1993
SWAINSON'S HAWK (B)	SGF			Sep 1	
RED-TAILED HAWK (B)	Apr 17			Oct 11	
ROUGH-LEGGED HAWK		SGF #			reported spr & fall 1993
AMERICAN KESTREL (B)	SGF			Aug 28	
MERLIN (B)	SGF			Aug 30	
PEREGRINE FALCON	SGF	May 13			
PRAIRIE FALCON				Aug 4 #	Pr. Rec. July 25, 1990
GRAY PARTRIDGE (B)	SGF	May 29			
RING-NECKED PHEASANT	SGF #				breeding status unknown
RUFFED GROUSE (B)					all year
SORA (B)	May 8			Aug 16	
AMERICAN COOT (B)	Apr 11			Oct 11	
SANDHILL CRANE	Apr 6	May 7			
BLACK-BELLIED PLOVER	May 21	May 29	Aug 2	Aug 4	
AMERICAN GOLDEN-PLOVER	May 8	May 29	Aug 3 \$		
SEMPALMATED PLOVER	May 8	May 24	Aug 4 \$		
PIPING PLOVER (B)	May 14 #				1993 breeding record

1994 Beaverhill Lake Species Sight Records Calendar

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
KILLDEER (B)	Apr 11			Oct 11	
AMERICAN AVOCET (B)	May 3			Sep 2	
GREATER YELLOWLEGS		May 29 \$	Jul 20	Sep 26	
LESSER YELLOWLEGS	SGF	May 21	Jun 28	Aug 16	
WILLET (B)	May 3			Aug 5	
SPOTTED SANDPIPER (B)	May 8			Jul 20	
WHIMBREL	May 21	May 23			Pr. Rec. May 30, 1992
HUDSONIAN GODWIT	May 3	May 8	Jun 25	Aug 4	
MARbled GODWIT	SGF			Aug 16	
Ruddy TURNSTONE	May 23	May 29			
RED KNOT	May 21	May 29			
SANDERLING	May 10	May 29		Aug 4 \$	
SEMPALMATED SANDPIPER	May 8	May 29	Jun 30	Aug 4	
LEAST SANDPIPER	May 12	May 29		Aug 4 \$	
WHITE-RUMPED SANDPIPER	May 22	May 29			
BAIRD'S SANDPIPER	Apr 30	Jun 10	Aug 4	Aug 16	
PECTORAL SANDPIPER	May 8	May 29	Jul 20	Oct 11	
DUNLIN	Apr 23 #				reported May 3 & 15, 1993
STILT SANDPIPER	May 13	May 24	Jun 28	Aug 4	
BUFF-BREASTED SANDPIPER	May 21	May 23			
SHORT-BILLED DOWITCHER	May 10	May 24	Jun 28	Aug 5	
LONG-BILLED DOWITCHER	May 13 \$		Jul 8	Jul 29	
COMMON SNIPE (B)	SGF			Sep 26	
WILSON'S PHALAROPE (B)	May 3			Jul 20	
RED-NECKED PHALAROPE	May 13	May 24		Jun 30 \$	
FRANKLIN'S GULL (B)	SGF			Aug 28	
BONAPARTE'S GULL	SGF \$		Oct 4	Oct 23	also Jun 9
RING-BILLED GULL (B)	Apr 6			Oct 23	1994 breeding status unknown
CALIFORNIA GULL (B)	Apr 17	May 13	Aug 2	Aug 28	1994 breeding status unknown
HERRING GULL	May 25 \$		Oct 11	Oct 15	also Jun 28
COMMON TERN (B)		Jun 28 \$		Aug 2 \$	visitor only in 1994
FORSTER'S TERN (B)	SGF \$			Aug 4 \$	visitor only in 1994, also Jun 28
BLACK TERN (B)	May 14			Aug 9	
ROCK DOVE (B)					all year
MOURNING DOVE (B)		Jun 28		Aug 19	
GREAT HORNED OWL (B)					all year
SNOWY OWL		Apr 6 \$		Dec 17 \$	
LONG-EARED OWL (B)	May 30 #				reported May 10, 1993
SHORT-EARED OWL (B)				Oct 15 #	reported May 29, 1993
RUBY-THROATED HUMMINGBIRD	Jun 9	Jun 13	Jul 22	Jul 29	
YELLOW-BELLIED SAPSUCKER	May 13	May 24		EJ(fall) \$	
DOWNY WOODPECKER (B)					all year
HAIRY WOODPECKER					all year
NORTHERN FLICKER (B)	Apr 17			Sep 18	
OLIVE-SIDED FLYCATCHER				Aug 14 #	Pr. Rec. May 26 & 31, 1991
WESTERN WOOD-PEWEE (B)	May 24	May 29		EJ(fall) \$	
YELLOW-BELLIED FLYCATCHER			Aug 16	EJ(fall)	
ALDER FLYCATCHER (B)	May 24			Sep 2	
LEAST FLYCATCHER (B)	May 12			Sep 14	
EASTERN PHOEBE (B)	Apr 23			Aug 30	
SAY'S PHOEBE	Apr 24 \$			Aug 4 \$	
GREAT CRESTED FLYCATCHER				Aug 19 #	Pr. Rec. July 12, 1987
EASTERN KINGBIRD (B)	May 23			Aug 28	
HORNED LARK (B)	Mar 13	Jun 10			
PURPLE MARTIN	May 29 #				breeds in Tofield
TREE SWALLOW (B)	SGF			Aug 27	
BANK SWALLOW				Aug 16 #	reported spr & fall 1993
CLIFF SWALLOW (B)	May 22			Aug 27	
BARN SWALLOW (B)	May 8			Aug 30	
BLUE JAY	May 12 \$		Aug 27	Oct 23	all year west of Tofield
BLACK-BILLED MAGPIE (B)					all year
AMERICAN CROW (B)	Apr 17			Oct 11	
COMMON RAVEN					all year

1994 Beaverhill Lake Species Sight Records Calendar

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
BLACK-CAPPED CHICKADEE (B)					all year
BOREAL CHICKADEE			Sep 14	Oct 5	
RED-BREASTED NUTHATCH	May 9			Oct 1	
WHITE-BREASTED NUTHATCH				Aug 28 #	reported Oct 7, 1993
BROWN CREEPER			Sep 24	Sep 26	Pr. Rec. Sep 23, 1992
HOUSE WREN (B)	May 17			Sep 17	
SEDGE WREN (B)				Aug 2 #	reported Jun 20, 1993
MARSH WREN (B)	SGF			Sep 30	
GOLDEN-CROWNED KINGLET			EJ(fall)	Oct 1	
RUBY-CROWNED KINGLET	Apr 17	May 24	EJ(fall)	Oct 5	
MOUNTAIN BLUEBIRD (B)	Apr 17			Aug 28	
SWAINSON'S THRUSH (B)	SGF			Sep 18	
HERMIT THRUSH	May 10	Jun 10	Sep 15	Sep 26	
AMERICAN ROBIN (B)	Apr 17			Oct 11	
VARIED THRUSH				Sep 26 #	First record
GRAY CATBIRD	EJ(spr)	May 26		Aug 16 \$	
AMERICAN PIPIT	May 3	May 8			
SPRAGUE'S PIPIT (B)	May 23			Aug 4	
CEDAR WAXWING (B)	May 29			Sep 1	
NORTHERN SHRIKE			Oct 4	Oct 11	
EUROPEAN STARLING (B)		Apr 17		Oct 11	
SOLITARY VIREO	EJ(spr)		EJ(fall)	Sep 1	
WARBLING VIREO (B)	May 19			Sep 14	
PHILADELPHIA VIREO			Aug 19	EJ(fall)	
RED-EYED VIREO (B)	May 24			Sep 9	
TENNESSEE WARBLER	May 24	Jun 15	Jul 10	Sep 14	also June 27 & 28
ORANGE-CROWNED WARBLER	May 15	May 17	EJ(fall)	Sep 28	
NASHVILLE WARBLER				EJ(fall) #	Pr. Rec. Aug 1992 (EJ)
YELLOW WARBLER (B)	May 13			Sep 8	
CHESTNUT-SIDED WARBLER			Aug 16	EJ(fall)	Pr. Rec. Aug 31, 1992
MAGNOLIA WARBLER	EJ(spr)		Aug 8	Sep 9	
CAPE MAY WARBLER			Aug 8	Aug 30	
YELLOW-R. (MYRTLE) WARBLER	SGF	May 25	Jul 20	Oct 1	
TOWNSEND'S WARBLER	EJ(spr) #				Pr. Rec. Aug 24, 1992
BLACK-THR. GREEN WARBLER				EJ(fall) #	reported Aug 12 & 25, 1993
BLACKBURNIAN WARBLER				EJ(fall) #	Pr. Rec. Aug 31, 1992
WESTERN PALM WARBLER	May 17 \$		EJ(fall)	Sep 16	
BAY-BREASTED WARBLER				EJ(fall) #	Pr. Rec. Aug 31, 1992
BLACKPOLL WARBLER	May 13	EJ(spr)	Aug 2	Sep 17	
BLACK-AND-WHITE WARBLER	May 17 \$		Aug 8	Sep 9	
AMERICAN REDSTART	May 25 \$		Aug 9	Sep 17	
OVENBIRD	May 15	May 24	July 15	Sep 14	
NORTHERN WATERTHRUSH			Aug 9	Sep 2	
CONNECTICUT WARBLER				EJ(fall) #	
MOURNING WARBLER	EJ(spr)	May 28		EJ(fall) \$	
MacGILLIVRAY'S WARBLER				Sep 9 #	reported Aug 20 & 27, 1993
COMMON YELLOWTHROAT (B)	May 19			Sep 15	
WILSON'S WARBLER			Aug 3	Sep 18	
CANADA WARBLER			Aug 13	Aug 30	
WESTERN Tanager				EJ(fall) #	reported Aug 16, 1993
ROSE-BREASTED GROSBEAK	EJ(spr) #				reported Aug 3, 1993
AMERICAN TREE SPARROW	Apr 6	SGF	Aug 21	Oct 23	
CHIPPING SPARROW (B)	May 12	May 29	Aug 8	Aug 16	
CLAY-COLORED SPARROW (B)	May 10			Sep 14	
VESPER SPARROW (B)	SGF			EJ(fall)	
SAVANNAH SPARROW (B)	SGF			Aug 31	
LECONTE'S SPARROW (B)	May 19			Jul 8	
SHARP-TAILED SPARROW (B)	EJ(spr)			Jul 22	
FOX SPARROW	May 14 \$			Sep 24 \$	2 banding records in 1989
SONG SPARROW (B)	Apr 17			Sep 23	
LINCOLN'S SPARROW	May 10	May 19	Sep 15	Sep 28	
SWAMP SPARROW (B)	EJ(spr) \$		EJ(fall)	Sep 14	
WHITE-THROATED SPARROW	May 9	May 31	Aug 27	Sep 26	

1994 Beaverhill Lake Species Sight Records Calendar

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
WHITE-CROWNED SPARROW	SGF	Jun 1	EJ(fall)	Sep 24	
DARK-EYED JUNCO	Apr 6	SGF	Aug 27	Oct 11	
LAPLAND LONGSPUR	May 8 #				
SNOW BUNTING	Apr 24 \$		Sep 26	Oct 23	
BOBOLINK (B)	May 18	Jun 28			
RED-WINGED BLACKBIRD (B)	Apr 17			Oct 11	
WESTERN MEADOWLARK (B)	SGF			Aug 4	
YELLOW-HEADED BLACKBIRD (B)	May 3			Oct 10	
RUSTY BLACKBIRD	May 29 \$			Oct 11 \$	
BREWER'S BLACKBIRD (B)	May 3			Aug 4	
BROWN-HEADED COWBIRD (B)	SGF			Aug 9	
NORTHERN ORIOLE (B)	May 19			EJ(fall)	
PINE GROSBEAK				Dec 18 #	CBC
PURPLE FINCH			Aug 2	Aug 16	
PINE SISKIN			Jul 21	Aug 16	
AMERICAN GOLDFINCH (B)	May 24			Sep 26	
EVENING GROSBEAK	May 29 #				Pr. Rec. Jul 1, 1992
HOUSE SPARROW (B)					all year
(B) - Breeding species currently or historically Pr. Rec. - previous records from BBO reports reported - if 1994 numbers are unusually low # - the only 1994 record \$ - the only migration record SGF - Snow Goose Festival April 21-22, 1994 CBC - Christmas Bird Count					
Re: Edgar T. Jones (EJ) (spr) banding records May 22 - 31 (fall) banding records Aug 19 - Sep 1					

Weather Watch

Although the weather in May started out slightly warmer and drier than average, the summer quickly turned cooler and wetter in June and July, according to data collected by Alberta Environmental Protection - Water Resources Division from the Beaverhill Lake Weather station no. 05EB906. Despite above average precipitation, lake levels continued to drop and were lower in 1994 than they have been in the preceding 10 years.

3d. 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 1994, the Tree Swallow grid showed good reproductive success. In the spring there were 48 boxes out of a possible 58 occupied by pairs of Tree Swallows. A total of 279 eggs were laid averaging 5.8 eggs per nest box and ranging from 3 to 7. 253 of the eggs produced viable young giving an 90.7% hatch rate. Of the 253 hatchlings, no mortalities were found, giving a 100% fledging success. The supposition of successful fledgling is based upon the lack of evidence of any predation around the nest (nestling blood, bone or feathers), and/or the absence of dead chicks in or around the nests. There were only two pairs of Tree Swallows in the grid that had second broods. A second set of nest boxes is located along Rowan's Route. Here 8 occupied nestboxes produced 51 eggs, of which only 32 (62.8%) hatched.

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.

3e. Prairie Nest Record Card Scheme - Compiler Ross Dickson

Research on the distribution, habitat preference, and productivity of birds can be greatly assisted by the recording of nesting data. The Prairie Nest Record Card Scheme is coordinated by H.W.R. Copland at the Manitoba Museum of Man & Nature in Winnipeg. Volunteers from Alberta, Saskatchewan, Manitoba and the Northwest Territories have submitted approximately 50,000 nest records to date. For each nest, a card is filled out recording the clutch size, number of hatchlings, and final outcome of the nest. A description of the nest (size, height from the ground, materials) as well as the location (locality and habitat) is also recorded. This information has been used to compile bird checklists and to compare the productivity of several prairie species from year to year.

In 1994, the Beaverhill Bird Observatory submitted the following Prairie Nest Record Cards for nests observed in the Beaverhill Natural Area:

#NESTS	SPECIES
2	Mallard
1	Gadwall
3	Least Flycatcher
2	Eastern Phoebe
61	Tree Swallow
4	Barn Swallow
6	House Wren
2	Mountain Bluebird
1	American Robin
6	Yellow Warbler
1	Clay-coloured Sparrow

3f. The Lesser Slave Lake Bird Observatory Project - By Jason Duxbury

Introduction

The Lesser Slave Lake Bird Observatory station was operated in 1994 as an expansion of the Beaverhill Bird Observatory. The station was formalized after a few years of informal migration monitoring and bird banding by BBO members (since 1992). Its main purposes are to monitor small landbird migration and summer resident bird populations. The site is located on the northeast shore of Lesser Slave Lake, in Lesser Slave Lake Provincial Park which is approximately 300km north by northwest of Edmonton, Alberta.

The site chosen for the banding station is nestled in between the large Lesser Slave Lake and Marten Mountain, the highest point in the Pelican Hills. These two obstacles may funnel the birds through the banding site, situated at the south end of a long strip of "edge" habitat, during migration. This strip, averaging 80 metres in width, consists of a thin strip of mature willows, poplars and alder, up to 10 metres in height; a right of way of open grassland; and a wider strip of shrubbery (alder, willow, dogwood, young spruce etc.) interspersed with open areas. The area seems to be one containing a high concentration of migrating birds in the spring and fall. Not only songbirds were seen on migration, but Northern Harriers, Merlins, Kestrels and even a Peregrine Falcon were spotted this spring. The songbird species seen in migration were Tennessee Warbler, Myrtle Warbler, Wilson's Warbler, Black-and-white Warbler, Blackpoll Warbler, Palm Warbler, Cape May Warbler, and White-crowned Sparrow to name only a few.

The LSLBO is located right in the middle of the park on the lake shore. Access to the site is very easy as the road is short, tends to hold up better than the road to the BBO in bad weather, and goes right to the site itself. Another major plus is the location within a gem of a provincial park. There are plenty of other things to do for those tired of watching birds or for family members of those who can never get enough of the birds. There are very nice campgrounds, both regular camping and group use, a large lake that supports great fishing and water sports, and beautiful beaches with the whitest, natural sand found in Alberta. Those coming to see this wonderful place must also realize that it is considered wilderness and that Black Bears were seen in the area.

For the first official year of the LSLBO two summer students were hired to run the banding programs; Jason Duxbury, who had been part of the staff at the BBO for the last two field seasons, and a new staff member Lisa Zuberbier of Slave Lake. Both of the summer staff ran the station successfully this year while also contributing to the park's interpretation programs throughout the summer.

Banding

Over the whole field season, 2955 birds of 51 species were banded and 121 species were observed. These totals break down into two programs as follows:

Migration Monitoring:

Various net lanes were used over the field season (Fig. 2). There were some different net lane sites used in the spring (net lanes 21 and 24) that were changed in the fall (net lanes 4 and 15). This was done in order to find the best net lane sites before any standardization takes place.

At the beginning of the migrations only a few nets could be set up because of the numbers of birds being caught. As the migrations slowed down the number of nets increased, but never exceeded 10 in number.

Spring - 676 birds of 34 species were banded and 111 species were observed in the area
(recorded from May 14 - June 9)

Fall - 1823 birds of 46 species were banded and 97 species were observed in the area
(as recorded from July 31 to September 11)

Monitoring Avian Productivity and Survivorship (MAPS):

Three new MAPS stations were started in 1994 and their locations are given in figure 3. Each station contained 10 net lane sites and 9 points for point counts (Figure 4a, b, c).

456 birds of 24 species were banded, while 87 species were observed during the summer (June 10 - July 30)

Retraps:

103 retraps during Migration Monitoring
70 retraps during MAPS

We only caught 6 birds that were banded previously to 1994, and all of those were banded in 1993.

One Wilson's Warbler, banded in 1993, was caught in both spring and fall migrations!

Interesting Birds:

Interesting Bandings:

Sharp-shinned Hawks
Northern Flicker
Western Wood Pewee
Blue Jay
Boreal Chickadees
Golden-crowned Kinglet
Ruby-crowned Kinglets
Hermit Thrush
Gray Catbird
Western Tanager
Rose-breasted Grosbeaks
Philadelphia Vireos
Solitary Vireo
Chestnut-sided Warblers*
Palm Warblers
Cape May Warblers
Yellow-rumped Warbler Hybrid
Oregon race Dark-eyed Junco
White-crowned Sparrow
Savannah Sparrow
Swamp Sparrows
Purple Finches

A Wilson's Warbler retrapped that was banded in 1993 then retrapped in both spring and fall migrations in 1994.

2955 birds of 51 species were banded

Busiest day had 102 birds caught with 8.5 net hours on 4 nets = 12.7 birds/net hour!

* Possibly the most western extension of the Chestnut-sided Warbler range documented.

Interesting Sightings or Audible Observations:

White-fronted Geese
Snow Geese
Swan sp.'s (Seen by Ranger Hayduk in October)
Double-crested Cormorants
White-winged Scoters
Surf Scoters
Bald Eagles
Northern Goshawks
Peregrine Falcon
Barred Owls
Pileated Woodpeckers
Belted Kingfishers
Eastern Kingbird
Olive-sided Flycatcher (Heard)
Horned Larks
Water Pipits
Gray Jay Juvenile with 2 Blue Jays
Winter Wren (Heard)
Varied Thrush (Heard)
Common Grackles
Black-throated Green Warblers
LeConte's Sparrows
Fox Sparrow

121 species were observed

LSLBO Tours, Events, and Visitors

For the LSLBO, 1994 was a year for organizing the site and developing a set protocol. Therefore, there were no major events planned like those at the BBO. However, scheduled demonstrations were given on a regular basis with some groups containing 10-16 people, and the site had a fairly consistent turn out of daily visitors. Aaron Lenman brought out his high school biology class of 30 students to the site, and we were also visited by a group of 17 Girl Guides. The most interesting visitors were George and Laura Levin. They were up travelling north through Alberta from South Dakota in search of Blackpoll and Mourning Warblers. They left very satisfied customers after the staff led them to find a singing male Mourning Warbler (unfortunately they would have to continue north to find the Blackpolls). In the end the LSLBO site was witnessed in operation by 170 people (not including BBO personnel) over the whole summer.

Those that came to the LSLBO as visitors or volunteers consisted of: 67 Slave Lake locals and park staff, 56 People from various campgrounds in the area, 44 Edmontonians, and one Ranger from Pembina Provincial Park. The BBO personnel that came up to assist in the operation the LSLBO consisted of: Stefan Jungkind, Steve Lane, Jim Faragini, Josh Bilyk, Rachel Amores, and Carla Palaschuk.

Of all of the visitors/volunteers the most visible were: 1st) Park Ranger Cheryl Dash with 18 visits, 2nd) Park Ranger Karen Hayduk with 9 visits, and 3rd) Park Interpreter Andrew Lukat with 6 visits. The best turnout by a local volunteer (non park staff) was 3 visits by Marion Whitby.

Table 6. Birds banded at Lesser Slave Lake Bird Observatory in 1994.

Species	# Banded	Species	# Banded
Sharp-shinned Hawk	5	Chestnut-sided Warbler	4
Yellow-bellied Sapsucker	2	Magnolia Warbler	61
Nothorn Flicker	1	Cape May Warbler	8
Western Wood Peewee	3	Yellow-rumped Warbler	123
Eastern Phoebe	1	Western Palm Warbler	4
Yellow-bellied Flycatcher	8	Blackpoll Warbler	7
Traill's Flycatcher	254	Black and White Warbler	38
Least Flycatcher	234	American Redstart	521
Blue Jay	1	Ovenbird	25
Black-capped Chickadee	36	Northern Waterthrush	16
Boreal Chickadee	7	Mourning Warbler	61
Red-breasted Nuthatch	1	Common Yellowthroat	48
Golden-crowned Kinglet	1	Wilson's Warbler	70
Ruby-crowned Kinglet	15	Canada Warbler	132
Swainson's Thrush	126	Chipping Sparrow	8
Hermit Thrush	4	Clay-colored Sparrow	12
American Robin	17	Savannah Sparrow	4
Gray Catbird	1	Song Sparrow	8
Cedar Waxwing	13	Lincoln's Sparrow	35
Solitary Vireo	4	Swamp Sparrow	22
Warbling Vireo	5	White-throated Sparrow	127
Philadelphia Vireo	6	White-crowned Sparrow	7
Red-eyed Vireo	39	Slate-colored Junco	8
Tennessee Warbler	371	Purple Finch	6
Orange-crowned Warbler	20	Pine Siskin	30
Yellow Warbler	157	Western Tanager	4
		Rose-breasted Grosbeak	14
		Total Species	53
		Total Individuals	2753

1994 Lesser Slave Lake Species Records Calendar

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
COMMON LOON					entire monitoring season
RED-NECKED GREBE					entire monitoring season
WESTERN GREBE	May 26			Sep 11	
AM. WHITE PELICAN	Jun 9			Sep 11	
GREAT BLUE HERON	May 15			Aug 25	
GR. WHITE-FRONTED GOOSE			Sep 6	Sep 11	
SNOW GOOSE		Jun 10 \$		Sep 11 \$	
CANADA GOOSE	May 26			Aug 29	
AM. GREEN-WINGED TEAL			Aug 1	Aug 4	
MALLARD					entire monitoring season
NORTHERN PINTAIL	May 30	Jun 5			
AMERICAN WIGEON	May 14	May 29			
CANVASBACK	May 24 #				
SURF SCOTER	May 15 #				
WHITE-WINGED SCOTER	May 17 #				
COMMON GOLDENEYE	May 15			Sep 11	
BARROW'S GOLDENEYE					
BUFFLEHEAD	May 14	May 15			
COMMON MERGANSER	May 15			Aug 27	
RED-BREASTED MERGANSER	May 15	May 31		Aug 19	
OSPREY					entire monitoring season
BALD EAGLE					entire monitoring season
NORTHERN HARRIER	May 17			Sep 31	
SHARP-SHINNED HAWK	Jun 5 \$		Aug 3	Sep 11	also Jul 5 & 16, peak was Aug 25 & 26
COOPER'S HAWK					
NORTHERN GOSHAWK		Jul 10 \$	Aug 13 \$		
AMERICAN KESTREL	May 17			Aug 29	
MERLIN	May 17	Jul 5	Aug 31	Sep 6	
PEREGRINE FALCON	May 17 #				
RUFFED GROUSE					entire monitoring season
SORA	Jun 27 \$			Aug 4 \$	
KILLDEER	May 25			Aug 1	
GREATER YELLOWLEGS			Aug 26	Aug 27	
LESSER YELLOWLEGS	May 21	May 22			
SPOTTED SANDPIPER	May 21			Aug 18	
FRANKLIN'S GULL	May 15			Sep 6	
RING-BILLED GULL	May 15			Aug 17	
HERRING GULL	May 17	May 29	Aug 18	Sep 11	
COMMON TERN	May 28 \$			Sep 6	
FORSTER'S TERN	May 15			Aug 18	
BARRED OWL	Jul 8			Aug 9	
RUBY-THROATED HUMMINGBIR	May 26	May 31			
BELTED KINGFISHER	May 21 #				
YELLOW-BELLIED SAPSUCKER	May 14			Aug 19	
DOWNY WOODPECKER	May 21	May 22		Sep 6 \$	
HAIRY WOODPECKER					entire monitoring season
NORTHERN FLICKER					entire monitoring season
PILEATED WOODPECKER	May 14 \$			Sep 6 \$	
OLIVE-SIDED WOODPECKER	May 26 #				
WESTERN WOOD-PEWEE	May 21			Aug 9	
YELLOW-BELLIED FLYCATCHER			Aug 4	Aug 17	
ALDER FLYCATCHER	May 24			Sep 2	
WILLOW FLYCATCHER		Jun 12 #			
LEAST FLYCATCHER	May 14			Aug 31	
EASTERN PHOEBE	May 14	Jun 2		Aug 6 \$	
EASTERN KINGBIRD	Jun 5 \$		Aug 13	Aug 26	
HORNED LARK				Sep 11 #	
TREE SWALLOW	May 22	Jun 14	Aug 1	Aug 5	also Jul 18
BARN SWALLOW	June 26 \$			Aug 18 \$	
GRAY JAY			Jun 26	Aug 27	
BLUE JAY	May 15 \$		Jul 30	Sep 10	also Jun 26
BLACK-BILLED MAGPIE					entire monitoring season
AMERICAN CROW					entire monitoring season

1994 Lesser Slave Lake Species Records Calendar

SPECIES	FIRST RECORD	LAST SPRING	FIRST FALL	LAST RECORD	COMMENTS
COMMON RAVEN					entire monitoring season, peak Aug 25-2
BLACK-CAPPED CHICKADEE					entire monitoring season
BOREAL CHICKADEE					
RED-BREASTED NUTHATCH	May 14			Sep 1	entire monitoring season
WHITE-BREASTED NUTHATCH		Jul 16 #			
BROWN CREEPER					
HOUSE WREN	May 24 \$		Jul 7 \$		
RUBY-CROWNED KINGLET					entire monitoring season
SWAINSON'S THRUSH					entire monitoring season
HERMIT THRUSH					entire monitoring season
AMERICAN ROBIN					entire monitoring season
GRAY CATBIRD	May 29 #				
AMERICAN PIPIT	May 14 \$		Sep 6	Sep 11	
CEDAR WAXWING	May 29				entire monitoring season
SOLITARY VIREO	May 21	Jun 8	Aug 9	Sep 2	
WARBLING VIREO	May 14			Aug 29	
PHILADELPHIA VIREO	May 30	May 31	Aug 14	Aug 19	
RED-EYED VIREO	May 21			Aug 29	
TENNESSEE WARBLER	May 17			Aug 30	
ORANGE-CROWNED WARBLER	May 21	May 23	Aug 27	Sep 10	
YELLOW WARBLER	May 14			Aug 28	
CHESTNUT-SIDED WARBLER	May 31			Aug 28	uncommon
MAGNOLIA WARBLER					entire monitoring season
CAPE MAY WARBLER			Aug 2	Aug 18	
YELLOW-R. (MYRTLE) WARBLE					entire monitoring season
BLACK-THR. GREEN WARBLER	May 15			Jul 5	where did they go?
WESTERN PALM WARBLER	May 26 \$		Aug 29	Sep 2	
BLACKPOLL WARBLER	May 28 \$		Jul 31	Aug 30	
BLACK-AND-WHITE WARBLER	May 14			Sep 2	
AMERICAN REDSTART	May 21			Sep 11	
OVENBIRD	May 17			Sep 2	
NORTHERN WATERTHRUSH	May 21	Jun 10	Aug 1	Aug 29	also Jul 6
MOURNING WARBLER	May 21			Aug 18	
COMMON YELLOWTHROAT	May 21			Sep 6	
WILSON'S WARBLER	May 21	Jun 5	Aug 1	Aug 31	
CANADA WARBLER	May 24			Aug 29	
WESTERN Tanager	May 14			Aug 29	
ROSE-BREASTED GROSBEAK	May 21			Aug 14	
CHIPPING SPARROW	May 14			Aug 25	
CLAY-COLORED SPARROW	May 15			Aug 26	
SAVANNAH SPARROW	May 15	May 26	Aug 26	Sep 11	
LECONTE'S SPARROW	May 15 # XX				
SHARP-TAILED SPARROW	May 17 #				
FOX SPARROW			Aug 14 #		
SONG SPARROW					entire monitoring season
LINCOLN'S SPARROW					entire monitoring season
SWAMP SPARROW					entire monitoring season
WHITE-THROATED SPARROW					entire monitoring season
WHITE-CROWNED SPARROW	May 14	May 17	Aug 9	Aug 28	
HARRIS SPARROW				Aug 28 #	check
RED-WINGED BLACKBIRD	May 15	May 24	Aug 1	Aug 3	
YELLOW-HEADED BLACKBIRD				Aug 6 #	check
RUSTY BLACKBIRD			Aug 6	Aug 10	
COMMON GRACKLE			Aug 14	Aug 25	
BROWN-HEADED COWBIRD					entire monitoring season
NORTHERN ORIOLE	May 17			Aug 16	
PINE GROSBEAK					
PURPLE FINCH	May 14 \$		Aug 9	Sep 6	
PINE SISKIN	Jun 12			Sep 11	
AMERICAN GOLDFINCH	May 29	Jun 2			

- only report
\$ - only migration report

3g. The Guatemala Project

After receiving news that a BBO band had been recovered in Guatemala (see Duxbury 1995), Geoff Holroyd and other BBO members enthusiastically began planning a visit in 1993 to observe the wintering habitat of some of "our" songbirds. The following two accounts describe the events of the second visit made in 1994.

The 1994 Guatemala Expedition Summary By Geoff Holroyd

After the successful BBO trip to the beautiful lowland rainforest of eastern Guatemala in early 1993, I had to return. From January 30 to February 28, 1994, a BBO team joined Chandler Robbins and Barbara Dowell of the US National Biological Survey (NBS) in eastern Guatemala to conduct bird surveys for FUNDAECO. The intrepid BBO team comprised of Elisabeth Beaubien, Jason Duxbury, Jim Faragini, Steve Lane, Wendy Oughtred, Jacques Sirois, Chris Shank, Matt Smith, Phil and Helen Trefry and myself.

A local non-profit society, FUNDAECO is the regional conservation society which has staff that assist local communities with agricultural and forestry practises. FUNDAECO began an acquisition program by purchasing 2300 hectares of rainforest on Cerro San Gil, which is about one quarter of the area that they wish to preserve. Our objectives were to survey wintering birds in Cerro San Gil and Cerro Caral and to assist the conservation efforts of FUNDAECO. Cerro San Gil is on the eastern coast of Guatemala, just north of Puerto Barrios and Santa Tomas, and Cerro Caral is due south on the border with Honduras.

Using a standard protocol of 3 days banding with 16 mist nets, 2 mornings of point counts, and 3 surveys of vegetation, we surveyed 9 sites. Six of these had been previously surveyed on Cerro San Gil by the NBS and one on Cerro Caral had been surveyed by the BBO last year.

~~We banded 1225 birds of 92 species at these sites. Fifty of the birds that were banded in February 1992~~ were recaptured in 1993, and in February 1994 we recaptured 138 birds of 38 species that were banded in 1992 and 1993. These numbers indicate site fidelity for 11 species of migrants and 33 species of residents. Retraps of 9 resident species indicate that they only moved 0.7 to 1.6 km. While we might expect "resident" species to have high site fidelity, the surprise was how many neotropical migrants were retrapped at the same site one year later. Five of 43 Wood Thrushes banded in 1993 were retrapped in 1994, likewise 3 of 38 Gray Catbirds, 6 of 19 Worm-eating Warblers, 5 of 17 Ovenbirds, and 2 of 4 Louisiana Waterthrushes were retrapped. Of 185 neotropical migrants (of 11 species) banded in 1993, 27 were retrapped in 1994. This proportion is comparable to the return rates of breeding birds at Beaverhill Lake.

Many species were striking to see in the hand, but the 11 species of hummingbirds were among the most spectacular. Even their names are remarkable: Band-tailed Barbthroat, Long-tailed Hermit, Violet Sabrewing, White-necked Jacobin, Brown Violet-ear, Green-breasted Mango and Crowned Woodnymph. Imagine banding something called a Plain Xenops; there is nothing plain about its name. The Guatemalan rainforest is a magical world.

During the month we recorded over 220 species. The most notable sighting was three Lesser Yellow-headed Vultures, a new species for Guatemala! Unusual species for eastern Guatemala were Black-shouldered Kite, Snail Kite, Mississippi Kite, Solitary Eagle, Limpkin, Common Moorhen, Lesser Nighthawk, Tree Swallow, and Black-headed Nightingale-Thrush.

Every morning we were up at 5 am and off at 6 for 12 hours of banding and birding in the forest. Jack Bucklin, FUNDAECO's head biologist, would arrive promptly to transport us to the field sites. The project would not have been possible without him, nor as much fun. Most evenings were spent taking turns having a shower, eating supper delivered by a local family, making notes, and repairing equipment. Beer was never far away after a hot day in the rainforest, and then early to bed.

The funding support of the Latin American Program, Canadian Wildlife Service, Environment Canada paid for our logistical costs in Guatemala. Everyone donated their travel expenses and time. FUNDAECO, its chairman Marco Vinicio Cerezo, and biologist, Jack Bucklin provided local support. Chandler Robbins and Barbara Dowell kindly allowed us to work on their project. The resources of these agencies, individuals and the BBO team are greatly appreciated. This report was edited from a longer report by B.A. Dowell, G.L. Holroyd and C.S. Robbins titled Bird Habitat Survey of Cerro San Gil and Polochic Delta, Guatemala, February 1994.

Guatemala Expedition '94 - By Jason Duxbury

In February of 1994, another team of BBO bird banders once again travelled south to assist the "work" of members of the U.S. National Biological Survey. The objectives were the same as the previous year: resurvey areas of eastern Guatemala to obtain year to year comparable data, as well as survey new areas to discover the potentially unknown. Survey objectives were to increase the knowledge on habitat use by neotropical migrants on their wintering grounds; to inventory the birds found in protected forests, aiding the conservation efforts by local Guatemalans; to determine site fidelity for continued studies on the survival rate of various species (Dowell, Holroyd and Robbins 1994); and to confirm, disprove or add to the limited data on the local bird populations found in Land (1967). (Providing some of us with our first tropical birding and cultural experience was a small and insignificant side benefit.)

The 1994 expedition took place from the 1st to the 28th of February, however only the expedition's fearless leader, Geoff Holroyd, remained in Guatemala for the whole month. The other members from the BBO were organized, along with other Canadian or American volunteers, into one of two, two week shifts. February 14, brought with it the second shift of BBO bird banders. As Elisabeth Beaubien, Steve Lane, Chris Shank, Wendy Oughtred, Jacques Sirois, Matt Smith, Phil and Helen Trefry left Guatemala (some in better shape than others), Jim Faragini and I arrived. The arrival came in the humid darkness of Guatemala City and so the tropical birding experience would have to begin after a night with very little sleep.

Waking to the call of Great-tailed Grackles in every tree, Jim and I soon set off for unos panqueques, chorizos y jugo de naranja (pancakes, sausages and orange juice) from the McDonald's down the block. This would be our last contact with what may resemble our culture at home as we were soon on a bus to Santa Tomas to meet up with the rest of the banding team.

The bus trip was a mixture of frights and sights. The scenery changed from dry uplands to lush lowland agriculture fields to the rain forests of the east coast. The sky was filled with Turkey and Black Vultures, and the fields contained countless Cattle Egrets. My first glance of a Black-shouldered Kite came from my bus window as we passed it sitting on a telephone wire. There were so many things to see, and I would have seen more had I not been watching for oncoming traffic as our bus driver tended to pass slower traffic while on inclines and around sharp corners!

Taking a break from what seemed like an amusement park ride, we arrived at a rest stop which provided an excellent opportunity to do some bird watching. Field guide and binoculars in hand, off I went to find some new birds. I was immediately drawn to a bush containing a small bird. I approached slowly to discover what I hoped to be a gem of a tropical songbird that anyone's life-list would envy. It was a House Sparrow.

My crushed spirit was soon alive again at the arrival at Santa Tomas with the sightings of Grey-breasted Martins and a Little Blue Heron. My spirits were lifted further with a warm greeting from Geoff and the rest of the banding team with our arrival at the house. Conversations about what activities and sightings that had occurred so far, and what the next two weeks would hold for us led to another night with little

sleep.

Situated at 15° north, the sun rises and sets perpendicular to the horizon in Guatemala. Without what people who live north of the 49th parallel consider dawn and dusk, preparing for a days work must take place in the early morning darkness. If it hadn't been for the neighbourhood roosters crowing and radios blaring at 4:30 in the morning, I might have slept through the alarm clock set for 5:00. After a hardy bowl of cornflakes and powdered milk, we were out the door into the daylight which I swear was total darkness only five minutes ago.

The first morning on the east coast started out in fine form with Red-lored Parrots flying in couples overhead and a Yellow-fronted Woodpecker climbing a nearby palm tree. After a short drive, we arrived at the Torre Road site on Cerro San Gil where we would finish the last day of banding for that site. Not since my first day as a bird bander had I seen so many new species of birds in such a short duration. The nets captured Red-capped Manakins, Black-throated Shrike-tanagers, Band-tailed Barbthroats, Olive-backed Euphonias and White-throated Spadebills to name a few. Overhead were Keel-billed Toucans and Chestnut-headed Oropendolas. The forest was alive with the sound of White-breasted Wood-wrens, Rufous-sided Pihas and Montezuma Oropendolas. Also seen were insects like walking sticks, fire ants and Blue-morph Butterflies with wingspans close to 4 inches! The day progressed with new species after new species. However, retrieving some birds out of the nets was not as exiting when it seemed each net check would include them. After all, once you've seen on Ochre-bellied Flycatcher, haven't you seen them all?

To break away from the monotony of our first site, we travelled by ferry across Lake Izabal to El Estor. During the ferry ride we observed Gars zipping through the water around the boat, as well as a multitude of Neotropic Cormorants and Laughing Gulls (the gulls may have been snickering at Jim who, not able to wait to fish the tropical waters, was attempting to troll off the upper deck of the ferry only to have his lure bounce off the wake of the ferry!). The trip across the lake also provided us with sightings of Wood Storks, Great Egrets, Gull-billed Terns. On the way from the El Estor dock to a cantina (we were not acclimatized yet) we saw Mangrove Swallows and a Mangrove Warbler. The remainder of the day was spent scouting out the proposed banding site, meeting some locals, and setting up camp around an old house that is occasionally used by U.S. Peace Corps volunteers. The current residents were lizards and tarantulas, and since they were there first, we chose not evict them. And besides, once one got used to them, the tarantulas made for interesting company in the bathroom.

An old airstrip adjacent to El Estor provided access to a second growth forest growing on the shore of the Lake Izabal. The site we chose for the banding table happened to be right in the middle of a Leaf-cutter Ant highway. However, the ants in charge of the maintaining the path soon had a trail cleared around our site allowing the flow of leaf carrying ants to stay in constant motion towards their nest. Three days of banding provided another series of new species such as White-bellied Emeralds, Ivory-billed Woodcreepers, Tawny-crowned Greenlets, Bright-rumped Attilas, Spotted Wrens, Plain Xenops, White-collared Manakins and the meanest looking grosbeak around, the Blue-black Grosbeak. Migrants such as Rose-breasted Grosbeaks, Hooded Warblers and Worm-eating Warblers which would soon start heading north were also banded at the site.

Exploration of the forest in and around the study site provided other interesting observations. The highlight, a Lesser Yellow-headed Vulture, a species that is not listed a field guide for the birds of Guatemala, occurred after sightings of Variable Seed-eaters, Aztec Parakeets, Kiskadees, a Black-headed Trogon, a Gray Hawk, a Common Blackhawk, and a Green Jay. In the forest while following the hoots of a Ferruginous Pygmy Owl, I discovered a deadly Coral Snake a half second before I stepped on it. Also keeping us company in the forest were numerous troops of Howler Monkeys. New comers are quickly warned about standing directly underneath these territorial primates since urination or defecation on those below are common techniques to ward of those coming too close to these monkeys. Fortunately for most of

us but unfortunately for him, Jim was the only one to be greeted by the howlers in their very special way.

Taking a break from banding, the research team rented two motorboats to explore and document the birds of the Polochic Delta. Bird species thought to be rare residents but were found to be quite abundant were Tree Swallows, Limpkins, Purple Gallinules, Common Moorhens, Black-necked Stilts, Royal Terns and Snail Kites. Some other interesting sightings were of Least Sandpipers, Caspian Terns, Northern Jacanas, Brown Pelicans, Blue-winged Teals, Black-bellied Whistling Ducks, Anhingas, Vaux's Swifts, a Northern Parula, a Green Kingfisher, and a Ringed-Kingfisher. The most interesting last sight of the delta was either a young Peregrine Falcon or Jim attempting to clean his legs by dangling them over the side of the fast moving motorboat. Jim had discovered, via jumping off the boat, that what appeared to be dry land in the delta was actually a floating, stinky mat of fermenting leaf litter!

Following the exploration of the delta, we made a short excursion into the mature forests of the Santa Cruz mountains. Here we documented Collared Trogon, Thrush-like Manikin, Black-crested Croquette, Masked Tityra, Golden-crowned Warbler and many more. Unfortunately, with the swift arrival of darkness we had to head home ending a very memorable day.

The final banding site for the trip was near the Costa de Jade resort situated on the coast. Tropical fresh pineapples were a succulent treat after hacking 16 net-lanes in dense undergrowth with dull, 3 foot long machetes. Sweat Bees surrounded our location, after detecting the result of hard work in a humid forest. Our labour paid off as the site proved to be extremely productive and resulted in the capture of some interesting species. A Vermiculated Screech Owl decided that a furled net was a good perch during the night after the first day of banding. We found the poor bird as it hung upside down with its talons tangled in the net. Some of the other species seen at this site were White-necked Jacobins, Orange-billed Sparrows, Chestnut-coloured Woodpecker, a White Hawk, a Barred Forest-falcon, a Blue-crowned Mot-mot, and a Squirrel Cuckoo. We managed to catch and band a Yellow-bellied Tyrannulet, only the third record ever in Guatemala. Also, on our last day of banding in Guatemala, we finally caught the one bird which I had hoped to see on the trip: the Northern Royal Flycatcher. This is a drab bird which when startled, raises its bright orange and purple crown feathers and mimics the motions of a cobra about to strike. An amazing bird providing a wonderful conclusion for bird banding in Guatemala.

After celebrating the end of the successful trip in a local cantina and saying our goodbyes to our new found friends, our last night on the east coast was spent in Puerto Barrios in the Hotel Norte, a beautiful old hotel built during the Banana Republic and one of a few buildings in the area surviving numerous earthquakes. The following day's bus ride back to Guatemala City was kept interesting with conversation with the locals, boardings by men armed to the teeth, and the wonderful scenery. Our last moments in Guatemala were of a sound night's sleep and a lazy morning swim in the hotel's outdoor pool. It was hard to believe that in a matter of hours we would be back to the bitter cold winter of Edmonton.

Guatemala awaits our return.

4. PUBLIC EDUCATION COMMITTEE

The goal of this committee is to educate the public and promote community interest in the value of birds and the natural world through organization and participation in seminars and outdoor activities related to wildlife at Beaverhill Lake and elsewhere.

4a. Tours, Events and Visitors in 1994

The first "fieldtrip" undertaken in 1994 was the February Guatemala expedition organized by Geoff Holroyd as reported previously. A little closer to spring, the BBO was one of many participants in the annual Tofield Snow Goose Festival that saw thousands of people visit the area as well as at least 200 visitors to the lab itself. Geoff Holroyd and Josh Bilyk helped serve up hot chocolate and cookies, as well as a few words about banding, to many of these visitors.

In May, the BBO again participated in the Baillie Bird-a-thon. Richard Chabaylo organized the Alberta portion of this nation-wide event. Over \$5,000 was raised by the BBO, the fourth highest amount in Canada! The following excerpt was taken from Rick's report of his own bird-a-thon day:

"...when Rick and Richard [Thomas] began at 5:15 am, the temperature was a mere 3 degrees C with light showers of rain mixed with a bit of wet snow. Oh joy! ...the first thing they saw was not a bird, but the mist as their breath met cold, damp air...after a few more seconds they had heard Swainson's Thrush, Yellow Warbler, American Robin and Clay-colored Sparrow...a good sign..."

By the end of the day, Rick and his team mates had racked up an impressive 121 species!

On May 29, the annual BBO Pancake Breakfast saw approximately 50 people turn out, despite a few rain showers. These hardy participants were rewarded with a sighting of a Turkey Vulture, last recorded at the lake by Dick Dekker in 1967.

On June 11, Josh Bilyk brought a Wildbird General Store birding class out to the BBO for a banding demonstration and some good birding. July 23-24 saw a Trainers Workshop organized by Brenda Dale. This workshop provided an excellent forum to share information for several Alberta banders as well as visitors from Last Mountain Lake Bird Observatory and Long Point Bird Observatory. Later in the fall, Petra Rowell spent a day at the lab exchanging ideas with Bill Murphy of the Ottawa Banding group.

Other visitors to the lake included 149 individuals that stopped at the lab long enough to sign the Guest Book. These visitors hailed from as far away as Germany, England, Florida, Alabama, New York and Ottawa.

Both a spring and fall General Meeting were held in 1994. In the spring, Brenda Dale and Connie Downes of the Canadian Wildlife Service joined several members for a day of discussions at the University of Alberta. In November, several members again gathered at the university to listen to year-end project reports and conduct executive elections.

5. PUBLICATIONS COMMITTEE

The goal of this committee is to develop an awareness and community interest in birds and natural history through publication. In 1994, the BBO newsletter was revised and renamed "The Willet". Other publications that have resulted from activities of the BBO include:

Campbell, L. (ed.) 1991. *Beaverhill Bird Observatory 1990 Annual Report*. Beaverhill Bird Observatory, Edmonton.

Dunn, P.O. 1989. The maintenance of monogamy in Black-billed Magpies and Tree Swallows. PhD dissertation, University of Alberta, Edmonton.

Dunn, P.O. and Hannon, S.J. 1990. Intraspecific competition and maintenance of monogamy in Tree Swallows. *Behavioural Ecology* 2(3): 258-266.

Duxbury, J. 1994. *The Beaverhill Bird Observatory Operations Manual*. Beaverhill Bird Observatory, Edmonton.

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----- 1995. *Beaverhill Bird Observatory 1993 Annual Report*. Beaverhill Bird Observatory, Edmonton.

----- and Rowell, P. 1996 *Beaverhill Bird Observatory 1994 Annual Report*. Beaverhill Bird Observatory, Edmonton.

Ebel, G.R.A. 1985. An abnormally coloured Yellow-rumped Warbler. *Alberta Naturalist* 15(2): 78.

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Jungkind, S. 1988. *Beaverhill Bird Observatory 1986 Annual Report*. Beaverhill Bird Observatory, Edmonton.

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----- 1990. Activities at Beaverhill Bird Observatory 1988 and 1989. *Edmonton Naturalist* 18(1): 9-13.

----- 1990. *Beaverhill Bird Observatory 10 Year Report (1980-1989)*. Beaverhill Bird Observatory, Edmonton.

Quinn, M. 1989. Factors regulating the breeding population, reproductive success and mating system of House Wrens at Beaverhill Lake, Alberta. M.Sc. thesis, University of Alberta, Edmonton.

----- 1990. Nest-site and prey of a pair of Sharp-shinned Hawks in Alberta. *Journal of Raptor Research* 25(1): 18-19.

----- and Holroyd, G. 1989. Nesting and egg destruction by House Wrens. *Condor* 91: 206-207.

Rowell, P. (ed.) 1993. *Beaverhill Bird Observatory 1992 Annual Report*. Beaverhill Bird Observatory, Edmonton

6. INTERORGANIZATIONAL COOPERATION

The goal of this committee is to communicate and promote participation of volunteers and organizations of a similar nature in cooperative bird projects at Beaverhill Lake and elsewhere.

6a. Interorganizational cooperation in 1994

As Geoff Holroyd reported in the 1994 Winter newsletter, "The last few years have been very active with two expeditions to Guatemala and a new banding station at Lesser Slave Lake Provincial Park". As well as undertaking these two cooperative ventures, the BBO has also become a part of a network of bird monitoring stations across Canada with the Migration Monitoring Protocol and across North America with the MAPS project.

Closer to home, Roy Fairweather continues as the BBO representative on the Beaverhill Lake Stakeholders committee. This committee has provided input to The Town of Tofield on The Beaverhill Lake Interpretive Plan released in 1994. This plan identifies Beaverhill Lake as a special place for birds and identifies several guidelines to increase awareness and appropriate use of the lake in the future.

Other banding activities in the Beaverhill Lake area in 1994 included efforts by Jim Faragini and Edgar Jones. While banding at the sandpits west of the lab, Jim re-caught a Northern Oriole that had been banded at the BBO 9 years ago! Edgar Jones reported capturing 1,252 birds of 57 species on the east shore of the lake including good numbers of Least Flycatchers, and Myrtle, Tennessee and Yellow Warblers.

6b. Banding Trainer Study

In 1994, Brenda Dale (CWS) conducted a study to determine the effectiveness of informal training methods as several bird observatories including the BBO. The following paper outlines her findings.

The effectiveness of informal banding training at several Western Canadian banding stations

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[This paper was originally prepared for and presented at the Point Reyes Bird Observatory Mist Net Conference in October 1993 and the research will be described in the Conference Proceedings].

Introduction

Our use of data collected at banding stations for such important international programs as MAPS (Monitoring Avian Productivity and Survival - DeSante 1992) and Migration Monitoring is based on the belief that data is collected accurately.

Training standards for obtaining banding permits vary greatly throughout the world. The Canadian Bird Banding Office is currently developing a bander training and education program to make training more readily available and consistent and to enhance data accuracy and consistency.

Formal and informal training are not usually well defined. For the purposes of this discussion, informal training is where a trainee works in the presence of a trainer until the trainer is satisfied with the consistency and correctness of data collection. The criteria for what is acceptable may vary by trainer and in many cases the point where the trainer ceases to check the trainee varies with the skill being learned. The difficulty in progressing to a more uniform method lies in defining what to teach and finding suitable standards to determine when a trainee is ready to function alone. The manual of methods for monitoring landbirds (Ralph *et al.* 1993b) and syllabus for training methods (Ralph *et al.* 1993a) are steps towards more uniform banding training. The manual details methods and the syllabus outlines background materials to be covered in a one week course and defines minimum performance standards.

The purpose of this study was to use these minimum performance standards to assess informally trained banders at several western Canadian banding stations. The results may provide some guidance on how much improvement in training is required, aid in defining what constitutes a reasonable standard, and suggest avenues to achieve better training.

Methods

Data was collected in August and September 1993 at three stations in western Canada: Beaverhill Bird Observatory in Alberta, Last Mountain Banding Station in Saskatchewan and Delta Banding Station in Manitoba. The exact format for informal training varies at these stations, but the trainee is not allowed to collect data alone until the trainee has achieved a high degree of data agreement with the trainer. For each trainee I obtained an estimate of total experience and an estimate (from the trainer) of the time the trainee had access to the trainer. I chose to use time in proximity to the trainer because it was more readily definable, and many trainees prefer confirmation on at least some of the birds encountered after initial training (pers. obs.).

At each station the trainer and trainee independently examined the same birds and collected all relevant data. Sample sizes of birds measured by each trainer/trainee combination varied from 37 to 167. All data was collected in August and September so participants were unable to use Cloacal Protuberance and Brood Patches as an indication of the sex or age of the birds examined. Participants were situated to eliminate or minimize visual contact. No discussion of birds being handled was allowed for the entire length of the experiment. It was assumed the trainer had correctly classified, assessed and measured the bird.

All calculations were relatively simple. The percent deviation for wing chord was the average of the absolute deviations of trainee from trainer (the difference in their measurements without regard for which one

had the higher value) divided by the average value achieved by the trainer. For age, sex, skull and fat measures, I calculated the proportion of cases in which a trainee scored the bird the same as the trainer, the proportion where different by one class, or different by two classes. For example, if the trainer scored the fat on the bird as a 3 then a trainee scoring it as 1 would have a "two class" error and a trainee scoring the fat as 2 would have a "one class" error.

It was evident that not all "one class" differences were of equal importance. Where this occurred the proportion of critical and noncritical errors was calculated. For age and sex categories a trainee calling a bird unknown when the trainer had felt able to classify to an age or sex category was noncritical whereas errors when trainer and trainee assigned opposing age or sex classes were critical. In skulling, an error by one class within one of many hatch year categories was considered noncritical.

Acceptable performance levels suggested in the syllabus and by C.J Ralph (pers. comm.) are shown in Table 1.

Table 1
Minimum Performance Standards for Banders

	Error Rate ¹ Measurement	Species, Age & Sex Errors		Qualitative Errors
		Agree	Agree	Disagr. 1 class
Top	< 1%	100 %	> 95 %	< 5 %
Pass	< 3%	100 %	> 80 %	< 20 %
Marginal/ Fail	> 5%	100 %	> 50 %	20-40%

¹ All rates of agreement or error are in reference to the trainer.

Results and Discussion

Quantitative Measures

Analysis of quantitative differences were limited to wing chord. One trainee was in the "top" category and the rest were comfortably within the "pass" category (Figure 1). There was no real relationship to the amount of time in proximity to the trainer or to overall length of experience. This appears to be a skill that is learned and solidified quickly.

Qualitative Measures.

Species. Correct identification of species ranged from 98 to 100 percent. Two errors committed were typographical errors. The other two were confusion between Least and Alder Flycatchers. Examination of measurements and application of formulas show the trainees made the wrong decisions because they did not collect all the necessary data. Assuming 100% is a pass, there were two passing and three failing individuals. Even though it may be shocking to consider the misidentification of species as acceptable, it is probably realistic to set the pass mark at 99 % rather than 100 %, since typographical errors can occur even with the most careful individuals. This more relaxed standard would have resulted in four passing marks.

Age. If 100 % is needed to pass (C.J. Ralph, pers. comm.) then no trainee achieving a passing score (Figure 2). One trainer/trainee combination did age 99% of the birds the same way. The only error was a bird called unknown age by the trainee.

Of the remaining four trainees, three achieved scores in excess of 80% and one failed by a wide margin. Of great concern, was that most errors by these four banders were of a critical nature (an adult bird called hatch year or vice versa) rather than noncritical (an adult or hatch year called unknown age). Performance in aging

is closely related to skulling ability (see below).

Sex. No trainees achieved a perfect score (Figure 3). One trainee achieved a score of 98% and three more achieved scores above 80%. One failed by a wide margin using the criteria in Table 1. Almost all errors of this and all other trainees were of a noncritical nature where the trainee classed the bird as unknown sex while the trainer classified it as known sex.

The sex determination data in this experiment points out a weakness in this particular scheme of rating skills. Examination of scores alone indicates individual C was much better than B in correctly determining the sex of a bird. However, the raw data show the poor score of individual B compared to A and the high agreement between B and C are both due to B and C classing a lot of birds as unknown. Individual B spent very little time with access to the trainer and may not have learned some of the subtleties of using a combination of characteristics to determine sex. Since this experiment occurred after the breeding season B could not rely on Cloacal Protuberance or Brood Patch to distinguish sex. Under conditions of uncertainty B did the correct thing and classed the birds as unknown sex. B was often unable to distinguish the sex of birds examined and C (whose entire banding experience was in the presence of B) was schooled to make similar decisions.

Consultation with several experienced banders (at the Point Reyes conference and elsewhere) indicated 100% was an unrealistic goal for the Age and Sex categories. No one can remain alert and make perfect decisions all the time. They suggested either 95% or 99% as a suitable passing grade for Age and Sex determination.

Skull. Using the standards in Table 1 no individual attained a "top" score but two "passed" and two achieved "marginal" scores (Figure 4). There was an outright failure. With the exception of the failing individual, most errors were of a non-critical nature (differed by only one class within bird of the year categories). The last individual had a high number of errors. According to the trainer, H appeared to be skulling well at the end of the training period (few errors) but subsequently had not asked many questions or asked for confirmation on many birds when trainer and trainee were in proximity.

Fat. There was one pass and two marginal scores (Figure 5). Almost all errors, even by the failing individuals, were within one class of their trainer. All stations were using a five point fat scale.

Training. All trainees had achieved a high degree of agreement with their trainers for these skills after initial training. Experience gained subsequent to training, and the period of long term access to the trainer following training differed among those tested (Table 2).

Table 2
Access to Trainer, Experience and Performance of Banding Trainees

Bander ¹	Access to Trainer	Experience (Birds Banded)	Cumulative Score (out of 600)
B	10 days	>3 000	500
C	65 days	~1 000	553
E	55 days	~2 000	518
G	29 days	~2 000	513
H	60 days	~2 000	433

¹ A trained B, B trained C, D trained E, and F trained G and H

There was only one trainee who was given a defined period of training and then banded alone thereafter. It was recognized from the onset that it is difficult to separate the influences of training and experience because both are often acquired together and quantifying them in a meaningful way is difficult. Visual inspection of the data for the first three individuals suggests access to a trainer beyond the first intensive period may be a factor in long term performance. Once skills have become firmly established, experience may be a potential factor in how well trainees score. Where skills are not clearly established practise does not appear to increase performance.

The last two individuals' scores would appear to contradict the concept of access to trainer being an important factor in training effectiveness given that access to trainer by person H was higher than person G but H's score was lower than G's. Discussions with the trainer of G and H revealed that personality or temperament may also be an important factor in training effectiveness. Trainee G was trained for a short time but was extremely cautious and very focused on gleaning all the information possible from the trainer. G constantly asked questions of the trainer and spent a lot of time reading source and reference materials. H did well in initial training but rarely asked questions during the extensive period following training when the trainer was accessible.

Individuals B and C are again worth noting. B was given a short period of intensive training and then banded for a period of several months. Bander B then trained C and the two subsequently worked together for several months. It appears that because C had constant access to B there was a high degree of agreement between B and C during the test. It appears individual B has done a very good job of passing on information to person C but B's score would indicate the likelihood that the information passed on was incomplete.

No individual attained a fully satisfactory performance level based on the criteria in Table 1. Several individuals did score generally well and their errors were of a non-critical nature. There is a need to improve the knowledge and skill level of banding trainees both for their benefit and the ultimate use of the data. All individuals involved were intelligent and motivated and training methods applied at these stations are not atypical for North America. Several banders at the Point Reyes Conference, where this was originally presented, indicated they felt the trainee performance in this experiment was typical of all but the most formalized and standardized banding stations.

Recommendations

1. More stations should undertake similar training evaluations before a national training protocol is finalized. Data from these evaluations would clarify which factors most influence performance and highlight weaknesses in training programs and skills.
2. Trainers should attend regional or national workshops so that all trainers teach from a similar standard. Without this we will be perpetuating high variability in standards since trainees are a reflection of their trainer's skills.
3. Contact and comparison among trainers in a region should ideally happen at least annually.
4. All personnel at any station should participate in periodic comparisons of data collected from the same bird. They would immediately discuss any sources of variation in their classification of a bird's identification, age, sex etc. This process would reduce the "drift" that naturally occurs in any subjective skill.
5. An intensive course, such as outlined by Ralph et al. (1993), should form part of the basic training of banders. It should include demonstration of net placement, extraction and processing of birds, provide material on molts and breeding cycles and use study skins, slides and video to augment identification of live birds. Background material will improve the trainee's overall knowledge and their ability to rationally resolve situations in which a bird does not perfectly match the keys.

6. Any testing criteria devised should encourage a high but realistic standard.

7. Any testing criteria devised need to be developed separately for each skill because errors are not all equal.

Acknowledgements

I thank the anonymous trainers and trainees for their participation. The cooperation of the Beaverhill Bird Observatory, Last Mountain Lake Banding Station and Delta Banding Station is greatly appreciated. They are to be commended for permitting this experiment and for their positive attitude in using the results to improve their programs. Al Smith and Keith Hobson coordinated data collection at Last Mountain Lake and Delta. H. Loney Dickson, Ellen Hayakawa Geoff Holroyd and Martin McNicholl offered helpful comments on the manuscript.

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Ralph, C.J., G.R. Geupel, P. Pyle, T.E. Martin, and D.F. DeSante. 1993b. Handbook of field methods for monitoring landbirds. Gen. Tech. Rep. PSW-GTR. Albany, CA: Pacific southwest Research Station, Forest Service, U.S. Department of Agriculture.

Fig. 1 WING MEASUREMENTS
Percent Deviation

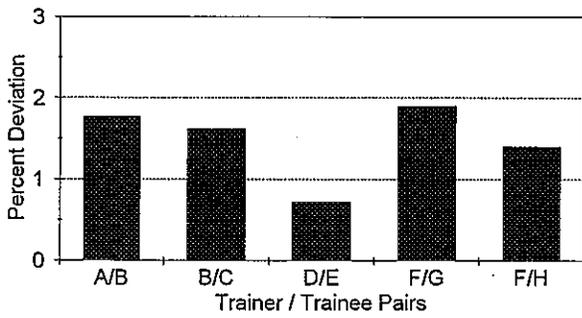


Fig. 2 AGE
Percent Agreement

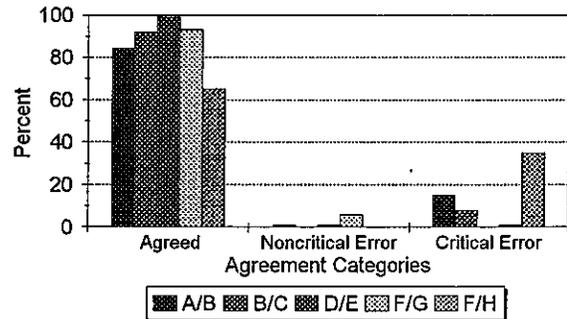


Fig. 3 SEX DETERMINATION
Percent Agreement

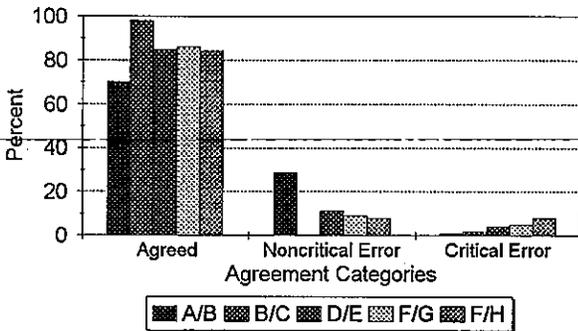


Fig. 4 SKULL
Percent Agreement

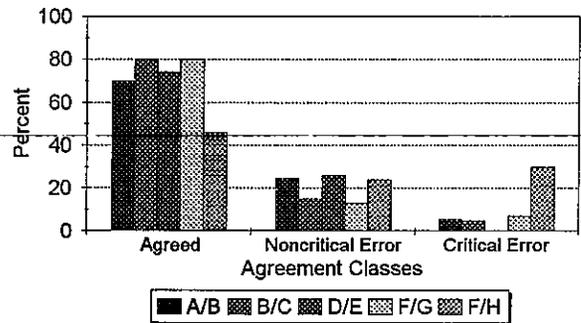
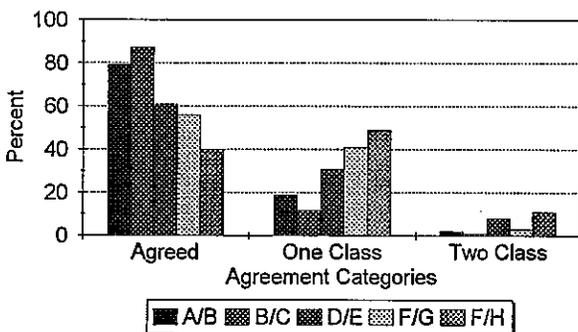


Fig. 5 FAT SCORE
Percent Agreement



Acknowledgements

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DeSante, D.F. and Burton, K.M. 1994. *The Monitoring Avian Productivity and Survivorship (MAPS) program Third Annual Report*. The Institute for Bird Populations, Point Reyes, California.

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 personnel) 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 its 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.