

Migration Monitoring at TTPBRS

2009



Canada Warbler

Table of Contents

Migration Monitoring at TTPBRS.....	i
Introduction	1
Study Site	1
Toronto and Region Conservation (TRCA).....	1
Migration Monitoring Program	2
Rationale	2
Methods.....	2
Spring 2009 Migration Summary.....	2
Banding	3
Recaptures	4
Highlights.....	4
<i>Personnel</i>	5
Fall 2009 Migration Summary	6
Banding	6
Recaptures	7
Highlights.....	7
Education and Outreach	9
Volunteer Training	9
Winged Migration.....	9
Media.....	9
2009 Baillie Birdathon.....	10
Acknowledgements	10
References.....	10
Appendices	11

Table of Figures

Table 1. Spring Coverage and Results	2
Table 2. Spring Banding Totals	3
Table 3. Spring Volunteer Hours	5
Table 4. Fall Coverage and Results	6
Table 5. Fall Banding Totals	6

Appendices

Appendix A. Count Area Map.....	11
Appendix B. Spring 2009 Recaptures.....	12
Appendix C. Fall 2009 Recaptures.....	13
Appendix D. Top Ten Species Banded 2003-2009.....	13

Introduction

The Tommy Thompson Park Bird Research Station (TTPBRS) was established in April of 2003 and is run by the Toronto and Region Conservation Authority (TRCA). The primary objectives of TTPBRS are to aid conservation efforts at the local, national and international level through monitoring, research and education. The core focus of the TTPBRS is the Migration Monitoring Program. This report details results of the 2009 spring and fall seasons at TTPBRS.

Study Site

Tommy Thompson Park (TTP) is located on the Leslie Street Spit, a man-made peninsula on Toronto's waterfront which extends 5 km into Lake Ontario. The spit was developed in the 1950's by the Toronto Port Authority for the purpose of expanding port facilities in anticipation of increased shipping activities in the Great Lakes. Since then a combination of lakefilling and dredging activities created the current configuration of the park. TTP now has a land base of approximately 160 hectares and a water surface area of 100 hectares, composed of the western embayments and the inner disposal cells.

Through natural succession and habitat restoration most of TTP has been colonized by a variety of plant and animal communities. The geographic situation of the park and its natural features make it very suitable for large numbers of breeding and migrating birds. Overall, the park represents the largest area of existing natural habitat on the Toronto waterfront. Tommy Thompson Park is classified as an Environmentally Significant Area and was designated as an Important Bird Area (IBA) by Birdlife International in 2000.

The site selected for Migration Monitoring is located on peninsula D, which is one of several peninsulas that branch off the main spine of the spit. The peninsula is bordered by the Toronto harbour on the north side and an inner bay on the south side. The habitat is composed of early succession cottonwood, willow, dogwood and birch forest. Beach and meadow features are also present in the study area. Please refer to Appendix A for a detailed map of the study area.

Toronto and Region Conservation (TRCA)

Toronto and Region Conservation (TRCA) was formed in 1957 for the management and conservation of natural resources in the Greater Toronto Area (GTA). Since its formation TRCA has prepared and delivered programs for the management of the renewable natural resources within its watersheds.

Migration Monitoring Program

Rationale

Migration Monitoring is an effective method for monitoring populations of migratory birds through the standardized capture and counting of migrants. This protocol is particularly useful for monitoring species which breed and winter in areas too remote and inaccessible to survey.

There are 25 Migration Monitoring stations throughout Canada which are coordinated by the Canadian Migration Monitoring Network (CMMN). The data collected by member stations can be analyzed to detect population trends at the local, regional and national scales.

Methods

Migration Monitoring operates on a daily basis from April 1 - June 9 and August 5-November 12. The protocol employs fixed effort census and point count surveys as well as a fully standardized capture regimen. The protocol for data collection at TTPBRS is detailed in the TTPBRS Migration Monitoring Protocol.

Spring 2009 Migration Summary

Spring migration monitoring commenced on April 2 and ran until June 9th for a total of 68 days of coverage. 164 species were detected within the study area. Diversity peaked on May 24 with 71 species detected, compared to a low of 17 species on April 3rd.

Table 1. Spring Coverage and Results

Unit	2009	2008	2007	2006	2005	2004
Days with coverage	68	68	67	64	67	69
Total Species Detected	164	188	178	179	173	161
Birds Banded	1,530	1,893	2,638	2,570	2,547	2,519
Birds Recaptured	271	361	369	470	468	604
Captured Unbanded	34	35	107	54	78	236
Total Captures	1,835	2,289	3,114	3,094	3,093	3,359
Net Hours	3,321	4,790	4,595	4,687	5,492	5,317
New birds banded/net hour	.46	.39	.57	.54	.46	.47

Banding

81 species were banded during spring 2009. A total of 1,530 birds were banded in 3,321 net hours for an average capture rate of 0.46 birds per net hour. The highest banding total was on April 27 when 106 birds were banded. The highest capture rate was on May 18th, with a rate of 1.62 birds per net hour. The least productive day was April 14 with a total of 4 birds banded and 0.076 birds per net hour.

Table 2. Spring Banding Totals

Species	Total	Species	Total	Species	Total
AMGO	39	EAKI	14	PUFI	2
AMRE	31	EAPH	10	RBGR	5
AMRO	23	EAWP	2	RBNU	1
ATSP	5	FISP	7	RCKI	45
BAOR	5	FOSP	6	REVI	18
BAWW	5	GCFL	1	RUBL	2
BBWA	2	GCKI	51	RWBL	70
BCCH	3	GCTH	25	SAVS	2
BGGN	1	GRCA	50	SCJU	42
BHCO	14	HETH	60	SOSP	40
BHVI	1	HOWR	4	SWSP	28
BLBW	8	INBU	3	SWTH	91
BLJA	1	LEFL	14	TEWA	3
BLPW	35	LEOW	1	TRES	2
BRCR	15	LISP	19	TRFL	34
BRTH	11	MAWA	50	VEER	11
BTBW	8	MODO	1	WAVI	5
BTNW	10	MOWA	12	WCSP	14
BWWA	1	MYWA	117	WEWA	1
CAWA	11	NAWA	22	WIWA	35
CEDW	6	NOCA	1	WIWR	4
CHSP	5	NOPA	3	WOTH	1
CMWA	1	NOWA	9	WPWA	22
COGR	4	NRWS	1	WTSP	189
COYE	39	OCWA	1	YBFL	16
CSWA	9	OVEN	9	YBSA	5
DOWO	1	PHVI	3	YWAR	52
				Total	1,530
				Species	81

Recaptures

During spring 2009 there were 271 recaptures, consisting of 184 individuals and 87 multiple encounters (birds recaptured more than once). 138 individuals were repeats (banded at TTPBRS the same season) and 46 were returns (banded at TTPBRS a previous season). All of the returning birds were species that breed at TTPBRS. Please refer to Appendix B for detailed recapture totals for spring 2009.

Highlights



Worm-eating Warbler



Long-eared Owl

Long-eared Owl: 2 individuals observed on April 4th and one banded on April 9th

American Coot: One individual observed on a daily basis from April 19th – 29th

Rusty Blackbird: Banded on April 25th

Worm-eating Warbler: Banded on April 25th – first record for TTP

Northern Rough-winged Swallow: banded on May 31st

Blue-winged Warbler: female banded on June 3rd

Acadian Flycatcher: observed on June 9th

Personnel

Spring 2009 was Brett Tryon's first season as the Coordinator of TTPBRS. After years of banding and monitoring birds throughout Canada and the US she quickly eased into the role. Special thanks go to volunteers Andrew Jano, Don Johnston and Ian Sturdee for familiarizing her with the protocol and making her feel at home.

25 volunteers contributed 1,534 hours in spring 2009. 13 of these were returning to TTPBRS from previous years, and 12 were new volunteers. Several volunteers dedicated additional time to assist with data entry and fundraising. Thank you to all of our committed volunteers who make this program possible!

Table 3. Spring Volunteer Hours

Name	Hours
Andrew Jano	179.3
Don Johnston	174.2
Ian Sturdee	133.5
Priscilla Lai	114.0
Heidi Brown	113.3
Glenn Reed	95.0
Juan Zuloaga	81.9
Josh Shook	68.3
Theresa McKenzie	62.2
Maya Ricker-Wilson	61.7
Bronwyn Dalziel	54.7
Mark Field	51.2
Andrea Geboers	47.4
Zak Smith	47.4
Larry Menard	46.9
Tom Flinn	39.0
Sachiko Schott	28.2
Marc Dupuis-Desormeaux	27.2
Theresa Carlin	25.7
Jan McDonald	25.6
Attila Fust	19.2
Diane Doiron	12.3
Clarissa Jewell	11.3
Kristen Field	7.0
Stephanie Hung	7.0
Total	1,533.5

Fall 2009 Migration Summary

Fall migration monitoring began on August 5 and continued until November 12 with a total of 96 days of coverage. 158 species were detected within the study area. (Due to there being no full-time bander in fall, 2008, there was no banding, except during one brief test period.)

Table 4. Fall Coverage and Results

Unit	2009	2008	2007	2006	2005	2004	2003
Days with coverage	96		96	87	91	95	84
Net Hours	2,641		6,835	6,085	6,816	7,388	6,726
Total Species Detected	158		185	176	180	173	161
Birds Banded	1,190	8	3,391	4,473	4,247	3,870	3,327
Birds Recaptured	120	0	423	429	560	614	623
Captured Unbanded	38	0	125	515	382	429	152
Total Captures	1,348	8	3,939	5,419	5,189	4,913	4,102
Birds banded/net hour	0.45		0.50	0.74	0.62	0.52	0.49
Birds captured/net hour	0.51		0.58	0.89	0.76	0.66	0.61

Banding

Table 5. Fall Banding Totals

Species	Total		Species	Total		Species	Total
AMGO	3		EAPH	14		RBGR	1
AMRE	5		EAWP	3		RBNU	2
AMRO	12		EUST	39		RCKI	145
ATSP	6		FOSP	2		REVI	11
BAOR	14		GCKI	248		SCJU	29
BAWW	1		GCTH	13		SOSP	29
BCCCH	33		GRCA	16		SWSP	6
BHCO	1		HAWO	2		SWTH	30
BHVI	6		HETH	43		TEWA	2
BLJA	9		LEFL	2		TRFL	17
BLPW	10		LISP	5		VEER	1
BRCR	29		MAWA	13		WAVI	12
BTBW	26		MOWA	2		WCSP	3
BTNW	9		MYWA	49		WIWA	4
CAWA	4		NAWA	37		WIWR	7
CEDW	46		NOCA	6		WPWA	4
CMWA	1		NOPA	8		WTSP	68
COYE	7		NOWA	6		YBFL	1
CSWA	2		OCWA	9		YBSA	7
DOWO	8		OVEN	4		YSFL	2
EAKI	10		PHVI	5		YWAR	40
				Total		1,189	
				Species		63	

63 species were banded during fall 2009. 1,190 birds were banded in 2,641 net hours for a capture rate of 0.45 birds per net hour. October 13 had the highest capture rate, with 5 birds per net hour. This was not necessarily the busiest day however, as only 19 birds were banded in 3.8 net hours. The most productive day overall was September 24 with 110 birds banded in 47 net hours (2.3 birds per net hour). The least productive days were August 30 and November 11 when we didn't band a single bird.

Recaptures

There were 120 recaptures in fall 2009, which is the lowest number ever recorded in a fall season at TTPBRS. Of 120 recaptures, 2 were "return" individuals banded in a previous season at TTPBRS and 76 were "repeats", birds banded during fall 2009 at TTPBRS. 37 records were multiple captures of the same individuals. The most commonly recaptured birds were Black-capped Chickadees, Golden-crowned Kinglet, Ruby-crowned Kinglet, Song Sparrow and Yellow Warbler. Refer to Appendix C for a detailed table of recaptures.

Highlights

Broad-winged Hawk: recorded on census Sept 12

Bald Eagle: observed on census Oct 14

Cackling Goose: observed November 1

Glaucous Gull: observed Oct 27

Long-eared Owl: observed Nov 1,2

Rusty Blackbird: observed October 12, November 1

Virginia Rail: observed September 17

Whip-poor-will: observed Observed October 11

Personnel

23 volunteers contributed at least 1668.3 hours during fall 2009. Zoe Southcott joined us for the first time, and every other volunteer was returning from the previous season.

Table 6. Fall Volunteer Hours

Volunteer	Hours
Bronwyn Dalziel	249.9
Don Johnston	174.5
Ian Sturdee	168.1
Theresa McKenzie	150.8
Joanna Jack	145.5
Maya Ricker-Wilson	104.6
Andrew Jano	100.6
Mark Field	98.6
Larry Menard	78.3
Josh Shook	51.8
Tom Flinn	45.8
Jan McDonald	45.0
Zak Smith	44.7
Bert Vanderzon	39.1
Marc Dupuis-Desormeaux	34.3
Heidi Brown	32.9
Glenn Reed	21.6
Priscilla Lai	21.4
Juan Zuloaga	19.7
Stephanie Hung	13.8
Attila Fust	13.0
Zoe Southcott	7.3
Andrea Geboers	7.0
Total Volunteer Hours	1,668.3



Education and Outreach

TTPBRS continues to engage the community through educational programming. Banding demonstrations and interpretive talks were given to 1000 people at TTPBRS in 2009. This figure includes park visitors, students and special groups.



In 2009, staff and volunteers reached out to the community by presenting talks at various conferences. Karen McDonald gave a presentation at the Royal Ontario Museum highlighting the TRCA's role in bird conservation.

TTPBRS hosted a workshop in the fall for volunteers of the Fatal Light Awareness Program (FLAP). Volunteers learned how to safely handle live songbirds, which will assist

them in their efforts to save birds that have collided with buildings in the city.

Volunteer Training

Providing educational opportunities for those interested in bird research is a critical role for the research station, as venues for hands-on learning are hard to find. Many of our trainees have gone on to bright futures in the environmental field through experience at TTPBRS.

Winged Migration



Winged Migration combines an in-class lesson in bird biology with a field trip to Tommy Thompson Park, where children experience the life of birds firsthand. During spring 2009 we offered the Winged Migration program to 5 classes, impacting 146 children. The highlight of the trip is a visit to the Tommy Thompson Park Bird Research Station where they get to see a bird banding demonstration and learn about migration monitoring.

Media

TTPBRS was well featured in local, national and international media in 2009, which significantly increased our outreach to the public. We were featured in the Toronto Star, the National Post, Reuters, Fairchild Television and Breakfast Television.

2009 Baillie Birdathon

During May 2009 TTPBRS participated in the annual Baillie Birdathon, a fundraiser organized by Bird Studies Canada. Participants go birding any day in May during a 24 hour period and try to find as many bird species as they can. Birdathoners find pledges at a flat rate or for each species they see. 90% of the money raised is donated to TTPBRS, and the rest goes to Bird Studies Canada to fund bird conservation projects.

Name	Amount Raised
Marc Dupuis-Desormeaux	\$1,500.00
David Love	\$3,739.00
Yvonne Pigott	\$35.00
Josh Shook	\$554.00
Ian C. Sturdee	\$715.00
Brett Tryon	\$790.00
TTPBRS Guest Birder	\$186.00
TOTAL	\$7,519.00

Acknowledgements

TRCA would like to thank all the volunteers who made 2009 Migration Monitoring possible:

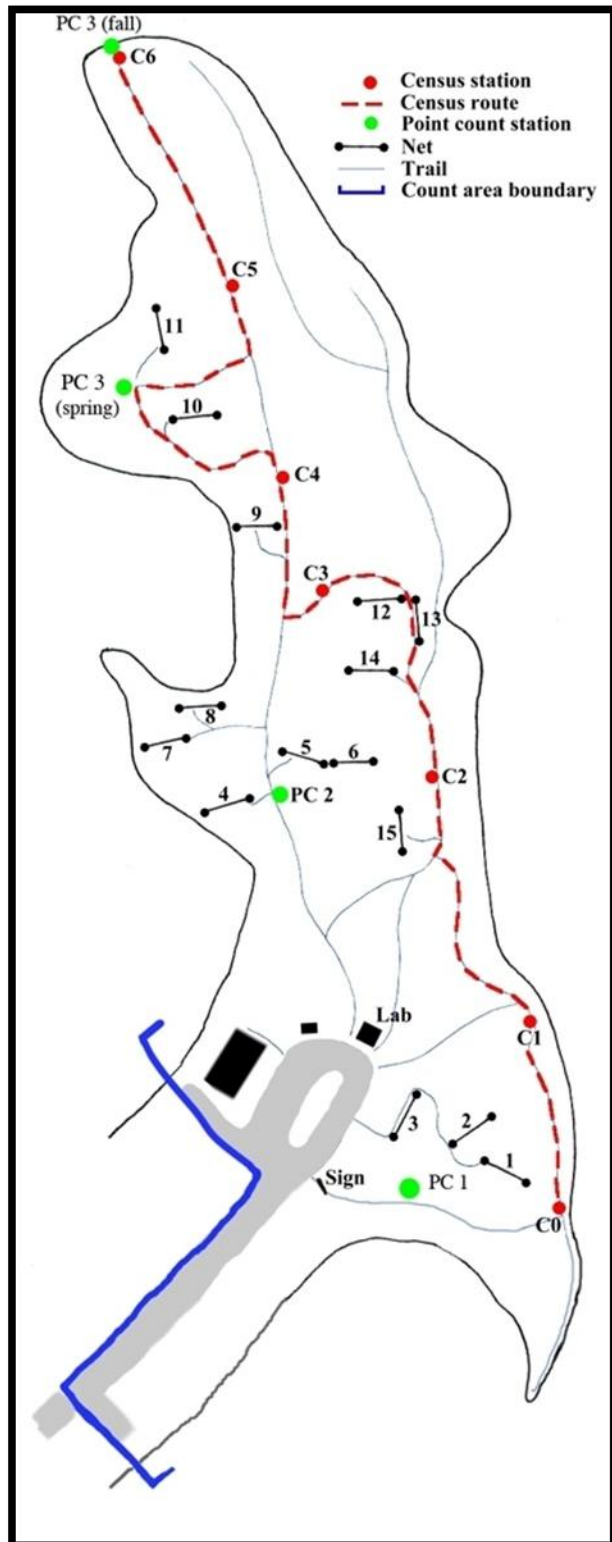
Andrea Geboers, Andrew Jano, Attila Fust, Bert Vanderzon, Bronwyn Dalziel, Clarissa Jewell, Diane Doiron, Don Johnston, Glenn Reed, Heidi Brown, Ian Sturdee, Jan McDonald, Joanna Jack, Josh Shook, Juan Zuloaga, Kristen Field, Larry Menard, Marc Dupuis Desormeaux, Mark Field, Maya Ricker-Wilson, Priscilla Lai, Sachiko Schott, Stephanie Hung, Theresa Carlin, Theresa McKenzie, Tom Flinn, Zak Smith, Zoe Southcott

References

Derbyshire, D.G. April, 2004. *Operations Manual for Tommy Thompson Park Bird Research Station*. Unpublished.

Appendices

Appendix A. Count Area Map



Appendix B. Spring 2009 Recaptures

Species	Repeat Individuals	Repeat Multiples	Return Individuals	Return Multiples	Foreign	Grand Total
AMGO	4	5	2			11
AMRO	3		3	7		13
ATSP	3	1	1	2		7
BAOR	3	2	4	3		12
BCCH	3	2	3	6		14
BHCO	4	3	2	1		10
BLBW	1					1
BLPW	3					3
BRTN			1			1
BTBW	1					1
CAWA	1					1
CEDW	1					1
COYE	7	3				10
CSWA	1					1
EAKI	1		1			2
EAPH	1	1				2
FOSP	1					1
GCKI	10	2				12
GRCA	3	2	5	3		13
HETH	3					3
MAWA	1					1
MYWA	5					5
NAWA	2					2
NOWA	2	5				7
OVEN	1					1
PUFI	1					1
RBGR	1					1
RCKI	5					5
RWBL	7		5			12
SCJU	2					2
SOSP	9	13	4	2		28
SWSP	5					5
SWTH	7	3				10
TRFL	1					1
VEER	1					1
WAVI	1		6			7
WCSP	1					1
WIWA	6	1				7
WPWA	4					4
WTSP	8	3				11
YWAR	14	9	9	8		40
TOTAL	138	55	46	32	0	271

Appendix C. Fall 2009 Recaptures

Species	Repeat Individuals	Repeat Multiples	Return Individuals	Return Multiples	Foreign	Grand Total
AMGO	1					1
AMRE	1					1
AMRO	1					1
BCCH	17	32	2	2		53
BTBW	2					2
COYE	1					1
DOWO	1					1
GCKI	19	2				21
GRCA	1					1
MYWA	1					1
NOCA	2		1			3
RCKI	9					9
SCJU	2					2
SOSP	5	3				8
SWSP	1					1
SWTH	2					2
TRFL	2					2
WAVI			1			1
WIWR	1					1
WTSP	2					2
YBSA	1					1
YWAR	4		1			5
TOTAL	76	37	5	2	0	120

Appendix D. Top Ten Species Banded 2003-2009

Rank	2003	2004	2005	2006	2007	2008	2009
1	GCKI	GCKI	GCKI	GCKI	WTSP	WTSP	GCKI
2	WTSP	WTSP	RCKI	RCKI	RCKI	MYWA	WTSP
3	RCKI	RCKI	BCCH	WTSP	GCKI	MAWA	RCKI
4	HETH	MYWA	WTSP	MYWA	MYWA	RWBL	MYWA
5	SWTH	HETH	MYWA	MAWA	HETH	SWTH	SWTH
6	MYWA	MAWA	SWTH	NAWA	SWTH	SOSP	HETH
7	BRCR	SWTH	HETH	SWTH	MAWA	RCKI	YWAR
8	SCJU	YWAR	MAWA	HETH	SCJU	YWAR	SCJU
9	NAWA	NAWA	SCJU	SCJU	BRCR	COYE	RWBL
10	MAWA	TRFL	BRCR	BRCR	NAWA	HETH	SOSP