

Forest Birds at Risk in the Norfolk Sand Plain region of southwestern Ontario

2013 Summary Report



Photo: Louisiana Waterthrush, Jody Allair

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This report contains a summary of the 2013 results of the Forest Birds at Risk in the Norfolk Sand Plain (FBAR –NSP) project. It contains sensitive information on species at risk locations and is not for general distribution. For further information contact Jody Allair at jallair@birdscanada.org.

PROJECT FUNDING

In 2012, Bird Studies Canada (BSC) applied to Environment Canada's Habitat Stewardship Program (HSP) and the Ontario Ministry of Natural Resources' Species at Risk Stewardship Fund (SARSF) for support for a three-year project targeting four at-risk bird species breeding in forest habitats in the Norfolk Sand Plain region in southwestern Ontario. In 2013, BSC also applied for and received funding to hire three students through the Canada Summer Jobs Program for 16-week Species at Risk Intern positions. A fourth student was also hired as a Species at Risk Intern under a Co-op program funded by her University.

GOALS

Information will be collected on site occupancy, breeding evidence, pairing success, nesting success, and habitat conditions of the target species at risk. This will be done to improve the understanding of frequency of site occupancy, population dynamics, and the influence of previous forest management practices. An enhanced knowledge of the habitat requirements and preferences will allow for a better understanding of current and potential threats to target species. Recommendations can then be provided on how to encourage public and private landowners to engage in habitat stewardship and forest management activities. This project will result in targeted habitat improvement recommendations to benefit the priority target species and other species at risk in this region.

OBJECTIVES

1. To collect current data on site occupancy (presence/absence/productivity of target species), for 50+ priority sites primarily in the Norfolk Sand Plain region for four SAR forest bird target species: Acadian Flycatcher (ACFL), Cerulean Warbler (CERW), Louisiana Waterthrush (LOWA) and Prothonotary Warbler (PROW) in the 2013 breeding season.
2. To improve the understanding of ACFL habitat preferences and requirements.
3. To continue to increase awareness and understanding of SAR forest birds and their stewardship needs in key audiences in the Norfolk Sand Plain region.

METHODS

Target species were searched for in forest tracts that encompassed known and potential breeding habitat for one or more of the four target species at risk: Acadian Flycatcher (ACFL), Cerulean Warbler (CERW), Louisiana Waterthrush (LOWA), and Prothonotary Warbler (PROW). Canada Warblers, Eastern Wood-Pewees, Red-headed Woodpeckers and Wood Thrushes were also recorded when encountered, however these species were not surveyed for as extensively as the target species. Sites were chosen based on whether they were known sites (occupied by

SAR and surveyed regularly), historic sites (used to be occupied by SAR but haven't been in at least 10 years), or new sites (have never been surveyed by BSC before). All target sites were intensively surveyed at least once during the breeding seasons of each target species. Many sites were surveyed multiple times as LOWA and ACFL breed in similar sites, but at different times during the spring (LOWAs nest from May to mid June and ACFLs nest from June to August). Nests were searched for and monitored for each target species where pairs were observed. Data for each nest was recorded on an Ontario Nest Record Scheme Card, and was entered into the Project NestWatch database, maintained by BSC. Nest information and survey information were entered into the new forest birds at risk database maintained by BSC Ontario Region. All site data will be submitted to Environment Canada and the Ministry of Natural Resources – Natural Heritage Information Centre. Habitat quality and any noticeable threats to the target species were also recorded during each survey, and Ecological Land Classifications were conducted after the breeding season in 2013 at 10 2013 ACFL nest sites. Private landowners who received the 2012 Forest Bird Species at Risk Factsheet were given a questionnaire and were interviewed about their forest and their response to the factsheet. Afterwards landowners were invited to join BSC staff on a survey of their property.

SURVEY EFFORT

In 2013 surveys were completed by BSC staff for target species at 54 sites from April to July, primarily within the Norfolk Sand Plain region. Forest birds at risk field work commenced on April 28th and ended on August 30. Survey effort totalled 479 person-hours spread over 191 site visits as shown in Table 1.

A total of 54 sites within the Norfolk Sand Plain region (Norfolk and Elgin Counties), and in surrounding areas, with known or potential habitat for the target species have been surveyed. Of the total sites surveyed, 31 are known sites, 14 are new sites, and 9 are historic sites. LOWA were detected at 2 new sites, however neither site has been surveyed during the LOWA breeding season for this project before. LOWAs were also detected at 9 known sites, and 2 historic sites. ACFLs were observed in 9 known sites, 1 historic site and 2 new sites. Neither ACFLs nor LOWAs were observed in the remaining new sites surveyed in 2013; however, several (Big Creek Forest-SE of Langton, Shoppe's Creek Ravine-Saul, Closed Bridge-Barnabas, Talbot Line Ravine-Gagnon-South, Dundas Valley General, Dundas Valley East, and Royal Botanical Gardens) have potential habitat for both.

STEWARDSHIP

Effort was made to speak to all landowners to receive permission to continue to survey old sites, and to survey new sites for ACFL and LOWA. Landowners who received the 2012 Forest Bird Species at Risk Factsheet were asked to participate in a follow up interview with BSC. Those who had target species on their property in 2013 were also invited to join BSC staff on a survey/nest check. New landowners with target species on their property were given a copy of the Forest Bird Species at Risk Factsheet.

Table 1: Summary of 2013 Forest Birds at Risk Survey Effort by Site

Site ID	Site Name (Site complex)	Land Ownership	Visits (#)	Time (hours)	Effort (person-hours)
BR48z	Oakland Swamp	Private	1	0.5	1
BR81a	Hatchley Swamp	LPRCA	1	0.5	1
EL14z	Passmore Farm-Silver Creek	Private	1	2.5	5
EL20z	Hawk Cliff	Mark Brown and Cheryl Berengrad	1	1	3
EL27z	Rush Creek	Private	12	14.5	29.75
EL28z	Grigg-South Otter	Larry Grigg, Vance Shutt, John Nezezon	1	0.25	0.5
EL29z	James Line	Private	1	0.5	1
EL38z	Harmony Acres Ravine	Private	1	1	2
EL4z	Closed Bridge-Barnabas	Private	2	1	2
EL43a	Calton Swamp-SE	Provincial Government	2	2.5	6
EL45b	Rugienis Tract	Conservation Authority & MNR	3	1.25	2.5
EL45z	Carson Line Ravine	Private	15	14	30
EL46d	Talbot Line Ravine-Graydon	Private	3	1	2.25
EL46b	Talbot Line Ravine-Gagnon	Private	6	8.25	19
EL46c	Talbot Line Ravine-Gagnon South	Private	1	0.5	1.5
EL46a	Talbot Line Ravine-Baldwin	Private	1	0.25	1
EL49z	Bossuyt-Fick	Private	2	2.5	5
EL50a	Dennis Property	Doug Dennis	1	1	2
HN1b	Backus Woods North Tract	ENGO	14	30.75	63.5
HN1c	Backus Woods South Tract	ENGO	9	17	37
HN101d	Big Creek Bend	Private	1	1.5	3
HN102z	Demaiter	NCC	1	0.5	1
HN111m	Big Creek Forest-SE of Langton	Private	1	0.5	1
HN112c	Ravine west of South Coast Gardens Property	Private	5	8.5	19
HN114a	Jackson Gunn	Long Point Basin Land Trust	1	0.5	1
HN12d	St.Williams Forest - Southwest	Provincial Government	5	3.25	5
HN12g	St.Williams Forest - Northeast	Provincial Government	13	13.25	24.5
HN14z	Spooky Hollow	Multiple	4	5.5	7.5
HN16m	Long Point Eco Adventures	Private	1	0.5	0.5
HN16z	Turkey Point SW Bluff & Ravines	Provincial Government	7	8	16
HN19b	Jackson Tract	Conservation Authority	2	2	5
HN21c	Smith Tract-Walsh Forest	Conservation Authority	1	0.5	0.5
HN21b	Earl Danylevitch Tract	Conservation Authority	1	2	2
HN21a	Swick-King Tract-Walsh Forest SE	Conservation Authority	5	8.5	15.5
HN27a	South Walsingham-Wilson Tract	Conservation Authority	6	7.25	20
HN27c	South Walsingham-Coppens Tract	Conservation Authority	12	14.25	27.25
HN27d	South Walsingham-Armstrong Tract	Conservation Authority	3	6	12.5

HN27g	South Walsingham-Rowanwood	Non Government Organization	7	6.5	14
HN30z	Shoppe's Creek	Private	5	6.25	11
HN30a	Shoppe's Creek-Saul	Private	1	0.5	1
HN31z	Fisher's Glen	LPRCA	1	1	1
HN31a	Fisher's Glen-South	LPBLT	1	1.5	1.5
HN32z	Hay Creek Conservation Area	LPRCA	1	0.5	1
HN37a	Abbott-Townsend Tract	Conservation Authority	1	0.5	1
HN37z	Courtland/Middleton Wetlands	Conservation Authority	1	0.5	1
HN4d	Burwell Tract (Cultus Woods)	Conservation Authority	1	1.5	3
HN5a	Hepburn Tract (Deer Creek Valley)	Conservation Authority	5	5.5	12.5
HN5b	Woolley Tract	ENGO	2	2.25	4.5
HN5z	Deer Creek Valley	Multiple	3	5.5	11
HN52a	Trout Creek	Regional Government	2	1.5	3
HN81a	Arthur Langford	ENGO	10	8.75	23.25
HW1z	Dundas Valley General	Hamilton Conservation Area	1	1.5	3
HW1b	Dundas Valley East	Hamilton Conservation Area	1	1.5	3
HW10z	Royal Botanical Gardens	RBG	1	2	8

RESULTS

The results of the 2013 Forest Birds at Risk fieldwork is summarized in Table 2. Summaries for each site surveyed in 2013 are presented in Table 3.

Acadian Flycatcher

Four known ACFL sites in Norfolk County were not used for breeding this year for unknown reasons. Two sites, that are not currently listed as critical habitat (one in Elgin and one in Norfolk County), had 3 pairs of ACFL that all nested successfully in close proximity. 10 pairs and 6 transient males were detected in eleven sites across the Norfolk Sand Plain. One or more nests were found for each pair. 16 nests were monitored in total, 8 of which were successful, fledging 23 young. No ACFL nests were parasitized in 2013. One pair of ACFL attempted nesting four times from May to August. They subsequently failed on their fourth attempt.

Ecological Land Classifications were completed at ten Acadian Flycatcher nest sites after the breeding season was finished. See the attached report for a summary of the findings.

Cerulean Warbler

15 males were recorded at five known sites: Backus Woods North, St. Williams Conservation Reserve Northeast, Earl Danylevitch Tract, Smith Tract and Swick-King Tract. In the St. Williams Conservation Reserve a female was found at a nest about 50 feet high in a Basswood between the territories of two males. This nest was monitored extensively until at least two 2 chicks were seen fledging from the nest on July 1st. This was an important discovery as it is the first CERW

nest to be found during this forest birds at risk study, and the first found by BSC staff in recent years.

Louisiana Waterthrush

Known, historic and new forests were surveyed in 2013 for LOWAs. 12 pairs, 10 nests, and 5 single male birds were detected in thirteen sites across the Norfolk Sand Plain region. Of the 10 nests that were monitored, 6 nests were successful in fledging 25 chicks, one nest had an unknown outcome, and three nests were parasitized by Brown-headed Cowbirds. One of the single birds recorded was seen later in the breeding season feeding one LOWA chick, and one BHCO chick.

In addition to the field surveys, a colour banding program was initiated in 2011 and continued in 2012 and 2013 to learn about site fidelity and return rates for this species. Since 2011, 44 chicks have been colour banded, 9 chicks have been silver banded and 24 adults have been colour banded (23 chicks and 8 adults in 2013). In total, 2 males, 3 females, and 1 nestling have returned to the NSP in 2012 and 2013 to breed (Table 4). These birds all returned to the same site they were banded in, however all paired with different birds.

Prothonotary Warbler

4 pairs of PROWs were reported to be nesting in the same boxes at the traditional Backus Woods North site. 20 chicks fledged successfully this year, and no attempts of a double brood were observed. New sites were surveyed this year for LOWA and ACFL that appear prime habitat for PROW (primarily Big Creek Bend), which should be surveyed in future years during the PROW nesting season.

Other SAR

5 male Canada Warblers were found at three sites. No females were recorded however extensive searching was not conducted. 1 pair of Red-headed Woodpeckers (RHWO) successfully fledged young in Jackson Gunn Forest. 2 RHWO were observed in two additional forest but were not confirmed to be breeding. Effort was made to record locations of incidental singing and territorial Eastern Wood-Pewees and Wood Thrushes. Nests were found for this species and monitored only in special cases, such as if the nest was located near another target SAR nest.

Table 2. Summary of the results of the 2013 field surveys for forest birds at risk at 54 sites in the Norfolk Sand Plain region.

Species	# Sites	Males	Females	Nests	Host Young Fledged	Cowbird Young Fledged	Nest Parasitism Rate
Acadian Flycatcher	12	17	10	16	23	0	0%
Canada Warbler	3	5	0	0			
Cerulean Warbler	5	15	1	1	2+	0	0%
Louisiana Waterthrush	13	17	12	10	26+	3+	30%

HN27c	South Walsingham-Coppens Tract	1		1	1		1												
HN27d	South Walsingham-Armstrong Tract		1														1		2
HN27g	South Walsingham-Rowanwood	1	1	2															1
HN30z	Shoppe's Creek				1	1	1												2
HN30a	Shoppe's Creek-Saul																		
HN31z	Fisher's Glen																1		1
HN31a	Fisher's Glen-South																		
HN32z	Hay Creek Conservation Area																		
HN37a	Abbott-Townsend Tract																1		
HN37z	Courtland/Middleton Wetlands																1		
HN4d	Burwell Tract (Cultus Woods)																1	1	
HN5a	Hepburn Tract (Deer Creek Valley)																1	1	4
HN5b	Woolley Tract					1											1		
HN5z	Deer Creek Valley					1											4		
HN52a	Trout Creek																1		
HN81a	Arthur Langford	3		4													1		
HW1z	Dundas Valley General																		
HW1b	Dundas Valley East																		
HW10z	Royal Botanical Gardens																		

Notes: ACFL= Acadian Flycatcher, LOWA = Louisiana Waterthrush, CERW = Cerulean Warbler, PROW = Prothonotary Warbler, CAWA = Canada Warbler, EAWP = Eastern Wood-Pewee, WOTH = Wood Thrush.. P = Number of pairs, S = Single (unpaired) individuals), N = number of nests found, M = males, F = females

Table 4: Total LOWAs banded from 2011 to 2013, including return rates.

Total Nestlings Colour Banded	Total Nestlings Silver Banded	Total Females Banded	Total Males Banded	Total Adults Birds Returned	Total Young Birds Returned
44	9	12	12	5	1

SAR HABITAT INVENTORY

Habitat was evaluated on a small scale during each site survey to record the habitat quality for the target species, as well as any noticeable threats to the forest. In general no large disturbances were recorded in any of the known, historic or new sites for ACFL or LOWA, excluding one site in Norfolk County: Armstrong Tract (owned by Long Point Region Conservation Authority). Other disturbances included dumping garbage into ravines, pollution, or erosion. However, Armstrong Tract is being damaged due to ATV use. ATVs that have come into the forest have destroyed trails, thus causing ATVers to drive through the forest off trail. This has resulted in damages to the understory and the wetland sloughs in the woodlot, which are used for breeding by two of our target species: ACFL and LOWA. One area that was particularly ruined happened to cover the territory of a male ACFL, which appeared to be single. Armstrong Tract is also an historic site for LOWA, and 2013 was the first year breeding LOWAs

were not detected. Images were taken at the site and are presented in Figures 1 and 2. MNR and LPRCA have been notified of this issue.



Figure 1: Damage caused by ATV use in Armstrong Tract near 2013 ACFL territory, and historic LOWA territory. Jody Allair.



Figure 2: Damage due to ATV use in Armstrong Tract. Photo was taken in 2013 while standing under a singing Acadian Flycatcher. Jody Allair.

LANDOWNER STEWARDSHIP

In 2013, three new private landowners were given a copy of the Norfolk Sand Plain Forest Bird Species at Risk Factsheet. Biologists were also contacted at the Hamilton Conservation Area and Royal Botanical Gardens (RBG), to ask permission for BSC to conduct surveys for ACFL in Dundas Valley and the RBG forest. Biologists from both organizations granted BSC permission and joined staff for a survey to discuss forest management for ACFL and LOWA.

After the 2012 breeding season 10 private landowners received a letter and the Norfolk Sand Plain Forest Bird Species at Risk Factsheet from Bird Studies Canada (BSC) which provided information on the SAR that were present on their property and the relevant habitat information. In only one case the package was lost in the mail and not delivered to the landowner. This landowner was provided with a new electronic version the following summer. In 2013, these landowners were contacted to participate in a follow-up interview and to join BSC staff on a survey of their property. Interviews consisted of 6 questions that were designed to gauge the response to the Norfolk Sand Plain Forest Bird Species at Risk Factsheet from the average landowner and to determine how each landowner uses the forest. 9 of 10 landowners agreed to complete the interview, and 4 agreed to join staff on a survey/nest check in their forest. In all but one case, landowners who declined the survey invitation declined due to a busy schedule or for health reasons, however, were interested to join in the future if possible. Results from the interviews are summarized in Table 5. Of the three new landowners who received factsheets, one participated in a forest survey with BSC staff and a follow-up interview, (which is included in the summary in Table 5), and one landowner joined staff on a survey only. Overall, landowners were enthusiastic about the birds on their property. They were interested in seeing Acadian Flycatchers as well as learning more about them and other forest SAR.

Table 5. Summary of responses from questions asked in 2013 Follow Up Landowner Interview.

	Questions					
	#1- Do you have any concerns about having BSC or SAR on your property?	#2-Do you have a forest management plan?	#3- How do you use your forest?	#4- Did you find the FBAR fact sheet useful?	#5- Are you interested in learning more about FBAR and forest management?	#6- Is there a more effective method of receiving information?
Answers	100% responded with no.	70% Leave it alone 30% Yes	60% General Appreciation (i.e: hiking/camping) 28% Selective Logging/Cutting for Firewood 8% Hunting 4% ATVing.	56% said it was interesting 44% said it was also useful	90% Yes for both 10% Only FBAR	29% Survey with staff 36% Enjoyed the fact sheet 21% Wish to receive online 14% Wish not to receive online

EXPLANATION OF INTERVIEW RESULTS

Question #1:

In 2012, effort was not only made to contact private landowners for permission onto their land, but effort was made to meet landowners in person to explain what BSC is, and why it is important to survey for species at risk. Of the 10 landowners who were sent a letter and the Norfolk Sand Plain Forest Bird Species at Risk Factsheet, one person was only spoken to over the phone and not in person. Meeting with landowners in person was proven to be the most effective in 2013 for landowner stewardship as all landowners excluding this person have continued to have a good relationship with BSC staff, and agreed to complete the 2013 Landowner Interview. This could lead to a bias as all private landowners who completed the interview stated that they had no concerns with BSC finding SAR on their property, however all landowners said this having known BSC staff for a year, or longer in some cases. In addition, several landowners (50%), although private, either work for conservation organizations (ie: LPRCA, LPBLT), or are heavily involved with conservation efforts on their own. Therefore these landowners already know the importance of having FBAR, and would not be concerned with BSC on their property.

Question #2:

Four landowners have a forest management plan, which generally involves avoiding logging and allowing the woodlot to mature. Landowners who have a management plan also receive tax incentives for their efforts. One landowner (who does not live on a farm) stated that she wishes to have a management plan, however is not able to receive enough tax incentives to have the plan be worth her time. The remaining landowners choose to leave their forest alone. Of the 28% of landowners that stated they choose to log their forest, there are no cases of extensive logging. Most of the time, logged trees were chosen if they were dead, dying, or for some other hazard to people or the woodlot. Logging was also done under approved conditions and in all but one case does not occur very frequently.

Question #3:

In general, many of the landowners stated that they do not use their forest, or do so only to selectively log it occasionally. Most answers regarding general appreciation were given by landowners who are involved with conservation efforts on their land.

Question #4:

Landowners, who are not involved in any conservation efforts of their own, found the fact sheet interesting to learn about the birds, however did not find it useful to learn about forest management as they have no plans to manage.

Question #5:

The only landowner that did not want to learn more about forest management for species at risk stated this meaning that he/she does not wish to partake in forest management in any way, and therefore does not need any information on this topic. All other landowners were willing to receive more information on birds at risk and forest management strategies from BSC in the

future.

Question #6:

Landowners were asked how they would like to receive more information in the future, in order to determine if there is a more effective method than a factsheet to get interesting and beneficial information to private landowners. Some landowners gave suggestions on what they would like in addition to a factsheet, such as an audio link of the bird calls and songs, and others stated that they liked receiving the factsheet. The response to taking landowners into survey sites with BSC staff was very positive. Many landowners who were not able to join BSC in 2013 were very excited to join in the future, and landowners that did join BSC in 2013 enjoyed seeing the birds in person versus only seeing photos that were provided. Lastly, some landowners disagreed on whether it was better to receive information online or in the mail. Some landowners live in rural areas and do not have access to internet. It is clear that how information is distributed in the future will depend on each specific landowner.

SUMMARY

In 2013, a total of 54 sites were intensively surveyed primarily in the Norfolk Sand Plain region (Norfolk and Elgin Counties) with known or potential habitat for target species: Acadian Flycatcher (ACFL), Cerulean Warbler (CERW), Louisiana Waterthrush (LOWA), and Prothonotary Warbler (PROW). A total of 191 site visits and 479 person/survey hours were completed during the 2013 field season.

This year we were able to document nest productivity and habitat associations for all of our target species: Acadian Flycatcher (16 nests), Cerulean Warbler (1 nest), Louisiana Waterthrush (10 nests) and Prothonotary Warbler (4 nests). In addition we were able to continue SAR stewardship with private landowners. The landowners who received a letter and the Norfolk Sand Plain Forest Bird Species at Risk Factsheet at the end of the 2012 field season, were asked to complete an interview to gauge their response to the factsheet, and were invited to join BSC staff on a survey of their property. The Norfolk Sand Plain Forest Bird Species at Risk Factsheet was also given to new private landowners contacted during the 2013 field season. All of the SAR data will be submitted to Environment Canada, and to the Ministry of Natural Resources – Natural Heritage Information Centre and the Royal Ontario Museum – Ontario Nest Records Scheme.

ACKNOWLEDGEMENTS

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