

**Bird Studies Canada**  
**Annual Report for Nova Scotia Habitat Conservation Fund 2017-2018**

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**Project Title:** *Strengthening Landowner Stewardship of Aerial Insectivores (Year II) (NSHCF17-24)*

**Background**

Aerial insectivores (swifts, swallows, flycatchers and nightjars) are declining more rapidly than any other bird group in Canada<sup>1</sup>. Their dependence on human-influenced habitat for foraging and nesting provides a unique opportunity to engage the public as citizen scientists and environmental stewards. Through this project, Bird Studies Canada worked with Nova Scotian landowners to address threats and expand the network of aerial insectivore stewards and citizen scientists across NS. Specifically, this project took place in communities hosting significant populations of roosting and nesting Chimney Swifts, including Bear River, Caledonia, Falmouth, Oxford, Mabou, Middleton, New Glasgow, Truro, Weymouth, and Wolfville. Additional surveys (comprising landowner questionnaires and barn assessments) took place in areas of Nova Scotia with high prevalence of aerial insectivore species (identified using data from SwiftWatch, NestWatch, Breeding Bird Surveys and the Maritimes Breeding Bird Atlas)

Bird Studies Canada acknowledges the support of the Nova Scotia Habitat Conservation Fund (contributions from hunters and trappers) for supporting this ongoing project.

**Project goal**

This project focused on landowners and community members in communities that have the greatest capacity to impact aerial insectivores and their habitats. The goal of this project was to address threats to declining aerial insectivores (specifically Chimney Swift, Barn Swallow,

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<sup>1</sup> State of Canada's Birds, 2012

Tree Swallow, and Cliff Swallow) by (1) increasing awareness for the plight of aerial insectivores among key stakeholder groups; (2) promoting stewardship and restoration of breeding and foraging habitat for these species on private land; and (3) engaging the agricultural community to improve outreach and encourage stewardship practices.

#### **Outline of the work completed and results:**

This project addressed threats to the target species' habitats by (1) identifying appropriate habitat for swifts and swallows through Landowner Questionnaire and Property surveys (developed and piloted in 2015 and 2016); (2) providing species-specific information, habitat stewardship advice and "bird-friendly property" signage to landowners; and (3) engaging the general public in reporting and monitoring these species.

To monitor regional Chimney Swift population trends, we coordinated a network of SwiftWatch volunteers to participate in National Roost Monitoring surveys (in conjunction with similar monitoring programs across Canada) and held multiple outreach events in communities hosting large roost sites to raise awareness of Chimney Swift biology, threats, population status and ways that Nova Scotians can help protect this species. We also surveyed known nest sites for presence of breeding swifts, and investigated factors that influence nest site selection using temperature data loggers inside chimneys.

#### **2017-2018 Project activities, objectives, and achievements**

<b>Activities</b>	<b>Objectives</b>	<b>Achievements</b>
<b>Conduct targeted outreach</b> through public events and presentations to local naturalist clubs and community groups in communities with roosting and nesting populations	<ul style="list-style-type: none"> <li>- Increased public awareness of swift and swallow biology, threats, and how to help protect target species</li> <li>- Increased ability to identify swifts and swallows, and locate nest and roost sites</li> <li>- Broad participation in stewardship and monitoring activities</li> <li>- Increased reporting of swifts and swallows</li> </ul>	<ul style="list-style-type: none"> <li>- Hosted Swift Night Out event (presentation and field trip to roost sites) in Caledonia, NS (McGowan Lake Fish Hatchery) with ~30 participants</li> <li>- Presented information about Chimney Swifts at display at the Environmental Educators conference in Wolfville, NS</li> <li>- Provided Chimney Swift information and project data for an interpretive panel installed at roost site in Bear River, NS</li> <li>- Project partner Mersey Tobeatic Research Institute (MTRI) led Swift Walk nest-searching events in Annapolis Royal, Liverpool, Lunenburg and Shelburne</li> <li>- SwiftWatch volunteer gave presentation on Chimney Swifts to Middleton, NS Rotary Club July 2017</li> </ul>
<b>Coordinate standardized volunteer-based Chimney Swift surveys</b> at known	<ul style="list-style-type: none"> <li>- Fill knowledge gaps related to population dynamics (a high priority threat) through tracking</li> </ul>	<ul style="list-style-type: none"> <li>- 141 roost counts conducted and submitted to database</li> <li>- 40 volunteers engaged in roost monitoring</li> </ul>

roosting sites following the national monitoring protocol.	<p>regional and national trends</p> <ul style="list-style-type: none"> <li>- Engagement of volunteers in conducting citizen science and engaging in Chimney Swift conservation</li> <li>- Identification of threats to roost chimneys before they arise</li> </ul>	- 10 of 10 roosts monitored on synchronized roost counts
<b>Coordinate nest searching</b> in towns with roost chimneys to locate Chimney Swift roosts and nests in these communities.	<ul style="list-style-type: none"> <li>- Identify additional nest/roost sites and secure long term protection of these sites</li> <li>- Engage landowners in conducting citizen science</li> <li>- Fill knowledge gaps related to nest site selection and breeding biology</li> </ul>	<ul style="list-style-type: none"> <li>- Mersey Tobeatic Research Institute (MTRI) led Swift Walk nest-searching events in Annapolis Royal, Liverpool, Lunenburg and Shelburne.</li> <li>- 10 new active nest sites found in Albany, Annapolis Royal, Bridgetown, Dartmouth, Kentville, Liverpool, Mill Village, Perotte, and Port Williams.</li> <li>- Contacted owners/managers of nest and roost sites to inform them about Chimney Swifts, answer questions, provide stewardship advice and resources, and gain more information about site history.</li> </ul>
<b>Promote the Aerial Insectivore website</b> (including data entry portal and natural information etc.) to standardize data collection and increase awareness and concerns for aerial insectivores beyond the naturalist community	<ul style="list-style-type: none"> <li>- Identify important nest sites</li> <li>- Prioritize sites for monitoring and protection</li> <li>- Encourage stewardship of aerial insectivores and their habitats, including habitat maintenance, restoration and improvement.</li> </ul>	<ul style="list-style-type: none"> <li>- 6537 unique page views on Aerial Insectivore website (<a href="http://birdscanada.org/volunteer/ai">birdscanada.org/volunteer/ai</a>), 7251 unique page views on NatureCounts data entry portal for aerial insectivores (<a href="http://Naturecounts/ai">Naturecounts/ai</a>) between April 1, 2017 and March 31, 2018.</li> <li>- Press coverage included newspaper articles in the Queens County Advance and Truro Daily News; three CBC Radio interviews (Halifax), 100+ posts on Facebook and Twitter, and the Nature NS listserv, and three articles in Bird Studies Canada's Latest News e-newsletter (53,000 subscribers).</li> </ul>
<b>Investigate potential for increased securement of sites through non-binding stewardship agreements</b>	<ul style="list-style-type: none"> <li>- Recognize landowners who maintain swift and swallow nesting habitat</li> <li>- raise awareness of swift and swallows, threats, and stewardship options in surrounding communities</li> </ul>	<ul style="list-style-type: none"> <li>- bilingual rugged aluminum sign and coordinating fridge magnet designed and produced in consultation with partners/</li> <li>- Visited 25 properties in NS hosting large swallow colonies or multiple swallow species to survey properties and meet landowners</li> <li>- stewardship package including sign, magnet, explanatory letter, and information about how to record/report observations distributed to 15 landowners (including small</li> </ul>

		businesses, residential homes, and farm properties) in NS, with additional packages to be distributed in 2018-19
<b>Engage landowners in chimney research project</b> using temperature data loggers to investigate factors influencing nest-site selection	<ul style="list-style-type: none"> <li>- Investigate internal temperature as a variable influencing nest site selection</li> <li>- Results shared with researchers to aid design of artificial habitat</li> </ul>	<ul style="list-style-type: none"> <li>- 31 loggers were deployed inside chimneys across NB and NS</li> <li>- landowners who participated by allowing loggers to be installed in chimneys, as well as landowners who were consulted but whose chimneys were not used, were provided with package including research project results, Swift-friendly Property magnets and Project NestWatch materials</li> <li>- research paper submitted by UNB for publication</li> </ul>

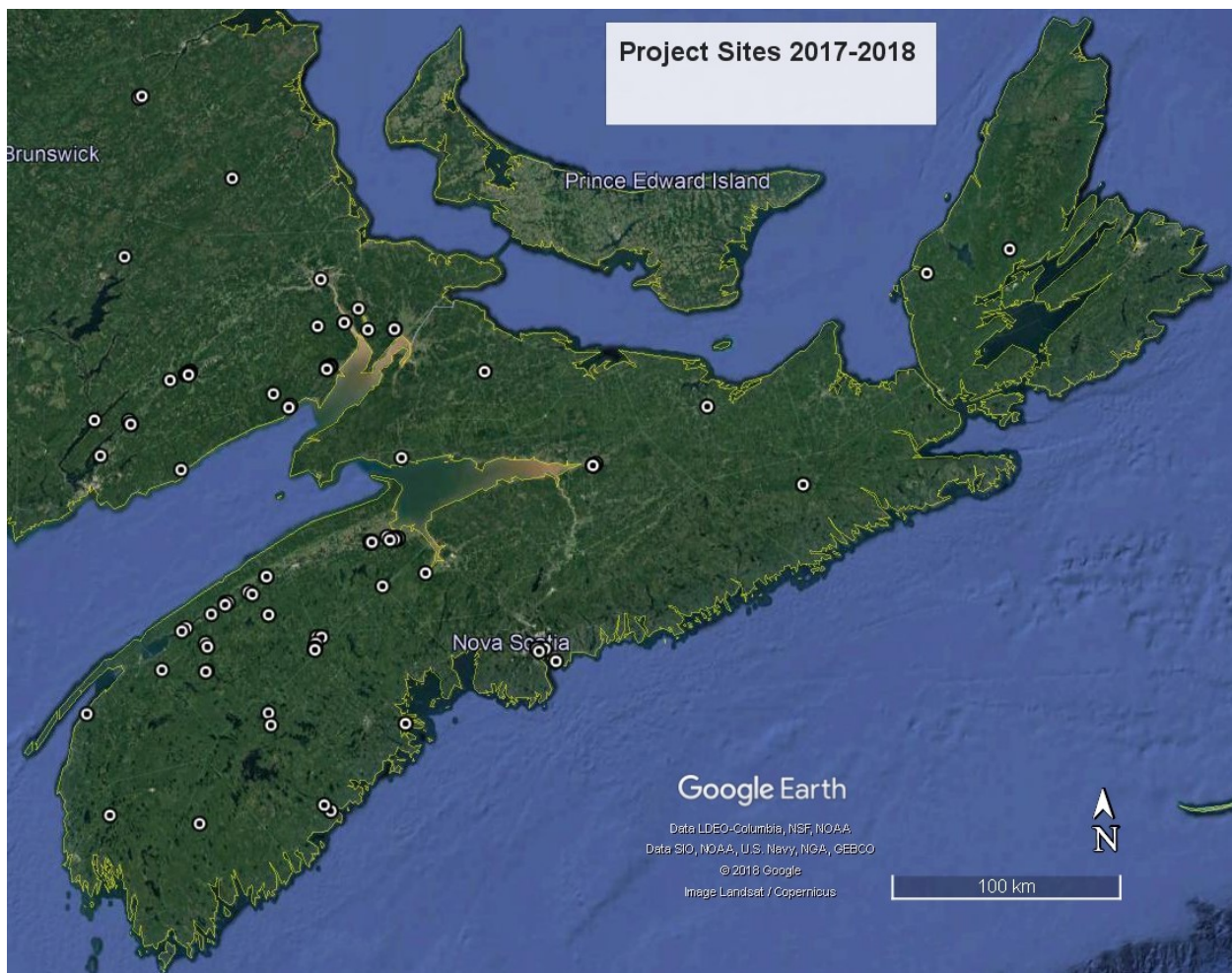


Figure 1. Map of Chimney Swift roost and nest sites in NS. Landowners of newly-identified swift-occupied chimneys were contacted to notify them of the presence of Chimney Swifts and provided with stewardship advice. Landowners or stewards of known Chimney Swift sites were contacted to confirm nesting/roosting in 2017.





# SWIFT-FRIENDLY PROPERTY



This property is recognized  
for providing important nesting  
and roosting habitat for the  
**Chimney Swift**, a rare and  
threatened bird.

## LEARN MORE AND PARTICIPATE

[BIRDCANADA.ORG/AI](http://BIRDCANADA.ORG/AI) [MARSWIFTS@BIRDCANADA.ORG](mailto:MARSWIFTS@BIRDCANADA.ORG) (506) 364-5196

This project was undertaken with the financial support of:  
Ce projet a été réalisé avec l'appui financier de :



Environment and  
Climate Change Canada

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Changement climatique Canada



# CETTE PROPRIÉTÉ ABRITE DES MARTINETS



Cette propriété est un site  
important de nidification et de  
repos pour le **Martinet ramoneur**,  
un oiseau rare et menacé.

## POUR EN SAVOIR PLUS ET PARTICIPER :

[OISEAUXCANADA.ORG/AI](http://OISEAUXCANADA.ORG/AI) [MARSWIFTS@BIRDCANADA.ORG](mailto:MARSWIFTS@BIRDCANADA.ORG) 506-364-5196

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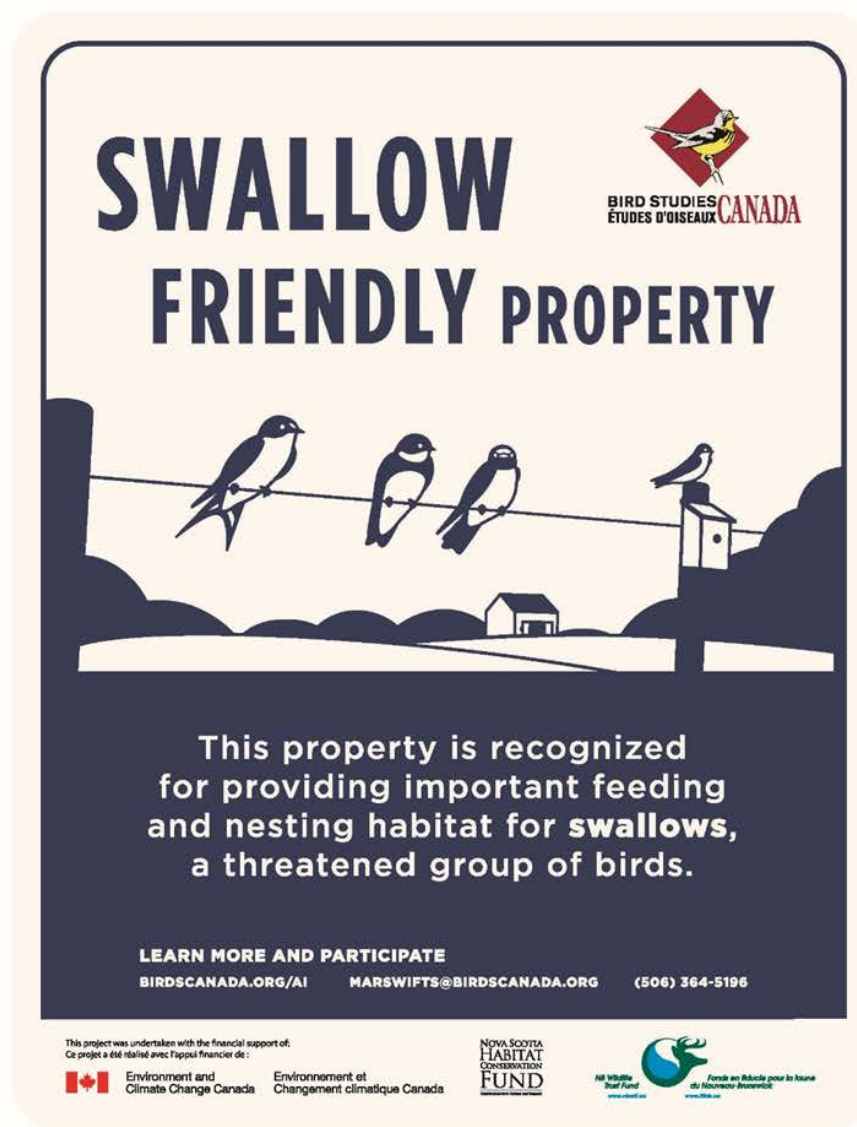


Figure 3. Durable aluminium signs measuring 8.5" x 11" were provided to landowners hosting Chimney Swifts and those hosting Barn, Tree and/or Cliff Swallows to install in highly-visible areas to recognize their stewardship contributions and raise awareness of swifts and swallows in their surrounding communities.

### **Recommendations for follow-up steps to the project**

This is an ongoing project for which we have a long-term commitment. We plan on following up this project with continued outreach and stewardship for aerial insectivores, including annual Swiftwatch Roost Counts and support for Chimney Swift hosts; promotion and continued use of our Aerial Insectivore data portal and Project Nestwatch; searching for new Chimney swift nests and better outreach/stewardship for individual nesting chimneys; strengthening our relationships with rural landowners in agricultural areas where swallows occur; and working with agricultural associations to improve the flow of stewardship information to farmers and understanding barriers to conservation for swallows on agricultural lands.