



**Bird Studies Canada**  
**Annual Report for Nova Scotia Habitat Conservation Fund 2015-2016**

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**Project Title:** *Fostering Landowner Stewardship and Conservation for Aerial Insectivores*

**Background**

Aerial insectivores (swifts, swallows, nightjars and flycatchers) are facing the steepest population declines of any bird group in Canada. These declines are not fully understood but are thought to be caused by a number of factors including decreasing availability of flying insects, increasing pesticide use, loss of nesting and foraging habitat, and climate change. The dependence of many aerial insectivore species on human-influenced habitat (e.g. agricultural areas) for foraging and nesting can present risks to these birds, but also a unique opportunity to engage the public in stewardship and monitoring activities. Through this project, Bird Studies Canada worked with Nova Scotian landowners to address threats and develop a network of aerial insectivore stewards and citizen scientists across NS.

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**

The goal of this project was to address threats to aerial insectivore (specifically swift and swallow) breeding and foraging habitat by increasing awareness amongst landowners and promoting stewardship and monitoring of declining aerial insectivores. Using existing datasets to identify aerial insectivore “hotspots”, we targeted landowners and community members in communities that have the greatest capacity to impact on aerial insectivores their habitats. We interviewed landowners to identify existing attitudes towards, and knowledge about our focal species (Bank Swallow, Barn Swallow, Chimney Swift, Cliff Swallow, and Tree Swallow), and surveyed properties to identify characteristics that might influence nesting and foraging

decisions. Landowner concerns and questions were addressed through distribution of a Landowner Info Package and ongoing contact with interested participants, and a follow-up survey allowed us to measure the effectiveness of our surveys on improving awareness and attitudes towards aerial insectivores.

We also contacted landowners of Chimney Swift-occupied chimneys to notify them of the presence of swifts and to provide stewardship and monitoring expertise. To monitor regional 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.

### 2015-2016 Project activities, objectives, and achievements

Activities	Objectives	Achievements
<p><b>Targeted outreach</b> through "Swift Night Out" community events and/or presentations to local naturalist clubs, and town councils in communities with roosts (e.g. Middleton, Truro)</p>	<ul style="list-style-type: none"> <li>- Increased awareness of Chimney Swifts and threats facing the population</li> <li>- Increased ability to identify Chimney Swifts</li> <li>- Broad participation in program</li> <li>- Increased reporting of Chimney Swifts</li> </ul>	<ul style="list-style-type: none"> <li>- 5 "Swift Night Out" public events were held (Middleton, Wolfville, Truro, Halifax, and New Glasgow). By the end of each presentation, participants could identify Chimney Swifts, were aware of threats and ways to help protect swifts, and were aware of the importance of local roost sites for swifts.</li> <li>- 10 new nest sites reported in NS, and one possible roost site.</li> </ul>
<p><b>Coordinate standardized volunteer-based surveys</b> at known roosting sites following the national monitoring protocol.</p>	<ul style="list-style-type: none"> <li>- Ability to address knowledge gaps related to population dynamics through tracking regional and national trends and capacity to monitor over the long term</li> <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>	<ul style="list-style-type: none"> <li>- 168 roost counts submitted by 42 volunteers</li> <li>- 9 of 10 roosts monitored regularly throughout the migration period</li> </ul>
<p><b>Coordinate nest searching blitz</b> in a town with a chimney</p>	<ul style="list-style-type: none"> <li>- Volunteers engaged in nest searching</li> </ul>	<ul style="list-style-type: none"> <li>- 10 new nest sites identified across NS</li> </ul>

<p>inventory (e.g. Wolfville) to locate Chimney Swift nests in these communities.</p>	<ul style="list-style-type: none"> <li>- New nest sites identified and material provided to homeowners</li> <li>- Ability to identify nest sites within a town and long term protection of these sites</li> <li>- Engagement of landowners in conducting citizen science</li> <li>- Ability to address knowledge gaps related to population dynamics through tracking regional and national trends.</li> </ul>	<ul style="list-style-type: none"> <li>- Nest-search blitz in Wolfville and Kentville resulted in discovery of 6 of the 10 sites</li> <li>-Landowners contacted at 8 of 10 sites to inform them of CHSW presence and provide stewardship advice</li> </ul>
<p><b>Media campaign</b> to promote the new Aerial Insectivore website</p> <ul style="list-style-type: none"> <li>- Press releases prior to migration and during migration/breeding</li> <li>- Updates on BSC's Facebook page, Twitter account, and websites</li> <li>- TV or radio interviews</li> </ul>	<ul style="list-style-type: none"> <li>- Increased awareness of a new tool to report aerial insectivore sightings</li> <li>- Standardized data collection and entry</li> <li>- Simplify reporting and encourage more individuals to enter sightings</li> </ul>	<ul style="list-style-type: none"> <li>~50 sightings reported via phone, email and Aerial Insectivore online reporting tool</li> <li>-868 website hits on Chimney Swift section of Aerial Insectivore website (hits on other components of Aerial Insectivore website not available at time of writing)</li> <li>-Press coverage included 2 radio interviews, 6 news articles, 4 Bird Studies Canada "Latest News" posts, 100+ Twitter and Facebook posts and presentations at 2 Atlantic-region conferences (Atlantic Society of Fish and Wildlife Biologists, Atlantic Canada Organic Regional Network)</li> </ul>
<p><b>Development of a barn surveying protocol</b> and material (in consultation with the provinces, federal biologists, and other potential partners) to identify barns that would likely host aerial insectivores (e.g. access, use, location), survey interior of barn effectively for these species, and provide information for landowners.</p>	<ul style="list-style-type: none"> <li>- Better understanding of the use of a habitat (barns) that is often-ignored but potentially significant in hosting a suite of aerial insectivores</li> <li>- Ability to engage landowners in conducting citizen science</li> <li>- Platform to distribute material to landowners providing information on aerial insectivores (e.g. natural history, threats, how to help) and a starting point for stewardship engagement</li> </ul>	<ul style="list-style-type: none"> <li>--Protocol and data forms, including property survey and landowner questionnaire, designed in consultation with provincial and federal biologists, as well as representatives from Environmental Farm Plan programs. Access database created and populated with pilot survey data, and outreach material designed and distributed to landowners and other stakeholders.</li> </ul>

<p><b>Pilot barn surveys</b> in at least 1 agricultural location in Nova Scotia (e.g. Cherryfield or West Dalhousie areas) to determine feasibility, and identify areas for improvement.</p>	<ul style="list-style-type: none"> <li>- Volunteers engaged in surveying for aerial insectivores</li> <li>- Data collected on presence absence in an agricultural area of NS</li> <li>- Ability to troubleshoot prior to broader volunteer involvement</li> <li>- Landowners informed of the presence of aerial insectivores on their properties</li> </ul>	<p>Barn Survey piloted by a field technician in June-July in areas of Cumberland and Colchester Counties identified as aerial insectivore “hotspots” by predictive mapping.</p> <ul style="list-style-type: none"> <li>-4 individual volunteers and 1 naturalist club engaged in Project NestWatch monitoring of aerial insectivores.</li> <li>- Barn survey was piloted at 79 sites, with 70 landowner questionnaires and 43 property assessments completed, including point counts to detect aerial insectivores. Landowners were provided with identification and stewardship information/resources.</li> </ul>
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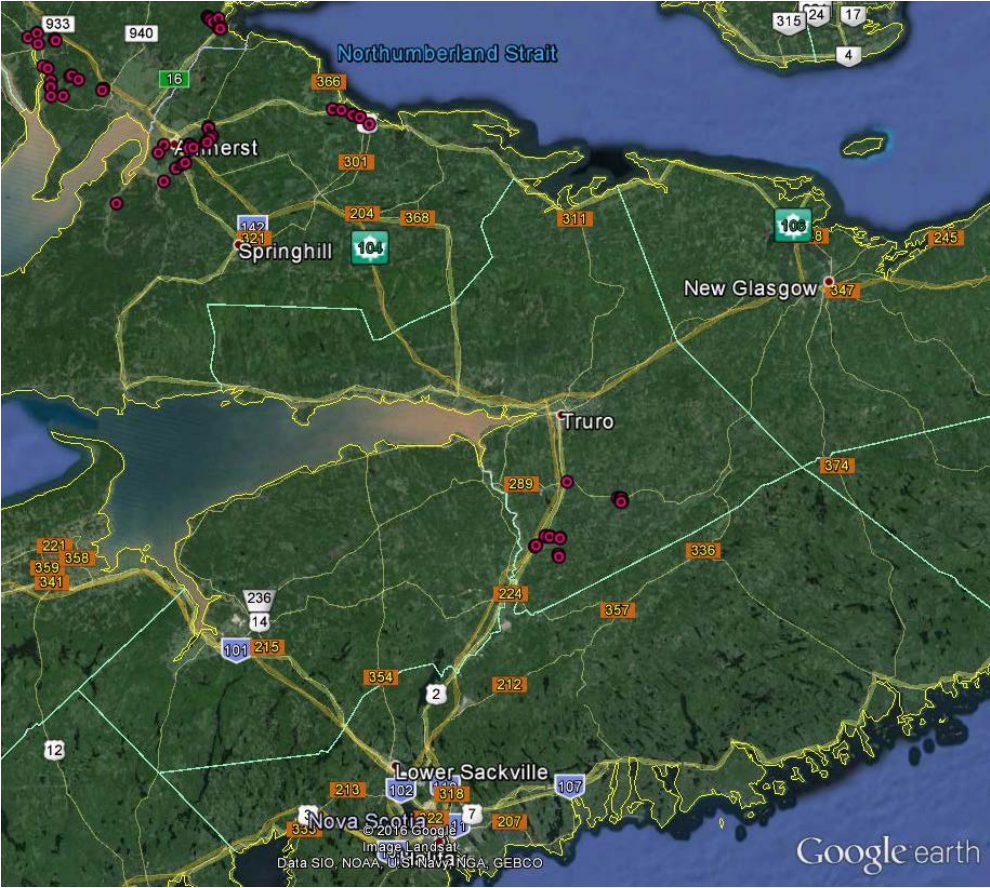


Figure 1. Map of 2015 Barn Survey addresses (red dots) visited to interview landowners and conduct property assessments (areas show in NB were supported by separate funding sources).



Figure 2. Map of 2015 Chimney Swift roost and nest sites in NS. Landowners of swift-occupied chimneys were contacted to notify them of the presence of Chimney Swifts and provided with stewardship advice.

Table 1. Nova Scotia swift numbers on official SwiftWatch counts

Site	Building Type	20-May	24-May	28-May	1-Jun
St. Bernard (Weymouth)	Church	84	145	121	154
McGowan Lake	Unused smithy	231	179	128	0
Bear River	House	307	252	275	2
Middleton	School	497	335	321	0
Wolfville	Freestanding chimney	82	n/a	84	40
Upper Falmouth	House	n/a	n/a	n/a	n/a
Truro	New town library	104	153	n/a	n/a
New Glasgow	School	357	528	259	255
Oxford	Freestanding chimney	2	4	0	n/a
Mabou	Church	0	23	6	0
Total		1664	1619	1194	451

"n/a" means that no count was conducted on this date. Note: weather on June 1 was very rainy and cold across the region.