

# 2016 Eastern Loggerhead Shrike Recovery Program - Summary Report

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## Wild Population

### Monitoring

**Eighteen pairs** of Loggerhead Shrike were confirmed in Ontario this season: 8 in Carden, and 10 in Napanee. This number is a welcome change from the alarmingly low number in 2015, when only 11 pairs were found across the province (Figure 1). By core, Carden stayed relatively stable, whereas the number of birds found in Napanee was more than double 2015 counts. Breeding success was high this year, with 89% of observed pairs fledging young. Fledgling counts were high in 2016, with **64 fledglings** confirmed across all cores (30 in Carden, 34 in Napanee). Again, this more than doubles the number of fledglings seen in 2015. There was one double clutch confirmed this year, from a pair in Carden.

In addition to breeding pairs, there were 7 unpaired birds confirmed this year: 4 in Carden, 2 in Napanee, and 1 in Grey-Bruce. Five of these birds were banded, allowing definite identification, and two unbanded birds could be counted with confidence based on the location and timing of their sightings. As in past years, there were numerous other sightings of unbanded birds, or birds where band status was not determined, but these were generally transient birds that were not reliably seen, so could not be counted as separate individuals.

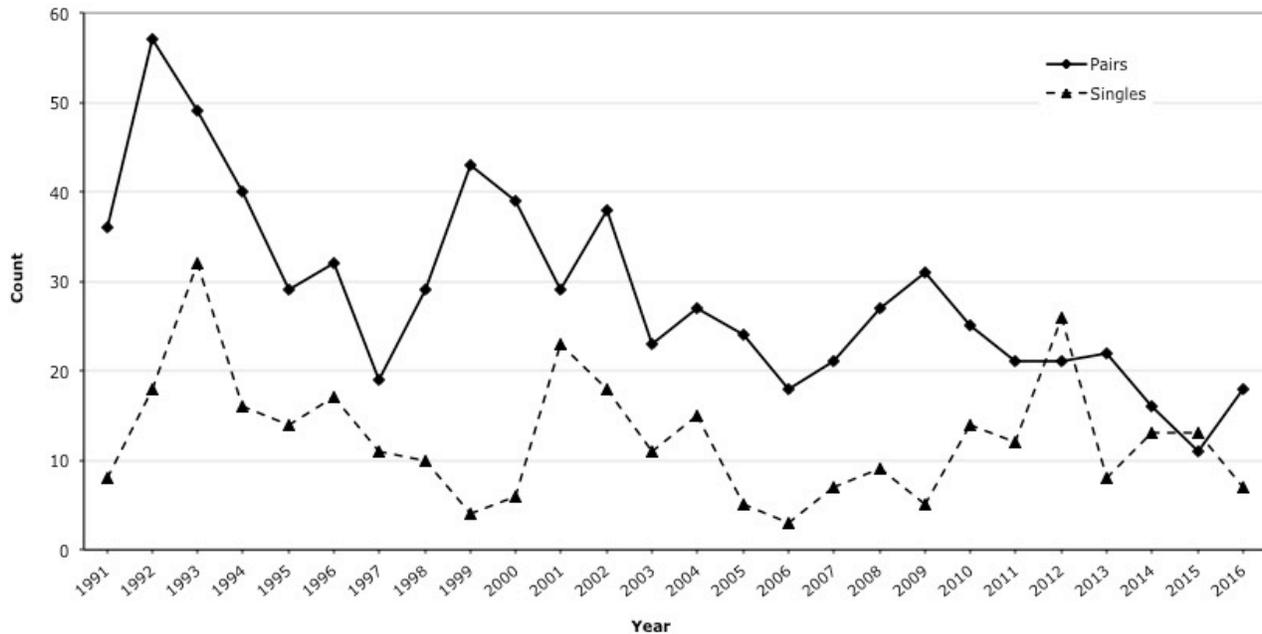


Figure 1: Number of Loggerhead Shrike pairs and single birds in Ontario 1991-2016

### Volunteer surveys

Loggerhead Shrike survey efforts were again aided by Adopt-A-Site (AAS) volunteers. To date, 29 volunteers have submitted data for 130 priority patches across all core areas, and were responsible for the vast majority of coverage outside of the Carden and Napanee cores. Four shrike were observed during volunteer surveys, and there was one other incidental shrike sighting reported when a volunteer was travelling between assigned survey sites. One of these reported birds was not seen by WPC staff during follow-up visits, so would have otherwise been unaccounted for without the participation of this volunteer.

Call-playback was again included in to the volunteer protocol as an optional tool to increase detectability of shrike, but was used by few volunteers due to a lack of equipment. However, WPC has secured some funding to purchase playback equipment for volunteer use, so this tool should be more widely incorporated in 2017.

The effectiveness of the AAS program at detecting shrike was again assessed this year by having volunteers duplicate field staff surveys of sites throughout the core areas, including those sites where shrikes were found in 2015. Though some Loggerhead Shrike were reported by volunteers, there were four additional sites where WPC staff confirmed shrike that were not detected by volunteers from the roadside. These results support the conclusion that the current model of roadside surveys has a lower level of effectiveness at detecting shrike on larger sites with low visibility from the roadside. An on-site survey protocol will be developed over the winter, to be piloted on a limited number of sites in 2017, to address the difficulty of surveying large patches from the roadside. Along with the on-site protocol, increased pre-season training may be delivered for volunteers, but will be limited by WPC staff capacity.

### ***Returning captive-bred birds***

Twelve captive-released birds were confirmed returning to Ontario breeding grounds, making up 28% of the confirmed population in 2016. Further, the captive-breeding and release program made a significant contribution to the fledgling count in Ontario this year, with 41% of observed fledglings coming from pairings that included a captive-bred bird.

Two birds hatched and released in 2012 were the oldest seen, and both of those were found in Napanee. Five birds could be confirmed as 2014-release birds, but another bird spotted in Carden was also likely released in 2014. Only the right leg bands were seen on this bird, from which we can confirm it was captive-bred, and birds with this right leg combination have been released in Napanee in 2012, 2014, and 2015. However, those bands were also added to the right leg of a bird carrying a geolocator that was caught in Carden in 2015. Given that the birds tend to return to the same core areas between years, it is likely that the ‘geobird’ was the one seen in Carden this year. If so, that would make it a 2014 bird, bred and released in Carden.

### ***Trapping and Banding***

Two adults were trapped and banded this year, both in Napanee. The first was part of a breeding pair, both of which were unbanded. The second was the male of another breeding pair in which the female appeared to be carrying a geolocator. This pair had a territory on a site for which WPC staff did not have permission to enter, so all trapping was done at the roadside. Though the female was the main target for trapping, the male was caught and banded. There were no other opportunities for trapping the female, as the birds are believed to have moved deeper in to the site, away from the roadside, thus inaccessible to staff.

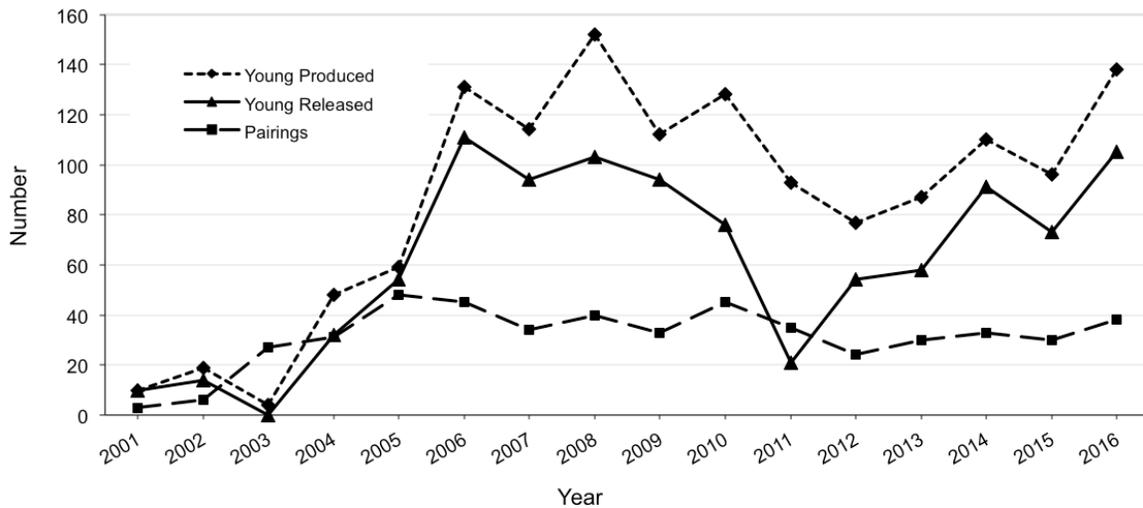
## **Captive Population**

### ***Captive breeding and release***

Following the model from 2015, all captive breeding occurred at partner facilities this year, with young birds transferred to the field sites once they were independent of their parents and ready for release. Breeding pairs were housed in four locations: Mountsberg Raptor Centre (Campbellville, ON), African Lion Safari (Hamilton, ON), Toronto Zoo (Toronto, ON), and the Smithsonian Conservation Biology Institute (Front Royal, VA).

This was a banner year for the captive-breeding program, with **24 breeding pairs producing 138 young** (Figure 3), which is the second-highest number of young the program has ever seen. **One hundred and five** young were ultimately released to the wild (66 in Carden, 39 in Napanee), and **19 young were retained** for the captive population. With this year’s results, the program has surpassed the goal of released at least 100 young in a season, which was last achieved in 2008. We hope that with the expertise of our breeding partners, we will be

able to keep the release numbers at this level moving forward, and perhaps start to see a change in the population trend in the wild.



**Figure 2.** Loggerhead Shrike captive pairings, young produced, and young released, 2001-2016

***New partner facilities***

This year, we welcome the Nashville Zoo at Grassmere (Nashville, TN) to the Loggerhead Shrike Recovery Program. The Nashville Zoo has been involved with shrike since 2015, when they started working on wild birds in Tennessee. They were connected to the shrike recovery program through the Smithsonian Conservation Biology Institute (our US breeding partner), and were keen to get involved with the captive side of things. Nashville has expressed interest in eventually breeding birds, but for now will be housing four retired birds that have aged out of the captive breeding population. These birds will be used in a pilot study on the effects of captivity on migratory urge, which will ultimately help with management of the larger captive breeding population.

***Banding and radio tags***

One hundred and thirty-three captive juvenile shrikes received stainless steel bands this season. Released birds that received colour-bands were given a combination that included SI/YE (79 birds) or YE/SI (16 birds) on the left leg to identify them as a 2016 release bird. As in 2015, birds released with radio tags (10 individuals) received only SI on left because of weight constraints. All birds received temporary colour-marking (Sharpie) to aid in individual identification while in the release enclosures and during post-release monitoring.

***Motus receiving stations***

WPC erected two Motus receiving stations this year ([www.motus.org](http://www.motus.org)), one near each field release site, which will gather data on the timing of migratory departures for tagged birds, and will generally expand the coverage of the Motus network in Ontario. The station in Carden used an MNRF weather station as the mounting structure for the antennas (Figure 5a), and the station in Napanee was mounted to one of the release cages (Figure 5b). Data have been downloaded from both stations and submitted for processing, but no results have yet been made available. WPC will be working with Couchiching Conservancy to erect two more Motus towers in the Carden core by spring 2017.



**Figure 4.** Motus receiving stations set up a) on an MNRF weather station in the Carden core, and b) at the Napanee field release site

## Habitat Stewardship

One habitat stewardship project has been completed in Carden so far, in collaboration with Couchiching Conservancy. This project involved repairing a length of cattle fencing on Cameron Ranch, which is a very important area of Loggerhead Shrike habitat in the Carden core. This project was completed in April 2016; discussions will continue with Couchiching Conservancy over the fall and winter to identify other potential stewardship projects in the region.

In Napanee, WPC will be contributing to the securing of a parcel of land immediately adjacent to the NCC Scheck Nature Reserve, which has been the Napanee field release site since 2012. Securing this title will increase the protected area of contiguous, high-quality shrike habitat in the region, which is especially important in the Napanee core as the vast majority of habitat is privately owned, thus unprotected.

## Public Education and Outreach

### *Public Presentations and Site Tours*

Lead Biologist, Hazel Wheeler was the guest speaker at the Kawartha Lakes Field Naturalists meeting on June 6, where she spoke about Loggerhead Shrike recovery activities in Ontario. Approximately 50 members were in attendance, and response was very positive. Wheeler also delivered an online presentation to the Fish and Wildlife Restoration Class at Cambrian College (April 6).

WPC Conservation Programs Director, Jessica Steiner, delivered a presentation to the Masters of Environmental Studies Resources Management Class at York University (June 18). This presentation highlighted Loggerhead Shrike, along with the other programs coordinated by WPC.

Loggerhead Shrike Recovery Program displays were staffed at four events over the season:

- Spring Birding Festival, May 28, Colonel Sam Smith Park, Toronto
- Napanee Riverfront Festival, June 11, Napanee
- Conservation Awareness Day, June 19, Toronto Zoo
- Napanee Fair, July 29 – August 1, Napanee

Outreach at the Napanee events was targeted towards landowners, to encourage responsible habitat management, and forge new relationships within the community.

In partnership with members of the Napanee Plain Joint Initiative, WPC helped to organize an “Alvar and Grassland Stewardship Workshop”, that was held on September 20 in Roblin, ON. This workshop, geared towards local landowners, provided education on the unique flora and fauna of the Napanee Limestone Plain, and provided information on responsible stewardship, as well as funding available to landowners interested in undertaking stewardship projects. WPC gave a presentation on habitat stewardship for Loggerhead Shrike, and the NCC Scheck site (the Napanee field release site) was included in the fieldtrip portion of the workshop as one of the demonstration sites for habitat stewardship. Approximately 60 people were in attendance, including local landowners, environmental organizations, First Nations, provincial and federal government, and conservation authorities.

### **Media**

- The Loggerhead Shrike Recovery Program will be featured in the December 2016 issue of “Les Débrouillards”, a French children’s science magazine based in Montreal.
- Megan Perra, an artist (<http://feral5creativeco.com/>) and visual journalism graduate student at Concordia University, contacted members of the Loggerhead Shrike Recovery Program to make a visual communication piece on the shrike program. The final product will be a 7-minute video documentary looking at all aspects of the recovery program, and will be made available online.
- Loggerhead Shrike will be featured in the next “Our Incredible World” series (<http://www.incredibleworld.ca/>), which is a web series, and associated school materials, designed to fit in the Ontario elementary school curriculum. This series, entitled “Sharing our Habitats”, will highlight SAR in Ontario. Some footage of captive birds and a release was taken this year, but the bulk of the filming will occur during the 2017 field season.
- Hazel Wheeler did an interview about the Loggerhead Shrike Recovery Program for a Prince Edward County community radio station (99.3 County FM). The interview will be aired on “The County, Naturally”, a nature program hosted by Pamela Stagg; Stagg connected with WPC through the Alvar and Grassland Stewardship Workshop held in Roblin in September.

### **Program support**

WPC is grateful to all supporters of Loggerhead Shrike recovery activities. Funding this year was provided by:

- Habitat Stewardship Program for Species at Risk (Environment and Climate Change Canada)
- Ontario Species at Risk Stewardship Fund (Ministry of Natural Resources and Forestry)
- Environment and Climate Change Canada – Canadian Wildlife Service
- Colleges and Institutes Canada – Clean Tech Internship Program
- Kingston Solar
- Dillon Consulting
- Private foundations

In addition, we would like to thank all program volunteers for their generous donation of time to the various aspects of the program, and of course to the landowners, whose continued support and stewardship efforts are essential to recovery efforts.