Wild Population

Monitoring

Nineteen pairs of Loggerhead Shrike were confirmed in Ontario this season: 11 in Napanee, and 8 in Carden (Fig. 1). This is a marked drop from the 26 pairs found in Ontario last year, and a strong reminder of the precarious nature of the Ontario population. Pair counts in both cores decreased compared to last year, with a 15% decrease in Napanee, and a 33% decrease in Carden.

Breeding success was variable between the two cores, with all pairs successfully fledging young in Carden, but only 64% of pairs successful in Napanee. Though nearly two-thirds of pairs in Napanee successfully bred, the success by nesting attempt in that core was much lower (54%), with six nest failures observed (see Section 2.1.4). Despite the high number of nest failures in Napanee, 53 fledglings were confirmed across Ontario (29 in Napanee, 24 in Carden), which is just five fewer fledglings than were observed in 2017 when there were 26 nesting pairs in the province. On average, this amounts to 3.5 young per successful nest this past season. Though three pairs did make multiple nesting attempts, none successfully double-brooded this year.

In addition to breeding pairs, four single birds were confirmed this year: two each in Carden and Napanee. Only one of these birds was banded so allowed a definite ID, but the remaining three were determined to be separate individuals based on location and timing of sightings.

Sightings outside of the Carden and Napanee cores were sparse this year. One transient bird was seen near the end of April near Woodstock, and another was seen for a period of almost two weeks from April-May on St. Joseph’s Island, near Sault Ste. Marie. Both of these sightings came from eBird.

Using conservative counts of confirmed pairs and single birds, the LOSH population in Ontario was 42 adults this year.
Volunteer surveys

WPC staff survey efforts continue to be augmented through the Adopt-A-Site (AAS) survey, which uses citizen scientists to survey for LOSH, and a suite of other birds found in similar habitats. Thirty volunteers conducted roadside AAS surveys of 114 priority patches across Ontario. Carden and Grey-Bruce had the best coverage, with 34 and 33 sites surveyed in each respective core. Conversely, Pembroke-Renfrew was a low-engagement area, with only one active volunteer, and Manitoulin Island had no surveyors for the second year in a row. Volunteer recruitment continues to be a challenge in areas where LOSH have not been recently observed.

Volunteers reported LOSH on eight sites: seven in Carden and one in Napanee. The Napanee report and one of the Carden reports were sites that were already know to field staff, but the remainder were either the first observation on a site, thus augmenting early-spring occupancy data, or were mid-season reports that helped to locate elusive birds that were not reliably seen by field staff. Thirteen volunteers used call-playback (CPB) during their surveys this year, with one positive result.

No on-site surveys were conducted this year because of time constraints on the Lead Biologist at the start of the season. Efforts will be made over the winter to find landowners who are willing to allow volunteers to conduct on-site surveys, so there will be established in-roads by the time surveys need to be organized. Some progress was made this year towards getting volunteers on a large site in the Napanee core owned by the Mohawks of the Bay of Quinte, so those discussions will be reopened with the goal of connecting them with some volunteers in 2019.

Returning captive-bred birds

Nine captive-released birds were confirmed returning to Ontario breeding grounds this year (Table 1). Ultimately, captive-origin birds made up 21% of the population of adult shrike seen in Ontario this year.

Eight of these birds were observed as part of breeding pairs, and the other was a single bird that was often seen mingling with this year’s releases at the Napanee field site. Six of the breeding birds had confirmed pairings with wild birds; the mates for the remaining two breeding birds were never seen, so their origin (wild or captive) is unknown. Seven of the eight pairs bred successfully, with at least 21 fledglings confirmed (40% of all wild juveniles seen in Ontario); however, this fledgling count may be an underestimate, as two successful nests were confirmed after young had already fledged, and both adults were never seen. Breeding birds will typical split fledgling groups between them once the young become more mobile, so the unobserved adults from those two pairings may have been tending to other fledglings.

Five of these birds were confirmed as 2017-releases (3.9% return rate). The remaining four captive-origin birds were released in 2016, three of which were not observed in 2017. The fourth 2016-release bird (SI/[YE]:OR/GY) may have been seen last year as well, as there was a bird for which only a partial band combination was seen in 2017 (YE:OR). Though the bird seen this year had lost the colour band on its left leg, review of banding records showed yellow to be the only option for that lost band. Had the bird observed this year retained its yellow band through the 2017 season, it is conceivable that the grey band on the right leg could have been missed by field staff that year, as grey is a notoriously difficult band colour to see. Taking the conservative approach and assuming this bird was the same seen last year, this would mean that 7.6% of birds released in 2016 returned to breeding in Ontario in subsequent years, which is an increase from the 4% seen in 2017.

Trapping and banding

Five wild LOSH were trapped and banded this year, two in Napanee and three in Carden. Hazel Wheeler led all trapping, with assistance from area field staff. Both birds trapped in Napanee were from the same breeding pair, and trapping in Carden included birds from two separate territories. Birds were banded with either SI/DB or
DB/SI on right, to indicate wild adults caught in 2018. Regular behaviour was observed at all territories the day after trapping activities.

After trapping activities, at least 52% of the wild LOSH population remained unbanded in Ontario; band combinations were only confirmed for 44% of birds in Carden, and 29% in Napanee. This rising percentage of unbanded birds in Ontario is making decreasing the quality of demographic and territory use data that we are able to gather each year, so an increase in trapping effort is strongly recommended in 2019.

**Captive Population**

*Captive breeding and release*

This was another good year for the captive breeding and release program, with 24 breeding pairs producing 132 young (Fig. 2). One hundred and thirty young were released to the wild (73 in Carden, 57 in Napanee), which is another record for the program (beating last year’s record high by two). One additional independent fledgling escaped at the breeding facility just prior to transfer to the release site, which would bring our release count to 131 individuals for the year. No juveniles were retained this to add to the captive population, because of constraints on overwinter holding space.

![Figure 2. LOSH captive pairings, young surviving to end of season, and young released, 2001-2018](image_url)

*Figure 2. LOSH captive pairings, young surviving to end of season, and young released, 2001-2018*

**Banding and radio tags**

One hundred and thirty-four captive juvenile shrikes received stainless steel bands this season. Released birds that received colour-bands were given a combination that included either DB/SI (69 birds) or SI/DB (57 birds) on the left leg to identify them as a 2018 release bird. One captive-bred bird was banded with DB/SI on the right leg prior to release because an injury on the left leg prevented use of the regular colour band scheme. Radio tags used in 2018 were a slightly different, and lighter, design than used in past years, so birds released with radio tags (14 individuals) were able to be banded with the full year combination (DB/SI) on their left leg, if they took a size 1D band; eight were released with SI/DB, and three with DB/SI. Radio-tagged birds that took a size 2 band received only SI on left, as the larger bands were too heavy to allow addition of the DB band as well. All birds received some sort of temporary colour-marking (Sharpie) to aid in individual identification while in the release enclosures and during post-release monitoring.
Band resightings
Captive-bred LOSH were seen during both spring and fall migration this year. The first report was of a bird seen in Dunkirk, IN, over two days in early April. This bird was hatched in 2015 at Mountsberg, and released in Carden. Interestingly, this bird was never reported in Ontario.

The only other sighting to-date is a tagged bird that was spotted in Winchester, VA from Oct. 16 to Nov 23. This was a radio-tagged bird that was banded DB/SI, and while those details alone cannot individually identify the bird, it is hoped that Motus detection data received over the winter will elucidate its origins.

Motus detections
Fourteen birds were released with radio tags on the Motus network this season. No detection data have yet been received for radio-tagged birds released this year, but results continue to be compiled from past years.

Tracking results received continue to highlight migratory routes through Ontario; results from birds released in 2017 can be seen in Figure 3. All birds detected on towers in 2017 appeared to go southwest to get around the Great Lakes, with no birds going east around Lake Ontario as was seen in both 2015 and 2016. Data from 2018 is very preliminary at this stage, but two birds released in Carden were picked up on the tower that the Toronto Zoo erected this year.

![Figure 3](image)

Figure 3. Fall 2017 detections for birds released that year. Tag 22528 was released in Napanee, and all other birds were released in Carden.

Status of the captive breeding population
As of November 9, there were 74 birds in the captive population (including partner facilities in both Canada and the US). Sixty-six of these birds are considered breeding stock, three are retired birds that have aged out of the breeding population, three are education/exhibit birds, and two are unreleasable non-breeders. The current breeding stock includes: 44 birds that are 5 years or younger (HY 2013-2017), 21 birds that are 6-10 year olds (HY 2008-2012), and two over 10 years old.
Habitat Stewardship

One habitat stewardship project was identified in Carden during the field season, which will involve the repair of a length of cattle fencing on a private property that has been important for LOSH in the area.

In Napanee, discussions are underway with the Nature Conservancy of Canada, to see what management is necessary on their newly acquired Irene Ockenden Alvar Tract Reserve to maintain the habitat for LOSH. No other projects were identified by field staff over the summer, so landowners will be contacted over the winter to solicit proposals.

Public Education and Outreach

Public presentations

Lead Biologist, Hazel Wheeler was a guest speaker at the a species at risk workshop organized by the Ontario Land Trust Alliance on Dec. 11/17 in London, ON (not reported last year), and at the Ontario Bird Banding Association (OBBA) AGM on Mar. 3 at the Bird Studies Canada headquarters in Port Rowan, ON. Both meetings had very engaged audiences of 40-50 people, and were received very positively. The OBBA meeting in particular reached a very valuable audience in soliciting shrike sightings from across Ontario.

Events

WPC participated in the Nature Conservancy of Canada’s event to announce the acquisition of the Irene Ockenden Alvar Tract, which lies immediately west of the existing Napanee Plain Alvar Nature Reserve, which hosts the Napanee release site. In preparation for the event, NCC sent a photographer and videographer to the Napanee release site gather some media about the LOSH program. The resulting video was screened at the acquisition announcement on July 25 at the NCC’s Napanee office. Hazel Wheeler also spoke at the event about the importance of the Napanee core to the shrike program. The announcement garnered a great deal of media attention as federal Minister of Environment and Climate Change, Catherine McKenna, was in attendance and spoke on the importance of habitat protection.

WPC also led in the organization of an “Alvar and Grassland Stewardship Workshop” that was held at the Lion’s Head Rotary Hall on November 3. This was the third in a series of workshops geared towards local landowners (the others held in Napanee and Carden in 2016 and 2017, respectively), and provided education on the unique alvar flora and fauna of the, and information on responsible stewardship (including LOSH habitat). Thirty people were in attendance, including local landowners, environmental organizations, and citizen scientists. Feedback received after the workshop was generally positive, with respondents giving high ratings to the content of the workshop, and the applicability of topics to their concerns. The workshops run in past were both full day events, but an afternoon-evening format was planned for this latest workshop as the full day prevented some landowners from attending, especially in 2017. Clearly there are benefits and drawbacks to each format, so any similar events in future will include a comprehensive consideration of the target audience. This workshop was presented in partnership with the Nature Conservancy of Canada, Ontario Nature, and the Ontario Land Trust Alliance.

LOSH outreach displays were staffed at two events this year:
- Partners in Protection, February 4, Royal Ontario Museum, Toronto (with other WPC staff)
- Spring Birding Festival, May 26, Colonel Sam Smith Park, Toronto

Media

The LOSH Recovery Program broke in to the world of podcasting this year, when NCC invited us to be featured on an episode of their “Nature Talks” podcast (episode 4: The Home of the Butcher Bird). NCC staff recorded
audio from the Carden release site, including an interview with Hazel Wheeler. This episode was the third-most downloaded out of the seven-episode series, with 967 downloads. For the entire series, the bulk of listeners (80%) were within Canada, 14% were from the U.S., and the remaining 6% were from dozens of other countries.

The LOSH Recovery Program was also the subject of a project initiated by Leah Gerber, an editor at Alternatives Journal, who wanted to start working on her own media. Leah made two visits to the Carden release site to gather footage of juvenile banding and a subsequent release, and conducted an interview with Hazel Wheeler about the program. The video is in the final stages of editing, and is anticipated for release before the end of the year.

We continue to wait for the release of the Our Incredible Work series, “Sharing our Habitats”, which includes a section on the LOSH Recovery Program (https://incredibleworld.ca/2017/). The producers are now anticipating the series to be released next year.

Beyond media concerning the NCC land acquisition, WPC and the LOSH Recovery Program were featured in an article released on the TVO website, “How captive breeding can help save endangered species”.

**Program support**

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

- Ministry of Natural Resources and Forestry - Ontario Species at Risk Stewardship Fund
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- BluEarth Renewables
- Employment and Social Development Canada – Canada Summer Jobs
- 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.