

Shrike Recovery: The Big Picture

Julie Stauffer

Saving a species isn't simple. For every two steps forward, there's inevitably one step back. But after 14 years of shrike recovery, those small gains add up to one big achievement: survival.

Back in 1997, only 18 pairs of Eastern Loggerhead Shrike remained in the Canadian wild. "Without the recovery program, we likely wouldn't have the species in Ontario today," says WPC Species Recovery Biologist Jessica Steiner.

When one species disappears, the whole ecosystem suffers. "Biodiversity is like a spider web," Steiner explains. "Because everything is intertwined, we don't want to risk unravelling it."

That's why, when the Eastern Loggerhead Shrike teetered on the edge of extinction, the recovery team set up a captive breeding program. "We had a responsibility to do whatever we could to conserve the species," says recovery team member Jon McCracken, of Bird Studies Canada.

The goal was to make sure the species survived — if only in captivity — and with luck, breed enough birds to release some back into the wild. Today, we've succeeded on both scores.

In 2005 we achieved a world first: the return of a captive-bred migratory songbird. Since then, we've



A banded shrike in flight.

seen more and more captive-bred shrikes returning, mating and fledging young.

What started as an experiment now drives the recovery effort. According to Environment Canada, the captive breeding and release program has helped sustain the Eastern Loggerhead Shrike in Ontario, particularly in the Carden area.

Habitat stewardship has also proved to be a big success, with more than half the wild population now nesting on improved or restored land.

Not only that, our habitat stewardship work is benefitting other species that depend on Ontario's shrinking grasslands and globally rare alvars. "If you can help conserve shrike habitat, you're also helping conserve habitat for bobolinks and meadowlarks and other species of conservation concern," McCracken points out.

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Letter from the Executive Director

Eastern Loggerhead Shrike Update Where is that Masked Bird?

Erica Lagios

Spring brings with it the return of Canada's migratory species. The Eastern Loggerhead Shrike Recovery Team is especially on the lookout for their returning birds, captive bred and released in previous years to increase the population of this endangered songbird. Once present throughout Ontario, Quebec and Manitoba, it is now down to only a handful in a few isolated pockets. The recovery program, led by Wildlife Preservation Canada, has been monitoring the wild population and working on building a sustainable population in Ontario since 2001. Erica Lagios, last year's Carden biologist and this year's Grassland Bird Survey coordinator, reports on our 2011 spring season.

New Release Techniques

Breeding and releasing captive eastern loggerhead shrike to the wild is one way of reaching our ultimate goal of saving this endangered bird from extinction. In 2010, 6 birds previously released from the captive breeding program returned to breeding grounds in Ontario. With the wild population still so critically low, alternative release techniques are being tried with the hope that return rates can be improved even further. Experimentation with these techniques began last season, with the release of a family group looking the most promising. This season, we will continue to experiment with family releases in Ontario.

Population Monitoring

In addition to biologists in the Carden and Napanee areas, we now have a dedicated biologist to survey Grey and Bruce counties this season. This new staff member will be providing much needed support in this region - by surveying potential habitat, following up on reported shrike sightings, and making connections with landowners and other community members. Dedicated volunteers and other members of the community who regularly report sightings of birds are valued contributors to the recovery program. This will improve our chances of determining the current population in Ontario. It is anticipated that with expanded surveying and prompt follow-up of all reported sightings, we will discover additional nesting pairs breeding in the region.

On the Lookout for Geolocator Birds

Since 2009, a total of 92 birds wearing geolocators have been released from the captive breeding program.

An Eastern Loggerhead Shrike sporting leg bands. Aided by these unique colour band combinations on all captive releases and a number of adult wild birds, the recovery team is especially interested in spotting birds with bands which will indicate the bird was fitted with a geolocator in the 2009 or 2010 seasons.



These tiny data loggers will help determine the migration routes and wintering grounds of Ontario shrikes. As we launch the 2011 field season, we are optimistic that a few geolocator birds will return this year and we will be able to retrieve the information on the device. To help with identification, all shrikes released wearing geolocators were given a unique band combination. Those released in 2009 received a red over silver band on the left leg; those in 2010 received a silver on the left leg and red on the right leg. Please report all shrike sightings to Wildlife Preservation Canada at 1-800-956-6608 or admin@wildlifepreservation.ca. Pay particular attention to any leg bands seen and report this with your sighting.

Canada's New Noahs - Past and Present Green Sea Turtles Battle the Cold

The Canada's New Noahs program was begun in 1990 to address the need for Canadian conservation biologists. Over the last 20 years, this innovative, hands-on training program has built a pool of experienced, dedicated conservation professionals who are continuing the work of Wildlife Preservation Canada's founder, Gerald Durrell, in Canada and around the world. Each year WPC selects one young Canadian scientist for the Canada's New Noahs program, which entails first a rigorous training program at the International Training Centre in Jersey, Channel Islands, followed by a placement in Mauritius, working with some of the most endangered birds and reptiles in the world. When our New Noahs return to Canada, they put their experience into action, contributing to conservation with a wide variety of species. Former Canada's New Noah, Tara Imlay, recently returned from Texas studying the impact of the Deepwater Horizon (British Petroleum) oil spill on endangered Piping Plover populations that spend the winter along the Gulf of Mexico. Below, she tells of her experiences.

I recently completed a position with Virginia Tech and the US Fish and Wildlife Service, examining the impact of the Deepwater Horizon (British Petroleum) oil spill on Piping Plovers. My research crew and I surveyed beaches and mudflats for these endangered birds since September. In addition, I have been learning a lot about barrier island ecology and the havoc an extremely cold winter can play on many different animal species.

I've experienced three "hard freezes" in south Texas this year. A hard freeze occurs when the air temperature drops below 0°C suddenly and for a prolonged period of time. The first hard freeze only lasted two days.

This may not sound extremely cold compared to winter in Canada, but many of the species that spend the winter farther south are unprepared for it. In addition, the sudden drop in air temperature also has a corresponding sudden drop in water temperature. After all each hard freeze the shorelines were littered with the cold, frozen bodies of thousands of fish and birds that did not survive the cold conditions. However, the largest impact was on the juvenile green sea turtle population.

Green sea turtles are endangered worldwide, and this part of south Texas is a very important area for juvenile turtles to grow and mature before they venture out into the oceans as adults. The hard freezes caused a sudden drop in water temperature and green



Tara transports beached turtles to turtle rehabilitation centre for treatment before being released.

sea turtles are very susceptible to "cold-stunning" when the water temperatures drop too low, too quick. It can be fatal.

After the first hard freeze I was warned that dead sea turtles would also be found along the shorelines and was asked to report the location of the car-

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Sea Turtles (continued)

casses. I saw a few dead turtles, but also found one cold-stunned turtle that was still alive. After making a few calls I arranged to bring the still cold turtle into a turtle rehabilitation facility. The biologists at this facility would insure that the turtle was warmed slowly, like you or me after frostbite, that the lungs were empty of water and any injuries could be treated properly before the turtle was released. Thus began my turtle-rescuing adventures.

Most juvenile sea turtles have a carapace (or shell) that is at least a foot long, but can reach three feet, and they weigh anywhere from 20-60 pounds. Following the second hard freeze, which lasted five days, my crew and I brought in 29 cold-stunned turtles. Several turtles had to be carried for at least a kilometre before they could be placed in the truck. To save on trips, I often carried two at a time. Each turtle was balanced on a hip and supported by an arm. Carrying turtles is exhausting! A few of the turtle we rescued were given names - Tiny Tim (who

GREEN SEA TURTLE - Quick Facts (*Chelonia mydas*)

Listed as endangered, Green Sea Turtles, named for their greenish skin, are found in all temperate and tropical waters throughout the world, though they mainly stay near the coastline, around islands, bays and protected shores. Rarely are they observed in the open ocean. Their greatest threat is from the commercial harvest for eggs and food though incidental catch in commercial shrimp trawling is an increasing source of mortality. They have a blunt head, with a serrated jaw, a bony carapace ranging from pale to very dark green and plain to very brilliant yellow. Their bodies are nearly oval and somewhat flattened. A single pair of prefrontal scales (scales in front of its eyes), differentiates them from other sea turtles which have two pairs, and a single claw is visible on all flippers. Their average lifespan in the wild is over 80 years, and adults weigh from 110-190 kg (240 to 420 pounds), though they can grow as large as 317.5 kg (700 pounds), making them among the largest sea turtles in the world.

did not feel so tiny after a kilometre and a half hike), Quasimodo, Squirt, Fluffy - but there were too many to keep up with. The truck filled up quickly as we started assigning turtles to seats and open spaces on the floor. To make a little more room I held one on my lap while driving the truck to the rehab facility. There were so many turtles on the shoreline that I had to prioritize our rescue efforts on those that were still obviously alive and leave the ones that appeared dead.

The third hard freeze happened almost a week later and again we found a lot of sea turtles. Unfortunately of the 24 washed up on the shorelines only three were still alive.

In total, almost 300 turtles were rescued by park staff and volunteers, like us, during the hard freezes this winter. Several years ago there was a particularly cold winter that resulted in the deaths of over 1000 juvenile sea turtles - a substantial part of the population. I hope our efforts this winter helped to reduce juvenile sea turtle mortality.



Canada's New Noahs - Past and Present

Canada's 22nd New Noah

Ffion Cassidy is Wildlife Preservation Canada's most recent Canada's New Noah, selected from amongst many excellent applicants from across Canada. She introduces herself here.

Having grown up just outside Winnipeg, Manitoba, animals and the outdoors have always been a huge part of my life. In keeping with this fascination, I studied biology at university where I was drawn to courses in animal behaviour, ecology, and conservation. I completed co-op positions with Agriculture and Agri-Food Canada and Environment Canada and volunteered with a wildlife rehabilitation centre and a vet clinic, and applied my interest in animal behaviour by fostering dogs for a rescue organisation.

In 2008, I graduated with a B.Sc. in Animal Biology from the University of British Columbia and a growing interest in wildlife and environmental issues. After graduation, I worked as a field technician with the Calgary Zoo Centre for Conservation Research on a project studying the population dynamics of Black-tailed Prairie Dogs in Grasslands National Park, Saskatchewan.

Since prairie dogs are a keystone species in the Grasslands, I really enjoyed gaining greater understanding of the species they impact. In October, 2009 the Black-footed Ferret was reintroduced to the Grasslands after more than 70 years of extirpation. I was thrilled to be a member of a release team, and to release a ferret back into its natural habitat. Ferrets prey almost exclusively on prairie dogs, making understanding prairie dog populations very important, and it was fitting to see how science could be applied to restoring balance in the ecosystem. I returned to help with the pilot ferret monitoring effort, and am so pleased that the population continues to thrive!

I love being in the field, and this has led me to a diverse array of experiences from surveying for Northern Leopard frogs and Greater Short-horned Lizards and mist-netting Saw-whet owls to live-trap-

ping Richardson's ground squirrels, taking blood samples from bison, and even collecting behavioural data on a troop of *Chacma baboons* in South Africa (I love to travel too)! I also pursued my interest in behaviour by working as a behavioural ecology research assistant at the University of Manitoba, and as a canine behaviour counsellor at the Winnipeg Humane Society. Most recently, I completed an internship at the Zoological Society of London where I worked on the Living Planet Index - a tool that uses vertebrate population trends to track changes in global biodiversity.

I am enormously honoured to be chosen as Canada's New Noah for 2011 - it's really a dream come true! Upon my return to Canada, I hope to combine all that I learn from this experience with my dual passions for conservation biology and animal behaviour. I would like to pursue further studies in how these two fields can be combined to improve the conservation, captive breeding, reintroduction, and management of endangered species in Canada. In the meantime, though, I can't wait to share the adventure with everyone!

Ffion releases a prairie dog in Grasslands National Park, SK.



The Big Picture (continued from page 1)

Similarly, the lessons learned from shrike recovery can be applied to other species. Take the innovative field breeding approach that we pioneered, for example. It's more cost-effective than traditional hand-rearing methods and produces much fitter birds.

Fundamentally, recovery is a numbers game. Although the shrike population has inched upwards since 1997, there's still a long way to go. Last season saw just 23 pairs - 25 per cent less than in 2009 - likely due to harsh winter conditions in the southeastern United States, where we suspect shrikes spend the season.

"The drop this year was an important reminder of how critically low the population is," says Steiner. "It's all the more reason to drive ourselves harder to find out where these birds are the rest of the year."

Our geolocator study promises to provide that vital information, perhaps as early as this summer, so we can begin scrutinizing migration routes and wintering grounds for the reasons behind shrike decline.

"We're not out of the woods yet," Steiner concludes. "But if we can answer some of these critical questions, then we have the opportunity to make a substantial impact on the wild population."



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