



# Ontario Eastern Bluebird Society

## 2016 Fall Newsletter ~ Editor Bill Read

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The AGM is set for Saturday, March 11, 2017 at the Royal Botanical Gardens in Burlington.

Meeting starts at 9.00 am, registration is from 8.30-9.00 am

See our website for the program [oebbs.ca](http://oebbs.ca)

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Welcome to the 2016 fall newsletter. It was an above average year for bluebird reproductive success with most well managed trails reporting excellent success. Bluebirds thrived in the hot humid weather. There were no reports of heat causing problems for young in boxes with no ventilation holes. **As I have stated many times ventilation holes are not necessary in Ontario.** In Texas probably a good idea but not here. Only the nest hole should be open and facing away from the prevailing winds. There was mortality for some early broods on the weekend of May 15-16 when the temperature went down to zero. I lost four sets of young on that weekend. Other trails reported the same. Most successfully re-nested but were not able to produce two broods. May, June and July had below average rainfall and above average temperatures that created ideal conditions for bluebirds. August made up for it with almost as much rainfall as the previous three months combined and an average temperature that was 3 degrees above the long term average. It was the hottest August in Southern Ontario since 1959 and the fifth hottest ever. The hot humid weather continued well into September. This lack of rainfall in May, June and July impacted insects like mosquitoes that had part of their life cycle in the water. I was able to walk through Backus Woods during this time without any insect repellent on, there were very few flying insects. This lack of insects impacted Tree Swallows during the nestling period and resulted in more dead nestlings than usual. On my trail I fledged 374 Tree Swallows but had 90 dead nestlings. This is down from 470 fledged young in 2015. There were periods of cold windy days in early June which further impacted Tree Swallow reproductive success. The two Tree Swallow nest box grids in Windermere basin in Hamilton had some dead Tree Swallow nestlings in the boxes but not nearly the number I experienced on my own trail. Red Hill Creek beside the grids and a large man made pond nearby to support nesting Caspian Terns and Common Terns may have made the difference with continual hatches of insects out of these two bodies of water. Lake Ontario is also close by. The dead Tree

Swallow young found in the boxes were reduced to a pile of bones and feathers as the carrion beetles had completely consumed them. There are 100 nest boxes in the north and south grid and all are filled with Tree Swallows except a couple. There was a significant number of European Paper



This beautiful female Mountain Bluebird was photographed by *Patty Gale* on November 29th, 2015 near Whitby. A female Mountain Bluebird was seen this year near Mossonee on November 29th, 2016 by Todd Hagedorn and Josh Vandermeulen. Mountain bluebirds have been somewhat regular visitors to Ontario usually arriving in the fall. Notice that the bill shape is different than the more robust bill of an Eastern Bluebird.

Wasps in the north grid boxes (most I identified as the non native European Paper Wasp) They do not sting unless you put your hand over them. Peter Thoem and I also found ants and Mud Dauber wasp nests in the boxes mostly in the North Grid. Next year I may have to research ways to keep the paper wasps and Mud Dauber wasps out of the boxes. Ants can be kept out of the nest boxes by applying a little fresh grease at the bottom of the pole. The ants can't climb through it. I have heard that rubbing the inside roof with soap can deter wasps from attaching the paper nest to the inside roof. All the paper wasp workers die at the end of the year and only the queen survives by overwintering in the ground to emerge the following spring to start a new colony. According to Chris Earley the two cold winters of 2013-2014 and 2014-2015 impacted their population negatively by reducing queen survival. It now appears that they are starting to increase again.

Every spring bluebirders have high hopes for a record setting year but something usually interferes to prevent it from happening. I guess that's why most of us continue hoping for that perfect season. We can look back on 2016 as a very successful year for bluebirds but a less than average year for Tree Swallows.

## 2016 Eastern Bluebird and Tree Swallow Nest Box Report

Included in this mailing is the nest box reporting form for 2016. We are particularly interested in your Tree Swallow nest box success. Did the lack of flying insects in May, June and July affect nest success? Was there more than usual nestling mortality. How many dead adult Tree Swallows did you find in your boxes?

## Purple Martins Love Fire Ants

The fire ant is an introduced, exotic pest species in the U.S. Colonies in the southern states are responsible for inflicting painful bites on humans and fatal attacks on wildlife, including cavity nesting birds. But Purple Martins have turned the tables on fire ants by targeting the flying queens. Turns out they are an abundant, nutrient rich food source that just might be keeping Purple Martins in the south.

Fire Ants form large colonies, and lots of them. One of the keys to their growing population is an extended breeding season – basically throughout the spring and summer, and year round in warm climates. Breeding activity involves large



This excellent picture was taken by Bill McDonald in 2016 at the Radio Towers field near Glen Morris. It is posted on our facebook site. Both the male and female were banded by Bill Read using size 1 bands. Nine bluebirds fledged from this pair in 2016. The male was banded in 2016 and the female in 2015.

In 2014 the actions of photographers caused this nest to fail; at one point there were 6 cars lined up along the road. I had an argument with four of them when they absolutely refused to leave or move their vehicles. The bluebirds at that point were not coming anywhere near the nest box. They had already laid 5 eggs but were prevented from incubating by the cluster of photographers. They abandoned the nest. I have absolutely no problem with pictures being taken at this box or any of my other nest boxes as long as it is done responsibly. That means if the bluebirds are not acting normally because you are there then you have to change your behaviour. The problem lies with some photographers not knowing what acting normally is. For example -Are they continuing to feed young while you are photographing them? Is your presence preventing them from entering the nest box to incubate the eggs? They are especially vulnerable to abandonment during nest box selection, nest building, egg laying and early incubation.

swarms of flying queens – a single hectare of land may produce 40,000 queens at a time.

Purple Martins take advantage of these swarming flights and capture many of the queens. Each queen is a juicy bundle of fat and protein, just the thing to feed growing young martins. A recent study of martins nesting in Oklahoma found that a third of the food items fed were fire ant queens. There are an estimated one million nesting pairs of martins within the U S range of fire ants. We now know that Purple Martins do not eat mosquitoes except after they have been eaten by dragonflies. Dragonflies form a substantial part of a Purple Martins diet. **Now we can accurately tell people they can eat 2000 Fire Ant Queens a day.**

**Editor's Note:** This article and the one on Tree Swallows vs Mountain Bluebirds was taken from the NABS *Bluebird Magazine*. Found under a summary of Recent Research on Bluebirds and other Cavity Nesters - Scott Gilliam.

## Tree Swallow Reproductive Success

**M**ost of the nest box reports I receive indicate Tree Swallows are doing well. Last year (2015) was a good one, this year (2016) some what below average because of a lack of flying insects during the critical time when they were feeding young. **It is hard to imagine how many Tree Swallows there would be if there were no nest boxes provided for them.** That said one of the major problems is the proliferation of nest boxes that lack both monitoring and predator protection. In my opinion this is becoming a major problem for Tree Swallows. (that combined with a lack of House Sparrow control) How many groups and businesses have nest box workshops where you can build your own nest box. The majority of these boxes do not have predator protection and are put up in all the wrong spots. In most cases no information is provided as to how to place and monitor the nest boxes.

**Few people except bluebirders realize the negative impact that House Sparrows have on our native cavity nesting birds.**

## Factors affecting Tree Swallow Reproductive success on a nest box trail

1. **Proper location of the nest box.** Water near by usually means that more flying insects like mosquitoes will be available for the Tree Swallows to eat. Boxes located on high elevations will be colder with greater wind entering the nest box and fewer flying insects. Some areas become unsuitable if vegetation near the boxes becomes overgrown. These boxes need to be moved to better locations.



**A female Eastern Bluebird feeding a newly fledged young at the Carden Alvar.**

*Photo by Patty Gale.*

**If a nest box is unsuccessful or unoccupied for two successive years it needs to be moved.**

2. **Continued monitoring of your trail.** The bluebird society recommends this be carried out every 10 days at a minimum during the nesting season. Once a trail is abandoned the reproductive success steadily declines to a point where it becomes a negative. Single nest boxes and nest box trails that are **no longer** being monitored need to be removed.
3. **Banding of Tree Swallows on eggs** can result in lower clutch sizes and abandonment. Banding should not be done until the young have hatched or at least the very least a few days before hatching. (this protocol is also observed by the Long Point Bird Observatory) You must know how long incubation has been underway before you band.
4. **Boxes must have predator protection.** Absolutely no boxes should be placed on fence posts or trees. They are highways for squirrels, chipmunks, Deer Mice, weasels, raccoons. Etc. Deeper boxes and an extra thickness of wood over the nest hole have been proven not to work. **You have to stop the climbing predators from reaching the box by putting it on a free standing T-bar or metal pole.** Grease, stove pipe baffles or metal cone guards can be used to accomplish this.



Jenny Hendershot from the Maryland Bluebird Society sent us this lovely shot of a nesting Tree Swallow. As she said, Tree Swallows make excellent neighbours for Eastern Bluebirds when in paired boxes.

The whole idea behind bluebirding is to provide a predator proof nest box so bluebirds and Tree Swallows can fledge more young than they would in a natural cavity.

5. **House Sparrow control.** It is an unfortunate part of bluebirding, but House Sparrows have to be controlled. One method is to move the boxes away from barns and buildings to areas with no sparrows. They can also be trapped using a simple in box trap and moved to another area and released. They have a small home range and will not find their way back. The method I use is to trap them and dispatch them in the most humane way possible. That way they will not kill native birds on your bluebird trail and in the area where they are released. Pulling out their nests does not work as you have not eliminated the problem. The most humane method is cervical dislocation. House Sparrows are not protected as they are a non native bird.

**The bluebird society will not endorse any trail that does not have proper predator protection.**

## 2016 Birdathon Results

Our birdathon fund raiser **Sylvia van Walsum** set a new record in 2016 with \$1175. (\$293.75 comes back to OEBS). **Thanks again Sylvia for your continued support of OEBS.**

## Environmental Stewardship Awards

The following awards were given out by the Ontario Eastern Bluebird Society.

To **Northland Nursery** – For providing a safe haven in their barn, allowing Cliff Swallows to nest successfully. They open up the barn doors when the Cliff Swallows arrive and do not close them until all the Cliff Swallows have fledged. Most nest on the open runners on each side of the metal doors. There are upwards of 100 pairs. The nests are removed only when the cliff Swallows leave so the doors can be closed.

To **Fern Hill School** – Both Burlington and Oakville campuses have made it a priority to accommodate Barn Swallows by allowing them to nest at door entrances and on ledges around the buildings. In 2016 fourteen nests of the provincially threatened Barn Swallow were recorded. Nest boxes on the grounds for Eastern Bluebirds and Tree Swallows makes this a bird friendly school. These initiatives have created a very successful outdoor learning environment for the students and have been incorporated into their outdoor field studies program.

## Mountain Bluebirds vs. Tree Swallows: Who Wins and Why

**S**uitable natural cavities are often in short supply for bluebirds and other secondary\_ cavity nesting birds. To be acceptable, the opening must be the right diameter, the cavity must be the right inside diameter and depth, located at the right height, and in the right habitat, etc. There are often more pairs looking for nest sites than there are suitable cavities available.

This shortage causes competition between cavity nesters.

Many bluebirders, especially within the range of the Eastern Bluebird, are familiar with the competition between bluebirds and Tree Swallow for nestboxes, a competition that the bluebirds often loose, in spite of the Tree Swallows smaller size.

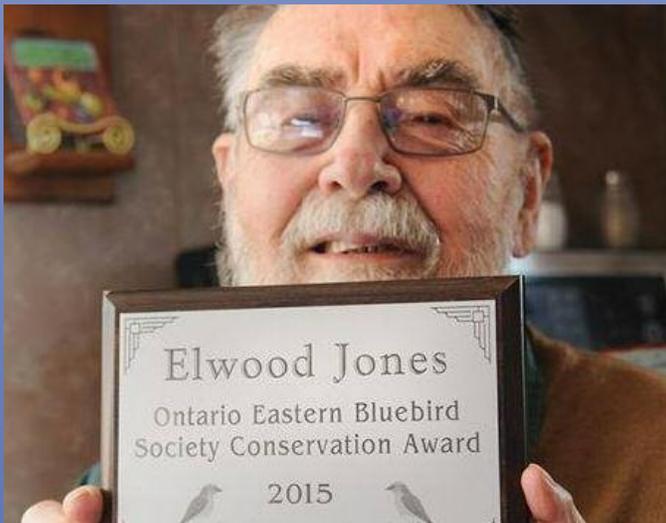
This same competition occurs in the west, where Tree Swallows contend for nest cavities with Mountain Bluebirds, the largest of the three bluebird species. As is the case in the east, the swallows are often victorious. A recent study tried to break down the reasons for this outcome.

Researcher Karen Wiebe manipulated the availability of nestboxes examine two factors: The ability of each species to usurp a nestbox already owned by the other species, and the ability of each species to outcompete the other for a newly available nestbox. She found that the two species were roughly equal in their ability to defend a box that they had already claimed (with the other species able to usurp the owners in 23-33% of cases). However Tree Swallows were



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Bill Read is banding a nestling male Eastern Bluebird using a 1 B band on the right leg. This male is about 12 days old. The bright blue on the flight feathers indicates it's a male. The banding is part of an ongoing study to examine reproductive success in orchards. Hopefully this bird will return the following year.



### 2015 OEBS CONSERVATION WINNER

Last years winner was 95 year old Elwood Jones from Castleton. You can see more pictures of Elwood and the award on our facebook site. The winner of the 2016 award will be presented at the meeting on March 11, 2017.

much better at laying claim to a newly available box than were Mountain Bluebirds \_ The swallows won ownership of a new box 70% of the time, verses just 30% of the time for the bluebirds.

The swallows won the battle for new nestboxes not by being more physical (in fact, the bluebirds were more likely to initiate physical contact when competing for a nestbox), but by being more persistent. They repeatedly entered (or attempted to enter) the new nestbox and once inside, refused to be displaced by the bluebirds. As Karen wrote, The Tree Swallow seemed to rely on a strategy of continued harassment and a steady presence near the nest box to gain access to the entrance hole, behaviour that eventually wore down the defensive efforts of many Mountain Bluebird pairs.

Of course the Tree Swallow is a native North American cavity nesting species, so its presence on bluebird trails should be encouraged. Many bluebirders have had luck by offering nest boxes in pairs-one for the bluebirds and one for the swallows. See <http://www.sialis.org/pairing.htm> for more information.

**Karen L. Wiebe.** 2016. Intraspecific competition for nests: Prior Ownership Trumps Resource Holding Potential for Mountain bluebird Competing with Tree Swallow. The Auk 133:512-519

**Editors note-** Pairing boxes works well in most cases. I recommend 6-7 feet apart with the nest holes facing in different directions. This way Tree Swallows looking out the nest hole will not see the nest hole of the other box. The strategy used by the Tree Swallow of repeatedly entering the nest box (as mentioned in the article) can prove deadly if House Sparrows are near by. The male sparrow will quickly enter the box and kill the Tree Swallow by hammering the swallows head until it is completely devoid of feathers and the Tree Swallow is dead. Over the years I have lost hundreds of Tree Swallows killed in this fashion. And this even though I humanely dispatch all House Sparrows that attempt to nest in my boxes as soon as they are observed. Bluebirds will kill Tree Swallows on very rare occasions. Bluebirds and swallows can coexist peacefully. This Tree Swallow strategy of repeatedly entering a nest box does not work well when House Sparrows are also competing for a nest box.

### Does nest box size have any influence on the number of eggs laid, or young fledged?

**M**ost bluebirders prefer a somewhat larger inside diameter nest box because they feel more bluebirds will fledge from it. Is this true? Do more bluebirds fledge from a larger inside diameter box, or is there no difference in egg or fledge totals from a small or large inside diameter nest box?



This picture of a female Mountain Bluebird was taken by Nancy Barrett near Whitby in December 2015. The more slender and pointed bill is quite evident in this picture.



This is what a successful bluebird nest should look like after the young have fledged. Flattened out with no fecal matter. Unlike Tree Swallows bluebirds remove the fecal matter right up until the last nestling fledges. Underneath the nest you should see black blowfly pupal cases. Notice the grasshopper left behind. One of many favourite bluebird foods that are fed to their young.

The best study I found on this subject was by **Dr. David Pitts** who spent a great deal of time researching nest box size. You can read about this study in his book “Studying Eastern Bluebirds A Biologists Report and Reflections”. T. David Pitts.

Dr. Pitts made the following conclusions. After comparing nesting results from large nest boxes and small nest boxes I have no evidence to indicate that either nest box size is preferred by bluebirds or that either nest box is more productive. He also goes on to say that until I see evidence to the contrary, I believe that large nest boxes (with at least a 4 in X 5 in floor) are best for bluebirds in southern states. This belief is based on Dr. Pitts assumption that in large nest boxes the nestlings are less crowded and are less likely to suffer from overheating during the hot summer days.

**Editor’s note.** It is somewhat warmer in Tennessee where Dr. Pitts did his study. Spring (May) temperatures would be colder in Ontario than Tennessee. Is it possible that in smaller nest boxes the young would be able to keep warmer because they are more tightly packed in reducing heat loss?

## How do poorly run nest box trails affect both populations of Tree Swallows and Eastern Bluebirds?

**T**rails that have limited success because of poor management can impact populations in a negative way. They can become population sinks. This is especially true for trails that have been abandoned or are monitored only a few times during the breeding season. **A sink population is a breeding population that does not produce enough offspring to maintain itself in coming years without immigrants from other populations.** I find the best way to judge success is by fledged young per pair or by the number of fledged young per box. Well managed trails should have between 5-6 fledged young per pair and between 1-2 young fledged per nest box. **A source population is a breeding group that produces enough offspring to be self sustaining and that often produces excess young that must disperse to other areas.** Lets say your trail suffered predation by raccoons and House Sparrows because of poor management. Two pairs were unsuccessful with both the female and young killed. You were still able to fledge some young bluebirds but the total fledged young per pair was below 3. **Have you produced**



This is the bottom of a successful bluebird nest showing the blowfly pupal cases. Studies have indicated that blowfly larva do little harm to bluebird nestlings.



This is a good example of a successful Tree Swallow nest. Tree Swallows do not remove fecal matter from the nest for the last few days before the young fledge. Tree Swallows do not feed their young once they leave the nest. When no fecal matter is found in a Tree Swallow nest it may indicate that the young fledged prematurely or it was unsuccessful. Premature fledging can be caused by opening the nest box late in the nesting cycle and disturbing the young.



The 2016 Young Ornithologists Workshop participants. Each participant was given an Ontario Eastern Bluebird Society hat and a 1 year online membership.

Back L-R Robin Moore (Edmonton, AB), Peter Simons, (Barrie, ON), Hayden Bilty, (London, ON), Cole Gaber, (Vancouver, BC ), Front L-R Hannah Stockford (Strathroy, ON), Tessa Gayer, (Toronto, ON)

**enough young to keep the population self sustaining?** I don't have the answer to that question but I can speculate that you would need a minimum of 3 young fledged per pair to sustain your population.

## Ontario Nest Record Card Scheme

The Ontario Nest Record Card Scheme (ONRS) provides a valuable means of tracking the health of Ontario's bird populations through maintaining detailed records of their nesting success and distribution.

You can submit your nest box data online by visiting The Ontario Nest Record Card website or you can request nest record cards that can be filled out and sent in. The previous Nest Record Card reports are available online. The Eastern Bluebird is the fourth highest in total entries submitted with over 6000. Other birds that you have monitored can also be submitted.

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To commemorate the 100th anniversary of the 1916 Migratory Birds Convention, the Royal Canadian Mint is producing an amazing, limited-edition, colour series of fine silver collector coins. The first coin in the series is now available, and depicts a gorgeous Mountain Bluebird. A second coin, featuring an American Avocet, will be issued on June 2, followed by an American Goldfinch on August 2, and a Pileated Woodpecker on November 1.



You can learn more about or invest in these coins on the Royal Canadian Mint website.

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