



# Ontario Eastern Bluebird Society

## 2012 Fall Newsletter ~ Editor Bill Read

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Welcome to the OEBS fall newsletter. The 23rd annual Ontario Eastern Bluebird Society meeting will be held on **Saturday, March 16th, 2013 at the Royal Botanical Gardens in Burlington.** We will celebrate the **25th anniversary** of the founding of the Ontario Eastern Bluebird Society in 1988. A special meeting is planned so be sure to join us. Last winter was the second warmest metrological winter (December, January and February) since records began in the area in 1914. (Data in this article courtesy of the University of Waterloo Environment Canada weather station.) This past winter just barely beat out 2001-2002, the year Environment Canada weather forecaster David Philips called the year without winter. Only 1931-1932 was warmer by a full degree. Although 1998 was the warmest calendar year in the area, the warmest 12 month period was between March 1931 and February 1932 with an average temperature of 9.26° Celsius. February 2012 was 4.5° Celsius warmer than average. March was warmer than April, the first time this has happened since records have been kept in the area. April was 0.1° Celsius above average.

This above average weather allowed more bluebirds than normal to survive through the winter and return to breed in 2012. May was almost 3° Celsius above average with very few reports of weather related nestling mortality.

There were however two periods that resulted in weather related nestling mortality. April 23 and 24th were wet and windy with day time highs of only 2-3° Celsius. Orangeville received 15 cm of snow, more than they received at once all winter. The temperature dropped to -5 to -6° Celsius at night. I lost 2 broods of young during this period. 1 pair re-nested and had two more nesting's, the female of the other pair left the area. It is possible that the male of this pair stayed and re-nested with another female. The failed female laid white eggs and did not show up again. Only one other pair laid white eggs this year. This was a disaster for fruit growers in Southern Ontario as the record temperatures in March had brought the fruit blossoms out to early.

The buds froze on the trees which resulted in fruit crops that were only 10-20% of what they should have been. The other period that resulted in weather related mortality was May 31st to June 1st. The rain started late on May 31st and the following day was cold, windy (gusts from 40-60 kph) with 30-40 mm of rain. Young are very vulnerable at about 7-8 days as they are not fully feathered and brooding usually stops at this time. I lost 2 broods both with young around this age. Both pairs re-nested, one pair in the same box and the other in a different box. I know this because I band all the adults. Weather wise the rest of the breeding season was almost perfect. There was a very noticeable lack of rain fall over this period. As I am writing this newsletter we are being hit by the remnants of Hurricane Sandy. We received 156.4 mm of rain in October which was the second wettest October since records began in the area in 1914. We still have a long way to go to fill up some of the ponds to last years levels. This is probably due to the warm winter and lack of snowfall in the area. The high winds and heavy rainfall may cause some mortality among bluebirds in the harder hit areas of Eastern North America.

### **Weather has always been the major factor affecting nest success or failure.**

Fledged young per pair numbers will be over 6 this year on most trails. Most bluebirders I have talked to had record or near record numbers of bluebirds fledged this past summer. I expect to see record numbers on fall and Christmas bird counts for 2012-2013. Record early egg dates in March were recorded on a number of trails. There will be more about this in the spring newsletter when I receive more nest box reports.

I would like to thank everyone for their generous support of OEBS and the work that you do for bluebirds. I would also like to acknowledge the contributions of our executive on behalf of the Ontario Eastern Bluebird Society and to Wayne and Linda Buck who no longer are on the executive but still run the registration table.

*Bill Read*

## Good Weather Equals Nest Box Success

Don Wills

At the annual general meeting last March 17th, 2012, I gave a depressing account of my nest box results for 2011. Bluebirds, Wood Ducks and Prothonotary Warblers were at all time lows for my trail. A warm winter (2011-2012), spring and summer provided everything needed for all the cavity nesters. Most nest box monitors in Ontario have reported a considerable improvement for 2012. I didn't think my trail would be as good as 1998, but this season came very close for all species. 1998 was one of the warmest years of the 20th century. Only the winter of 1931-1932 was warmer. A mild winter allowed bluebirds to over winter safely and an early spring provided easy box monitoring with no food shortages. Second broods started quickly producing a tremendous season overall. Other birds were equally successful with Wood Ducks, Tree Swallows, House Wrens and Prothonotary Warblers producing record numbers on my trail. In 1998 a Saw Whet Owl pair used a nest box in my woods and produced 4 young that were documented and photographed. This was a first for Hamilton district. None have ever returned.

The winter of 2011-2012 was very warm with few storms and very little snow accumulation. Bluebirds overwintered in fairly large groups.

A very early start to the nesting season began on March 24th with a bluebird nest containing 2 eggs. Unfortunately March was warmer than April causing problems for these early nesters. This is the first time since records have been kept that the average temperature in March was warmer than in April. There were more nest failures than 1998 but second broods started up quickly with plentiful food and warm dry weather.

EASTERN BLUEBIRD					
Year	No. of Boxes	No. of Pairs	Second and Third Broods	Total Nestings	Fledged Young
1998	435	104	91	195	721
2012	435	108	80	188	711

PROTHONOTARY WARBLER				
Year	No. of Boxes	Pairs	Nests	Fledged Young
1998	28	4	4 nests -6 eggs each	24
2012	28	3	5 nests 1 pair 2 broods	25

Prothonotary warblers returned earlier than normal to my nest boxes at Port Rowan. Five successful nests produced 25 fledged young setting a new record for this woodlot which is now owned and protected by the Nature Conservancy. Five of the seven known Prothonotary Warbler nests in Canada were monitored in these nest boxes.

## In Which Direction Should a Nest Box Face?

This is a question that every new bluebird landlord has asked. The answer is: it depends. It depends on the height of the surrounding vegetation and where the nest box is located in North America. The conventional wisdom says that it should face some tall woody vegetation (i.e. trees or shrubs) to give the fledgling young a safe landing zone to aim for on their maiden flight. But how close that vegetation should be to the nest box is the subject of some debate, as some bluebirders have seen fledglings fly only a few yards before hitting the ground, while others have seen fledglings fly 100 yards or more on their first try.

As for compass direction, a number of sources suggest that nest boxes should face east, apparently to take advantage of the morning sun. But the experimental evidence is inconsistent; with some studies confirming the preference for an easterly orientation and others showing that bluebirds show no particular preference.

This study of 83 boxes in Athens, Georgia found that Eastern Bluebirds strongly preferred nest boxes that faced northwest. The authors suggest that there warm southern climate precludes the need for early morning warming, and that nest box orientation is related to latitude: nest boxes in the north should face mostly east, and nest boxes in the south should face mostly west.

In any event, there is apparently no single "correct" answer to either the distance to the woody vegetation question and the compass orientation question. Rely on your own experience and observations, and the advice of other bluebirders in your area.

Navara, Kristen J., and Erin M. Anderson. 2011. Eastern Bluebirds choose nest boxes based on box orientation. *Southeastern Naturalist* 10:713-720.

**Editors comments** – It has been my experience that fledgling bluebirds can fly at least 100 yards on their first flight. Having appropriate vegetation within that range that they can fly to will greatly increase their chances of success. It is important not to disturb the young late in

the nesting as this may cause premature fledging resulting in young that can't fly far enough and land on the ground. Crows and Common Grackles will pick off birds that become grounded. In Southern and Central Ontario most of the spring and summer storms come out of the northwest or east. They are usually accompanied by strong winds. **I strongly suggest that boxes in most cases face in a SSE direction to avoid the wind blowing directly in the nest box. There is absolutely no need for nest box ventilation holes in Ontario. If you have boxes with ventilation holes they can be taped shut using duct tape and opened during later nesting's in July.** It is the cold that kills the nestlings not the heat. Bluebirds do fine in the hot weather. Insects contain water which keeps the young hydrated.

This article is from the *Bluebird, Journal of the North American Bluebird Society*. Summer 2012. Vol. 34 NO. 3.

## North American Bluebird Society

The Ontario Eastern Bluebird Society is an affiliate member of the NABS. I strongly suggest you get a membership which includes the Quarterly publication of their journal Bluebird. It has many current articles on all three species of bluebirds. Three of the articles in this newsletter are taken from the Journal of the North American Bluebird Society. They are still offering a 1 year affiliate membership at \$15. What better time to join when our dollar is at par. They can be found on the website at [nabluebirdsociety.org](http://nabluebirdsociety.org).

## Reports from the Field

**Adriano Borean** had his best year yet with 74 fledged bluebirds. His trail of 75 boxes is located in Binbrook on the Niagara Peninsula. 190 Tree Swallows and 12 house Wrens also fledged from this trail. Weather was recorded as the number 1 factor affecting nest box success.

**David Hampton** had another successful year with 111 bluebirds fledged from his 67 nest boxes in Dufferin County. David uses the gilwood box (54) and the Peterson box (13). All his boxes are on ½ inch conduit with car wax applied to stop climbing predators. David has maintained his trail since 1995. A total of 22 pairs or 5.05 young produced per pair. David does not have House Sparrows but House Wrens have been a real problem. Next season he will experiment with the House Wren guard.

Your newsletter editor **Bill Read** had his second best year ever with 380 fledged young second only to 397 in 1995. A total of 550 eggs were laid. 68.47% of eggs laid resulted in fledged young. I had 61 pairs of bluebirds on my trail which represents 6.23 fledged young per pair. This is considerably better than last years total of 212 young from 45 pairs or 4.7 young per pair and illustrates what a good year it was. Tree Swallows nested very successfully with over 500 fledged.

## Determining the Number of Bluebird Pairs on Your Trail

**Fledged young per pair is a good indicator of nest box success.** This year most trails will be over 6 young per pair. If you have a second nesting in the same box you can't always tell if it is the same pair. I had at least two re-nests in the same box that ended up being two different pairs. I had to count 4 pairs instead of 2 which lowers my fledged young per pair average. I band all the adults so I know exactly how many pairs I have. In other cases you may have what you think is a new pair when in fact it is a first nester that has moved to another box. You just have to be observant and take an educated guess.

**Joe Kral** from Guelph had a record year with 168 bluebirds fledged. He had a total of 28 pairs which represents 6 young fledged per pair. Joe has 498 nest boxes in Wellington County, most of them around Guelph Lake. He reports that he had fewer Tree Swallows this year but still managed to fledge 1463. This is down from 1778 in 2011. A total of 85 House Wrens and 47 Black Capped Chickadees also fledged. All of Joe's nest boxes are protected against climbing predators.

A great year.

**John Powers** had a record year with 141 bluebirds fledged from his 96 nest boxes in Bruce County. He also had 225 Tree Swallows fledge. Most of his boxes are located near pasture or along seldom used roadsides. John will soon be catching up to his brother Jerry.

**Felix Ventresca** and **Aurelio Munoz** had a record year with 145 bluebirds fledged. Their trail of 120 nest boxes is located in Short Hills Provincial Park on the Niagara Peninsula. All nest boxes have greased poles, 60 have baffles. Between 23-25 pairs of bluebirds are represented by this trail. This gives us 6.04 fledged young per pair. (145/24) A total of 216 successful Tree Swal-

low nesting's were also recorded. Weather was given as the number 1 presumed cause of nest failure. Thanks to **Margaret Kalogeropoulos** for compiling and sending in this report.

*Send your nest box reports in and I will include them in the spring newsletter.*

## A New Bluebird Book by David Pitts

This book is titled *Studying Eastern Bluebirds- A Biologists Report and Reflections*. By T.David Pitts. It discusses David's work with bluebirds and has a lot of information that is new. I recommend you get a copy. Copies will be for sale at the meeting at RBG on March 16th, 2013 for \$25 each.

## Winter Project: Nestbox Liners

*David Hampton*

Making bluebird nestbox liners from cereal box cardboard is not an entirely new idea. But maybe this would be a good time of the year to review their virtues and possibly add a bit to the technology. Sound good?

We all monitor our bluebird boxes regularly, but opening the door and peering into the darkness to count

accurately the number and colour of the eggs and the number of chicks can sometimes be challenging. Wouldn't it be nice if we could pull out the whole nest and its contents and examine it in the clear sunshine?



Every so often we like to take interested friends to our trail and let them or their children see what baby bluebirds look like close up. Wouldn't it be nice to be able to safely show the whole nest to them and let them see the babies open their mouths wide, or to show them the construction of the nest from coarse grass on the outside to the ever-finer grass of the cup? Or to show the partridge or chicken breast feathers protecting the eggs in a Tree Swallow nest or even the green moss of the chickadee nest? Sure it would.

But alas, sometimes we look in and see a nest and chicks soaking wet from wind-driven rain! Wouldn't it be nice to be able to slide out the whole nest and its contents and transfer the eggs or chicks into a new, dry liner containing a well-made, dry, abandoned nest that you saved from last year for just this situation? It is so satisfying.

Any other benefits from cereal box nestbox liners?

Sometimes even bluebirds make a skimpy nest or have to lay the eggs before the nest is really finished. The result could be that the eggs or the fledglings fall out when the door is opened or that the chicks get their legs pinched when the door is closed. The cereal box liner has sides two inches (5 cm) high so that even if the nest is shallow, the chicks have four walls around them keeping them safe within and free from drafts.



In this picture of the female both alula feathers along with the alula covert have been replaced. Notice the cinnamon chestnut wash on the tip of the alula covert. To the left of the bottom alula feather you can see the secondary coverts with this cinnamon chestnut edging on the distal edges. Above that the median and lesser coverts have the same edging on the tips of the feathers extending up to the shoulder. The top of the head also exhibits some chestnut colouring.

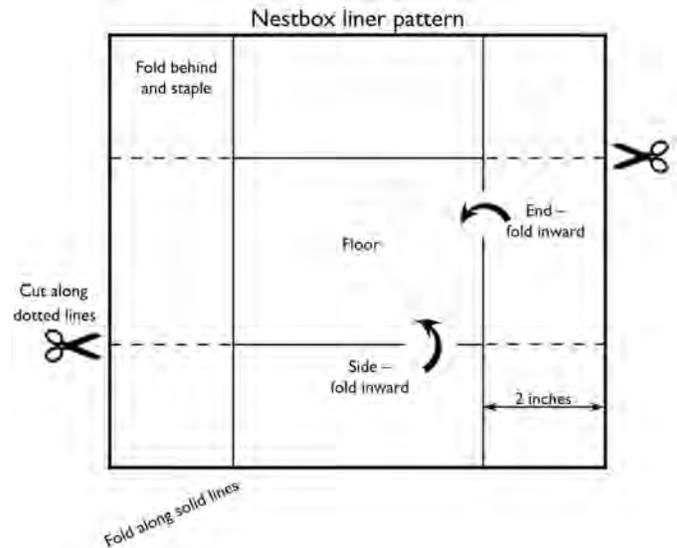
*Photo by Heather Wilson*

And of course the liners are cheap to make. You get the material for free when you or your neighbors finish eating your Quaker or Kelloggs.

Now, how do you make them?

In addition to a flattened cereal box, you will need: a good ballpoint or fine felt pen, scissors, a ruler, and an ordinary office stapler.

First make a pattern based on the dimensions of the floor of your own nestboxes (see diagram on opposite page). Draw the pattern on thicker cardboard, maybe from a frozen pizza carton. With a ruler, draw the folding and cutting lines. Cut out the pattern and use it to trace onto the cereal box cardboard.



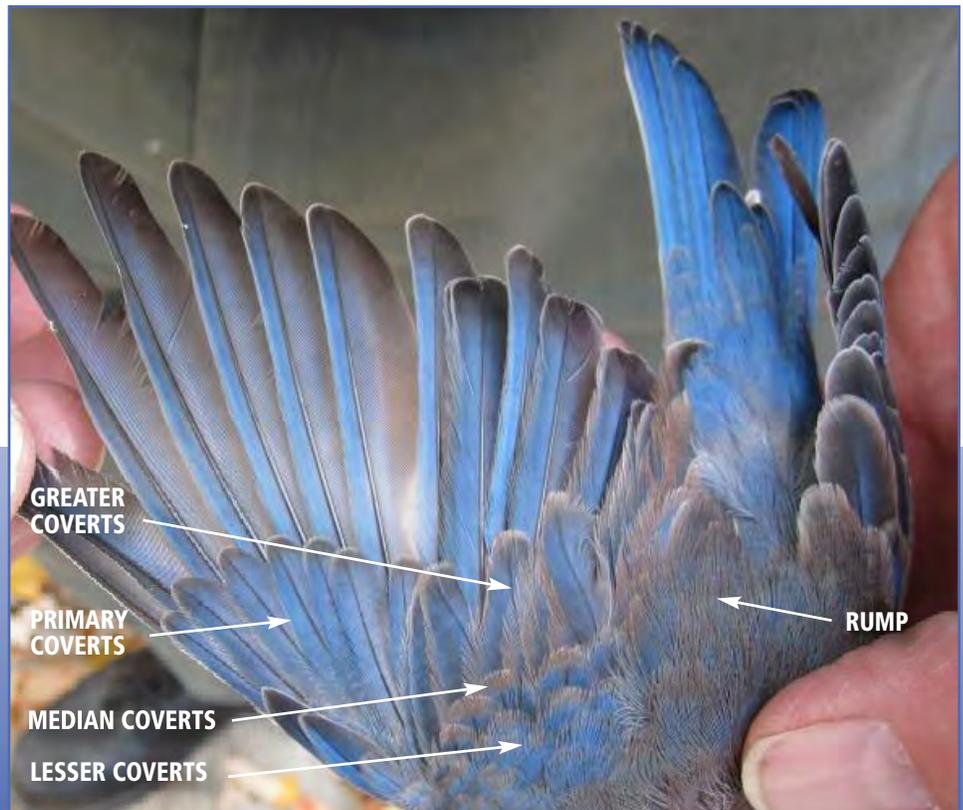
### A few details:

- Almost all of the 60 nestboxes on my trail are Gilwood design, so this pattern is for Gilwood. However, similar patterns can be made for any design. You begin with the floor dimensions.
- Cereal boxes have a shiny coating on the outside (advertising side). This coating is remarkably moisture resistant. So face the advertising side inside the liner. On the average, my liners last about three seasons.
- When you staple the ends together, make sure the smooth part of the staple is inside the liner and the sharp points of the staple are outside. It's to protect the residents.
- And finally, in Canada, all printed matter on packaged merchandise must be bilingual. So if you want your young bluebirds to learn some French while at home, use the French part of the cereal box too.
- **Article from the *Bluebird Winter 2011-12 Vol 34 No. 1.***

## Are Tree Swallow Populations Declining, or Just Moving?

Populations of birds that eat flying insects have been dropping at an alarming rate, especially in northeastern North America. Birds in this group include swifts, flycatchers, kingbirds, Purple Martin, and swallows. Researchers held a special conference to discuss the declines this past spring in Canada and a number of publications have addressed this topic.

One of the most ambitious efforts analyzed data from long running Tree Swallow nest-study sites across



This picture with the extended wing shows more of the chestnut edging on the greater coverts (on the distal edges) and on the tips of the median and lesser coverts. The upper back and rump have a chestnut wash to them.

Photo by Heather Wilson

the continent. The results reinforced previous findings that Tree Swallows are declining in the northeast, but also revealed the unexpected findings that the species is increasing in other parts of its range. Specifically, all six study sites that were in the northeast had declining trends, while four of the ten sites elsewhere in North America had increasing trends.

While this article provides good news about Tree Swallow population growth in parts of their range it doesn't shed any light on why the species is declining in the northeast. Several potential causes have been suggested, including forest regeneration and maturation (which close off the open forest structure favoured by Tree Swallows), climate change (causing life cycles of insect prey to be out of sync with the timing of Tree Swallow nesting cycles), and acid precipitation (which reduces calcium availability for insects, which results in calcium deficiencies for birds). However, each of these explanations falls short in one aspect or another, leaving researchers scratching their heads about the declines.

David Shutler (and 23 other authors). 2012. Spatiotemporal patterns in Nest Box Occupancy by Tree Swallows across North America. *Avian Conservation and Ecology* 7 (1):3. <http://dx.doi.org/10.5751/ace-00517-070103>.

**Editors comments** – The Atlas of the Breeding Birds of Ontario published in 2007 show that most of the Tree Swallow declines in Ontario have occurred in the Southern and Northern shield regions (18% and 28% respectively). According to the atlas- although the overall distribution has remained largely unchanged, there was a small but significant southward shift in the average latitude and northern edge of the species' range in southern Ontario, largely due to a sparser presence in the Southern Shield region during the second atlas. Most of the Ontario Eastern Bluebird Society nest box reports I have received for the 2011 and 2012 nesting season indicate stable or increasing numbers of Tree Swallows. Many trails reported record levels with all empty boxes filled with Tree Swallows. Most of these boxes are in Southern Ontario. We have in the past had large die offs of adult Tree Swallows caused by extended periods of unusually cold wet weather in March and April. Supposedly because of global warming Tree Swal-

lows are returning earlier making them more vulnerable to the volatility of our weather. I personally feel that weather may be the key factor causing declines in their numbers, especially in the Southern Shield Region. They migrate too far and get caught in these cold snaps and starve to death. Weather related declines happen from time to time. Populations usually are able to rebound but if this happens to often it causes a retraction in their range.

Article courtesy of the *Bluebird* Fall 2012 Vol. 34 NO. 4.

## Population Declines in House Sparrow and the European Starling

The British Trust for Ornithology reports that European Starling (*Sturnus vulgaris*) populations are in a free fall in the United Kingdom. Since 1979 the population has dropped by 80%. Across the whole of Europe



This picture shows clearly the chestnut edging on the distal edges of the tertial feathers. Notice the two central retrices (tail feathers) and one primary feather growing in.

Photo by Heather Wilson

the population has declined by a staggering 40 million birds in that time. House Sparrow (*Passer domesticus*) populations are down in the UK, too, with only one third as many birds present now as in the early 1970's. For both species the culprit seems to be habitat loss due to intensive agriculture and shrinking green spaces in cities. Both House Sparrows and starlings have declined in North America as well. According to Bent, the Ontario House Sparrow population peaked between 1910 and 1920 and thereafter began to decline. When automobiles replaced horses especially in the cities available grain which was the house Sparrow's chief food supply diminished. The European Starling population peaked sometime in the late 1940's and early 1950's. It was during this time that shotgun shoots were organized in some of the major cities in Southern Ontario to lessen the number of starlings roosting in downtown areas. One such shoot occurred in Hamilton's Gore Park on January 25th, 1954. 122 hunters armed with shotguns

were brought in and started blasting. About 5000 birds were shot at each shoot. Further shoots were planned twice a week until the end of April. J.L. Baillie, research assistant at the Royal Ontario Museum estimated the flocks in Hamilton totaled 2 million European Starlings.

In Ontario similar methods were employed to rid the countryside of House Sparrows. A note in the Brampton conservator on 28th February, 1902 described a sparrow shooting contest held that month at Streetsville, after which the winning side entertained the losers to an oyster supper at the Royal Hotel. The successful side bagged upwards of 3000 birds. (*Birds of Hamilton*-Page 419)

House Sparrows are still a huge problem for bluebirders as they will kill both Tree Swallows and bluebirds in the nest boxes. I lost 6 young bluebirds in 2012 to a male house sparrow at one of the apple orchards. A rogue male House Sparrow slipped into the box while the adults were off looking for food for their nestlings.



Photo by Rick Ludkin

The above picture of a male and female Eastern Bluebird was taken by Rick Ludkin at Ruthven Park near Cayuga. The female on the right has retained juvenal greater coverts which tell us she hatched in 2012. Notice the prominent eye ring which is not present on the male. The male also has retained juvenal greater coverts which indicate he also hatched in 2012. Both these birds will be classified as Second Year birds (SY) on January 1st, 2013.

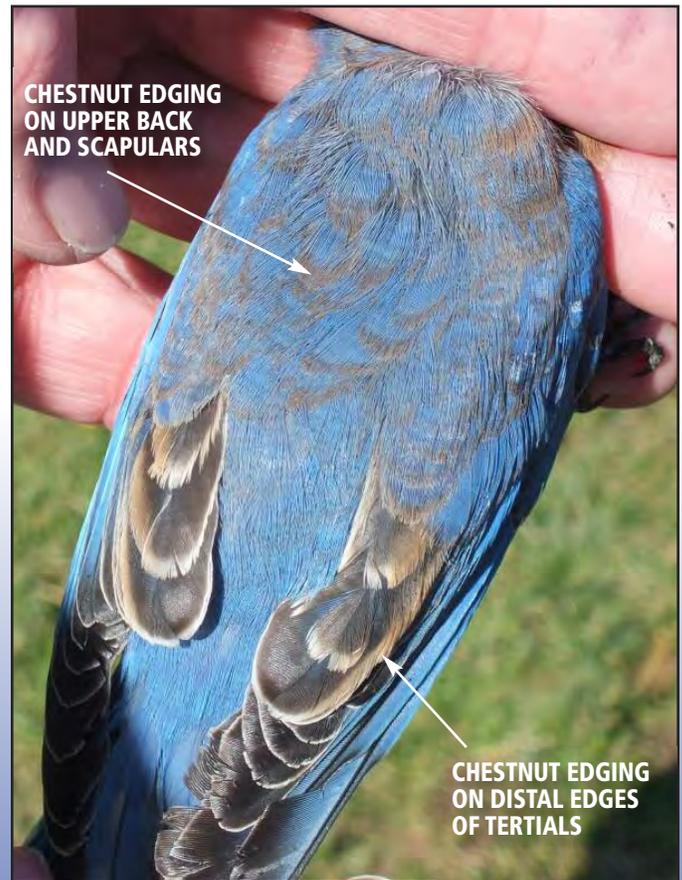
It quickly killed all 6 young and then left the area. It does this by hammering the head of each nestling with its weaver finch bill. If you find dead Tree Swallows or bluebirds in nest boxes with their heads devoid of feathers and bruising around the head it is almost certain to be the work of a House Sparrow. The male House Sparrow usually stays to try to take possession of the box. It is possible in this case the bluebirds drove it off when they returned. The male bluebird stayed to re-nest but the female left the area. Both were banded. He was able to attract another mate and had two more nestings in a different nest box that produced 8 young. **I humanely dispose of all House Sparrows on my trails.**

The last Ontario Breeding Bird Atlas that finished in 2005 puts the current population of the House Sparrow at 2,000,000 and the European Starling at 4,000,000. The current Eastern Bluebird population in Ontario is estimated to be 40,000.

## Rehabbed Female Eastern Bluebird Released

On May 27th I led our annual OEBS bluebird field trip and one of the places we visited was an apple orchard south of Cambridge, Ontario. (70 bluebirds fledged from this orchard and 40 from the adjacent orchard in 2012 ). At box OH-17 we observed 4 young begging for food when I opened the nest box, this is always a bad sign especially for older young indicating they are not being fed enough. On previous visits I had only seen the female feeding them and had not observed the male. We observed the nest box and it became clear to me that no adults were present. Later that day the ASY female was found dead under a bird bath at the front of the orchard owner's house. She was banded as an ASY (after second year) female 2541-67296 in this same orchard in 2011 making her at least 3 years old. We took the young with us on the rest of the trip with the participants alternately feeding them and keeping them warm by cupping them in their hands. After the trip I took them to a licensed bird rehabilitator in Rockwood (SOAR). Two of the young, both females survived and one was released about 3 weeks later in the same orchard. The other female did not grow in her feathers properly and could not fly and at that time was not releasable with her sibling. All breeding and non-breeding adults have a complete or prebasic moult in late August-September after they are finished nesting. During this time all feathers are replaced. All young

bluebirds have a partial first prebasic moult about 2 to 4 months after hatch where they replace some juvenile feathers with new adult feathers. It was around this time that she started growing in new feathers. The pictures on pages 4, 5 and 6 were taken before she was released. I am usually able to age adults by the presence or absence of retained juvenile plumage the following spring. The very nutritious diet she was given during her stay at SOAR in Rockwood enabled her to do this. We decided that she could be released and wanted to do it before the bluebirds had left this area. She was released on October 4th in an apple orchard north of St. George, Ontario. I do not band bluebirds at this time of year and do not see them in this plumage. They have a cinnamon chestnut edging over much of their body. I was fortunate to be at Ruthven with Rick Ludkin when several bluebirds with this plumage were banded. It wears off by the spring as it is not noticeable at that time in both second year (SY) and after second year (ASY) birds. •



*Photo by Rick Ludkin*

This male Eastern Bluebird displays the cinnamon chestnut edging on the back and scapulars and on the distal edges of the tertials.