

THE ONTARIO EASTERN BLUEBIRD SOCIETY

FALL NEWSLETTER - OCTOBER 1989

2-165 Green Valley Drive,
Kitchener, Ontario, N2P 1K3

Welcome to the second official newsletter of The Ontario Eastern Bluebird Society.

A special thanks to all nest box trail operators who sent in survey forms for the 1988 nesting season, and those who supported us by becoming members. The objectives of the OEBS were outlined in the first newsletter. (A copy of the Spring 1989 Newsletter may be obtained by sending 50¢ and a self-addressed stamped envelope to the editor.) The main objective was to monitor population trends from year to year by surveying the number of boxes in use and the number of fledged young produced.

The final total of fledged EABL's for 1988 was 6,352, up substantially from 4,905 fledged in 1987. (The 1988 nest box summary report is included in this newsletter.) A total of 155 survey forms were received for 1988; this total represents an increase of 39.4 percent in the number of fledged young from 1987, achieved while only increasing the number of monitored nest boxes by three percent from 8,426 to 8,809. Fledged EABL's per monitored box have increased from .59 in 1987 to .73 in 1988; this may indicate that nest box trail operators are becoming more efficient at trail management.

OEBS Correspondence

I receive many letters throughout the year from members and non-members concerning all aspects of bluebirding. I have made every effort to answer all of these, but sometimes it takes a little time. My apologies to those who have waited for a response. All of your mail is very valuable to the OEBS and every letter is kept on file for future reference. Doreen Stahle will be helping the OEBS in this capacity by answering some of these enquiries. When making an enquiry, it would be helpful if you could include a self-addressed stamped envelope.

OEBS 1990 Conference

A one-day Eastern Bluebird Conference has been scheduled for April 7th, 1990, at the Royal Botanical Gardens headquarters in Burlington, Ontario. Conference information will be mailed sometime in late January or early February of 1990. Make sure to mark this date on your calendar.

Membership Card

You will find enclosed your 1990 membership card and dues application. This will save the OEBS from having to mail out the cards upon receipt of dues.

Community Wildlife Involvement Program (MNR)

The Community Wildlife Involvement Program, run by the Ministry of Natural Resources, has given monetary assistance to many new nest box trail operators in Ontario. This support is greatly appreciated by the OEBS. You can apply for assistance under this program by asking for the CWIP coordinator at any Ministry of Natural Resources district office. A total of 24 Eastern Bluebird trails indicated they had received financial assistance from CWIP; out of this total, 19 trails indicated 916 fledged young Eastern Bluebirds.

1989 Nest Box Survey

It's time again for the third annual Ontario Eastern Bluebird Nest Box Survey. Please fill out and complete the enclosed survey. In cases where you are not sure of the information, leave it blank or make an estimate; if you estimate, indicate this on the form with est, but by all means return the survey as soon as possible. If you do not have a Bluebird trail, would you please distribute the survey form to the Bluebird trail operators that you are aware of in your area: one successful nesting represents an EABL trail. I will be writing an update report on the status of the EABL in Canada for Cosewic*, and it is very important that as many people as possible are aware of this year's survey. Many thanks for your cooperation.

William F. Read, 2-165 Green Valley Drive, Kitchener, Ontario, N2P 1K3.

*Cosewic - Council on the Status of Endangered Wildlife in Canada.

Maritimes Breeding Bird Atlas

The fortunes of the EABL have taken a turn for the better in the past five years or so in this part of Canada.

Brian Dalzell, coordinator of the Maritimes Breeding Bird Atlas, believes it is partially due to nest box trails in New England and the ability of the bird to adapt to forest clearcuts in the region. At any rate, they are on the increase and reoccupying their former range, which in some cases had been vacant for 40 years or more.

The atlasers also found them nesting on P.E.I. this summer. These sightings are a first for the province and indicative of the general resurgence of the species in the Maritimes. Please refer to the enclosed map provided by the MBBA, showing the distribution of the EABL in the Maritimes. Thanks to Brian Dalzell for providing the OEBS with this information. Contributions to support the work of the Maritimes Breeding Bird Atlas may be made to:

Brian Dalzell,
Nova Scotia Museum, 1747 Summer Street, Halifax, Nova Scotia, M3H 3A6.

Coping with the House Wren by Harold S. Pollock.

Prior to the summer of 1987, I had no reason to be unduly concerned with the uncivilized behaviour of the House Wren (Troglodytes Aedon). That spring, however, Calvor Palmateer and I put up Bluebird nest boxes on the top of a 1,100-foot (335 m) mountain on Galiano

Island. This is one of the Gulf Islands lying between the British Columbia mainland and Vancouver Island. Although the island is about 2 miles by 14 miles (3.2 km by 22.5 km) in size and in an area where there are only a few Western Bluebirds (Sialia Mexicana), none of the local naturalists I met have ever seen Bluebirds nesting there.

Later in May, while I was checking the boxes, a female Western Bluebird flew out of one which, I was delighted to find, contained six eggs. My joy was short-lived, however, for when I returned to the scene about three weeks later I found, to my dismay, six well-developed but dead nestlings. They appeared to have been killed when only a few days old.

The only other "active" box in the area was occupied by House Wrens. I felt fairly certain that they were the culprits as this is not uncommon behaviour for this species (Zeleny - Sialia 7(2): 57-58). Thus, we lost a year's progress in establishing a Bluebird colony in this promising new territory. This disaster was the catalyst that set in motion an urgent search for a solution to the "Wren problem": we realized that until we could prevent Wrens from moving into our Bluebird boxes and therefore from nesting nearby, we had little hope of success. Because of the ruggedness and remoteness of this mountain and the restrictions imposed by ferry schedules, it is only feasible to monitor the nest boxes there two or three times a year.

The nesting material (twigs) used by the House Wren is stiff, while that used by the Bluebird is pliable. Perhaps this difference could be exploited as a means of differentiating between the two species. From this, came the idea of incorporating a portal inverted U over the entrance hole that would keep the Wren off-balance when it tries to take twigs into the box. As its claws reach for the bottom of the entrance hole, its head is held back by the twig striking the front of the guard. It is leaning backwards and is in an awkward and unstable position which it can only maintain with great difficulty.

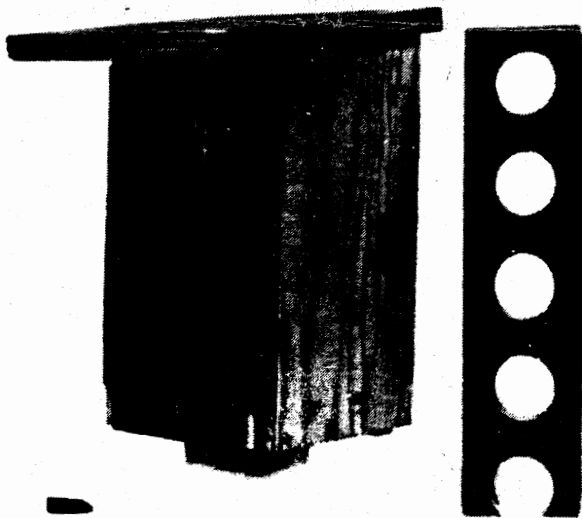
As I monitored my Bluebird nest boxes on the southern part of Vancouver Island in the spring of 1988, I was on the lookout for Wren nests. Whenever one was found, I removed the twig-constructed nest, closed the box and fastened the guard over the entrance hole. I then left the Wrens to their own resources for a few days, after which I returned and opened the box for inspection.

In all, I found 17 House Wren nests. Of this total, only three were rebuilt. The remaining 14 boxes were abandoned. As Wrens are usually quite vigorous and persistent in rebuilding when unimpeded, this seemed to indicate a fair measure of success. If Wrens can be kept from taking over Bluebird boxes, they will be forced to nest farther from the Bluebird trail and so should prove less troublesome to Bluebirds and bluebirders. Fewer boxes would be plugged up with twigs and fewer punctured eggs or dead nestlings of other species would result.

A question that arises is what effect, if any, the guard has on the Bluebirds' acceptance of these "framed" nest boxes. Because of the scarcity and remoteness of Bluebirds in this general area, I was unable to try out the guard on a box before it had been taken over by a Bluebird. However, I placed guards on two boxes already being used by

Western Bluebirds, both at the egg stage. In each case, there was an initial hesitation of a minute or so when the female fluttered around the entrance hole and then withdrew. This happened once or twice and then it entered the box, and from then on it behaved quite normally. Guards were placed on other boxes before being used by Violet-Green Swallows (Tachycineta Thalassina) and they were readily accepted.

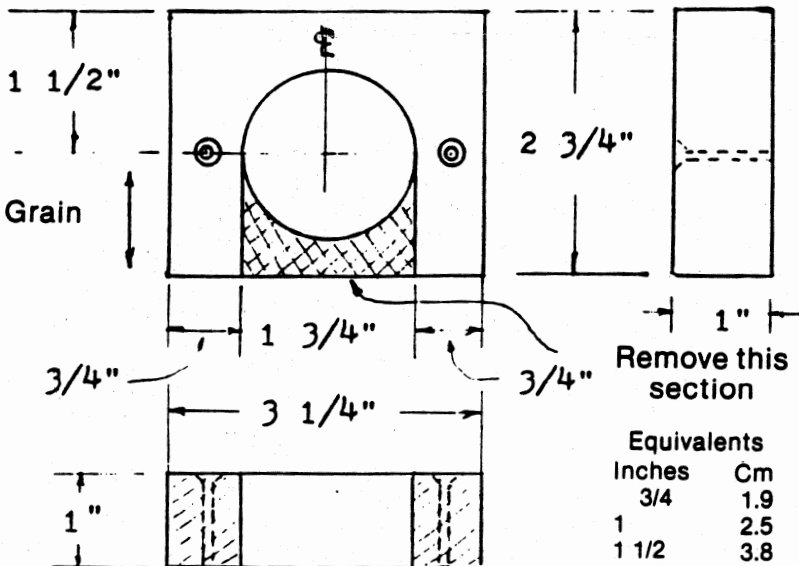
The dimensions of the wren-guard are shown in the drawing. Any soft wood such as pine or cedar may be used. The work is facilitated and time is saved by cutting a strip of wood to the required width and long enough to make eight or ten guards at one time. Mark the centers for the larger holes and holes for mounting. Saw out the 1-3/4 inch (4.4 cm) center holes, and drill clearance holes with a #28 or equivalent twist drill and counter-sink for 1-1/4 inch by #6 (3.2 cm by #6) flat-head wood screws (Robertson preferred). See photograph. Then cut the strip into 2-3/4 inch (7 cm) sections. From each, remove the portion below the hole with a band saw and round off the inner edge and corners with a half-round wood rasp. See drawing.



HOUSE WREN GUARD

Top view

Side view



End view

Equivalents	
Inches	Cm
3/4	1.9
1	2.5
1 1/2	3.8
1 3/4	4.4
2 3/4	7.0
3 1/4	8.3

These wren-guards can be secured to nest boxes in the field, keeping the entrance and guard holes concentric, without the necessity of drilling the fronts for mounting screws. If used with front-opening boxes, the swing-down type works best as it permits opening without interference from the guard. One caution should be observed. The guard may not work if the box slopes backwards. It should either be vertical or slope forward.

The wren-guard design given has not been optimized and experience may suggest dimensional changes that will improve its effectiveness. Approximating the U shape by three straight pieces of wood may also work almost as well. I would appreciate hearing from other bluebirders who try out the design described or modifications of the same. Address: 104-225 Belleville Street, Victoria, British Columbia, V8V 4T9.

Nest Box Management where House Sparrows are a Problem by William Read.

Nest Box Trail located near Cambridge, Ontario

House Sparrows (Passer Domesticus) can be a serious competitor on Eastern Bluebird nest box trails. On a recent survey of trails in Ontario in 1987, House Sparrows, House Wrens and blow-flies were ranked by trail operators as the number one presumed cause of nest failure.¹

When Bluebird trails are unsuccessful, the blame may usually be traced to either improper location of the nesting boxes or failure to prevent House Sparrows from taking over.²

In both 1986 and 1987, I found a male Eastern Bluebird killed in a nest box by a male House Sparrow. Each year also, I found several Tree Sparrows killed along my trail in a similar manner. In both cases, the Bluebird's head was completely devoid of feathers. The male House Sparrow pecks the Bluebird on the head, knocking all feathers off and causing severe injury; young Eastern Bluebirds are killed in the same manner. I have witnessed this on several occasions, in both 1988 and 1989.

Eastern Bluebirds are extremely aggressive in defending their nesting territory. The problem seems to occur when a Bluebird and House Sparrow end up in a nest box together. Either a male House Sparrow enters the box when a Bluebird is gathering food for its young, or the Bluebird is roosting in a nest box within the House Sparrow's territory.

I have witnessed Eastern Bluebirds aggressively defending and chasing Common Flickers, Red-headed Woodpeckers, European Starlings, House Sparrows and Tree Swallows. On one occasion, I watched a male Eastern Bluebird grapple with a Starling in mid-air; they tumbled to the ground, and the Bluebird flew up to chase the Starling away from its territory. Starlings are never a problem as long as nest boxes have entry holes 3.81 cm or 1½ inches in diameter, too small for the Starling's body size.

Eastern Bluebirds returning in early spring are extremely vulnerable to House Sparrow attack. They arrive in a weakened condition after a long migration, may have a very slim supply of food here, and then try to defend a nest box or roost in a box where House Sparrows are common. A resident House Sparrow may have already claimed the box for his own, and upon returning to roost finds the male Eastern Bluebird. Bluebirds outside a nest box are more agile than House Sparrows; in a confined area, however, they are no match for House Sparrows with their weaver finch bills.

Footnotes:

¹ Read, W. F. 1987. Short Communications. Ontario Bird Banding 19: 34-5.

² Zeleny, L. 1986. The Bluebird: How You Can Help Its Fight for Survival. Available from North American Bluebird Society (address at end of article).

In 1986, a male Bluebird was killed in a nest box with the nest only partly built by the female. Since the female builds the nest with encouragement from the male, who usually does not enter during nest building, I surmised that the male had entered the box after the House Sparrow. This supports the view that Eastern Bluebirds are aggressive and will fight to the death defending a nest box or young against House Sparrows.

Putting up Bluebird or Tree Swallow nest boxes in urban areas or in rural areas where there are large populations of House Sparrows only encourages Eastern Bluebirds to nest where their chances of being successful are greatly reduced.

I recommend the following:

- (1) Place nest boxes at least 400 meters ($\frac{1}{4}$ mile) from barns or houses where there are large populations of House Sparrows. If House Sparrows continually occupy the nest boxes after removal of their nests or young, the only solution may be to move the boxes to another area. It is important to remember that only the nests of House Sparrows and European Starlings can be removed from nest boxes. All other cavity nesters, House Wrens and Tree Swallows included, are protected by law.
- (2) Keep in mind that the male House Sparrow has a greater attachment to his nest box than the female. Even if the female, nest and young are removed, the male will not give up possession of the nest box (personal observation).³
- (3) It is possible to completely remove House Sparrows from a limited area, using commercial sparrow traps. Eastern Bluebirds have nested successfully in some areas where they have not been seen for over 100 years.⁴ Keeping House Sparrow populations controlled is a labour-intensive activity and must be maintained on a regular basis, especially if a small Eastern Bluebird population has been established in the controlled area.

The best time to trap House Sparrows is in late winter when large numbers congregate around barns and other buildings. It is best to bait the area with some kind of seed mixture.

Since male House Sparrows incubate, it is possible to sneak up to the box and remove them, especially on cold, wet days when they are reluctant to leave the eggs. If you miss catching them on the first try, they become extremely wary on your next visit.

If House Sparrows are allowed to nest successfully in boxes, the young will in turn seek out boxes in which to nest. This will result in an increase in boxes occupied by House Sparrows and actually pose a greater threat to Bluebirds than if the boxes were not put up in the

Footnotes:

³ Grussing, D. 1988. Controlling the Male House Sparrow. Sialia 10: 21-2.

⁴ Sialia Slide Show from North American Bluebird Society.

first place, the opposite of what was intended. So-called Eastern Bluebird trails that allow House Sparrows to nest, or that are not monitored on a regular basis, can actually do more harm than good to the Bluebird, especially if the trail is located in an area where House Sparrows are common.

Special House Sparrow traps, and the article on how to control House Sparrows by Don Grussing, are available from: North American Bluebird Society, Box 6295, Silver Spring, Maryland, U.S.A., 20906-0295. Send a self-addressed stamped envelope with your enquiry. The plans for a commercial sparrow trap that you can build yourself can be obtained by sending a self-addressed stamped envelope to the OEBS.

North American Bluebird Society

I would recommend for all nest box operators to become members of NABS. The address is written below. Their Tenth Anniversary Edition 1988, has compiled some of the best articles written about Bluebirds over a ten-year period. I would recommend it highly, as I would recommend a subscription to the NABS.

North American Bluebird Society, Box 6295, Silver Spring, Maryland, U.S.A., 20906-0295. Membership--Regular: \$17.00 U.S.

Establishing an EABL Nest Box Trail

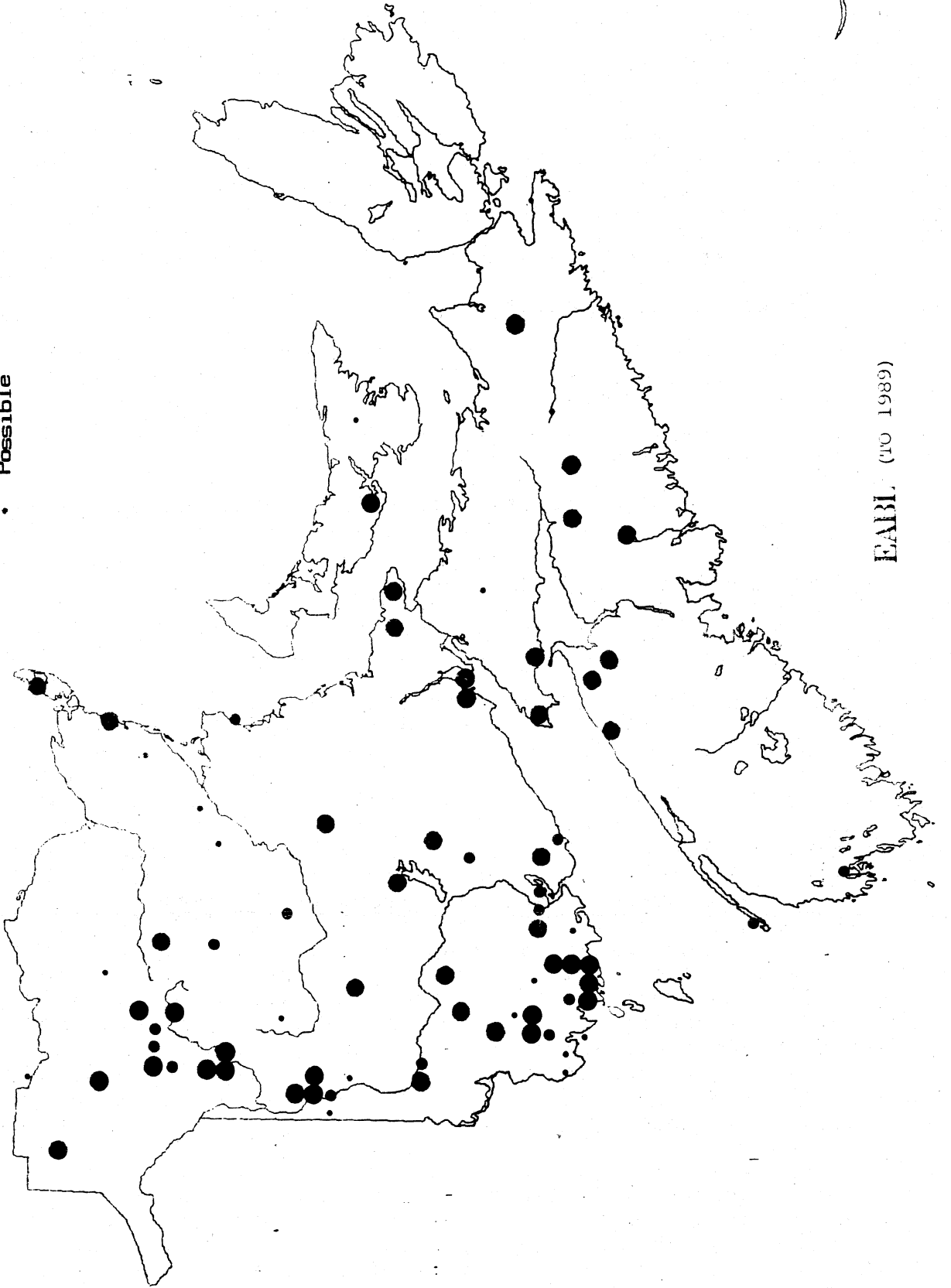
Nest box placement and commitment to managing a trail are important components in achieving nesting success.

Nest box placement is the most critical aspect when establishing an EABL nest box trail. (See article by Lawrence Zeleny on the importance of nest box location in the OEBS Spring 1989 Newsletter.)

By far the easiest task is building the nest boxes. There really isn't much value in building 100 boxes and then putting them in locations where there is little chance of EABL's nesting in them. This accomplishes almost nothing, and may even be detrimental to EABL's by allowing nest-box breeding House Sparrows to use them. The fledged non-native House Sparrows then look for boxes to nest in, competing with EABL's. A much better idea would be to build fewer nest boxes and spend the extra time placing them in the correct habitat. This involves driving around locating areas that would be suitable for nest boxes, and then asking the land-owner's permission to put the boxes up. (I find pastured areas with cattle and sheep provide ideal locations for EABL's. Horses tend to chew the nest boxes, and are less desirable.) When the project is explained to the farmer land-owner, he invariably says "yes".

I believe an important component when working with young people in conservation programs, is teaching them that commitment and follow-up (record-keeping over a number of years) are important and part of the over-all process; that the task is not complete after a one-day workshop building nest boxes. It is distressing to me to observe the amounts of money and time that have been wasted on nest-box building programs that lack this component. Record-keeping is extremely important in documenting the breeding success of the Eastern Bluebird, over a large geographic area.

- Confirmed
- Probable
- Possible



EABL (to 1989)

ONTARIO - 1990 EASTERN BLUEBIRD NESTBOX SURVEY

NAME _____

ADDRESS _____

PHONE (____) _____

County where bluebird boxes are located: _____

If more than one county, number in each: _____

How many bluebird boxes did you monitor? _____ Total number of boxes on your trail: _____

How many times did you check your trail during the nesting season? _____

Number of boxes used successfully¹ by Eastern Bluebirds: _____

Number² of successful Eastern Bluebird nestings (broods): _____

Number of young EABL's fledged³: _____ Unsuccessful Eastern Bluebird nestings⁴: _____

¹ "Used successfully" means at least one bluebird was fledged. More than one nesting per box equals one box used successfully.

² Include all Eastern Bluebird nestings in each box; for example, two broods raised in one box equals two successful nestings.

³ A young bird is said to be fledged when it leaves the nestbox on its own power.

⁴ Include in this category if a nest was built or if eggs were laid but for some reason no Eastern Bluebirds fledged.

Number of Eastern Bluebird eggs laid in boxes: _____ Blue White

Number of EABL eggs known to have hatched: _____ Number of EABL eggs which did not hatch: _____

Number of eggs for which fate unknown: _____

Description of Box:

Top Opening: _____ Side Opening: _____ Front Opening: _____

Depth from bottom of hole to floor: _____ Inside dimensions: _____

Wood type and thickness: _____ Colour of box: _____

What sort of predator protection was used, if any? _____

Successful Nestings of Other Species:

House Wren: _____ Tree Swallow: _____

Black Capped Chickadee: _____ House Sparrow: _____

Banding Totals:

Eastern Bluebird: _____ Tree Swallow: _____

Name of Bander: _____

Number of years you have maintained a nestbox trail: _____

What methods were used to discourage House Sparrows? _____

Date of first Eastern Bluebird sighting in 1990: _____ Date of last Eastern Bluebird sighting in 1990: _____

Number of pairs of EABL's represented by your nestbox trail: _____ Has the population of EABL's in your area increased or decreased over the past five years? _____ from 1989 _____

Where are your boxes located? Please circle:

Pastureland, open field, cereal crops (corn, barley, oats, wheat, etc.), hedgerow, woodland edge, railway tracks, lawn (any mowed area, park, golf course), cemetery, roadside, orchard, garden.

If eggs or nestlings were lost, indicate the importance of the presumed cause. (Please number--"1" for the most important to "8" for the least important):

Pesticides/herbicides: _____ Humans: _____ Raccoons: _____

House Wrens: _____ House Sparrows: _____ Squirrels: _____

Snakes: _____ Blowflies: _____ Weather: _____ Other: _____

Would you be willing to share your trail and experiences with others? _____

* Suggestions for changes in survey or overall comments:
* _____
* _____
* _____

Did you receive C.W.I.P. funding?

* _____
* _____
* _____

Yes: _____ No: _____

Ontario Eastern Bluebird Nestbox Survey - 1989

W.F. Read

The Eastern Bluebird has increased substantially in Ontario during the past decade (1980-1990) and may be at a higher population level than at any time since the late 40's or early 50's. (Discussions with senior naturalists.)

This increase can, in my opinion, be attributed to a number of factors:

- 1) the increase in well managed nestbox trails in all areas of Ontario by dedicated blue birders.
- 2) an absence of abnormally cold wet weather during the breeding season.
- 3) an absence of abnormally cold weather in their wintering areas in the Eastern U.S.
- 4) a decline in the population of House Sparrows' which can be attributed to changing farming practices in Ontario over the past 40 years has lessened competition in rural areas between House Sparrows and Eastern Bluebirds.
- 5) the adaptability and resilience of the Eastern Bluebird.
- 6) the formation of organizations which promote Bluebird conservation in North America. In particular, the NABS and in Ontario the OEBS.

Well managed predator proof nestbox trails have allowed EABL's to fledge more young than is necessary to sustain the population at its current level and these additional birds have enabled the population to increase from year to year. This has been achieved because of the dedication and perseverance of long time trail operators over many years. Proper nestbox design and site location along with continual monitoring to determine success rates and discourage nestbox competitors are important ingredients on a nestbox trail.

Several programs in Ontario have been undertaken to establish EABL nestbox trails. Unfortunately, with many of these projects the boxes were placed in unsuitable locations and monitoring was not carried out to determine success rates or deter House Sparrows from nesting in them. This kind of trail is unproductive and even detrimental to other native cavity nesters.

Cold wet weather during the early part of the breeding season can result in high nest mortality. This happened in 1984 and again in 1990.

Larger populations are less affected by natural weather related mortality and quickly rebound. Smaller populations take longer to recover.

Abnormally cold weather in their wintering areas may also cause a population decline. The winters of 1977 and 1978 were especially harsh and did have a dramatic effect on the Ontario population.

House sparrows have declined in Ontario over the past 40 years because of changing Agricultural practices. Around the turn of the century and into the early part of the 20th century, House Sparrows were abundant. Transportation was by horse and fields were worked by horse or oxen (approximately 80% of Ontario residents were on the farm) which created optimum conditions for House Sparrows. Eastern Bluebirds were also common to abundant at this time. There are several reasons for this; starlings had not spread from urban areas to rural areas in the numbers of today leaving many cavities still available for EABL's. Also, agricultural Ontario provided plenty of cavities in fence rows which were made of cedar posts, split rail fences and uprooted tree stumps. With changing fencing

practices., (T-bars and barbed wire began replacing some of the wood fences) and with starlings increasing rapidly and beginning to occupy rural areas in greater numbers, EABL's began to decline. The House Sparrows and Bluebirds were forced to compete for fewer and fewer available cavities. EABL's are very aggressive but do not fare well against House Sparrows and in most cases are driven off or end up being killed by the non-native male House Sparrow. House Sparrows have also declined during this period but their demise can probably be correlated with the decline in the number of horses in Ontario.

Eastern Bluebirds have proved very adaptable to man-made boxes and will disperse widely. They have an extensive geographical distribution at present in Ontario.

The 1989 totals indicate that 8,260 EABL's fledged from nestboxes, a considerable increase from 1988's total of 6,352. This total represents an increase of 30% in the number of fledged young from 1988. This can be attributed to more reports received and greater success rates on trails. A total of 176 reports were analyzed from 44 counties.

The number of monitored nestboxes reported increased substantially from 8,809 to 11,426, an increase of 29.7%. Fledged EABL's per nestbox monitored has remained the same at 0.72% in both 1988 and 1989.

The 1989 nestbox survey represents a total of 1,723 EABL pairs. This figure was obtained by using an average of 4.8³ fledged young per EABL pair in Ontario. Assuming 85% of trail operators responded to the survey, the actual population as represented by nestboxes could be as high as 2,027 pairs.

The increase in well managed nestbox trails throughout eastern North America will continue to be an important factor in the EABL's recovery.

Eastern Bluebirds have shown preferences for clear cut areas and forest fire burns in Boreal Forest areas of Ontario. One naturalist reported to me that in a burned out area in Rainy River District near the Minnesota border, the EABL was the most common passerine.

In pre-agricultural Ontario when much of the province was covered by Climax Forest the EABL would probably have been classified as rare.

Based on abundance estimates only, from the Ontario Breeding Bird Atlas (Cadman et al, 1987), a population range from 1,063 to 7,094 pairs of EABL's is possible in Ontario. Ontario's population will be at the upper end of this abundance estimate and may at present be considered uncommon rather than rare.

Population monitoring such as the OEBS nestbox survey will continue to be an important tool in assessing the status of the EABL in Ontario.

Literature Cited:

Cadman, M.D., P.F.J. Eagles and F.M. Hellejner (Eds). 1987. Atlas of breeding birds of Ontario. Univ. Waterloo Press, Waterloo.

1. OEBS Ontario Eastern Bluebird Society, 165 Green Valley Drive, Unit 2, Kitchener, Ontario Canada, N2P 1K3
2. NABS North American Bluebird Society, Box 6295, Silver Spring, MD, 20906-0295, USA
3. 4.8 fledged young per EABL pair average obtained by analyzing data from trail information (author).

Ontario Eastern Bluebird Nestbox Survey - 1989

Addendum to the 1989 Eastern Bluebird (EABL) Ontario Nestbox Survey Sheet issued with the Fall 1990 OEBS Newsletter.

Statistical information in this summary sheet was taken directly from the 1989 EABL nestbox survey forms received by the author.

Estimates were made for EABL fledged young if they were not included on the survey forms. For example, if a respondent indicated six successful nestings, but made no estimate of total fledged young, I would estimate (4×6) or 24 fledged young EABL's. Estimates were not made in other cases. For example, if egg totals were not included on nestbox survey forms, then no estimate would be made on the respondents' survey forms. This is why the egg total is actually lower than the EABL fledged young total. The egg total would probably be around 12,500 if all trail operators counted and recorded on their survey sheets the eggs laid. (See article on nestbox monitoring and banding in the Spring 1990 OEBS Newsletter.) In order to analyze data in a statistical manner, individual survey forms would have to be examined.

The information collected and analyzed on the summary sheets is a good indicator of population changes or trends from year to year. The survey started in 1987 and will continue as one of the major objectives of the OEBS.

