

Ontario Eastern Bluebird Society Nestbox Survey - 1996  
*William Read*

Since 1987, the Ontario Eastern Bluebird Society (OEBS) has conducted a survey of the results from nestbox trails operated throughout Ontario. This report summarizes the data obtained from the 1996 survey.

### Methods

A survey was distributed to all known operators of EABL nestbox trails in Ontario and to all members of the Ontario Eastern Bluebird Society. The forms requested standard information regarding the operation and nesting success of the nestboxes. The data reported was incorporated directly into the attached summary table (Table 5) which is arranged on a county basis.

Because not every form was complete, it was necessary to make some estimates for the missing data based on the information that was supplied. For example, if a respondent indicated six successful nestings, but made no estimate of total fledged young, an estimate of  $(3.5 \times 6)$  or 21 fledged young was used. On the other hand, no estimates were made for the other categories if they were not reported on the survey.

### Results

A total of 4611 EABL's were recorded fledging from the 1996 nestbox surveys. Ninety-two reports were received for 1996, an increase of 3 over 1995. The number of monitored nestboxes increased to 5718 from the 1995 total of 5653 (Table 2).

The 1996 Nestbox Survey represents a total of 1027 EABL pairs in Ontario. If EABL pair information was not recorded on survey forms, the figure was estimated using an average of 4.56 young per EABL pair per nesting season. In calculating the number of pairs of EABL's, the number of fledged young reported was divided by a factor of 4.56 to establish the estimate of EABL pairs. This calculation is made only if the respondent did not include the number of EABL pairs on the survey form.

In order to arrive at a figure that more accurately represents EABL breeding success in 1996, I examined the 52 surveys that recorded both numbers of EABL pairs and fledged young. A total of 519 EABL pairs fledged 2365 young of 4.56 young per pair in 1996. This figure was used to calculate the number of EABL pairs.

Six hundred and five EABL's and one thousand five hundred and seventy-two tree swallows were reported banded during the 1996 season. Banding was carried out by David Lamble, Bill Read, Bob Hubert, P.J. Nairaway and Dave Raynor.

## Nestbox Survey

Occupation (number of nestings only - not fledged young) of nestboxes by the usual other bird species occurred with 305 House Wrens, 2542 Tree Swallows, 29 Black-capped Chickadees and 30 House Sparrows. The number of House Wren nestings increased to 305 from 206 in 1995.

### Fledged Young Calculation Per EABL Pair

Fledged young calculation per EABL pair - in an earlier unpublished report (W.F. Read, 1988) I calculated that on average each EABL pair would produce 4.8 fledged young over one breeding season. In 1996, 519 pairs reported 2365 fledged young or 4.56 fledged young per pair.

This figure is the same as 1995 and indicative of a very successful breeding season.

### Fledged Young per Pair per Breeding Season

Year	EABL pairs	Fledged young	Fledged young per pair
1989	894	3804	4.26
1990	793	3081	3.81
1991	794	3345	4.21
1992	801	3121	3.90
1993	553	2076	3.75
1994	516	1944	3.77
1995	510	2328	4.56
1996	519	2365	4.56
<b>Total</b>	<b>5380</b>	<b>22064</b>	<b>4.10</b>

**Table 1 - Percentage of Attempted EABL Nestings which were Unsuccessful as Reported on OEBS Surveys from 1988 - 1996**

Year	Attempted Nestings	Successful	Unsuccessful	%
1988	2112	1608	504	23.86
1989	2321	1985	336	14.48
1990	2548	1977	571	22.41
1991	2393	1956	473	18.26
1992	2065	1574	491	23.77
1993	1140	805	335	29.28
1994	1107	864	243	21.95
1995	1250	1051	199	15.92
1996	1241	1080	161	12.97

## Nestbox Survey

**Table 2 - Fledged Young Per Monitored Nestbox  
As Reported on OEBS Surveys 1987 - 1996**

Year	Boxes Monitored	Number of Surveys	Fledged Young	EABL's Fledged Per Monitored Nestbox
1987	1 7503	101	4910	0.65
1988	8809	153	6352	0.72
1989	11426	175	8260	0.72
1990	9209	148	7307	0.79
1991	8784	134	8138	0.93
1992	7605	133	5770	0.76
1993	6561	119	3677	0.56
1994	4999	102	3681	0.74
1995	5653	89	4980	0.88
1996	5718	92	4611	0.81

1. Bluebird Nest-Box Trails in Ontario and Their Usefulness for Bio-effects Monitoring of Agricultural Chemicals Technical Report Series No. 202, Ontario Region 1994.  
Canadian Wildlife Service, Martin K. McNicholl, William F. Read, D.V. (Chip) Weseloh

**Table 3 - Summary of the number one presumed cause of lost eggs or nestings as recorded on 44-1996 Surveys**

Cause	No. Occurrences	%
Weather	16	36.4
Raccoons	7	15.9
House Sparrows	9	20.5
House Wrens	6	13.6
Blowflies	2	4.5
Infertile eggs	2	4.5
Cats	1	2.3
Humans	1	2.3
Total	44	100%

## Nestbox Survey

### Summary

Weather seems to affect the population much more than anything else (as indicated on your OEBS nestbox survey returns). A warm winter means more pairs will return to breed the next year. After a cold winter, fewer pairs survive to return to their breeding areas.

Very cold wet weather was experienced in 1996. March, April and May were colder than normal and April, May and June received much more rainfall than usual. After record early nestings in 1995, bluebirds delayed their first nesting attempts in 1996 because of a very cold wet spring. First nestings will probably be about a week to 10 days later than average. This delay proved to be a bonus as most first broods were successful with fewer nestings succumbing to those 3 or 4 days of cold wet weather we usually experience around the 25th of May. The fledged young per pair total of 4.56 is the same as 1995 and indicative of a very successful nesting season. The number of returning pairs of EABL's was down considerably from 1995 and the cold wet weather of late winter early spring probably was a factor. This can be a very difficult time for EABL's as vegetable food sources are in low supply and extended periods of wet, cold weather inhibit the activity of the few insects that are available.

Weather data collected at the Waterloo Wellington Regional Airport.

Date	Actual	30 year normal	Precipitation mm	
			Actual	Normal
January 1996	-7.5 °C	-7.3	92	54.3
February 1996	-6.6 °C	-6.8	55.0	55.6
March 1996	-3.6 °C	-1.5	37.8	72.7
April 1996	3.9 °C	5.8	120.6	72.6
May 1996	11.2 °C	12.5	112.8	76.3
June 1996	18.3 °C	17.0	128.3	79.5
July 1996	18.9 °C	19.9	91.8	90.4
August 1996	19.7 °C	18.7	43.1	93.3

The number one presumed cause of lost eggs or nestlings as recorded on 44 1996 surveys was again weather at 36.4%, higher than the 1995 percentage of 21.4% (see table 3) this was followed by house sparrows at 20.5% and raccoons at 15.9%.

Although the number of returning pairs was down considerably from the previous year, 1996 can still be considered a successful year for Eastern Bluebirds with fledged young numbers close to the 1995 total.

### Acknowledgments:

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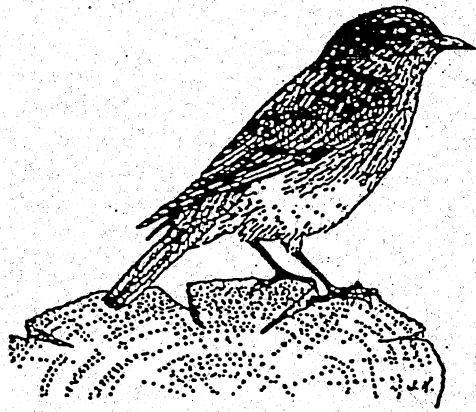


Table 5. Summary of responses for Eastern Bluebird nestbox questionnaire for Ontario - 1996

County or District	Survey	Boxes Monitored	Boxes on Trail	Boxes Used Successfully	Nesting Successful	Young Fledged	Unsuccessful Nestings	Eggs: Blue	White	Nesting Natural Cavities	EABL Pairs Represented	House Wren	TRES Nestings Succ/Unsucc	Black-capped Chickadee	House Sparrow
Algebra	1				5	20					4				
Brant	2	295	295	74	96	371	15	445			76	32	183 13	1	
Bruce	6	409	394	34	84	465	19	516	19	2	145	30	163 4	2	13
Dufferin	4	568	587	25	138	502	2	83			112	1	36 6		
Durham	4	143	145	6	7	91		34		1	9	8	9 2		
Elgin	2				12	151		58			33				
Essex	3	329	329	28	42	160	17	197	15	1	34	44	136 15		
Grey	3	26	28	2	151	532	1	16			118	75	346 1	1	
Haldimand-Norfolk	4	52	29	3	4	132	1	14			29	2	3		
Halton	4	56	56	7	11	43	1	34			11	5	1	2	3
Hamilton-Wentworth	5	215	222	27	27	102	6	124	12	1	28	6	79 13	1	
Hastings	2	40	85	2	2	8	1	15			3		20 3		
Huron	2	27	27	4	4	18		18			3	4	9		
Lambton	2	113	178	15	19	63	2	75			16	1	29		
Lanark	1	3	32	3	6	20		20		1	4	5	20		
Leeds-Grenville	2	8	8		2	7					1			1	
Lincoln	3	45	45	14	19	110	4	97			16	7	9		
Manitoulin	3	42	42	3	7	28		18			7		16 1		
Middlesex	3	33	33	4	4	18		19			3	7	10 1		4
Muskoka	1	205	205	37	47	174	5			1	40	4	74	1	1
Niagara	2	42	42	10	17	65		40			7		20 10		
Northumberland	8	572	572	34	80	278	15	264		1	65	33	88 8		
Ontario-Carleton	2	305	305	42	54	181	3	298			39	8	108 2		2
Oxford	1	215	215		46	189	12	266			41				
Perry Sound	1	79	79	18	18	79	4	102	1	3	18		73 18		
Peel	1	7	7			0					3	2			
Perth	1					14		12	10		3				
Peterborough	2	74	74	8	1	34	2	4			8	5	45 5	2	6
Renfrew	2	37	37	8	8	30	1	37			9		14		
Simcoe	4	102	137	9	11	59	9	88	4		11	4	27	2	1
Timiskaming	1	110	110	9	9	37	6	59			10		41 26		
Victoria	2	56	56	19	22	98	4	121			22				
Waterloo	3	533	543	76	93	369	28	428	5	2	75	3	239 25	1	
Wellington	4	878	865	11	17	94	2	77			17	16	294 240	10	
York	1	99	99	12	17	69	1	74			10	2	52	5	
TOTALS	92	5718	5881	544	1080	4611	161	3656	66	13	1027	305	2149 393	29	30