

## Ontario Eastern Bluebird Society Nestbox Survey - 1997

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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 1997 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 4434 EABL's were recorded fledging from the 1997 nestbox surveys. Seventy-nine reports were received for 1997, a decrease of 13 over 1996. The number of monitored nestboxes decreased to 5298 from the 1996 total of 5718 (Table 2).

The 1997 Nestbox Survey represents a total of 1052 EABL pairs in Ontario. If EABL pair information was not recorded on survey forms, the figure was estimated using an average of 4.06 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 4.06 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 1997, I examined the 32 surveys that recorded both numbers of EABL pairs and fledged young. A total of 396 EABL pairs fledged 1607 young or 4.06 young per pair in 1997. This figure was used to calculate the number of EABL pairs.

Six hundred and nineteen EABL's and two thousand three hundred and fifty-two tree swallows were reported banded during the 1997 season. Banding was carried out by David Lambie, Bill Read, Bob Hubert, Bryan Wyatt and Dave Raynor.

Occupation (number of nestings only - not fledged young) of nestboxes by the usual other bird species occurred with 293 House Wrens, 2107 Tree Swallows, 5 Black-capped Chickadees and 18 House Sparrows. The number of House Wren nestings decreased to 293 from 305 in 1996.

#### Fledged Young Calculation Per EABL Pair for 1997

In 1997, 396 pairs fledged, 1607 young or 4.06 fledged young per pair. This calculation is made using the 1997 surveys that included both fledged young and number of Eastern Bluebird pairs.

This figure is lower than 1996 and indicative of an average breeding season. Very cold weather in May resulted in higher than normal nestling mortality.

#### 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
1997	396	1607	4.06
<b>Total</b>	<b>5776</b>	<b>23671</b>	<b>4.10</b>

**Table 1 - Percentage of Attempted EABL Nestings which were Unsuccessful as Reported on OEBS Surveys from 1988 - 1997**

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
1997	999	813	186	18.62

**Table 2 - Fledged Young Per Monitored Nestbox  
As Reported on OEBS Surveys 1987 - 1997**

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
1997	5298	79	4434	0.84

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 nestlings as recorded on 45-1997 Surveys**

Cause	No. Occurrences	%
Weather	16	35.6
Raccoons	10	22.2
House Sparrows	7	15.6
House Wrens	4	8.9
Humans	2	4.4
Unknown	2	4.4
Pesticides/Herbicides	1	2.2
Tree Swallows	1	2.2
Black Bears/chipmunks	1	2.2
Blow Flies	1	2.2
Total	45	99.9%

### Summary

The number of returning pairs was the same or slightly lower than 1996, but breeding success was not as good as the previous year. The spring was much colder than last year, but with less precipitation (see chart).

Weather data collected at the Waterloo Wellington Regional Airport.

Date	Temperature (30 year)		Precipitation mm	
	Normal	Actual	Normal	Actual
Sept. 96	14.3	15.0	89.6	154.6
Oct. 96	2.9	3.3	70.4	59.2
Nov. 96	2.5	-0.3	83.1	40.2
Dec. 96	-4.0	-1.2	79.2	104.7
Jan. 97	-7.3	-7.1	54.3	89.2
Feb. 97	-6.8	-4.0	55.6	87.5
Mar. 97	-1.5	-2.0	72.7	111.7
Apr. 97	5.8	4.9	72.6	25.5
May 97	12.5	8.7	76.3	88.6
June 97	17.0	18.7	79.5	71.7
July 97	19.9	19.2	90.4	47.8

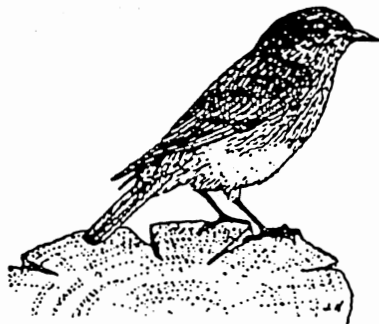
May was almost 4°C lower than the 30 year normal. I did not record a warm day in my field book until May 23rd. Above average rainfall was recorded in May to further hamper bluebird activity. Bluebird nestings were delayed because of this cold wet weather which resulted in most nestling mortality occurring in very late May and early June. The fledged young per EABL pair was 4.06 down considerably from the 1996 total of 4.56. Overall 1997 was about average or slightly below.



### Acknowledgments:

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Durham	P. Royal Lee, Mike Sullivan
Elgin	Bob Hubert, Joe Hurst
Essex	Essex County Field Naturalists
Grey	Lorne Smith, Patricia Burgon, David & Sharon Turner, Brad de St. Aubyn
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Lambton	Don A. Smith, Mike Bouman
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Manitoulin	George Third, Clayton VanHorne
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Peterborough	Garnet Graham
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Waterloo	Bill Read, Read C.W.S., Norm Shantz, Wayne and Linda Buck
Wellington	David R. Lamble, Bryan Wyatt



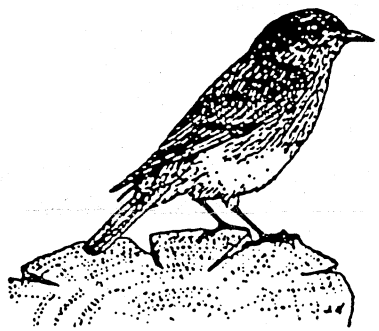


Table 5. Summary of responses for Eastern Bluebird nestbox questionnaire for Ontario 1997

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	Banded EABL	Banded TRES	
Brant	2	307	307	83	95	321	29	478		0	83	42	185					
Bunce	4	122	476	21	25	246	5	108	19		64	42	156			5		
Dufferin	5	581	659	42	157	573	6	78			130	5	44	3		98		
Durham	2	62	62	7	9	33	3	53			7		10					
Elgin	2	75	75			182					45					164		
Essex	1	243	243	50	56	212	19	282	9		44	42	90	18				
Grey	4	30	1645	1	1	653	1	8			161	106	513	5				
Haldimand-Norfolk	6	78	78	2	4	169					40	10	21					
Haldon	3	62	62	9	10	35	3	54			8	2	17	1		7		
Hamilton-Wentworth	6	244	244	21	21	72		139		1	19	2	73	3				
Hastings	1	40	40	1	1	5	1	7			1	1	21	1				
Huron	2	54	54	12	13	50	0	17			12	10	27	2		2		
Lambton	3	154	152	13	14	22	5	42			12							
Lanark	2	56	56			45					11							
Manitoulin	2	45	45	3		20	3	14			6		17	10				
Middlesex	3	45	45	4	4	20	1	26			5	3	12	1		1		
Muskoka	1	193	193	26	5	102	7	33	6	2	29	1	46	12		1		
Niagara	4	103	103	12	27	116	4	31			29	10	27					
Northumberland	5	446	446	43	14	390	23	98		1	91	4	13					
Ottawa-Carleton	2	224	224	54	106	261		383			65	4	189	5		2		
Oxford	1	200	200		71	148	15	244		1	36							
Parry Sound	1	92	92		41	80					20							
Peel	1	6	6	0		0					0	1	2					
Peterborough	1	12	12	0		0					0		10					
Renfrew	1	30	30	1	2	9	1	14			2		8	4				
Simcoe	3	129	129	1	2	92					24		2					
Timiskaming	1	110	110	8	10	34	1	39		8	8		36	18				
Victoria	3	75	75	20	23	110	29	49		1	26		7	4			253	
Waterloo	3	522	522	75	95	333	30	559		4	80	2	244	50		1	67	
Wellington	2	948	948	6	6	97	0	28			22	2	265	189			104	
York	2	7	7	1	1	4				2	1	4			1		2285	
TOTALS	79	5298	7345	516	813	4434	186	2784	34	20	1052	293	2107	333	5	18	619	2352

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