

2006 OKLAHOMA BLUEBIRD NEST BOX RESULTS

INTRODUCTION

The Oklahoma Nestbox Trails Project was initiated in 1985 to enhance habitat for cavity-nesting birds in Oklahoma and reverse the population decline noted for the Eastern Bluebird (*Sialia sialis*). The project depends entirely upon volunteers to place the boxes in suitable habitat, monitor usage, control competition from House Sparrows, alleviate predation problems and report the nesting season's results. The Oklahoma Department of Wildlife Conservation's Wildlife Diversity Program would like to especially give credit to those trail reporters who take the time and have the dedication to establish extensive trails and report on them.

The Wildlife Diversity Program would also like to express our sincere gratitude to the **Oklahoma Bluebird Society** (OBS) for promoting bluebird conservation in Oklahoma. Twenty-two percent (16) of the bluebird nestbox reports we received for the 2006 breeding season listed they were affiliated with OBS. If you wish to learn more about your bluebirds please consider joining this important conservation organization. They have already made a significant contribution to conservation by encouraging trail monitors to provide us with their data. The database of the Oklahoma Nestbox Trail Project provides a "window" into the conservation of cavity-nesters particularly bluebirds in Oklahoma. Membership includes receiving their excellent newsletter, *The Hole Story*, which provides good information about monitoring bluebird nesting activities and habitat enhancement. Heart-warming stories and poems provided by members will offer inspiration! A membership form is included in your packet.

The staff of the Oklahoma Wildlife Diversity Program wishes to extend our sincerest "thank you" to all trail monitors who know the work, the joy and the frustrations of maintaining a bluebird trail. Thank you for helping bring back the Eastern Bluebird.

RESULTS

The number of nestbox trail reports received for the 2006 breeding season (48) reflected a significant decrease from the 2005 (71). Accordingly, the number of nestboxes monitored decreased (744) as compared to 2005 (973). Twenty-one (21) counties are represented for the 2006 breeding season, a decrease over the 28 counties in 2005. Table 1 provides a ten year comparison (1996-2006) of survey results. The comparison focuses primarily on Eastern Bluebird breeding activities.

The top four species in frequency of nesting attempts and occurrence on trails were the **Eastern Bluebird**, **Carolina Chickadee**, **House Sparrow**, and the **Tufted Titmouse**. Over **99%** of nestbox usage was by Eastern Bluebirds and this species was reported on **99%** of the trails.

Ten (10) identified bird species were reported nesting in nestboxes including the first reported nesting of a Tree Swallow for Custer County. Nesting attempts of these cavity-nesting bird species by year is provided in Table 2. In 2006, the House Sparrow was again an unwelcome species on the list. However, absolutely no chicks fledged out of the combined 102 eggs reported! This demonstrates how continual monitoring helps to alleviate competition from these non-native species. Congratulations!

As in previous years, not all nesting attempts were monitored throughout the breeding season, and therefore, the number of eggs laid, hatched, and young fledged represent the minimums for the species (Table 3). Monitors reported at least **2,317 Eastern Bluebirds** fledged from **715 clutches**. Figure 1 is a map of Oklahoma showing bluebird data by county for the 2006 breeding season. Included are the number of monitored nestboxes and the number of fledgling bluebirds reported by county.

The **total number of fledgling bluebirds reported** to the Oklahoma Nestbox Trails Project **since 1985:** **54,450!**

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Counties Reporting | 25 | 24 | 31 | 21 | 24 | 25 | 21 | 21 | 21 | 28 | 21 |
| Reports Submitted | 51 | 40 | 56 | 46 | 47 | 47 | 38 | 43 | 50 | 71 | 48 |
| Species* | 13 | 9 | 12 | 11 | 11 | 11 | 7 | 9 | 10 | 12 | 10 |
| NestBoxes | 983 | 1081 | 1280 | 963 | 871 | 803 | 714 | 780 | 767 | 973 | 744 |
| Nesting Attempts | 1016 | 1072 | 1458 | 1075 | 879 | 703 | 650 | 664 | 110 | 734 | 754 |
| Clutches | 945 | 980 | 1290 | 1053 | 811 | 649 | 588 | 641 | 612 | 736 | 715 |
| # Eggs | 4276 | 4221 | 5958 | 4622 | 3592 | 2847 | 2611 | 2863 | 2676 | 3309 | 3253 |
| Eggs/Clutch | 4.5 | 4.3 | 4.6 | 4.4 | 4.4 | 4.4 | 4.4 | 4.5 | 4.4 | 4.5 | 4.5 |
| # Chicks | 3538 | 3731 | 4444 | 3704 | 3002 | 2019 | 1998 | 2250 | 2165 | 2708 | 2519 |
| Chicks/Clutch | 3.7 | 3.8 | 3.4 | 3.5 | 3.7 | 3.1 | 3.4 | 3.5 | 3.5 | 3.7 | 3.5 |
| Chicks/Eggs | 83% | 88% | 75% | 80% | 83% | 71% | 76% | 78% | 81% | 82% | 77% |
| # Fledged | 3393 | 3655 | 4395 | 3383 | 2789 | 1907 | 1879 | 2128 | 2092 | 2551 | 2317 |
| Fledged/Clutch | 3.6 | 3.7 | 3.4 | 3.2 | 3.4 | 3 | 3.2 | 3.3 | 3.4 | 3.5 | 3.2 |
| Fledged/Eggs | 79% | 87% | 74% | 73% | 77% | 67% | 72% | 74% | 78% | 77% | 71% |
| Fledged/Hatched | 79% | 97% | 98% | 91% | 93% | 94% | 94% | 94% | 97% | 94% | 92% |

TABLE 1. Ten year comparison of breeding success reported for Eastern Bluebirds using monitored nestboxes.

* Includes all species reported using the monitored nestboxes.

TABLE 2. Nesting Attempts by Year.

| Species | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------------------------|------|------|------|------|------|------|------|------|------------|
| Eastern Bluebird | 1390 | 1075 | 879 | 686 | 690 | 664 | 654 | 734 | 754 |
| Carolina Chickadee | 53 | 36 | 47 | 49 | 39 | 40 | 59 | 92 | 61 |
| House Sparrow | 143 | 118 | 78 | 90 | 70 | 105 | 89 | 59 | 38 |
| Bewick's Wren | 19 | 8 | 13 | 6 | 11 | 16 | 17 | 20 | 4 |
| Carolina Wren | 22 | 6 | 12 | 6 | 5 | 11 | 9 | 7 | 6 |
| House Wren | 6 | 3 | 3 | 2 | 1 | 0 | 0 | 7 | 2 |
| Tufted Titmouse | 45 | 31 | 71 | 20 | 18 | 40 | 27 | 32 | 22 |
| White-breasted Nuthatch | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Great-crested Flycatcher | 5 | 7 | 4 | 6 | 5 | 4 | 4 | 2 | 5 |
| Tree Swallow | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 5 |
| Eastern Phoebe | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 2 |
| House Finch | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Eastern Wood-Pewee | 0 | 1 | 1 | 1 | 3 | 0 | 3 | 0 | 0 |
| European Starling | 0 | 0 | 0 | 1 | 4 | 4 | 1 | 2 | 0 |
| Ash-throated Flycatcher | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |

TABLE 3. Nesting Success by Species in 2006.

PC = per clutch

| Species | Clutches Monitored | Eggs Laid | | Eggs Hatched | | Young Fledged | |
|--------------------------|--------------------|-------------|------------|--------------|------------|---------------|------------|
| | | Total | PC | Total | PC | Total | PC |
| Eastern Bluebird | 715 | 3253 | 4.5 | 2519 | 3.5 | 2317 | 3.2 |
| Carolina Chickadee | 58 | 332 | 5.7 | 272 | 4.7 | 229 | 3.9 |
| Tufted Titmouse | 20 | 107 | 5.3 | 85 | 4.2 | 59 | 3.0 |
| House Sparrow | 26 | 102 | 3.9 | 8 | 0.3 | 0 | 0 |
| Carolina Wren | 5 | 26 | 5.2 | 17 | 3.4 | 17 | 3.4 |
| Bewick's Wren | 4 | 21 | 5.2 | 19 | 4.7 | 19 | 4.7 |
| House Wren | 2 | 11 | 5.5 | 11 | 5.5 | 11 | 5.5 |
| Tree Swallow | 5 | 25 | 5.0 | 19 | 3.8 | 19 | 3.8 |
| Great-crested Flycatcher | 5 | 27 | 5.4 | 26 | 5.2 | 26 | 5.2 |
| Eastern Phoebe | 2 | 10 | 5.0 | 10 | 5.0 | 9 | 4.5 |

COMMENTS

Following are the comments provided by the trail reporters. My apologies if your comment is not reflected below. If I could not interpret handwriting, I did not record your comment. Thank you so much for taking the time to provide some thoughts, ideas, and concerns:

-Raccoon(s) hit my boxes hard this spring. Predation included boxes with both 1" and 2" wooden guards around the entrance hole. They took 4 nesting attempts of Eastern Bluebirds with 19 eggs/young; 8 nesting attempts of Carolina Chickadee with 43+ eggs/young and 1 adult; and 5 nesting attempts of Tufted Titmice with 31+ eggs/young and 1 adult. I lost 4 Eastern Bluebird nesting attempts to the HEAT (July-August) with 17 eggs. Snakes found all 3 Carolina Wren nests that I located (box, junk pile, chimney ledge) with 15+ eggs. Net guards are effective in preventing snake predation but the Carolina Wren picked a box on my patio without a guard. (Pontotoc County)

-Painted black holes on all sides of several houses that had never had nests. Almost all of them had nests this year. Continued spell of hot weather (105° - 107° every day) in July took its toll. I lost several young birds that were almost ready to fledge. Overall the best year I have had. (Osage County)

-Normally have chickadees and wrens but none this year. I have 9 bluebird boxes (all new this year). The birds evidently liked them for this is the best year I've had. (Oklahoma County)

-Long breeding season. First bluebird egg on March 16th; last bluebird fledgling Sept. 2nd. (Cherokee County)

-Unidentified bird had a nest that was white plant down primarily with just a few pieces of green moss. Bird would not leave nest when front of door was opened. (Cleveland County)

- Very successful in trapping sparrows – total of 42. They seem to bother my martins more than the bluebirds. (Comanche County)

-We had the best year ever, only lost one nest to cold & rain. Everything came together with weather and other factors to have a great year. (Beckham County)

- This year I hung two new boxes using the hook and eye hook method as suggested by Bob Walshaw. Both boxes successfully fledged one brood. (Okmulgee County)

- It was not a very good year. The birds started late, no water, and heat at 100° F for the month of August. As I was checking my boxes, I found several nestlings that had succumb to the heat. I do not believe it made any difference though if they had been in a PVC box or a wooden box, even though most were in PVC boxes. I had eggs in late July that had been abandoned by the moms. Also the other species besides Eastern bluebirds did not nest as well; their numbers were way down also. The bright spots were that I had a few more Tree Swallows nesting as well as my first Great-crested Flycatcher nest in a PVC box. (Ft. Sill)

- In a 2 day period, house sparrows killed both bluebird parents and 5 babies and then built their own nest over and on top of the bodies. Did not give them time to start laying eggs...caught them with sparrow trap and deleted them! (Pawnee County)

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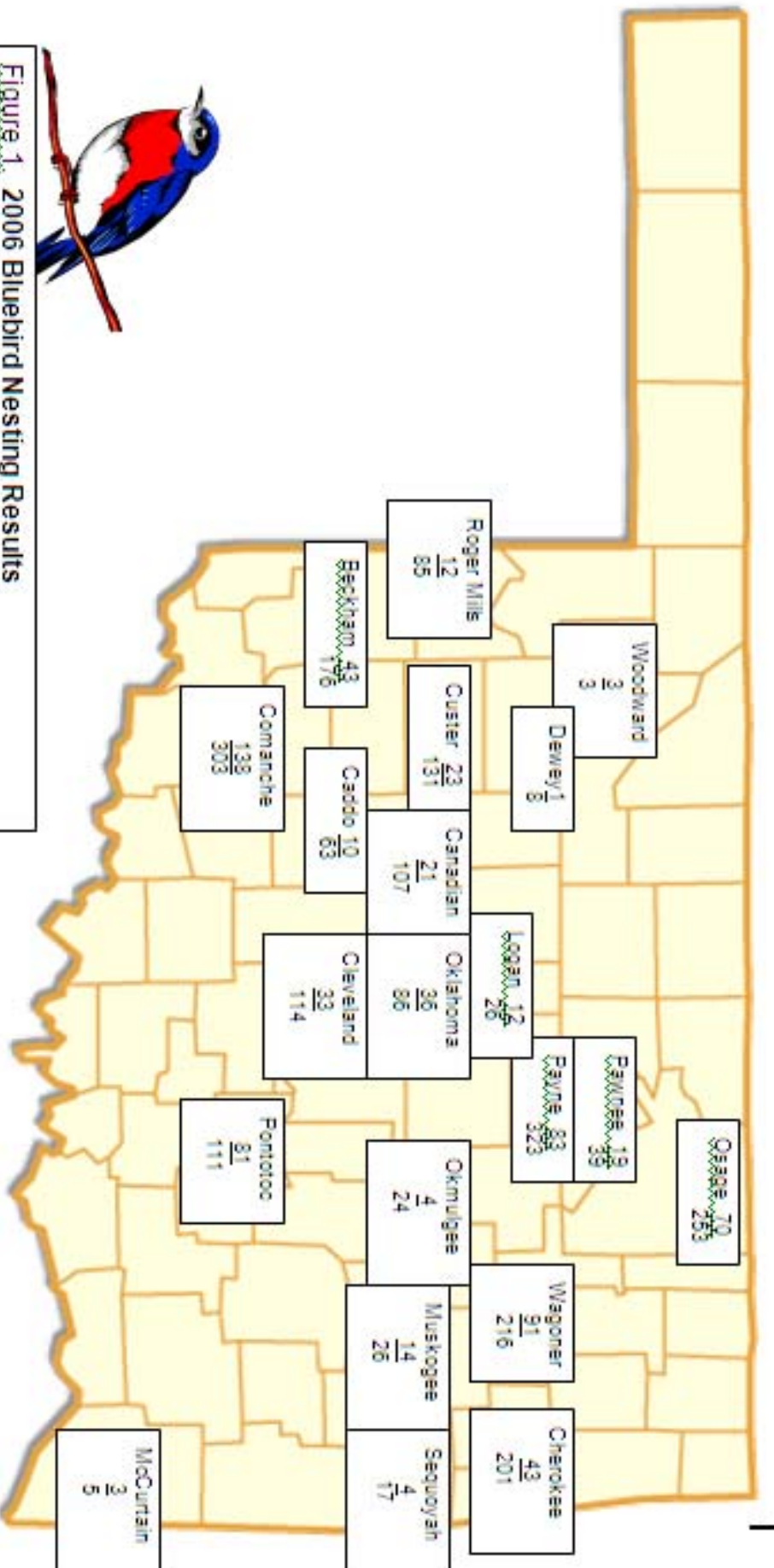


Figure 1. 2006 Bluebird Nesting Results

The top number is the number of nestboxes monitored.
 Bottom number is the number of bluebirds fledged.

