

# *Sialia*

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*Sialia* means bluebirds. Hence the title of this journal. Technically, *sialia* is the Latinized, neuter plural version of the Greek word *sialis*, a noun meaning a "kind of bird." Since the Eastern Bluebird was the first bluebird classified by Carolus Linnaeus (1707-1778), he gave it the species name *sialis*, though he placed it in the genus *Motacilla* which is now reserved for the wagtails. It was William Swainson (1789-1855), who, in 1827, decided that the bluebirds needed a genus of their own within the thrush family (*Turdidae*). He selected the generic name *Sialia* which he simply adapted from the species name *sialis* which Linnaeus had used. Therefore, the scientific name for the Eastern Bluebird is *Sialia sialis* (pronounced see-ah'-ee-ah see'-ah-iss). Similarly, the Western Bluebird and Mountain Bluebird, the two other species within the genus, were named *Sialia mexicana* and *Sialia currucoides* (coo-roo-coy-dees) respectively. Their species names are descriptive of their locations. All three bluebird species are native only to the North American continent, although each inhabits different regions generally separated by the Rocky Mountains and by altitudinal preferences.

While the adult birds all show differing plumages, the young of all three species look remarkably alike, prominently displaying spotted breasts and large white eye rings. This similarity in plumage was the principal reason the Society chose the juvenal bluebird for its logo. Since bluebirds almost always choose to raise their young in small enclosed cavities, a young bluebird sitting near a nesting box seemed to symbolize our mission. The hope of any species resides in its young. Because of bluebird nesting preferences, the survival of their young may depend on the nesting box, especially since natural cavities, for a variety of reasons, are disappearing rapidly. The theme of bluebird young nurtured in man-made structures will be a recurring one in our art and literature. We hope that this theme will remind all about the plight of the bluebird, and will stimulate action which will allow this beautiful creature to prosper.

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# Sialia

The Quarterly Journal  
About Bluebirds

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## COVER

Red-headed Woodpeckers are the first cover subject by new Art Editor Alexia J. Scott.

*Sialia* welcomes original articles, art and photographs for publication. Although this journal is named for the bluebird, material relating to all native cavity nesting species will be considered. Manuscripts should be typed neatly and double-spaced. All material submitted is subject to editing or rewriting. Submit the original manuscript plus a duplicate copy if you wish to proof the material before publication. If the article has been submitted elsewhere (or previously published) that fact must be stated at the time of submission. All manuscripts will be acknowledged. Black and white glossy photographs are preferred. Print the subject, names of individuals pictured, photographer and return address on the back of each photograph. Art is welcome and should be in black pen-and-ink. We do not assume responsibility for manuscripts, photographs or art submitted. The editor's address is 10617 Graeloch Road, Laurel, Maryland 20707.

# Presidential Points

Sadie Dorber

**F**all migration was not very productive at my house. Many hours were spent each day checking mist nets that were mostly empty; however, on October 7th, my luck seemed to improve.

As I walked across the lawn with my collection box, my husband said he noticed several birds in the net at the edge of the garden. As I approached the net, I could tell it was full of birds and as I walked closer, I could see they were all bluebirds. Most of the bluebirds were calling as I removed them from the net and I could hear still more bluebirds answer from the nearby trees.

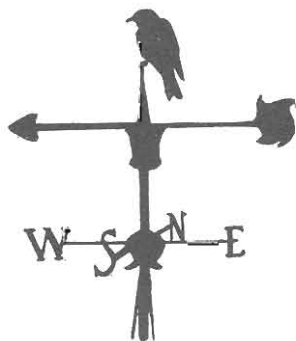
A summer of abundant rain had resulted in a continuous crop from the ever-bearing raspberries in the garden. As some of the bluebirds appeared to have berry stains on their beaks, I'm sure they had been feeding on the berries. The twelve bluebirds were quickly banded and released. Of the twelve birds, one male and one female were adults so I assumed it was a family migrating through my area. A few days later the mist nets were packed away and we were on our way to Wagoner, Oklahoma for the Ninth Annual Meeting of the NABS.

The one bird I had hoped to sight in Oklahoma was the Scissor-tailed Flycatcher. Charlotte Jernigan had told me that the flycatchers migrate and might possibly be gone by the time we arrived.

We had a leisurely drive to Oklahoma stopping at various places for a little bird watching. We were getting near Wagoner when I spotted a flycatcher on a wire. I said to my husband, "That was a Scissor-tailed Flycatcher!" He answered, "Are you sure?" and, as usual, sped on down the road.

We soon arrived at Sequoyah State Park to find the motel situated in a lovely situation for birders.

On Sunday a group of us left with Jim Norman to search the milo fields for the Greater Prairie-Chicken. All of



us lined up and proceeded down the rows of milo. We didn't have to walk far before a flock flew up and settled back down in a nearby field.

That afternoon a few of us accompanied Jim Harman around the reservoir and down the country roads. Flycatchers were abundant along with Loggerhead Shrikes. The flycatchers were exquisite to the eyes of this New Yorker.

Monday, we started the journey back to New York via Tennessee. The trees were at their peak of color and the drive across the state was very enjoyable. Bluebird boxes were always apparent in Tennessee. We found them at rest stops and near TVA damsites.

On December 1st, I drove to Deposit, New York, to meet with Rick Dunbar, Superintendent of Aquaga State Park. The park has many acres of short grass and we plan to have a trail developed by spring.

The following week NABS member Anna Casselberry and I again returned to fields where many had seen a Snowy Owl. We had already visited the location on a few occasions and today, as we approached, we could see the owl sitting on a manure spreader.

The snowstorm that converged on the South and the East Coast left about 20 inches at my house. With the storm, a large flock of Common Redpolls moved in to feed.

For awhile, bird watching may be confined to the backyard feeders with time spent building bluebird houses for the Agway store in Binghamton which is having a bluebird day in March. ■

# A STUDY OF WINTER ROOST SITE MANAGEMENT AND THE USE OF SITES BY EASTERN BLUEBIRDS IN DELAWARE STATE PARK, DELAWARE, OHIO

Richard M. Tuttle

*This paper was presented at the Ninth Annual Conference of the North American Bluebird Society, October 25-26, 1986, at Wagoner, Oklahoma.*

## INTRODUCTION

Spring house cleaning of bluebird nest boxes frequently yields evidence that the boxes had been used as winter roosts by bluebirds. Fecal debris, consisting of seeds and other plant matter, is easily identified by veteran bluebird conservationists as being deposited by bluebirds, especially when bluebird feathers are found among the remnant seed material. Collected deposits of bluebird droppings were used as important indicators in a study of possible winter roost preference in Delaware State Park (DSP), Delaware, Ohio, during the winter of 1985-86.

Since 1981, I have been "winterizing" bluebird nest boxes with the unsupported assumption that boxes which have all openings closed except the entrance hole are warmer or more draft free, and that they are more likely to be preferred during the winter by roosting bluebirds over boxes which have all drain and ventilation slots open. I wanted to test, or investigate, this assumption.

I knew of a master's degree thesis by Kathy M. Morland who, during the winter of 1978, studied roosting bluebirds in Hueston Woods State Park near Oxford, Ohio. After erecting 25 roosting boxes, built basically according to plans by Zeleny (1977), she found that bluebirds preferred to roost in natural cavities when given the choice among roost boxes, natural cavities, and 24 "ventilated" nest boxes. In fact, bluebirds could not be enticed to roost in roost boxes and failed to use any of them even once. The bluebirds also failed to roost in the nest boxes.

Most natural cavities excavated by woodpeckers have no openings except the entrance hole. Will a winterized bluebird nest box, which has had all vents closed but the entrance hole, be preferred over boxes that remain "ventilated" for the winter? A positive answer to this question would result in the evolution of new management techniques to help wintering bluebirds or bluebirds caught in inclement weather during migration, especially in areas that lack a selection of natural cavities.

## STUDY AREA

Delaware State Park (DSP), is located four miles [6.4 km] north of Delaware, Ohio, on the western shore of Delaware Lake, a 1330 acre [538.3 ha] flood control reservoir. The park contains 5.5 miles [8.8 km] of mowed trails that link four camping areas with 214 camping sites, six picnic areas, one swimming beach, two boat launch areas, one marina, a large maintenance area with a 1.2 acre [.5 ha] pond, a 0.7 acre [.3 ha] ice skating pond, and numerous parking lots. I manage a trail of 116 nest boxes found throughout the 1815 acre [734.5 ha] park. All but 9

of the 116 boxes can be seen from the pavement of a network of ten miles [16.1 km] of paved roads. The 116 nest boxes in DSP raised 197 Eastern Bluebirds (*Sialia sialis*) and 330 Tree Swallows (*Tachycineta bicolor*) during the 1985 nesting season.

## METHODS

My nest boxes have nest chambers measuring 5 x 5 x 8 1/2 inches [12.7 x 12.7 x 21.59 cm] tall with a 1 9/16 inch [40 mm] entrance hole centered seven inches [17.8 cm] above the floor (Tuttle, 1976). There are 1/4 inch [.64 cm] wide ventilation slots

above the front and back panels. The nest chamber is drained with four 1/4 inch holes [.64 cm], each located in a corner of the floor. The boxes are made of 3/4 inch [1.9 cm] white pine and all permanent joints are glued. Two coats of "Lexington Green" latex house paint insure tight seals so the box is protected from the elements.

I winterize nest boxes by plugging each ventilation slot with a piece of 3/4 inch [1.9 cm] wide felt weather stripping six inches [15.2 cm] long. The slots are five inches [12.7 cm] long and the extra inch of felt guarantees a snug fit. I use a screw driver to place the felt strips.

The floor is sealed by hammering four one inch [2.54 cm] lengths of 1/4 inch [.64 cm] dowel rods up into the floor allowing enough dowel rod to protrude from the box to permit extraction while guaranteeing that the rods have not entered the chamber.

In preparation for the winter roost study, all nine sign-mounted boxes were judged to be too difficult to check during the winter so I plugged their entrance holes. Four boxes were removed from the ice skating rink pond while a single box was removed to allow construction in the park. The study included the remaining 102 front-opening nest boxes.

The 102 nest boxes were divided into two groups: 35 "productive" boxes (boxes that had raised bluebirds during the 1985 nesting season) and 67 "non-productive" boxes (boxes that did not raise bluebirds). The "coin toss" technique was used to remove bias as each group was further divided into boxes to be winterized and boxes not to be winterized. The four resultant subgroups were 34 winterized nonproductive (W-NP) boxes, 19 winterized productive (W-P) boxes, 33 nonwinterized nonproductive (NW-NP) boxes, and 15 nonwinterized productive (NW-P) boxes. All designated boxes were winterized and all were cleaned with a dry paint brush before 31 October 1985.

I inspected all boxes during daylight hours the last weekends of November, December, January, and February using a penlight and ma-

chinist's mirror. All bluebird droppings were placed in a dry incubator to remove excessive moisture. All samples were weighed and adjusted to exclude the weight of the sacks. Seven samples weighing less than 3 grams [.11 oz] were excluded from the study to eliminate bias and no droppings samples were collected from the boxes during the middle weeks of March when the boxes were prepared for the nesting season. No appreciable amounts (3 grams) of droppings were found in the boxes in March.

Before the findings are revealed, the limitations of the study must be discussed. Fecal matter in a box is evidence that bluebirds have used the box as a roost, but I do not know if bluebirds leave droppings during each roost visit. A lack of droppings may not be a sign that the box has not been used as a roost.

Bluebirds do not roost in the boxes every winter night. During the evening of 31 January 1986 (25°F [-3.9°C]), I found 30 roosting bluebirds in nine boxes of the 102 in DSP. The roost groups consisted of 1,2,2,3,3,4, 4,4 and 7 bluebirds respectively. The sexual composition was 16 females and 14 males.

Four days later, on 4 February 1986, I was a guide for an ornithology class from Ohio Wesleyan University. We failed to find any roosting bluebirds in any of the nine boxes nor in any nearby boxes. The temperature was a seasonably warm 42°F [5.6°C]. As described by Thomas (1946), "Only in the coldest weather have the bluebirds slept in boxes." Moreland (1978) made similar observations. Bluebirds do not roost in cavities during moderate weather.

I should also add that I later collected droppings from all nine boxes that held bluebirds on the night of 31 January 1986, but I cannot accept this as evidence that roosting bluebirds always defecate during winter roosting. Also, I do not know how to ascertain the difference between the amount of droppings deposited by one bluebird during ten roost visits from the amount deposited by ten bluebirds during one

roost visit.

Until other researchers investigate the hows, whens, and magnitudes of roosting more closely, some conclusions of this study will remain open to debate. For simplicity throughout this discussion, bluebird droppings will be treated as evidence of roosting, and the amount of droppings will be considered to be a direct measure of the amount of roosting that took place. An absence of droppings will be treated as a measure that roosting did not take place.

## RESULTS

A total of 576.7 grams [20.34 oz.] of bluebird droppings were collected from 31 (30.4%,  $N = 102$ ) different nest boxes during inspections at the end of each month from November through February. Droppings samples were collected from zero boxes in November, three boxes (2.9%) in December, 17 boxes (16.7%) in January, and a maximum of 19 boxes (18.6%) in February (Table 1a).

More boxes were used as roosts in February, but more fecal matter was deposited in January. The monthly accumulations of droppings were as follows: December, 17.4 grams [.61 oz.] (3.01%,  $N = 576.7$ ); January, a maximum of 320 grams [11.29 oz.] (55.48%); and February, 239.3 grams [8.44 oz.] (41.49%) (Table 1b).

During the winter "roosting season" bluebirds roosted proportionately more in winterized boxes than nonwinterized boxes (35.84%,  $N = 53$ ). In the nonwinterized group, 209.3 grams [7.38 oz.] of droppings were collected from 12 boxes [24.48%,  $N = 49$ ]. The winter roost ratio factor of winterized to nonwinterized nest boxes is 1.46, or 1.46 times as many boxes of the winterized group were used as compared to the nonwinterized group. (The winter roost ratio factor = percent of winterized boxes used as roosts divided by the percent of nonwinterized boxes used as roosts.) Also, 1.76 times as much droppings were collected from the winterized boxes as compared to the nonwinterized nest boxes (Table 2).

Bluebirds increasingly use winter-

ized boxes over nonwinterized boxes as the winter progresses. During December, only nonwinterized boxes, three total (6.1%,  $N = 49$ ), were roosted in. Eleven winterized boxes (20.75%,  $N = 53$ ) contained 181.3 grams [5.93 oz.] of droppings in January. The January yield for nonwinterized boxes was 6 boxes (12.24%,  $N = 49$ ) with 138.7 grams [4.89 oz.] of droppings collected. The January roost ratio factor was 1.7 and 1.3 times as much droppings were collected from the winterized group as the nonwinterized group.

Roost use continued to shift toward winterized boxes during February. As the season progressed through winter toward spring, the number of winterized and nonwinterized boxes used for roosting varied by only one box, but the evidence represented by the mass of bluebird droppings reveals an increased use of winterized boxes. Twelve winterized boxes (22.64%,  $N = 53$ ) yielded 186.1 grams [6.56 oz.] of droppings in February. Seven nonwinterized boxes (14.28%,  $N = 49$ ) contained 53.2 grams [1.74 oz.] of droppings. The roost ratio factor decreased from a January value of 1.7 to 1.58 in February. Although a smaller proportion of winterized boxes was used, 3.5 times as much fecal matter was collected from the winterized boxes as compared to the nonwinterized. This represents a proportional increase of droppings by a factor of 2.7 from winterized over nonwinterized boxes from January through February (Tables 1c and 1d).

Inspection of the four subgroups revealed two noteworthy events. The winterized nonproductive (W-NP) group showed the most use in January with 26.47% ( $N = 34$ ) of the boxes containing bluebird droppings. The other subgroups showed nearly equal use with W-P boxes, 10.5% ( $N = 19$ ), NW-NP boxes, 12.1% ( $N = 33$ ); and NW-P boxes, 12.5% ( $N = 16$ ). One possible explanation of high roost use of W-NP boxes in January is that such boxes may be closer to winter food supplies. During the nesting season, bluebirds must nest near low or sparse vegeta-

tion in order to capture insects to feed their young. Habitats with tall and thick vegetation containing many berry-bearing vines and bushes are the least productive for bluebirds. Such habitats are preferred by dominant House Wrens which caused 41.2% of the bluebird nest failures in DSP during a six year period (Tuttle, 1986).

In DSP, 36 nest boxes (35.29%, N = 102) fledged bluebirds during 1985. Most of the productive boxes adjoin the mowed areas of the park. The majority of the remaining nest boxes are placed in open fields in stages of early succession. These fields are brushy

and lined with old fencelines of maturing trees. The plant communities contain "winter bluebird food" such as Multiflora Rose (*Rosa multiflora*) and others of the genus *Rosa*, Poison Ivy (*Rhus radicans*) and other sumacs of the genus *Rhus*, wild grapes of genus *Vitis*, Common Moonseed (*Menispermum canadense*), and several species of the genus *Viburnum*. I place boxes, wherever I can, to stimulate production of the park's "mosquito-eaters," Tree Swallows, and many of these boxes may be sustaining bluebirds during the winter by allowing them to roost nearer supplies of berries and seeds than

Table 1. Monthly Winter Roosting Values—Eastern Bluebirds (1985-86).

		Nov.	Dec.	Jan.	Feb.	Comments
1a	No. and % of boxes used as roosts. N = 102 boxes	0	3 2.9%	17 16.7%	19 18.6%	Droppings were collected from 31 (30.4%) different boxes.
1b	Droppings collected in grams	0	17.4g	320g	239.3g	Total = 576.7g
	% of total droppings collected	0	3.0%	55.5%	41.5%	
1c	No. and % of Winterized (W) boxes used as roosts. N = 53 boxes)	0 0	0 0	11 20.75%	12 22.64%	
	No. and % of Nonwinterized (NW) boxes used as roosts. (N = 49 boxes)	0 0	3 6.12%	6 12.24%	7 14.28%	
	Ratio Factor = % W boxes - % NW boxes; for Jan. & Feb. only, represents magnitude of roost preference.	----	----	1.7 x	1.58 x	Slight decrease for ratio factor from Jan. through Feb.
	Grams of droppings collected from Winterized (W) boxes	0	0	181.3g	178.3g	The ratio factor increased 2.7 times (3.5 - 1.3 = 2.7) to show an increased roost preference for Winterized over Nonwinterized boxes from Jan. through Feb.
1d	Grams of droppings collected from Nonwinterized (NW) boxes	0	16.9g	138.7g	53.2g	
	Ratio Factor = grams (W) - grams (NW) for Jan. & Feb. only, represents magnitude of roost preference.	----	----	1.3 x	3.5 x	



Table 2. Winter Roosting Totals—Eastern Bluebirds (1985-86).

	Winterized Boxes (W) N = 53 boxes	Nonwinterized Boxes (NW) N = 49 boxes	Ratio Factor W ÷ NW
No. of boxes used as roosts	19	12	---
% of boxes used as roosts	35.8%	24.5%	1.46 ×
Droppings collected from boxes	367.4g	209.3g	1.76 ×

boxes in better bluebird nesting habitat.

In February, a shift occurred in preferred boxes. The percent of W-NP boxes fell from a January use of 26.47% to a February use rate of 17.6%. This shift was accompanied by a January to February increase from 10.52% (N = 19) to 31.57% among W-P boxes. This shift may be explained by wintering residents and returning migrants preparing for the nesting season. In February, breeding instincts could be influencing bluebirds to select winter roost boxes within the territories they are claiming for spring nesting. Trautman (1968) and Borrow (1950) estimate the average arrival dates of returning bluebirds in Ohio as 20 and 23 February respectively, which would coincide with the winter roost shift from boxes in January that had not produced young the previous nesting season, to boxes in February that had.

Whatever the reasons, roost preference changed as the winter progressed. Two of the three boxes used as roosts in December were not used again. Ten of 17 boxes used in January were not used in February and 12 boxes used as roosts in February were used for the first time. (Some of the boxes roosted in during February may be the result of increased territoriality and migration as discussed earlier.) Only one box was used from December through February. Only seven of the boxes used for roosting (22.6%, N = 31) were used for the greater span of the winter roost season of January through February.

I could not find any trends in the data that would shed light on the failure of roosts to be used for longer periods of time. Two avenues of investigation, not already mentioned, might encompass the exhaustion of food supplies with the resultant need to change roosts, or the adjustment of the roosting birds to seasonal changes of such factors as temperature, wind exposure, etc., all factors beyond the scope of this study.

#### OTHER WINTER OCCUPANTS

One House Sparrow (*Passer domesticus*) and five Downy Woodpeckers (*Picoides pubescens*) roosted in six boxes in DSP. Sparrows deposit gray seedless droppings. Downy Woodpeckers do not deposit droppings, but their remodeling sprinkles wood chips on the floor of their roost as they chip away at the inside surface just below the entrance hole. At night, they perch with their heads cradled under their wings until awakened. Sometimes, they bobbed their heads from the entrance holes as I approached. As I peered in with my penlight and mirror, the downys frequently speared and jabbed at their mirror images. I found their behavior quite entertaining.

Three females and two males roosted in their separate boxes regardless of the weather. Bluebirds only roost to seek shelter from harsh weather, but downys roost in nest boxes nightly. Downys showed no roost preference since three of their

roosts were winterized and two were not.

## BANDING

All bluebird nestlings have been banded since 1980 and I had hoped to identify all roosting bluebirds in DSP during the winter of 1985. Patterson (1979) recommended that roosting bluebirds be located at night, the box plugged with a screen, and the birds banded at sunrise and immediately released. I decided to see if roosting bluebirds could be banded at night and returned to the roost as is done with nesting Tree Swallows (see Burt and Tuttle, 1983). Patterson's recommendations were quickly confirmed during my first attempt to band roosting birds.

At 7:00 p.m., 31 January 1986, I used a handkerchief to plug the entrance to box #36 which contained four roosting bluebirds. I extracted the birds one by one and placed each in its own milk carton chamber in my bird holder. Each wore an aluminum leg band. After I recorded each bird's band number with the aid of a flashlight, I returned the bird to the roost box by guiding it through the entrance hole. I replugged the entrance after each bird was returned to the nest box. For the next ten minutes, the birds thrashed about inside the box. I became increasingly alarmed as I thought what might be happening to their feathers as the birds refused to settle in for the night. Their energy expenditure was also of concern. I worried that injured feathers could cause death during the cold winter months still to come if their insulative properties were lowered by damage.

I removed the plug and decided not to band any more roosting birds as I continued the evening's survey. I counted and sexed all other birds found roosting that evening. Box inspections, with a penlight and machinist's mirror, don't upset the birds. As I peered into each roosting cavity, I found it quite easy to sex the occupants if I concentrated on their crowns. A bright penlight makes it easy to differentiate between the dull blue to blue-gray of a female's crown and that of a male's bright blue crown.

I returned to box #36 at 11:00 p.m.; one bird remained inside, the other three birds had departed. If I ever try to band wintering bluebirds again, I will plug the box within one hour before sunrise and identify the birds at one hour after sunrise. Researchers Morland (1978), Frazier and Nolan (1959) reported that roosting bluebirds most often depart from the winter roosts at nearly one hour after sunrise. I would also remove the birds one by one and band or identify them while in hand, and I would release them as quickly as possible from the hand. I would also take precautions to prevent the transfer of human skin oils to feather barbs in order to preserve insulative properties. Other logical precautions are described by Patterson (1979).

Knowing "who" roosted in the boxes was an early and important objective of this study. Unfortunately, I will have to wait for another time when I can manage "early-rise" research. The four birds that I did identify 31 January 1986, were three siblings raised the previous season (one male and two females) and a female into her second year. All four birds were raised in DSP, but I have no way of knowing whether or not the older female was the mother of the siblings.

## CONCLUSIONS AND DISCUSSION

Using bluebird droppings as a measure of winter roosting, 97% of the winter roosting of Eastern Bluebirds takes place in January and February. When given a choice, bluebirds use winterized nest boxes over non-winterized boxes by factors ranging from 1.3 to 3.5 with use of winterized boxes intensifying through February. Also, in January, bluebirds roost most in boxes that did not produce bluebirds the previous season, possibly because of the availability of food supplies in habitats not compatible with bluebirds during the nesting season. Bluebirds tend to shift their use in February to boxes that produced bluebirds the previous season, possibly in response to seasonal territorial instincts and the arrival of migrants.

Bluebirds roosted in 30.4% of the boxes in the park and only 6.9% of the park's boxes were used during both months of the roost season. Because there is no accurate method of predicting which nest boxes will be used as winter roosts, this researcher recommends that all nest boxes be winterized before 15 November.

During the 1984-85 winter, eight roosting bluebirds died in five nest boxes in DSP. (All eight winter kills had been raised in the park and all but one were raised in 1984. Three females were found in three different boxes; one box contained a pair of male and female brood siblings; another box contained the remains of the same sibling combination accompanied by a 1983 female, possibly their mother.) All but one had died in nonwinterized boxes. I had winterized a meager ten boxes within the park that year and that was not enough. Not one bird was lost during the 1985-86 season with one-half the park's boxes winterized. I plan to winterize all boxes as a standard management practice. The data reveal that wintering bluebirds may "learn" to use winterized boxes, possibly because they are "warmer." If all boxes are not winterized, returning migrants, or transient migrants, may not have the luxury of a learning period and, during inclement weather, may make a fatal choice and seek shelter in a ventilated box.

Last spring, in response to the winter lessons learned in this study, I began to leave my boxes winterized through May, during the first bluebird nesting period of the season. I removed the felt strip from above the front panel during the first week in June and I removed the second strip from above the back panel during the first week in July. I hope to prevent severe chilling of eggs and young during early spring while permitting adequate ventilation during hot periods in mid and late summer. Another study will have to evaluate these practices. ■

#### ACKNOWLEDGMENTS

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management of Delaware State Park for their support of the Bluebird—Tree Swallow trail. I also would like to thank *Sialia sialis* for revealing some of its secrets while displaying its beauty during the cold days and nights of 1985-86.

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R. Tuttle wishes to make two corrections in the article he authored which appeared in *Sialia* 9[1]:3-7, 34. On page 3 there are 5.5 miles [8.8 km] of mowed trails in Delaware State Park and on page 6 of the same article 600 m should be listed as 656 yds.

## Literature Review

T. David Pitts

**Leukering, Tony (editor). 1986. The 86th Christmas Count. American Birds 40: 589-1070.**

**Monroe, B.L., Jr. 1986. Summary of all-time highest counts of individuals for Canada and the United States. American Birds 40:1073-1083.**

**Monroe, B.L., Jr. 1986. Summary of highest counts of individuals for Canada and the United States. American Birds 40:1084-1090.**

In contrast to the ease of observation and study during the nesting season, bluebird winter activities are more difficult to study and, consequently, are not as well understood. The best source of information on bluebird winter distribution and population density is the published account of the annual Christmas Bird Count (= CBC). The 1985 CBC consisted of counts from 1504 localities including many outside of the United States such as Bermuda where 50 Eastern Bluebirds were recorded. Several counts in Canada recorded bluebirds; for example, St. Thomas, Ontario had 14 Eastern Bluebirds and Penticton, British Columbia had 44 Western Bluebirds. At each locality the participants attempt to count all of the birds inside a 15 mile diameter circle; virtually all of the 38,346 participants were amateurs. The first article presents the results of these counts. The second and third articles answer some of the questions most frequently asked about CBCs, such as: what locality had the highest count for each species? and, how do the results of this year compare with those of earlier years?

The largest number of Eastern Bluebirds counted at one locality on the 1985 CBC was 795 at the Bastrop and Buescher State Parks in Texas; this is also the largest number of Eastern Bluebirds ever recorded on a CBC. The Folson, California count had 540 Western Bluebirds, and the Santa Fe, New Mexico count had 486 Mountain Bluebirds to lead all areas for these two species in 1985. However, both of these

totals were far below the previous high counts. The highest count for Western Bluebirds was 1505 at Grand Canyon, Arizona in 1969, and the highest count for Mountain Bluebirds was 1831 at Nogales, Arizona in 1972. While the massive reports (481 pages this year!) generated each year are not likely to be entirely read by many people, the data will be used for many years. The CBCs depend on volunteer amateurs; NABS members are encouraged to support, and if possible, participate in the CBCs in their area.

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**Pitts, T.D. 1985. Identification of Second-year and After-second-year Eastern Bluebirds. Journal of Field Ornithology 56:422-424.**—Eastern Bluebirds have 10 primaries on each wing with the tenth, or outermost, primary being much shorter than the others. Overlying the base of the primaries are small feathers called coverts. Eastern Bluebirds hatched during the summer undergo a molt in which most of the juvenile feathers, including the spotted breast feathers, are replaced. However, the distinctive juvenile covert overlying the base of each of the tenth primaries is not molted the first summer but is retained through the first nesting season. If an adult is captured during the nesting season, examination of its tenth primary covert will reveal whether the bird is in its first nesting season (= second calendar year of life) or older (= after second year). Coverts of second year Eastern Bluebirds are not sharply pointed and have less blue than the coverts of after second year bluebirds. This technique will allow researchers to determine the percentage of a population that is comprised of inexperienced, second year birds and to compare their nesting efficiency with that of the older and more experienced birds. ■

Dr. Pitts welcomes reviews from members. Readers should submit material to Dr. David T. Pitts, The University of Tennessee at Martin, Martin, TN 38238-5014.

# 1986 Nesting Box Report

Delos C. Dupree

Despite terrible weather conditions in some parts of the country and other adversities normally associated with trying to bring back the bluebird, the 1986 nesting season was a fantastic success. While the number of reports received increased about 10% from 1035 to 1140, the number of fledged bluebirds increased almost 42% from 32,840 to 46,559. Amazing statistics for any endeavor.

Several reasons are cited for the dramatic increase. Not only were more boxes set out (27,420 versus 20,988), but the percentage of boxes used by bluebirds increased from 49% to 52%. The number of bluebirds fledged per box also increased from 4.36 to 4.48.

Nesting boxes used by other cavity nesting species increased by 38% (3,932 versus 2,842) although the total number of boxes increased by only about 30%. Apparently bluebirds are not the only birds needing human help.

Even woodpeckers, which are capable of making their own nesting cavity, are using nesting boxes. Puzzling, but a fact reported by many members. Donald E. Jenkins of Sutter Creek, CA, was fortunate in having an Acorn Woodpecker nest in one of his boxes, the first such report we have received.

Mrs. Norma C. Daniels of Baxley, GA, had an interesting experience with a pair of Red-headed Woodpeckers. Constantly harassed by starlings while enlarging the entrance hole and pecking wood chips for the nest, the woodpeckers finally gave up. The starlings built a nest and laid five eggs, but Mrs. Daniels removed the nest and the eggs and sealed the entrance hole with screen wire. When the covering was removed the woodpeckers immediately returned to resume nest building. This time, unhampered by starlings, the female finally laid one egg on 10 May. Now comes the amazing part of the story. The egg was punctured, apparently by a wren. After removing the damaged egg, the female laid another. The same thing happened for 24 consecutive days. Finally, the next four eggs were unmolested and eventually four young hatched. Three of the four successfully fledged on 19 July about two months after the first egg was laid.

## East

Despite a miserable spring followed by the worst hot, dry summer in many years, the results from the Southeast were most encouraging. One of the reasons for success can be attributed to the Moss Creek Plantation group. Mrs. G. Stewart Smith of Bluffton, SC, reports that each homeowner is offered a nesting box when they move into their new home. Thirty-four of the community's 49 cypress boxes yielded 225 bluebird fledglings. An additional six boxes were used by chickadees.

The Betsy Ross 4-H Club of Union Mills, NC, led by Christine B. Ammons had remarkable success. Even though only 53 of their 158 boxes were used successfully by bluebirds, 402 young were fledged.

Hot and dry weather in Perry, GA,

didn't bother Linda Maddox's bluebirds. Despite 47 straight days of 90° F or higher with no rain, Linda's constant attention helped her birds to fledge their young successfully. Nesting boxes were shaded from the hot sun and a constant supply of fresh water was made available.

The North Carolina Bluebird Society's 1986 bluebird nesting report from Linda Phillips summarized the effect of the drought with these words, "This year's drought may long be remembered more for its effect on monitors than on bluebirds." Judging from the tallies submitted by 57 trail monitors, no truer words have been spoken. A total of 1,616 young bluebirds were fledged from 274 of the 552 boxes available.

Included among the 77 boxes used by cavity nesters other than bluebirds was one monitored by Ann McIver and Joe White in which a Prothonotary Warbler fledged four young at Carlson Farms Golf Course located just north of Greensboro. One cowbird egg was found by both Lois Coleman and Bea Mansfield in one of their chickadee boxes. Ann McIver had one in a bluebird nest.

Andrew and Lorna Beasley of Live Oak, FL, have mounted their nesting boxes on PVC pipe to reduce predation by raccoons after these animals had destroyed nests of a Great-crested Flycatcher, eight pairs of bluebirds, an American Kestrel, two pairs of Carolina Chickadees, and one Tufted Titmouse. The Beasleys have the right idea. When trouble occurs on the trail, do something about it. Incidentally, their Eastern Screech-Owl nested successfully for the seventh consecutive year.

Bill Eckert, who was instrumental in setting up bluebird trails in all of the parks in Howard County, MD, did something about the blowfly infestation that was weakening and killing young bluebirds. Platforms designed by Ira L. Campbell of Harrisonburg, VA, and modified by Miss Fran Hanes of Utica, NY (*Sialia* 6(2):70) were installed in all boxes. Bill, like Ira, had 100% success; no more blowfly problem.

Fire ants will walk right through Tree Tanglefoot according to Delilah Caruthers of Wildwood, FL. Next year she is going to wrap rags soaked in diesel fuel around the posts and plans to keep records of the results. Since fire ants are constantly expanding their range, be on the lookout for these troublesome pests.

Beware of unusual objects used for nesting material. According to Ed and Tink Reish of Montoursville, PA, a piece of string was used for nesting material with disastrous results. The young birds became entangled and perished.

All 121 bluebird fledglings on Tom Mulvey's Pine Beach, NJ, trail were banded by him with color bands as well as the conventional bands. Each year a different color is used so that returning birds can easily be identified with-

out disturbing the nesting activities of adults. Tom reports that nesting was delayed about two weeks because of the weather, but once they got started the success rate exceeded 80%.

Last spring Joseph R. Sedlacek of Johnson City, NY, moved his nesting boxes farther apart and put boxes back to back in order to reduce territorial disputes between his bluebirds and Tree Swallows. Normally, bluebirds nest in one box and swallows in the other, because the swallows don't usually nest close to others of their own species. For the most part, they followed the script, swallows nested in one box and bluebirds in the other. The exceptions, however, were surprising. On two occasions, Tree Swallows nested successfully in back to back boxes. On the other hand, several bluebirds, reversing their roles as underdogs, drove off the swallows and established territorial right to both boxes. Another interesting development was the sharing of paired boxes between swallows and wrens. They seemed quite compatible according to Sedlacek.

No conclusions can be drawn until data are collected for several years on a controlled basis, but theories can be advanced. The fact that swallow nestings outnumbered bluebird nestings by 85 to 17 may be significant. By increasing the distance between boxes even though they were paired may have made defending a nesting site easier for the bluebird. The large concentration of swallows may have made nesting close together a necessity for the swallows. Interesting theories, but only theories until the true facts are learned.

Bonuses on Sedlacek's trail included successful nestings from two pairs of Wood Ducks, two pairs of Great-crested Flycatchers and one pair of American Kestrels. The latter have nested every year since 1981 in the box mounted 15 feet in the air in an overgrown cow pasture.

Nancy and Ladd Masek of Uniontown, PA, used a 12 volt buzzer to discourage House Sparrows from usurping a bluebird box. Every time a sparrow entered the box, the buzzer would be activated from the house. The first

buzzer had a high-pitched tone which caused the sparrow to peer out of the box, but not to leave. When a buzzer with a loud buzzing tone was used, the sparrow left and didn't return. Now, after waiting for three years, the Masek's were rewarded by having eight bluebirds fledged from one of their five boxes.

### Midwest

Reports from the Nongame Wildlife Program of the Minnesota Department of Natural Resources and the Bluebird Recovery Committee of the Audubon Chapter of Minneapolis show a 53% increase in the number of bluebirds fledged in 1986 (10,430) over those fledged in 1985 (6,803). Data received from 418 participants were computerized by Dave Ahlgren and Joyce Nellis. In his report Carroll L. Henderson, Nongame Supervisor of the Division of Wildlife, indicated that 8,883 nesting boxes were monitored. The Audubon effort was the responsibility of Minneapolis Chapter President Mary Ellen Vetter.

Liz Pitzer of Plymouth, WI, George and Carol Harmon of Quinlan, TX, and Dick Walker of Loogootee, IN, are experimenting with PVC pipe. Raccoons have always been a problem until PVC pipe was put over all her poles according to Liz. Dick is still having good luck with not having sparrows nesting in his PVC boxes even when they are placed in areas of high sparrow density. A total of 69 bluebirds fledged from 12 PVC boxes. Trouble with snake predation prompted George and Carol to mount their boxes on PVC pipe with a metal cone between the pipe and box. Only one 7 foot rat snake passed this formidable barrier.

From Glenwood, AL, comes news of two large broods successfully fledged on Mrs. W.W. Drinkhard's bluebird trail. In one nesting box seven eggs were laid and six fledged. In the other, six eggs were laid and six fledged.

Making violins and fine furniture for a living never drew praise for John W. Wood of Tyler, TX. Once he started to make and give away bluebird boxes, however, John became locally famous. John reduced the time required to build

boxes by eliminating the 1 1/2 inch entrance hole and leaving a 1 3/8 x 4 inch opening at the top. Whenever sparrows were a problem box tops were left off until May, then replaced.

Bewick's Wrens are becoming a frequent occupant of bluebird nesting boxes in more and more areas. Lawrence Herbert of Trenton, MO, reported the first record of the species in Finney County, KS, during the 1986 nesting season.

For the first time, third nestings of bluebirds occurred on Tom A. Barber's trail in Cambridge, OH. As a result 128 fledglings were raised in 17 boxes. Perseverance finally paid off for Linda Glickert of Millstadt, IL. Four years ago there were no known bluebird nestings in her area, although they passed through during migration. With Linda's help, trails were set up in surrounding communities. Bluebirds flourished everywhere but in her yard. Last spring Linda was rewarded for all her hard work when a pair raised four young in her backyard nesting box. The total fledged in the surrounding area was 275.

Pottery nesting houses made by Patricia Folley of Noble, OK, became summer homes for three pairs of bluebirds which produced 23 young. Cleaning the pottery houses is no problem. All Patricia does is fire the one piece pottery and, presto, the houses are ready for another nesting. Sparrows don't seem to like the pottery houses, the sparrows that are left, that is. Patricia trapped 4 gallons of House Sparrows for the local raptor rehabilitation center.

Pole barn spikes placed two inches apart with the sharpened points radiating from the bottom of the boxes were used by Ira B. Workman of Danville, OH, to discourage raccoons.

### West

Mountain Bluebirds returned early to their northern breeding range; in fact, at a record early date of 27 February in Lethbridge, Alberta. Spring-like temperatures were soon replaced by cold and wet weather. For the second year in a row, second broods were scarce. Not many broods of seven were reported, but four of five clutches with

Table 1. 1986 Bluebird Nesting Box Data According to Geographic Region.

Types of Boxes Used	4" x 4"			5" x 5"			Open-Top			Jug			Other			Total
	E	C	W	E	C	W	E	C	W	E	C	W	E	C	W	
Total Number of Boxes	4,596	12,133	997	2,254	1,575	4,125	16	28	7	13	60	0	654	719	243	27,420
Boxes Used by Bluebirds	2,068	4,228	574	1,161	685	1,197	9	3	0	7	2	0	143	228	60	10,365
No. of Bluebirds Fledged	8,680	18,704	2,631	4,941	3,837	5,800	41	22	0	28	9	0	768	1,055	243	48,559
Boxes Used: Chickadees	185	173	5	115	23	15	1	1	0	0	0	0	7	21	17	543
Boxes Used: Titmice	41	60	7	36	31	1	0	1	0	0	0	0	0	0	0	177
Boxes Used: Nuthatches	7	10	2	4	92	2	0	0	0	0	0	0	0	0	1	121
Boxes Used: Swallows	444	330	135	311	1	264	1	11	1	0	12	0	128	140	82	1,860
Boxes Used: Wrens	413	173	77	101	156	37	0	0	0	0	4	0	36	188	23	1,208
Boxes Used: Flycatchers	5	3	2	1	1	1	0	0	0	0	0	0	4	6	0	23
Total No. Boxes Used	3,143	4,977	802	1,729	989	1,517	11	16	1	7	18	0	318	564	185	14,297
% of Boxes Used by All Species	68	41	80	77	63	37	69	57	14	54	30	0	49	81	76	52
% of Boxes Used by Bluebirds	45	35	58	51	43	29	56	10	0	54	3	0	22	32	25	38
% of Boxes Used by Others	23	6	22	26	20	8	13	47	14	0	27	0	27	49	51	14

## Geographic Regions According to States and Provinces

East: Bermuda, Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, New Brunswick, New Hampshire, New Jersey, New York, North Carolina, Nova Scotia, Pennsylvania, Quebec, Rhode Island, South Carolina, Vermont, Virginia, Washington, D.C.  
 Central: Alabama, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Ohio, Oklahoma, Ontario, Tennessee, Texas, West Virginia, Wisconsin.  
 West: Alaska, Alberta, Arizona, British Columbia, California, Colorado, Idaho, Manitoba, Montana, Nevada, New Mexico, North Dakota, Oregon, Saskatchewan, South Dakota, Utah, Washington, Wyoming.

E—East (419 reports)  
 C—Central (638 reports)  
 W—West (63 reports)  
 Total (1,140 reports)



eight eggs were successfully fledged according to Duncan Macintosh of Lethbridge, Alberta. Duncan along with Gladys Galli of Great Falls, MT; Art Aylesworth of Ronan, MT; Clarence Hagerman of Pinehurst, ID; and Donna Hagerman of Reno, NV, reported that 10,461 Mountain Bluebirds and 1479 Western Bluebirds were added to the bluebird population along the Mountain Bluebird Trails last year. The good news was transmitted by Deni Hershberger of West Plains, MT.

Besides bluebirds, Donna Hagerman enjoyed seven other cavity nesters in her boxes including Mountain Chickadees, Plain Titmice, Red-breasted Nuthatches, Tree Swallows, Bewick's Wrens, House Wrens and Ash-throated Flycatchers. One flycatcher nest was destroyed by a bobcat which is the first such occurrence reported.

Between 300 and 400 Mountain Bluebirds began flocking together as early as 15 August at Jean Adams' ranch near Sundance, WY. According to Jean, this was unusually early for them to come down from the high country to prepare for the southern migration. On the other hand, Mary and Al Perry of Boise, ID, are seeing fewer bluebirds at traditional staging areas. Al blames the cold and wet spring weather that has persisted for the last three years. Burning off the grazing land is another reason given for the decline. The young birds have no place to fly to when all the small trees and shrubs are gone.

There were three significant gains in the number of bluebirds fledged in the state of Washington. Last year was the first time a significant number of third nestings occurred at Fort Lewis. Even though losses were heavy due to adverse weather conditions during the first nestings which began in early March, 471 Western Bluebirds fledged. George F. Walter banded 438 of the young and 21 females.

Elsewhere in Washington, trails at the Turnbull Wildlife Refuge in Cheney yielded 10 Mountain and 402 Western Bluebirds. Early nestings also occurred on the Audubon Venas Trail, the Jones Trail and the Ryan Trail of the Yakima Valley Audubon Society. Despite early

and even late losses due to weather, Bill Ryan was very happy about the 719 Western and 188 Mountain Bluebirds fledged.

Mention must be made here of the Bowater Bluebird Box Project. Bowater is a lumbering company located in Catawba, SC, which annually distributes free nesting boxes with the stipulation that reports of nesting success be reported to the company. In 1985 boxes were distributed to 3,647 persons in 21 states, so a late report is understandable. Cards were returned by 1,555 monitors who reported 8,794 eggs laid, 7,571 eggs hatched and 7,202 bluebirds fledged. Ed Haws, who publicizes the project, is a former NABS board member.

The blue (bluebirds) and the gray (sparrows) are fighting to take over possession of two national battlefields. Fierce battles are waged each year on Mark Raabe's trail at Antietam National Battlefield. Fortunately, the bluebirds are winning. During the height of the tourist season, Mark always has an educational display at the main visitors' center. Thousands of travelers view the display annually.

A trail of 12 boxes started by Arthur L. Kennell is located in the Evergreen Cemetery at the Gettysburg National Battlefield. One box is located within 50 yards of the spot where Abraham Lincoln delivered the Gettysburg Address. Nineteen of 22 nesting boxes were used last year resulting in the fledging of 109 bluebirds.

Walt Whitman wrote, "You must not know too much, or be too precise or scientific about birds and trees and flowers; a certain free margin, and even vagueness helps your enjoyment of these things." Enjoy every minute you are outside monitoring your nesting boxes and remember that you are one of thousands helping to preserve nature's beautiful birds for others to enjoy in the future.

The 1987 nesting season is now upon us. You will find the 1987 bluebird nesting survey form enclosed. Enjoy a successful season and share your good fortune with the rest of us by sending in the report no later than 1 November 1987. ■

# QUESTION CORNER

Lawrence Zeleny

We regularly band 50 to 60 Eastern Bluebirds per year from a 28 box trail located in Northwest Virginia. While we miss banding only a very few fledglings who survive, we continue to catch a number of unbanded individuals before and after the nesting season. What is happening? How far do the bluebirds range after the nesting season?

William Oberman  
Washington, DC

Bluebirds in the Middle Atlantic area are essentially non-migratory, yet they often do not remain close to their nesting areas after the nesting season. Bluebird trails are not necessarily located in the best feeding areas. For this reason, after the young birds are fledged, family groups often wander considerable distances in search of better feeding areas where they may set up temporary residence. Later in the season, several such family groups are likely to join together to form small flocks which may wander still further in search of suitable locations to spend the winter. Preferred wintering locations are those where there is an abundance of wild berries or other fruit for winter food, and where there is good protection from strong winter winds.

In the spring the bluebirds are likely to return to the bluebird trail where they nested or were reared the previous year. The extent to which they thus return probably depends considerably on whether or not they encounter other suitable nesting sites during their fall and winter wandering.

On my own bluebird trail where I band nearly all of the nestlings, it



appears that roughly one-half of the adult birds are those that were reared on the trail in previous years.

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Is there any hope of attracting bluebirds to a residential area of a small city?

R. Baydowicz  
Michigan City, Indiana

Many years ago bluebirds nested quite regularly in the residential areas of most towns and cities wherever suitable cavities or nesting boxes were available to them. Later, however, such areas became quite inhospitable to bluebirds, largely as a result of the great proliferation of House Sparrows and European Starlings. Even so, bluebirds will still often nest in or close to the outer fringes of towns and cities if nesting boxes are provided and House Sparrows are controlled.

Other birds such as chickadees, titmice and House Wrens will often use nesting boxes in residential areas that are not acceptable to bluebirds. Boxes with entrance holes 1 1/8 inch [29 mm] in diameter are both starling and sparrow-proof but are readily used by chickadees and wrens.

Most rural property owners are willing or even happy to have bluebird boxes placed on their properties if the benefits of the project are explained to them. We suggest that you explore this possibility further. ■

# Report from Oregon and Washington for Annual Meeting 1986

Elsie K. Eltzroth

Only in the past ten years, and then only in a few isolated areas, did the decline of the Western Bluebird engender concern by anyone other than local birders. But things may be looking up for monitors in the Northwest because in 1985 the USFW Service office, Portland, OR, included the Western Bluebird in its compilation of the *Region One—Sensitive Blue Species*. Now we have what everyone dreams of—*STATUS*—however dubious or negative that may be.

Three weeks ago we were traveling in south and central Oregon, east of our approximately 11,000 foot high snow-capped volcanic mountains. At the end of the day, we conservatively estimated that we had seen at least 500 Mountain Bluebirds on their migration to California, Texas, or Baja, CA. In the 11 years that I have been obsessed with bluebirds, I have never seen such a multitude of sky-blue beauties flashing in the sun. I had the feeling that many had come from south-central Washington and the Brinkerhoff Trail. Bill Ryan, of Yakima, WA, reported that the people of Bickelton were asking individuals to help by designating a "Bluebird Day" for cleaning and repairing boxes.

Unfortunately, in our corner of the world, we are not organized like the Mountain Bluebird Trail. In fact, we aren't even a loosely knit group. Only by accident did I make contact with a biologist in north-central Washington near the town of Pateros on the east side of the Cascades. George Brady and I became acquainted when two dead male Western Bluebirds were found near Corvallis wearing his USFW bands. This was an astonishing migratory route for these birds in that they probably followed a number of passes through the 11,000 plus foot mountains, or flew westward through the Columbia Gorge in order to find their way to our eastern slopes of the Coast

Range of Oregon.

George sent me data comparing his recent nest box banding totals. He recaptured 5 bluebirds he'd previously banded within a few miles of the original banding site. In addition to bluebirds, White-breasted Nuthatches and Mountain Chickadees used his boxes. No mention was made of Tree Swallows, possibly an oversight. He is adding 50 boxes this fall and is having more made.

South of George Brady's area, in central Washington, the most promising news comes from Yakima where Bill Ryan and his wife, Edith, monitor a 78 box trail. He compiles data from 3 trails on private land, in the Wenatchee National Forest, and on Washington State Game Land.

A bluebird trail has been established by the Wenatchee, WA, Audubon chapter with the help of the Washington Dept. of Game.

In Oregon, the Portland Audubon Society has not had a bluebird trail coordinator since 1981. Earl Gillis, Forest Grove, has all of Hubert Prescott's notes and data and is trying to evaluate the information. Hugh was 87 years old last February and is no longer able to be "on the trail." Earl tries to keep in touch with the few individuals and many property owners who continue to monitor boxes on Chehalem and Parrett Mountains near Newberg, OR. He presents slide programs and consults with folks who want boxes and live in suitable bluebird habitat.

South of Portland in the Willamette Valley where we have only Western Bluebirds nesting, there are some boxes in the Salem area, approximately 200 being monitored on our trail near Corvallis, and others in the hills near Eugene. The Eugene trail, monitored by Al Prigge, was unbelievably successful in the first few years but has suffered a noticeable decline in

breeding success. No monitoring took place in 1985 or 1986.

Part of the problem on the Eugene trail is one common to all of us—lack of volunteers to help with boxes which some home owners are too busy to check on a regular basis. An even greater problem is one we are constantly experiencing on our trail near Corvallis where we have had a slow frustrating growth. A drastic downward slide in breeding success in 1984 and 1985 brought about a renewed effort to manage our boxes more intensively.

Dr. Zeleny, in a recent issue of *Sialia*, discussed weather related deaths of nestlings even when almost fully feathered. We have concluded, from 14 years of experience, that the primitive thermo-regulation which the young possess is insufficient to allow their survival for more than 36 to 48 hours under Western Oregon's windy, rainy conditions in early spring and summer. If the female neglects to brood the young at night or spends an inordinate amount of time hunting in the rain, we know now that we will have to supplement the food supply near the box or provide relief at the box by taking some birds to hand feed for a few days. We have the proper state and federal permits which allow us to do this and we only take this action when we find young cold and unresponsive to the adults nearby.

This past season, for the first time in 11 years, we recognized that blowfly larvae (*Protophthora sialia*) had become yet another hazard on our trail. When banding 12-14 day olds, three of 26 carefully monitored bluebird nests were found to be infested and were thoroughly cleaned to remove the parasites.

We continue to notice things of interest on our trail. When cleaning out a House Wren nest, I found many female bluebird feathers tucked in between the sticks and thorny briars. Curious as to the number of twigs in this box, I counted approximately half of the contents—giving up when I got to 600!

This season we had our second best fledging; I banded 177 nestlings and 3 adult females (no big deal when

some trails fledge thousands). But in terms of percentages it was our best survival rate in 11 years—82%! Supplementary feeding and intensive management paid off in what we may be forced to admit is marginal habitat; marginal only because of the mounting factors which reduce breeding success despite the proper placement of nest boxes in suitable habitat.

Going down to the southern part of our state, Mike Paczolt monitors a trail sponsored by the Rogue River Audubon Society. There at Agate Lake, 1/3 of the 53 bluebirds and 96 Tree Swallows were wiped out by raccoons. It was a devastating change from a successful 1985. In addition to bluebirds and swallows, they fledged 7 House Wrens, 4 Bewick's Wrens and 5 Ash-throated Flycatchers.

There, too, in southern Oregon on property along the Applegate River, John Keller placed 55 bluebird-type boxes for swallows and bluebirds, 2 specifically built for chickadees, 2 for wrens, and 2 for nuthatches.

The 2 boxes made to attract chickadees with a 1-1/8" hole were remodeled by a nuthatch in width only producing an oval opening. The nuthatch, instead of selecting a box so carefully made for it, then built its nest of inner-bark, fur and hair in the chickadee box. Just before the nuthatch could lay its eggs, the box was usurped by a House Wren which placed sticks on top of the nuthatch nest. The nuthatch then successfully raised a family in a swallow/bluebird box with a 1-1/2" round hole.

A pair of Tree Swallows selected one of the "remodeled" chickadee boxes and fledged 5 young. All of John's new swallow boxes have 1-3/8" holes and, if made oval shaped, can even be cut 1-1/4" in height and 1-3/8" from side to side.

At the other extreme (and you may have a hard time believing this) was the ludicrous use of his new Wood Duck box at the river, with its 4" wide oval hole and huge cavity, by another pair of Tree Swallows which also successfully raised 5 young. Three of the youngsters could perch at the hole at once waiting to be fed! Violet-green Swallows were present until mid July, but not one pair

was able to command a box from the numerous Tree Swallows.

The large swallow population overwhelmed the bluebirds, too. At one point three pairs of bluebirds established ownership of boxes, even to the point of building nests; however, conflicts within the species, and the "shadowing" by an ever-present pair of swallows eventually reduced the bluebird population to one pair and even that pair changed location several times before raising their first brood. The last brood was fledged from a box

previously used by swallows.

Though we lack organization out here in God's country, we don't lack determination. Many individuals, some not associated with trails, are helping bluebirds overcome the problems of survival. They are the unsung heroes in this nation-wide project and my hat goes off to them! ■

3595 N.W. Roosevelt Dr.  
Corvallis, OR 97330

**Ed. Note:** This report was condensed from that made in Wagoner, OK.

## NABS SPEAKERS' BUREAU GETS CHAIRMAN

The NABS Speakers' Bureau has been a more or less informal entity during the past nine years of its existence. The Speakers' Bureau consisted of those who rented and those who purchased the NABS Slide Program. Recently, Jerry Newman of Rising Sun, MD, has volunteered to head the bureau.

Jerry is a seasoned bluebirder and speaker himself, going back to his years with the U.S. Navy at Bainbridge, MD, where he began his first trail. He can appreciate the ups and downs of giving talks and knows the importance of getting the message out to the gen-

eral public. The efforts of all who have given talks using NABS' slides have been warmly appreciated by all.

Jerry wants to determine which groups use the slides and how many persons make up each audience. If you have made presentations, please write to him soon with the above information. Be sure to give him your comments and suggestions for making this arm of NABS more effective. NABS certainly has come a long way since March of 1978, and, as speakers, YOU have helped to make the cause of bluebird conservation the fast-growing activity it now is! KEEP UP THE GREAT WORK!

Jerry Newman, Chairman, NABS Speakers' Bureau, P.O. Box 53, Rising Sun, MD 21911.

## Orville M. Rowe

Orville M. Rowe, supplier of NABS quality cedar and pine nesting boxes, passed away on Sunday, 15 February 1987. He was 90 years of age and a veteran of World War I.

From his workshop at home in Elkhart, Indiana, Orville built and shipped countless bluebird nesting boxes. His first major shipment was made in the early 1970s as a result of a bluebird article in the *South Carolina Wildlife* magazine. When NABS was founded in 1978, Orville was immediately contacted and he agreed to build and ship nesting boxes. His products received rave reviews from customers commending his quality workmanship. This family tradition will be continued by his son, Jack. Orville's boxes will be testimony to his craftsmanship for generations of bluebirds to come.

—Mary D. Janetatos

# PLANTINGS FOR BLUEBIRDS AND OTHER WILDLIFE

## Red Chokeberry: Attractive Famine Food

Karen Blackburn

Like the familiar apple tree, the Red Chokeberry is a member of the rose family, and indeed, its flowers resemble miniature apple blossoms. Its spring clusters of white or purplish flowers are quite attractive and are followed by clusters of red fruits which ripen in the fall. Because few species of birds use chokeberries as a preferred food, the fruits are often neglected until winter when they are taken by many other species during hard times.

Red Chokeberry is a small deciduous shrub which rarely reaches its maximum height of eight feet. It prefers moist sites and is commonly found growing near wetlands, in moist woodlands and roadside drainage areas. Although Red Chokeberry can be grown on drier sites, it is perhaps best suited for natural areas alongside streams or ponds.

### Red Chokeberry (*Aronia arbutifolia*)

**Native Range**—Nova Scotia west to Minnesota and south to Florida and eastern Texas.

**Hardiness**—Zone 5

**Habitat**—Wetland borders, moist woodlands, but may be found on drier sites as well.

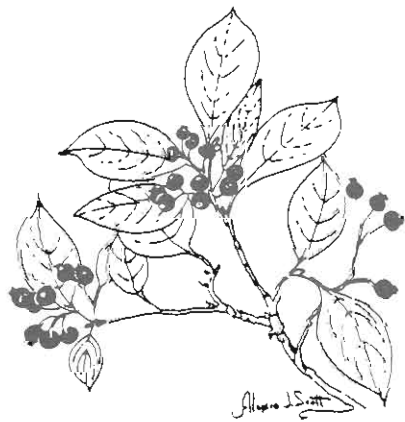
**Habit**—A small deciduous shrub to eight feet in height. Finely-toothed leaves are spaced alternately along the stems. Fall foliage is red to orange.

**Fruit and Flowers**—The 1/2" white or purplish flowers appear in clusters in spring or early summer. The red 1/4" fruits ripen in autumn and remain on the plant well into the winter months.

**Landscape Value**—Attractive when planted in groups bordering streams or ponds.

**Culture**—Easily transplanted. Prefers moist sites in full sun, but will do well on drier soil in partial shade.

**Wildlife Value**—The fruits of Red Chokeberry are taken by at least a dozen species of birds including the



Wild Turkey, Ring-necked Pheasant, Black-capped Chickadee, Gray Catbird, American Robin, Eastern Bluebird and Common Grackle. As a preferred food, chokeberries appeal to the Ruffed Grouse, Northern Bobwhite, Brown Thrasher, Cedar Waxwing and Eastern Meadowlark.

**Related Species**—Black Chokeberry (*A. melanocarpa*) ranges from Newfoundland to South Carolina and west to Minnesota and Tennessee. Like Red Chokeberry, it is most frequently found on moist sites. Its shiny black fruits are taken by at least seven species of birds. ■

Rt. 3, Box 650  
Marianna, FL 32446

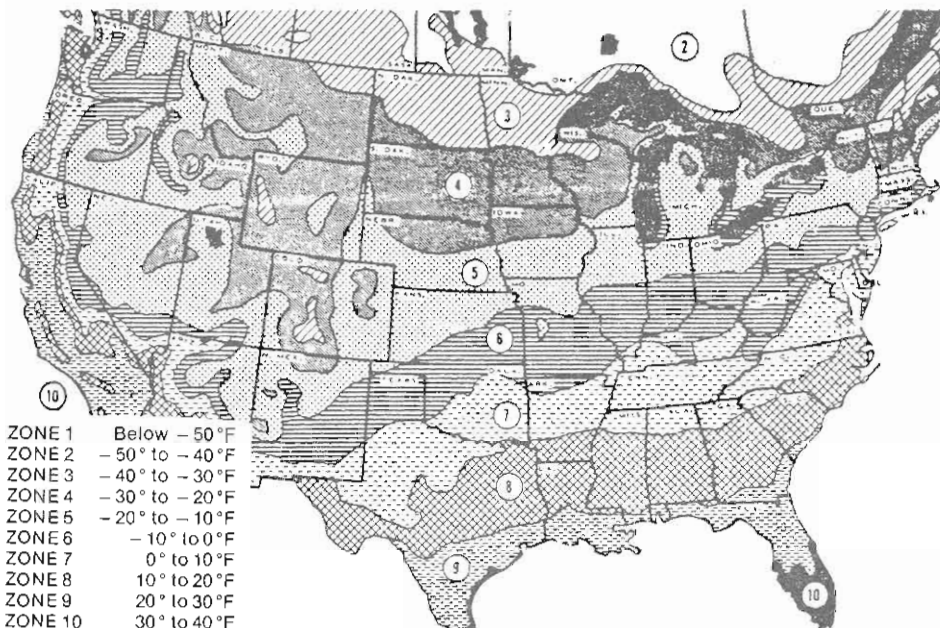


Figure 1. Hardiness Zones for the United States and southern Canada. Temperatures for each zone are the average annual minimum temperatures. When no zones are mentioned with the plant description, plants are hardy anywhere. If a zone is given, it indicates that plants are hardy within the zone and in all areas south of it. Factors within zones such as altitude, exposure, soil type, moisture, etc. can create variations. This map was developed by the Agricultural Research Service of the U.S. Department of Agriculture.

## A BIRD IN THE BUSH

Karen Blackburn

From Harry Krueger of Ore City, Texas, comes welcome news of his success with wildlife plantings: "Several years ago I planted five Autumn Olives (*Elaeagnus umbellata*) especially for birds. For the past three years these shrubs have produced numerous red drupes, and by November of each year, all fruits that are on the shrubs and those that have fallen to the ground have been eaten by the birds. These shrubs were planted after being described in *Sialia* (Autumn 1983)."

One day last fall Mr. Krueger noticed a bird perched in one of his Autumn Olive shrubs: "I knew immediately that it was a bluebird, but as I focused my binoculars on him and had

him in full view, he grabbed a fruit from the shrub. I know the birds eat the fruit of the Autumn Olive, but to actually see a bluebird in full view eating one of the berries is a special thrill—that was my main purpose in planting these shrubs." Those of us who plant for wildlife can certainly understand that "special thrill" which comes upon seeing a bluebird enjoying the "fruits of one's labor."

Mr. Krueger's property is also blessed with "numerous dogwood trees, lots of sassafras, plenty of sumac, poison ivy and other fruit-producing plants" which he has preserved

for wildlife. In addition, he has provided nest boxes as well as a bird bath which is visited by up to fifteen Eastern Bluebirds. This year he plans to add many more Autumn Olives to the landscape, and we wish him continued success in creating a haven for bluebirds and other wildlife.

Elsie Eltzroth of Corvallis, Oregon, has kindly provided us with a detailed account of recent observations pertaining to Western Bluebirds. She reports that on 10 August 1986 when cleaning out a nest box used by Western Bluebirds, "no less than 229 seeds were found in the nest and on the bottom of the box." Ms. Eltzroth states that these seeds have been identified as those of *Rhamnus purshiana*, the Cascara Buckthorn. She goes on to say: "I have raised orphaned bluebirds for the past ten years. Like the robin, they regurgitate coarse material which they cannot digest. I can't say for sure that the young bluebirds in this nest box were fed these *Rhamnus* fruits or whether the seeds were regurgitated by the three adults who were feeding them, but we do know that the seeds were deposited there by Western Bluebirds. We know that they also regurgitate the seeds from the western species of mistletoe. The mistletoe seeds are found on the rim of Dr. Angeline Cromack's bird bath where the birds wipe their beaks to get rid of the sticky seed."

Ms. Eltzroth has a wild buckthorn in her yard and has seen American Robins and Cedar Waxwings feeding on the fruit. She adds, "I suspect that the Steller's Jay and the Black-headed Grosbeak feed on it as well because they spend quite a bit of time near that area."

Because a number of *Rhamnus* species are common in the western states, particularly those along the Pacific Coast, their fruits provide a readily available source of food for wildlife in that region. Buckthorns produce small fleshy fruits which appeal

to at least 19 species of birds, and many mammals also feed on the fruits, stems or foliage.

Ms. Eltzroth's experience suggests that much can be learned about the fruit-eating habits of bluebirds by careful examination of the nest box and its contents after each nesting. Other NABS members who find similar nest box evidence of fruit use may wish to identify the seeds (perhaps by sending samples to the botany department of a state university) and pass their information along to us.

We thank Harry Krueger and Elsie Eltzroth for sharing their experiences, and invite others readers to report their observations of plant use by bluebirds and other wildlife. Please be as specific as possible, including such information as the name of the plant (botanical name when known) and the approximate time of year when the observation was made. Send your observations to Karen Blackburn, Rt. 3, Box 650, Marianna, FL 32446. ■



## IN MEMORIAM

Each year the Spring issue of *Sialia* carries a list of memorial gifts which have been received by the North American Bluebird Society during the preceding year. Contributions can be made as general donations to the Society or can be specified for research, education, or gift memberships.

In memory of Dale McCollum. By Mrs. Dale (Myrene) McCollum.

In memory of Kathryn F. Barden. By Ann Jennings.

In memory of Lois M. Backes. By Stan Lathrop.

In memory of James Williams. By Mrs. James (Jane) Williams.



# THE OKLAHOMA BLUEBIRD TRAILS PROJECT

Dana L. Base

*This paper was presented at the Ninth Annual Meeting of the North American Bluebird Society, October 25-26, 1986, at Wagoner, Oklahoma.*

The Oklahoma Bluebird Trails Project is a cooperative project between bluebird and other wildlife enthusiasts and the Oklahoma Department of Wildlife Conservation (ODWC). Initiated in early 1985, the project goals are (1) to promote the conservation of bluebirds and other cavity nesting species in Oklahoma; (2) to provide a unique avenue for educating the public on the habitat requirements of bluebirds and other wildlife; (3) to create an opportunity for volunteers to participate in Oklahoma's Nongame Wildlife Program; and (4) to expand opportunities for researchers interested in the biology of cavity nesting birds in Oklahoma.

Prior to the bluebird nesting season in early 1985 and 1986, nest box record forms were mailed out from the ODWC headquarters to cooperators who maintain nest box trails. Following the nesting season, cooperators sent nest box record forms back to the ODWC "Bluebird Trail Coordinator". A statewide summary of bluebird trail reports was then compiled.

Results of the 1985 nesting season statewide summary are reported in the fall 1985 issue of the Oklahoma Nongame Program Newsletter. For the 1986 nesting season summary, a total of 38 trail reports were received from 35 observers. The 38 trails were comprised of 446 total nest boxes. Trail size ranged from 2 to 59 nest boxes and the mean number of boxes per trail was 12. Nest box trails were located in 18 counties with the highest number of reports submitted from Wagoner County (Table 1).

Table 2 presents a comparison of nest box trail variables from the 1985 statewide summary with the present

year's. All trail variables increased in 1986 except for mean trail size which dropped from 14 to 12 nest boxes.

Eight species were recorded nesting in boxes in 1986 (Table 3). The top three species in order of frequency of nest box use in 1986 were Eastern Bluebird (*Sialia sialis*); Tufted Titmouse (*Parus bicolor*), and Carolina Chickadee (*Parus carolinensis*). The same species constituted the top three in 1985; however, more Carolina Chickadees than Tufted Titmice were recorded using boxes (Table 4). As in 1985, not all nesting attempts were monitored throughout the breeding season at each of the trails during 1986 (Table 3). The number of young fledged for each species, therefore, represents a minimum figure.

A report was not received for the Black Mesa Trail in Cimarron County this year; consequently, Plain Titmice (*Parus inornatus*) and Ash-throated Flycatchers (*Myiarchus cinerascens*) two species likely to have used nest boxes there are not listed in the 1986 summary (Table 4). White-breasted Nuthatches (*Sitta carolinensis*) reported to have used two nest boxes on one trail in McClain County in 1985 were not recorded again in 1986. Two species not recorded in 1985 are reported to have used nest boxes in 1986. These include one pair of Northern Flickers (*Colaptes auratus*) (yellow-shafted race) and three pairs of Carolina Wrens (*Phryothorus ludovicianus*). A late nesting date record may have been set with the Carolina Wrens and is currently under investigation by the Oklahoma Ornithological Society Bird Records Committee.

An albino Eastern Bluebird was reported to have hatched on about 18 May 1986, in a nest box in Pushmataha

Table 1. Number of Trails and Nest Boxes Reported by County in Oklahoma During 1986.

County	Number of Trails	Number of Nest Boxes
Cherokee	2	24
Cleveland	4	34
Comanche	1	59
Creek	3	37
Lincoln	2	14
Logan	1	18
McClain	1	30
Muskogee	1	6
Okfuskee	2	10
Oklahoma	3	33
Okmulgee	1	12
Osage	1	5
Pontotoc	1	48
Pottawatomie	2	22
Pushmataha	1	4
Tulsa	3	20
Wagoner	8	55
Woodward	1	14
Total: 18	38	446

Table 2. Comparison of Nest Box Trail Variables Between 1985 and 1986 Statewide Summaries.

	1985	1986	Difference (+/-)
Total Trail Reports	21	38	+ 17
Total Nest Boxes	296	446	+ 150
Average Trail Size	14	12	- 2
Total Observers	18	35	+ 17
Total Counties	13	18	+ 5

County. The adult female laid five blue eggs in the box during the first week of May. Both parent birds were of normal plumage. The young albino nestling was taken into captivity on 28 May 1986, when a black rat snake was discovered part way inside the nest box attempting to prey on the young. In June 1986 the albino bluebird was given to

the Oklahoma City Zoo where it currently remains.

In providing an expanded data set on nest box availability and use, the Oklahoma Bluebird Trails Project has created many opportunities for additional research on Eastern Bluebirds and other cavity nesters in Oklahoma. A few of these opportunities include re-

Table 3. Cavity Nesting Species Use and Monitoring Results for the 1986 Breeding Season Summary.

Species	No. of Nest Boxes Used	No. of Trails w/Species Reported	Total Clutches Monitored	No. of Young Fledged
Eastern Bluebird	225	37	299	802
Tufted Titmouse	27	13	27	94
Carolina Chickadee	26	14	21	95
Bewick's Wren	17	11	14	80
Carolina Wren	3	2	3	10
Prothonotary Warbler	8	2	6	20
Great Crested Flycatcher	1	1	0	0
N. Flicker (Yellow-shafted)	1	1	1	7

Table 4. Comparison of Cavity Nesting Species Use of Nest Boxes between 1985 and 1986 Statewide Summaries.

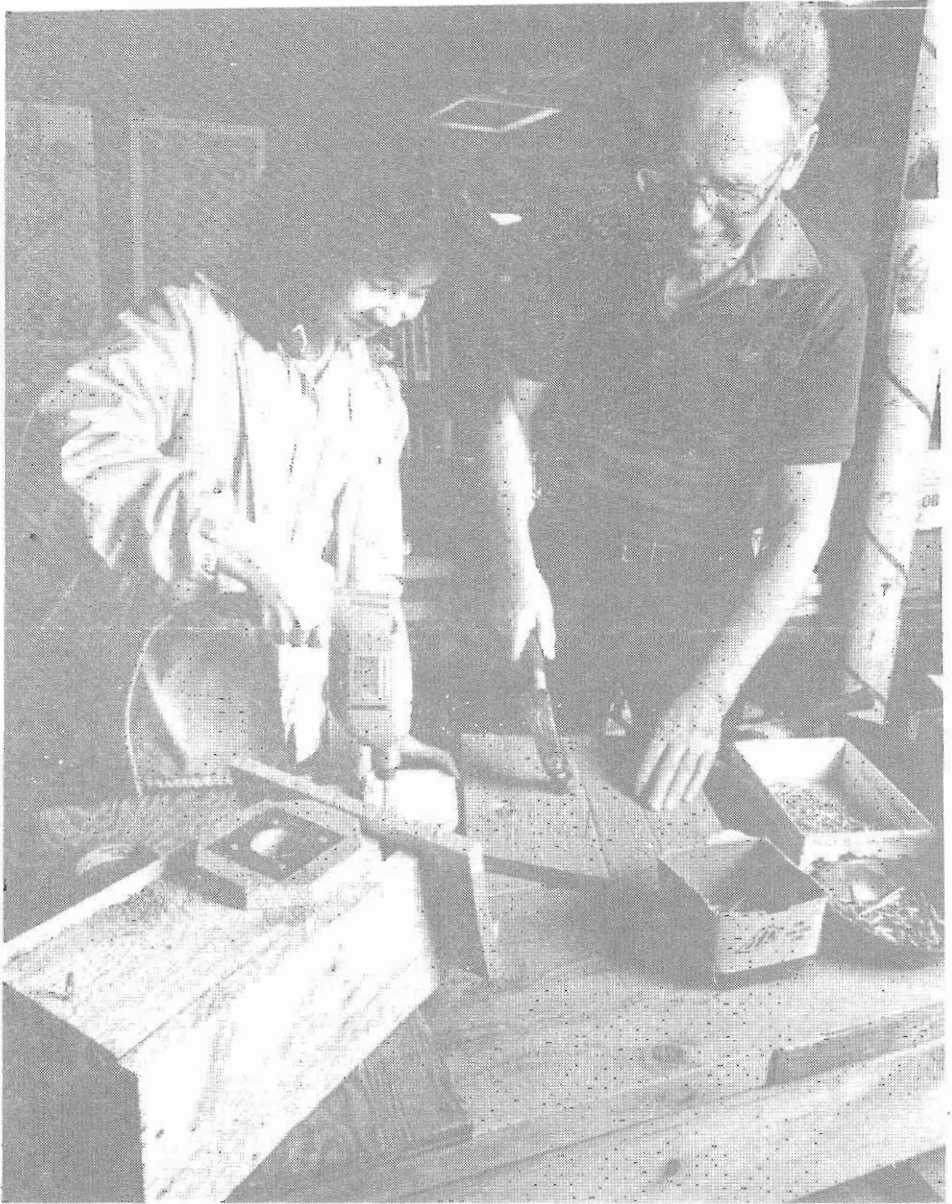
Species	1985 N = 296 nest boxes	1986 N = 446 nest boxes
N. Flicker (Yellow-shafted)	---	1
Ash-throated Flycatcher	2	---
Great Crested Flycatcher	2	1
Carolina Chickadee	31	26
Tufted Titmouse	16	27
Plain Titmouse	2	---
White-breasted Nuthatch	2	---
Carolina Wren	---	3
Bewick's Wren	4	17
Eastern Bluebird	58	225
Prothonotary Warbler	3	8
Total Species	9	8

search on early and late nesting dates for species, habitat selection by species, species clutch characteristics and clutch fates.

The following individuals are recognized and thanked for submitting nest box trail report forms in 1986: J. Banta, S. Beagley, G. Brown, W.A. Carter, T. Cartwright, M. Dyer, K. Dueck, C. Fessler, J.G. Fisher, P. Folley, D.G. Graham, R. Graves, E. Hill, E. Huskey, C. Jernigan, P. Kilgore, D. Kirkwood, L. Lang, M. Liles, O. Lloyd, J. Logan, D.D.

Martin, J. McMahon, R. Mills, S. Mitchell, P. Muzny, J.G. Newell, A. Nunnery, V. Nunnery, M. Schrick, R.H. Simmons, G.B. Taylor, J. Womack, and J.J. Yarger. Special thanks are extended to Charlotte Jernigan for her incredible enthusiasm and motivation of others to establish and maintain bluebird trails throughout the state. ☐

El Morro Beach Mobile Home Park  
Space #71  
8811 Pacific Coast Highway  
Laguna Beach, CA 92651



*North Jersey Advance photo by Ross Cameron*

Junius Birchard (right) is assisted in building bluebird nesting boxes by his next-door neighbor, Kara Parks. Mr. Birchard, a resident of Hackettstown, New Jersey, has provided over 10,000 boxes for bluebirds. He travels widely in the state making oral presentations and demonstrations encouraging individuals of all ages to aid the Eastern Bluebird.

# Why and How to Attract Barn Swallows to Your Home

Tina Dew

Anyone that enjoys the satisfaction of attracting bluebirds and/or Purple Martins to their home should try for a third species that is guaranteed to provide extra pleasure. The same openness preferred by bluebirds and martins is also the habitat of Barn Swallows, the most graceful of all the swallows in flight and appearance. Their tail, more magnificent than a swallow-tailed butterfly's, is only enhanced by an attractive combination of a sleek jet-black back, a cinnamon-toast colored throat and white underparts with touches of white on the tail. They breed over most of the United States.

Barn Swallows eat many mosquitoes, like martins, but for two reasons do an even better job of mosquito control than martins if you are lucky enough to attract them. The first reason for their superiority is that they stay in the area of their nest site much longer than martins. The martins near our home usually finish fledging the last of their young around the first of July and then leave the area shortly afterwards. The Barn Swallows usually have two broods. The first brood fledges around mid-June and the second brood usually leaves the nest around the end of July. Even after the second brood fledges the Barn Swallows usually stay around the yard through August and part of September.

The second reason Barn Swallows are so beneficial in mosquito control is that they feed so close to the house. Even though our martin lodgings are near the house in the backyard, the martins either seem to fly high or far away from the house, across the fields and ponds, in search of their food. Barn Swallows also fly off, but they almost always make a few speedy trips around the house to gather mosquitoes. They look like miniature tornadoes flying so fast and close to the house vacuuming up insects under the eaves, in the gutters, and plucking them off windows.

We were successful three summers ago in attracting Barn Swallows to nest under our double carport. It is open on one end (it has no door) and on the opposite end it has a small door (usually left open) that connects the front porch to the carport. When we first saw the swallows hovering under the carport three years ago, we hurriedly put up small boards (about five inches square) on the inside of the carport directly above the opening for the cars to drive through. Being bird lovers we were delighted when the swallows immediately accepted the boards. They chose one, slept on it the first night, and started bringing mud the next morning to build their nest. Our comings and goings on foot and in the car didn't bother them. We were thrilled to be able to watch the whole nesting sequence of events from our carport window. First the mud is brought in droplet by droplet by both the male and female. After three to five days of mud only, pinestraw is brought in with the mud to finish the top layer and this is crowned with a layer of feathers. They prefer white feathers and would search far away, finally finding enough Cattle Egret feathers in the fields.

Before the nest building began, both the male and female would sleep together on the nest board. Once the nest is started, only the female is permitted to sleep on the edge of the board. The male chooses another board, but continues to sleep under the carport with his mate. From two to six cream-colored, brown-speckled eggs are laid and, usually, they all hatch. This past summer the pair in our carport laid only two eggs for the second brood and both hatched. After working extra hard to keep five first brood babies fed during an extremely hot and dry June and July, the adult swallows must have appreciated a small second family.

The main enjoyment comes when the babies hatch. From the easy viewing of our carport window, we were able to enjoy seeing the babies being fed and watching them grow. Often the adults would come flying in under the carport to the wall opposite the nest. Then they would fly toward the nest touching the ceiling five or six times to pick off mosquitoes to feed the babies. Then they would zoom through the open porch door, across the front porch, over the split-rail cedar fence and hit the pond, skimming across the water's surface like a skipping stone.

The nestlings always seem reluctant to fledge, waiting at least 20 days. The oldest ones fly first and the smaller ones do not often try their wings until the next day. The funny part is that the first ones to fledge always come back to the nest after a few hours to cuddle and nap with their scared siblings. They fly in and out of the nest all day but always come home to sleep in the nest at night until all the brood fledges. Once all the young fledge, they never get back into the dirty nest again. They all come back during the day to visit, and even nap the first few days, but they always sleep on a clean empty board. All babies come back at night to sleep under the carport for two to three weeks after fledging. They are a hilarious sight waddling around on their extremely short legs trying to get comfortably squeezed together for their night's sleep.

Barn Swallows are friendly birds and a joy to watch. They are very acrobatic flyers and love to play. Many times we have enjoyed watching ours play games with feathers. Either one, or the pair, will participate in the game taking a feather high into the air, dropping it and recapturing it several times before it hits the ground. They sing a cheerful high-pitched song similar to the Purple Martin's but also make a cute "yippling" call (resembling a small puppy) when in flight.

As the numbers of barns available for nesting have decreased, the swal-



Barn Swallow nest under cover of the author's carport on one of the small boards which were placed for their use. The mud base of the nest was reinforced with pinestraw and then lined with white feathers.

lows have taken to nesting under highway bridges. Traveling along interstate highways in the summer, you will often see Barn Swallows around the overpasses and underpasses. They often zoom low, inches above the highway surface, seeming to race the vehicles, sometimes darting right out in front of the cars.

If you have an open type of carport, garage, porch, workshop or even a barn on your property, try putting up some small boards about a foot below the ceiling in a corner concealed from the outside yard. If you live in an open area, particularly near water, you stand a good chance of attracting Barn Swallows. If you do not live near water, it might help to provide a small man-made mud puddle near the nesting area. If you succeed in attracting Barn Swallows, then you won't need to apply mosquito spray before stepping outside from March through September. You will also be rewarded with many delightful days watching your Barn Swallows. ■

c/o Marie Read  
Rt. 1, Box 108A  
Pachuta, MS 39347

# *I hear bluebirds...*

Shirl Brunell

*The following excerpts from Dr. Brunell's book and program were presented at the Ninth Annual Meeting of the North American Bluebird Society in Wagoner, Oklahoma, October 25-26, 1986.*

I love bluebirds. Once upon a time, two bluebirds loved me, I think.

The days were growing longer, and signs of spring were everywhere including the five brand new baby bluebirds tucked tightly down in one of my many nesting boxes. They were five days old on that fateful day as I drove into the city to do my usual Saturday shopping thinking as I drove about how my knowledge of the bluebird had grown. Several years ago, a friend gave me two bluebird boxes for my birthday in April but delivered the boxes two months early so they would be available when the bluebirds arrived. I knew nothing about bluebirds. I thought they migrated to Brazil in the winter and returned to the southern United States to nest in the spring. And so, at noon on that cold winter's day, I nailed one birthday present to the fence in the field and the other to the power pole off the front porch of my country home, and waited.

At 2 p.m., two fuzzy little winter-coated blue-winged, orange-breasted creatures came to inspect the apartments for rent. I thought that was the way it worked: Put up a box and the birds came; therefore, when the first pair of beauties arrived within two hours, I was not surprised. Very pleased, but not surprised. Everyone I knew who had any knowledge of bluebirds was surprised the birds found the boxes so quickly. They had flown from Brazil in two hours? The teasing continues to this day. Now I know bluebirds in Arkansas and Texas usually stay in these areas during the winter and do not migrate.

I wanted to improve my photographic skills and increase my experience with bluebirds. Then, I would choose a time to follow the bluebird's development step by step in pictures. Maybe I could create a little picture book for children to browse through in the waiting room at my office. As my love of this devoted, family-oriented, magnificent little creature has deepened, somehow it has become more and more important to share my bluebird experience with others, especially little boys with BB guns. Perhaps it will make a difference for a youngster to learn that birds travel in families and, when a bird is shot, it is the mother or father or the sister or brother who dies. Perhaps a battered child brought to my office would take interest in the gentle nature of the bluebird, needing kinder things to think about. There are many reasons why I have wanted to create a bluebird picture book.

Finally the time seemed right. My experience with the bluebird was substantial and my confidence with a camera I thought adequate.

In late winter, a bluebird pair selected the nesting box by the pump house making their activity easily visible from my home. In the spring, the female gathered straw from my strawberry patch and eagerly padded their new home. The male stood guard and inspected her work. If a territorial enemy had disturbed her, he would have fought valiantly to protect his little lady. Yet, their distribution of house work did seem a little typical. She flew full speed for hours. He watched. In short order, the floor of their home was filled with five tiny time capsules, with bluebird secrets a million years old locked only temporarily inside. What more could I have wanted for my birthday the coming Easter weekend?

Driving home, I thought about the squeaky tweetings of the baby brood I had heard early that morning as the parents' landing told that breakfast was about to be served. I smiled in response to the sound of fresh life, wondering what it would be like to eat a worm.

Repeatedly through the week, a pair of pesky sparrows attempted to enter the bluebird nesting box arousing great agitation in the parents. For the bluebird, the

sparrow is the devil himself. Sparrows have been known to peck to death a bluebird parent in the nest trying to shield his young with his body. Then, without conscience, the sparrow may build his own nest over the bluebird parent and his dead or dying nestlings. Or, sparrows cruelly may throw out the bluebird babies onto the ground, leaving them defenseless. That Saturday morning the sparrows had been especially harassing which caused me to cut short my shopping list and return to monitor the situation.

The windshield framed the scene at the nesting box as I eased up the driveway. The female sparrow hung from the door of the box and the male perched on the lid. I jumped from the car and ran screeching over the grassy knoll toward the bluebirds' home, put up the ladder and opened the lid. The nest was empty. I listened for bluebirds. I looked for bluebirds. My mind shot through all possible explanations like lights across a scanner. Then I looked down. Tiny pitiful naked bodies were everywhere. One on the pump house roof was dead and bloody. I gently gathered three babies to me and screamed to a neighbor for help. I searched for the fifth baby as the neighbor took the dead nestling for burial. With tiny cold lives tucked against my body, I tiptoed around and around the pole of the nesting box, searching for number five. Finally, realizing the three babies in hand must be warmed and fed quickly, I hurried into my home.

I do not remember finding the hot water bottle. All I remember is sitting on the floor staring at those lifeless nestlings. I could not bear the warmth of my home knowing that another baby lay alone in wait for his death or his rescue from the cold. Again, I ran. Again, I tiptoed, toward the north and south, toward the east and west. Then I found the little fellow slumped behind the pump house, his little beak broken and bleeding. Tenderly, I lifted him to me, trying to be a giant cradle and praying for a miracle. Frantically, I rushed to rest him with the others on the water bottle.

My jaw tightly clenched, I fed the little babies gently with a blunted toothpick, watching life struggling slowly to return. The baby with the broken beak seemed to fight the hardest. In the strange way the mind sometimes works, I wondered if the yoke from an Easter egg might make the difference between life and death.

I sat on the floor and watched, fed, and warmed four baby bluebirds covered to their chins with a tattered baby blanket that had warmed a tiny toy poodle long ago. Agonizingly, I watched two babies die. With gloves and shovel and tears, I buried the fragile little bodies pressed tightly together next to their first little brother under the huge protective oak tree.

And now there were two, one who cuddled as closely as she could and one who displayed such determination to live. Each bite of food took an act of courage for him, obviously requiring effort to force open and control his pitiful little beak, broken at the corner, his nostrils swollen with blood. Who in history was a valiant fighter? Samson. Samson, King of the Israelites, known for his strength. Name a baby bird with a broken beak Samson? Anything fighting this hard deserved a regal name, and so, Samson it was. His little sister kept tucking herself up against him. Samson and Baby Sister. I did not know if they were boy and girl, but so I named them, and with their names I inherited all of the duties that come with parenthood. I had had the choice to get involved or not get involved from the first day years ago when I set the birdhouse poles in concrete. To get involved has risks, not to get involved has risks. One cannot get away from risks, I thought to myself, and so, I had chosen the risk that brought this parenthood.

And my babies lived and my skills as a bluebird parent improved day by day. I built a cage and placed it in my van so Samson and Baby Sister could accompany me to work each day. Once an hour, I would hop out the back door of my office, feed my babies, and rush back in without anyone's knowing.

Soon, Samson and Baby Sister needed a more substantial home, so I built them a screened aviary about one hundred yards north of my home. All forms of magic and mystery unfolded in the protection of that little enchanted cottage at the edge of the



forest. Every detail of my baby bluebirds' development was recorded. Of interest to me was the discovery that baby birds play like puppies or kittens. I talked to them incessantly. Patiently, they tolerated me; usually when I began my ramblings, they chirped contentedly and sat in my hair. Their home was kept stocked with various props they eventually would encounter on the outside. Both babies loved to explore. At one point, Samson chose a huge juicy mulberry and began to tug at it. He displayed pride and confidence that he could overpower this sizable prey. In a moment, he popped it into his mouth, made a valiant attempt to swallow it whole, then held still on a branch, looking at me very wide-eyed. Again, he gulped hard, but to no avail. He looked as if a ping pong ball was stuck in his throat. Finally, he yielded to defeat, opened his mouth wide, threw his head back and popped the berry out. He studied the berry, lying on the ground, then looked up at me with a silly expression on his face. I leaned over, captured that wicked berry, pulled it apart into little seedlets, and Samson sheepishly ate them one by one out of my maroon-colored hand.

Invariably, Baby Sister came to me first and lingered the longest. She was the most loving tiny creature I have ever known. She would perch on the bend of my arm, lean into my body and drift into slumber. She loved to snuggle up under my collar in the hollow of my neck. I could feel her softly breathing and hear her heart, so little and yet so big. I know that if something should happen to Samson and Baby Sister, I would think of these times and not be sorry. Perhaps I would cry, but would not be sorry. The day of freedom came. They had had several days of successful freedom practice with their Big Bird mama nearby, each night being brought back in for safety. The final day of confinement had arrived. With Samson in my right hand and Baby Sister in my left, I kissed each baby on the top of the head, and lifted my hands, full of everything meaningful in this life, toward the heavens.

*(To be concluded in the next issue.)*

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## From the Historian

While serving as historian of the North American Bluebird Society over the past two years, I've had an opportunity to read many newspaper and magazine articles and to place them in scrapbooks where they will be part of the permanent record of bluebird projects being carried out throughout much of the United States and Canada.

One of the rewards of the task is the feeling one gets of the scope of nest box projects and of the number of people of different ages and backgrounds who are involved.

As newspapers have gradually increased the number of pictures they run in color, interesting bluebird feature articles accompanied by eye-catching color photography have become more frequent. They are a great way to promote bluebird activities.

As I begin the last half of my final year as the Society's historian, I'm par-

ticularly interested in assembling as large a number of articles as I possibly can prior to this fall's annual meeting. That goal requires your help in tracking down and clipping articles that appear in the print media in your area.

They may be sent, as in the past, to the North American Bluebird Society, Box 6295, Silver Spring, MD 20906-0295 or to me, Bob Bodine, 61 Gordons Drive, Media, PA 19063.

Please be certain to include the name of the city and state from which the publication comes so the article can readily be placed in the correct geographic section into which the scrapbooks are divided. Also, it would be helpful if you sent articles as soon as they appear so I can avoid having to grapple with a last minute flood of material.

Thank you for any assistance you can provide.

—Bob Bodine

## Art Editor Named

With this issue we welcome Alexia J. Scott of Falls Church, Virginia, as our new art editor. A graduate of Kent State University with majors in art and geology, she has also studied at the Corcoran School of Art. Mrs. Scott has been an illustrator for the U.S. Geological Survey, has done free lance work for the U.S. Fish and Wildlife Service, and has been generous in donating her work to a number of organizations. We are grateful for her willingness to use her considerable talents on behalf of bluebird and cavity nester conservation.

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## Bird Banders Available

One of our readers suggested that we publish the names of bird banders willing to band bluebirds in their area. So far, the following individuals have offered their services.

Rita E. Efta  
Rt. 1, Box 39  
Auburn, Iowa 51433  
(712) 688-2873

Christine Schaefer  
#1 Stony Run Road  
Stevens, PA 17578  
(215) 267-3321

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## Bluebird Boosters

*Appearing on the inside back cover is a list of those individuals who have made a financial commitment to bluebirds and native cavity nesters over and above their annual dues. Such support is essential in maintaining a stable dues structure. We thank the individuals, organizations, and businesses for their generosity.*

*You, too, can become a Bluebird Booster. For a donation of \$25.00 per issue or \$75.00 per four issues, you can be designated as an Eastern, Western or Mountain Bluebird Booster (your choice); for \$15.00 per issue or \$50.00 per four issues, be a Fledgling Booster; while \$10.00 per issue or \$25.00 per four issues makes you a Nestling Booster. Bonus decals will be sent for each category. All contributions are tax deductible. Mail your check to NABS Boosters, P.O. Box 6295, Silver Spring, MD 20906-0295.*



Photograph by Terry Dana

The above photograph of nine Eastern Bluebirds (three males and six females) was taken from Terry Dana's deck in Hot Springs Village, Arkansas, in February 1986. The mixture they are eating is mostly birdseed and peanut butter with a little bacon grease. For readers who might be interested in a color reproduction of this photograph, contact Mr. Dana at 20 Cresta Way, Hot Springs Village, Arkansas, 71909.

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## Pearman Named Ellis Bird Farm Biologist

Ellis Bird Farm Ltd announces the appointment of Mryna Pearman as the biologist responsible for the execution of the basic program of nest box care at Ellis Bird Farm. Bryan Shantz will continue his work on several educational projects being carried on by his company, Deer Ridge Consulting Ltd.

## NABS RESEARCH GRANT AWARDS

The North American Bluebird Society is proud to announce the presentation of the fourth annual research grant awards. The 1987 recipients are as follows:

### BLUEBIRD GRANT

Wayne H. Davis

Topic: Eastern Bluebird and European Starling: Competition for Nest Sites.

Steven G. Parren

Topic: Bluebird Nest Box Selection by Competing Passerines.

### GENERAL GRANT

Vasiliki Demas

Topic: Effect of Blowfly Parasitism on the Growth and Development of Western Bluebird Nestlings.

Gregory Hayward

Topic: Potential of Nest Boxes for Monitoring and Managing Boreal Owls.

William McComb

Topic: Microclimatic Characteristics of White-breasted Nuthatch Roost Sites.

### STUDENT GRANT

Danny J. Ingold

Topic: Nesting Phenology and Competition for Nest Sites Among Red-headed and Red-bellied Woodpeckers and European Starlings at East-Central Mississippi.

Kimberly A. With

Topic: Effects of Brood Size on the Parental Care of Western Bluebirds.

The North American Bluebird Society annually provides research grants-in-aid for ornithological research directed toward cavity nesting species of North America with an emphasis on the genus *Sialia*. Information and application materials are available from Theodore W. Gutzke, Research Committee Chairman, P.O. Box 121, Kenmare, North Dakota 58746.

(BLUEBIRD TALES—Continued from page 75)

read it in spring. I'll use an anecdote from last spring: **Fannie Beachey** of Salisbury, PA, wrote, "This past summer the dear little bluebirds brought me more happiness than anything else! A friend put up a house for me about 15 feet from my mother's favorite window on Saturday before Easter. Next morn, Easter, I looked out and a beautiful pair of bluebirds were in the nest. 7 weeks to the day they started building they hatched out and fledged 3 babies. This fall they all came back for a homecoming for several weeks before they left about a week ago." This year in late January, **M.T. Park** of

Columbia, TN, wrote, "Our bluebirds are already scrapping over who will get the boxes on our place. As you know, they start early here in Tennessee."

Here's hoping many bluebirders write in '87 asking their questions, telling their news, and sending their good wishes as did **Charles Porter**, of Canadain, TX. "Cooksen Hill Children's Home in Canadain, Texas, is returning the slides to you;...our children want to bring bluebirds back to Texas.... Thanks for giving us opportunity to show the slides....May God bless you real good. God loves you and so do I."

Thank you, Rev. Porter, that's great to hear!

# Bluebird Tales

Mary D. Janetatos

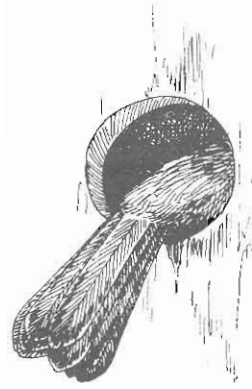
"A light broke in upon my soul—  
It was the carol of a bird;  
It ceased—and then it came again  
The sweetest song ear ever heard...

Although the famous "Prisoner of Challoot" does not identify his bird, my bird was the Carolina Wren which I heard on a crystal clear blue and white mid-winter morning. The lines presage hope, and hope is fulfilled when one thinks of the Carolina Wren. About eight years ago, these spunky little wrens were almost wiped out around here during a fiercely cold season; now their comeback is so strong they brighten the morning with their songs.

Bluebirds have needs Carolina Wrens don't. Because they nest in natural cavities, they need human help. Bluebirders try to fill that need. One thinks of **Tommy Outerbridge** of Bermuda, who suffered a debilitating accident 2½ years ago while aiding another cavity-nesting bird, the White-tailed Tropicbird. Recovery is slow, but as he battles paralysis, he continues his bluebird crusade. He has originated the BEAM (Build, Erect And Monitor) Nestbox Program in the island's school system. By means of closed circuit television, Tommy speaks to the school children about the necessity for helping the bluebirds. Since he has great personal charm, I am sure he captivates his young audience and inspires them to action.

NABS' Founder, **Larry Zeleny**, appeared on national TV's education channels in "Bluebirds, Bring Them Back." This is the film produced by **Walter and Myrna Berlet**, available from NABS in video cassette. **Lee Roy and Madaline Browne** of Greyslake, IL, report giving the NABS slide program at the Illinois Good Sam Samboree in Crescent City. **Bonnie McDaniel** of Darlington, WI, described her 4H bluebird project winning first prize and going on to the state fair.

**Lillian Files**, of Tyngsboro, MA, now chairing NABS nominating committee, as well as a past president, has recovered nicely from an injury which made it necessary to monitor her bluebird trail on crutches. **Warren M. Anderson**, a member of the New York State Senate, maintains a bluebird trail with **Dr. Robert A. Ahearn** of Binghamton. NABS President **Sadie Drober** quoted a fellow New Yorker as saying of the trail that "that places the bluebird in the elite group of birds!"



*Ford Times* magazine (Sept. '86) featured an article describing **Larry Zeleny's** bluebirding and many people wrote requesting information. Among these was **M.L. Barron**, of Mason City, IA. "I had a bluebird trail near my home here in Cerro Gordo County. I maintained a trail of 175 boxes each week. I fledged 254 bluebirds this summer....I have conducted a workshop this spring. I gave two talks on radio....Iowa has started a Bluebird Recovery Program this year. (1986)" **Dean Boyer**, of Leesport, PA, wrote last spring, "Right now we have 27 nesting pairs. That sounds pretty good until I think of the 128 boxes I have out." From Johnson City, TN, **Macdonald Gouge** says that the Horticultural Interest Society is concerned "about the decline, destruction and disregard of some of our natural resources." Over the past three years, the Club constructed approximately 280 nesting boxes, sold some...and erected others...as bluebird trails. They often show the NABS slide program....They plan to donate the displays, books, etc. to the library. All of this shows the invaluable activity of the NABS Speakers Bureau!

In a single-handed heroic effort, we note the bluebirding done by **Wilson Ford**, of Churchville, MD, whose trail is near the U.S. Army Proving Ground at Aberdeen. He writes, "...I have had my reward for helping bluebirds by building and erecting thousands of nest boxes over the past half century....I'm getting too old to maintain the pace of other years but my friend and younger assistant erects and monitors about 350 nest boxes in Harford County. His name is **Todd Holden** and it's helpful to have a younger person to lean on." **Alan Harkness** of St. Louis, MO, highlighted a problem shared by many NABS members, that of not realizing when their membership is due for renewal. "Enclosed is a check for

\$10 to renew my membership. While re-reading the winter issue of *Sialia* I finally noticed my renewal slip. Can you please send me a copy of the spring issue and summer if published by this date?" What others accomplish with large numbers of nest boxes, **Martin Miller**, of Accord, NY, tries to accomplish with large broods. He had a brood of seven bluebird nestlings all of which fledged! This is a real Eastern Bluebird rarity according to Larry Zeleny. Morton said that he and **Milford Van Demark** of Stone Ridge both monitored that nest box.

Groups and institutions interested in bluebird conservation wrote us. **Davidson College** of Davidson, NC plans to "...establish a bluebird trail on the periphery of our playing fields. Part of the plan is to monitor these nesting sites on a long term basis. The trail will be the first component of a more extensive nesting site project involving several species." In September of 1986, the "Societe des Amis du Merle Bleu de l'est de l'Amerique" (Society of Friends of the Eastern American Bluebird) had a formational meeting to discuss and exchange ideas in Montreal, Canada. This Societe was founded by **Andre Dion** (*The Return of the Bluebird*, available through NABS); its president is his wife, **France**. Watch for an upcoming regional meeting in Montreal hosted by the Societe! NABS member **Myra Swan**, of Ava, MO, attempted to influence the Missouri Department of Conservation (MDC) toward listing NABS in their 1987 Natural Events Calendar. Although she was not successful, the MDC spokesman **Betty C. Grace** said they might use it in a future edition. The Oklahoma Wildlife Federation knows a bluebird conservationist when they see one. They have selected as winner of their "1986 Wildlife Conservationist of the Year Award" **Charlotte Jernigan**, a past board member and chairman of the 1986 annual meeting. Congratulations, Charlotte!

One new bluebird friend, **Ron Lee**, wrote from Jonesboro, GA, "This summer (1986) I was introduced to the North American Bluebird Society by a friend, **Laurance Sawyer**. I came across an ad for bluebird houses in Ringgold, GA. The following weekend my wife and I drove up to the Sawyers—I had never seen a bluebird before and I was nearly in tears...I bought my first bluebird box and Mr. Sawyer gave me pictures and slides to help me get started. That was 1½ years ago and I'm still excited..." **Marie Shinn**, reporter with the Tulsa, Oklahoma, *Tribune* wrote last fall, "I just hung up the phone from talking with Mrs. Jernigan regarding our story today. [NABS 1986 Annual Meeting] It almost made

me ill when she told me the date of your convention at Fort Gibson (this weekend) because we have been so anxious to learn more about bluebirds and we won't be able to attend." **Sandra Lovingood**, of Knoxville, TN, told of her parents "adopting" a young female bluebird which had survived a domestic tragedy. Her parents, **Mr. and Mrs. James Lovingood**, of Maryville, TN, raised "Blue" and released her. Once there, she continued to be friendly. "She is so sweet and loves to be cuddled almost more than any pet I have ever seen. When my parents are working outside in the garden, etc., the bird will fly to them—sit on their heads. She can also tell which room we are in and will sometimes come to that window sill for a quick 'hello'..."

**Ken Houts** of Redington Shores, FL, hopes bluebirds will adopt his nest box, and to help them make up their minds in his favor, he carved a lifelike bluebird which he plans to "perch...appropriately." **Wendy McClure** told of her husband's working at the Peter Wentz Farmstead in Worcester, PA, as Assistant Farm Manager. For the first time this year, this "working 18th Century Historical Farm" put up two bluebird nest boxes and each one had two broods. **Mildred Brause** of Sulphur Springs, OH, wrote that she had experienced much frustration in trying to attract her "favorite" bird. Then, in late spring of 1986, a pair of bluebirds did nest in her yard. She went on to say, "Yesterday we went to Louis Bromfield's Malabar Farm which is now a state park. It was 'Bluebird Sunday.' We watched slides and saw displays....Then we went on a wagon tour of a bluebird trail and saw babies...." The emphasis on bluebirds at Malabar Farm is the result of **Reid and Teresa Caldwell**, the husband and wife naturalist team who work there. They are now the parents of two little girls, the youngest born just before Christmas. Congratulations, Reid and Teresa, on your newest little bluebird! Last autumn, **MariAn Logan** of Gibbon Glade, PA, wrote, "In the morning at 9:00 a.m. I looked outside to see what all the activity was and there in and around my yard were 25 bluebirds....What a thrill...." **Marjorie Stickman** of Winnfield, LA, told us that this year she had three bluebird nests in her backyard....

Writing this column reminds me of telephoning my daughter and son-in-law **Kathi and Leroy Smith** in Sherman Oaks, CA. I must try to be conscious of what time (season) folks on the other end are experiencing. If it's morning in Maryland, it might be still night in California. And thus with NABS readers: while I write this in winter, they

(Continued on page 73)

# BLUEBIRD EXPRESS

*SIALIA welcomes the correspondence of its membership. Bluebird Express should become a forum for all who are interested in communicating their ideas and actions concerning bluebird conservation. We will attempt to publish a wide range of views in a responsible manner. Keep your letters coming!*



Dear Editor:

I was fortunate in having bluebirds just a short time after installing a box. It wasn't long before the female had three eggs. Things were going well with House Sparrows and starlings rather a small annoyance. Then came the Red-headed Woodpecker. He started to annoy the bluebirds. Then he started to peck away at the hole, enlarging it more and more. Finally he got the hole large enough to enter. He removed two of the newborn birds. He also killed the one left in the house.

The female bluebird stayed around just two days, then flew off never to be seen again.

I tried to solve this problem. I installed a round electrical junction box cover plate with a 1 5/8 inch hole in the center. I then placed it over the hole in the nesting box. I was very excited when I saw my first bluebird since that woodpecker ordeal. I have seen one woodpecker try to peck, but to no avail. I have not seen him lately. The female bluebird has eggs. So far, everything seems to be going fine; no woodpecker problems.

Ray Ferry  
Lockport, Illinois

Dear Editor:

I would like to respond to Dr. Zeleny's answer (8(3):98) to an "uniden-

tified Wisconsin reader" who questioned why he did not recommend boxes with floor size less than 4 x 4 inches. Dr. Zeleny said he made observations in a 3 1/2 x 3 1/2 inch (straight?) box and that he observed cleaning difficulties and overcrowding.

With the tapered Peterson box, the nest top (where the nestlings are) is 3 1/2 x a little over 4 inches. In these boxes, in 1985, there was a 92% egg-to-fledgling success ratio, totaling 5,980 bluebirds fledged, usually in broods of five, often six. Eighty-two percent of the people reporting to the Midwest Bluebird Recovery Program chose the tapered bottom house. No one mentioned fecal accumulation or overcrowding problems.

Dorene H. Scriven  
Minneapolis, Minnesota

*The Midwest Regional Meeting in late June will provide additional material and examples of this box design for interested readers.*

Dear Editor:

Observing a dozen or more bluebirds in the fields of two adjoining farms in Connecticut, I recently reflected that, if more and more land is given into conservation trusts which will keep it untouched, so that fields are unmowed and it all reverts to the wild, won't this

result in destruction of habitat for the bluebirds? If one gives farm fields to such groups, it's best to specify that hayfields be mowed each year, even if one gives away the hay, rather than letting the land go wild and untouched! I think that's a message we need to publicize. Some people think that wholly wild is the preferred way for all land to be, but they need to know this will result in fewer fields for bluebirds and others that love sunny meadows. We're keeping our fields mowed!

Virginia James  
Northford, Connecticut

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Dear Editor:

At the end of our driveway is an old fencepost about 4½ feet tall with a rotted cavity maybe 6 inches from the top. In March of '83 I noticed a pair of bluish birds frequenting the post, but didn't pay much attention as there is much bird activity on our 10 acres.

One day my father was visiting and I mentioned this to him. He said it sounded like a bluebird, but quickly added that he hadn't seen any in this area for years. We watched closely that day, and he decided they were indeed Eastern Bluebirds. Every spring since, a pair of bluebirds has shown up here and claimed the post as home. I tried to entice them to a nesting box this year ('85), but they seem to prefer the post as home sweet home.

Do you think this is the same pair each year returning to the post and, if so, wouldn't it seem likely that some of the broods fledged would return also? As far as I know, no one has seen any other bluebirds in this area.

Butler, Illinois

Dear Illinois Reader:

Dr. Zeleny addresses your questions in answering those of another bluebird in his "Question Corner" in this issue.

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Dear Editor:

When I was a child I saw a few

bluebirds. But since then I can only remember seeing two. One was here one day in late winter of '80 or early '81. I kept saying to myself all that day, "I saw a bluebird." It was such a thrill.

That year my sister-in-law gave me a bluebird house. My brother and I planted it in the snow in February just so I could watch from my kitchen window. Since then my sister-in-law gave me another one.

I had bluebirds looking over the new house in less than a week. And I believe I have had at least 40 young bluebirds raised here. I feel very proud about that.

Sarah M. Heddings  
Northumberland, Pennsylvania

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Dear Editor:

We live in the northwestern part of South Carolina, and it seems to me we see bluebirds briefly every few weeks throughout the entire winter. I have the idea they drop by to check on their house, to find out if it still going to be available later. I would like to know where they winter and, in our part of the country, when should we have our bluebird boxes ready for them in the spring?

I read every issue of *Sialia* from cover to cover, turning first to the "Question Corner."

Carol Ratzlaff  
Spartanburg, South Carolina

Dear Carol Ratzlaff:

You are quite correct in your observation that you seem to see bluebirds throughout the entire winter. Eastern Bluebirds winter in the southeastern part of the United States. We normally recommend that boxes be left up all year and cleaned in late summer or early autumn after the last brood; however, if you are erecting new boxes, they probably should be in place in your part of the country by 1 February for bluebirds will begin actively checking suitable nest sites as soon as the weather settles. ■

## Bluebird Trail Directory

This is a continuation of listings of trail operators who have volunteered their help by providing tours or information.

Please be considerate of the time of day when you place calls. No collect calls will be accepted.

If you have monitored a trail of at least 50 boxes for a minimum of three years, let us know so that your trail can be listed in a future update. You need not offer tours or information; however, the location of the trail may make it ideal for research. Mail necessary information as shown in the listings to the following address:

Bluebird Trail Directory  
North American Bluebird Society  
Box 6295  
Silver Spring, MD 20906-0295

Entries are listed alphabetically by state and province, then alphabetically by trail operator's last name. The initial listing was published in *Sialia* 5(2):69-71 and updates in 5(4):143-144 and 7(2):68.

TRAIL LOCATION	TRAIL OPERATOR PHONE	ADDRESS	INFO AND TOURS
CONNECTICUT Litchfield Cty.	Art Gingert 203-672-0077	River Rd., P.O. Box 185 W. Cornwall, CT 06796	W:D-E; SS:D-E; Tours*
IOWA Sac Cty.	Rita E. Efta 712-688-2873	Auburn, IA 51433	SS:D-E; W:E; Tours*
MICHIGAN Tuscola Cty.	Harry Clark 517-673-3013	809 W. Sherman Caro, MI 48723	W:D-E; SS:D-E; Tours*
MINNESOTA Chisago Cty.	Richard & Marilys Hjort 612-257-2553	9571 - 270th St., N. Chisago City, MN 55013	W:E; SS:D-E; Tours*
NEW YORK Oswego Cty.	John H. Rogers 315-668-2207	9641 Bauer Rd. Brewerton, NY 13029	W:E; SS:D-E; Tours*
NEVADA Washoe Cty.	Donna Hagerman 702-747-1898	5010 El Dorado Dr. Reno, NV 89509	SS:D-E; Tours*

\* —telephone or write to arrange tour

W—weekdays (Monday-Friday)

SS—Saturday, Sunday

D—days (8:00 a.m. - 5:00 p.m.)

E—evenings (6:30 p.m. - 9:00 p.m.)



## Bluebirditis

What makes it so enchanting,  
How is the lifeblood stirred  
To see it earthward slanting,  
The diminutive bluebird?

Could it be its blueness  
That captivates the eye,  
That unexpected "hueness"  
That suddenly flies by?

Could it be its warble  
That lilts upon the ear,  
That sounds like so much garble,  
But stirs the soul to hear?

Could it be its pertness  
That takes one by surprise,  
That dipping darting curtness  
That tells its enterprise?

Could it be its tameness  
That is so appealing,  
That demeanor so blameless  
And yet so revealing?

Could it be the devotion  
That it displays toward its young,  
Brooding, then always in motion  
To provide when dinnerbell's rung?

Could it be its rareness,  
For many yet know it not,  
While those who in awareness  
First sighting have not forgot?

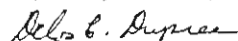
Could it be all of these  
With which they delight us,  
Smiting us with the disease  
That's called "bluebirditis"?

Henry M. Ditman

NORTH AMERICAN BLUEBIRD SOCIETY, INC.  
STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS  
NOVEMBER 1, 1985 THROUGH OCTOBER 31, 1986

Cash Balance - November 1, 1985		\$ 1,096.70
Add:		
Cash Received		
Sale of <i>Sialia</i> Magazine	\$23,308.83	
Sales of boxes, books, stationery, etc.	54,497.02	
Contributions	10,637.55	
Membership Dues	26,593.75	
Interest	49.67	
Sales tax collected	333.81	\$115,420.63
		\$117,447.51
Less:		
Cash Disbursements		
<i>Sialia</i> Magazine	\$27,489.60	
Boxes, books, stationery, etc.	40,790.47	
Educational material	6,864.80	
Membership fulfillment	15,735.19	
Research	4,890.00	
Salaries	2,369.30	
Expense accounts	11,255.71	
Office supplies	572.04	
Bank charges	199.37	
Maryland sales tax remitted	335.28	
Loans repaid	3,000.00	
Office furniture	708.00	
Cash deposited in Md. Nat'l. Bank	930.18	\$115,139.94
Cash Balance October 31, 1986		\$ 2,307.57
Assets:		
Checking account (Citizen's Bank & Trust)	\$ 399.47	
Savings account (Citizen's Bank & Trust)	977.97	
Savings account (Md. Nat'l. Bank)	930.18	
Value of inventory	14,079.77	
Value of furniture	2,381.99	
Outstanding loans	0.00	
Net Worth		\$ 18,769.38

Respectfully submitted,



Delos C. Dupree, Treasurer NABS

**ART CREDITS**

Jon E. Boone: 42, 76  
Suzanne Pennell Turner: 56, 62, 74  
Alexia J. Scott: 60

**Correction**

Jack Finch asked that a change be made in his article, "Is There a Need to Feed Bluebirds?" 9(1):13. "The three food trays on and in the nest box are made of 1/6 x 1/6 inch or 1/8 x 1/8 inch wire mesh," (not 6 x 6 inch or 8 x 8 inch as stated originally).

## BLUEBIRD BOOSTERS

### Eastern Bluebird Boosters

Mrs. Jocelyn Alexander  
Melissa Allison  
Milton W. Arnold  
Charmaine Bainum  
Mrs. Robert Bainum  
Suzan Baker  
Dr. Marion Baker  
Dr. James M. Barr  
Junius and Bea Birchard  
Stan Blezinski  
Robert P. Bodine  
Jim C. Boozer  
Shelba Brake  
Joan Campbell  
Mr. and Mrs. Floyd Chase  
John G. Davidson  
Mr. and Mrs. Edward DePaoli  
Dr. Dennis Dukes  
Mrs. Haskell Duncan  
Glenn D. Eddington  
Theodore L. Felsentreger  
Finch Hollow Center  
Elwood L. Fisher  
Mrs. Irene S. Frantz  
Mrs. Richard Gambrill  
Joseph C. George  
W.M. Gignilliat  
Harriet E. Gleaton, M.D.  
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Morris M. Green, Jr.  
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Jane and George Hausch  
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Earl M. Hubbard  
James D. Hunt  
Ann Jennings  
John M. Judy  
Mary-Margaret Kellogg  
Stan Lathrop  
George W. Laub  
John J. Lenhart  
Avis N. Levie, Jr.  
Aletha J. Lindstrom  
Ms. Felicia Lovelett  
Mrs. Betty H. McIlwain  
Karen S. Metz  
Kenneth M. Nagler  
Janet B. O'Neal  
George P. O'Neil  
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Founded in 1978, THE NORTH AMERICAN BLUEBIRD SOCIETY is an incorporated non-profit organization determined to increase the populations of the three species of bluebirds on this continent. Inasmuch as the populations of these birds have diminished due to the maladroitness of human beings, as well as other natural disasters, the primary objective of the SOCIETY is to educate all who will listen about the importance of preserving these singular creatures in their native environment.

Toward this end, the SOCIETY will work, within the bounds of effective conservation, to study those obstacles impeding bluebird recovery; to publish results of those studies; to promote ideas and actions which might reduce the effect of those obstacles; and to obtain a more complete knowledge about bluebird ecology, in the hope of learning more about the ecology of humankind.

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