

Sialia

Volume 12, Number 1
Winter 1990
Pages 1-40

The Quarterly Journal
Of
The North American
Bluebird Society



NORTH AMERICAN BLUEBIRD SOCIETY

Founder

Lawrence Zeleny

President

Sadie Dorber

Vice President

Thomas M. Tait

Treasurer

Delos C. Dupree

Recording Secretary

Suzanne Pennell

Corresponding Secretary

Joseph G. Tait

Directors

Robert Bodine 1990
Pennsylvania

William A. Carter 1990
Oklahoma

Keith Kridler 1990
Texas

Jane Williams 1990
Virginia

Doug LeVasseur 1991
Ohio

Thomas Matsko 1991
Montana

Myrna Pearman 1991
Alberta

John H. Rogers 1991
New York

Donna R. Hagerman 1992
Nevada

J. Douglas Quinn 1992
Massachusetts

Dorene H. Scriven 1992
Minnesota

John Trott 1992
Virginia

Executive Director

Mary D. Janetatos

Editor

Joanne K. Solem

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 *Motacilia* 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-ahl'-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.

Sialia is published quarterly by the North American Bluebird Society, Box 6295, Silver Spring, MD 20906-0295. Subscription price is included in annual membership dues. Single copies: \$2.50. Write for information about bulk quantities. Checks and money orders should be made payable to North American Bluebird Society and should be in United States funds. Issues are dated Winter, Spring, Summer and Autumn and appear approximately on the fifteenth of January, April, July and October respectively. Deadline for submission of material is three months prior to date of publication; dated items only, two months.



Sialia

The Quarterly Journal
About Bluebirds

Volume 12, Number 1
Winter 1990
Pages 1-40

EDITOR
Joanne K. Solem
**CONTRIBUTING
EDITOR**
Lawrence Zeleny
ART EDITOR
M. Suzanne Probst

CONTENTS

Presidential Points	2
Sadie Dorber	
Eastern Bluebird Mortality Due to Tick Paralysis	3
T. David Pitts and Lynn E. Hayes	
Bluebird Nest Box Infested with Northern Fowl Mite	4
Zach Neece	
Tufted Titmouse Egg Successfully Fostered in Bluebird Nest	6
Sarkis Acopian	
Question Corner	8
Lawrence Zeleny	
European Starling-Eastern Bluebird Nest Site Competition III	9
Peter A. Zerhusen	
Details for a Front Opening Bluebird Nest Box with a Slot Entrance	13
Richard M. Tuttle	
A Bird in the Bush	17
Karen Blackburn	
A Box Mounting Method	18
Horace Abee	
Mutual Benefits of Raisin' Bluebirds	19
Norman B. Wilcox	
Plantings for Bluebirds and Other Wildlife: Heartleaf Ampelopsis	20
Karen Blackburn	
Poetry: Goodwin	22
A Quick Closing Solenoid Trap for House Sparrows	23
Morris M. Green, Jr	
Camp Bluebird—An Adult Cancer Camp	26
Dan T. Peck	
Bev Ketchum Gets Things Done for Bluebirds	28
Bluebird Trouble-Shooters	30
Bluebird Trail Directory	31
Bluebird Express	36
Bluebird Tales	38
Mary D. Janetatos	
Financial Statement	40

COVER

Art Editor M. Suzanne Probst depicts a Tufted Titmouse for the winter cover. See page 6 for story of titmouse egg hatching in bluebird nest.

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 Graefloch Road, Laurel, Maryland 20723.

Presidential Points

Sadie Dorber

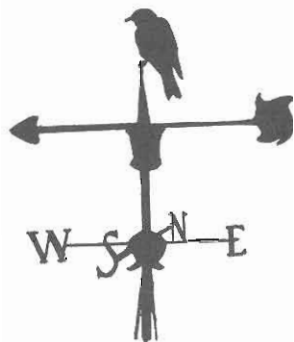
The predictions of another dry, hot summer didn't materialize in New York State as we endured day after day of rain. The Rose-breasted Grosbeaks arrived in May, as usual, and were a brilliant sight at the feeders. As the rain continued, the number of grosbeaks also increased daily. Several people called to report the large number and many of us had to replenish our seed supply. I felt the rain had forced the birds down and they were holding until the weather improved. They were a joy to all of us.

Rainy weather continued throughout May and June. The bluebirds had arrived a few days earlier than usual in March, but most were late in starting nests. Usually the bluebirds have their first nest by the time the Tree Swallows return, but this year most hadn't even started nest building. Competition for a single box was more apparent because both species were starting to nest at the same time.

In June, I spent a day in Schoharie County to work with the new banders. It again rained off and on all day, but we checked boxes when the persistent rain would let up for a while. We found bluebirds that weren't growing well and Tree Swallows crying of hunger. By now, I was starting to get calls from bluebirders who were finding dead nestlings or adults in their boxes. On my trail the bluebirds did survive, but I did find several adult female swallows dead on their nests.

Vent Pipe Hazard

Several years ago in this column, I wrote about open vent pipes being a serious hazard to bluebirds. I was again reminded of this situation when one of my banded bluebirds was found



dead in the wood stove at Oquaga Creek State Park a few weeks ago. When the trail was started three years ago, hardware cloth was placed around the top of the stove pipe to prevent the bluebirds from entering. With chilly days approaching, Park Superintendent Rick Dunbar instructed an employee to clean the stove pipe. The employee didn't replace the hardware cloth immediately as he felt the danger of bluebirds entering the pipe was over at the end of the nesting season. A lesson was learned the hard way: bluebirds search for cavities all year long. Migrating bluebirds check cavities as they journey south and many look for roosting sites to use at night. To the new bluebirders, please cover all open vents around your area.

Welcome, Ron Kingston

I'd like to welcome Ron Kingston back to our staff. Ron served as Board Director and will now be handling the roll as chairman of the Speaker's Bureau. Ron can be contacted at 3690 Country Lane, Charlottesville, VA 22901.

In the past few days the trees have taken on their fall brilliance and snow showers are in the forecast, which seems just a little early for the first week of October. Bluebirds have been present on the lawn recently and the feeders are attracting White-throated Sparrows. I am hoping that this winter will bring some of the beautiful northern birds to our feeders that were missing last year. ■

Eastern Bluebird Mortality Due to Tick Paralysis

T. David Pitts and Lynn E. Hayes

Eastern Bluebirds (*Sialia sialis*) commonly harbor several species of ectoparasites such as lice and mites; however, ticks are not frequently found on bluebirds. In his review of bluebird parasites, Roberts (1981) did not mention ticks. Other than Doster (1988; see below), the only reference available on the occurrence of ticks on Eastern Bluebirds is that of Joyce and Eddy (1943) who listed it as a host of the rabbit tick (*Haemaphysalis leporispalustris*). During the last 20 years the senior author (Pitts) banded approximately 3,000 bluebirds, including about 500 adults. Many of these were recaptured and weighed numerous times throughout the year. Only one of these birds (described below) had a visible tick. In this note, the tick related deaths of two Eastern Bluebirds are reported.

The first case involved an adult male found dead in a sitting posture on the ground in Madison County, Georgia, on 29 February 1988. A single engorged tick was found on the bird's head. The presumptive cause of death was determined at the Southeastern Cooperative Wildlife Disease Study (SCWDS) in Athens, Georgia, to be tick paralysis due to the single attached tick. The tick was identified at the United States Department of Agriculture National Veterinary Services Laboratory (NVSL) in Ames, Iowa, as *Ixodes brunneus*.

The second case involved a male found dead in a nest box in Weakley County, Tennessee, on 19 March 1988. A single large engorged female tick was attached to the bird's nape. The bird had been banded (1361-62448) on 11 July 1986 when it nested in a nearby nest box. Based on covert examination it was determined that the bird had hatched prior to 1985 (Pitts 1985). This bird had remained in the vicinity of his nest box during the winter of 1986-87 and again nested in the same box in

1987. During the winter of 1987-88 he remained in the same area and was captured nine times in traps. Each time he appeared normal and his weight was similar to that of other bluebirds in the area. At the time of death he weighed 30.8 g. Necropsy at SCWDS revealed that the bird apparently died as a result of the tick. Again, the presumptive diagnosis was tick paralysis. The tick was identified at NVSL as *Ixodes brunneus*.

Ixodes brunneus is the species of tick most commonly found on birds; it has been collected from at least 64 species of birds and is more commonly found on migratory than on non-migratory species (Boyd 1951). Blake (1964) noted that *I. brunneus* was the most abundant tick on birds handled at his banding station and that it was most frequently seen during the months of October through April. Bishop and Trembley (1945) stated that *I. brunneus* is found only on birds and usually in small numbers. In spite of the small numbers present, these ticks frequently have adverse effects on the host. Although the ticks engorge on the blood of the host, anemia is rarely a problem. Paralysis is the most frequently reported symptom of hosts of *I. brunneus* (Doster 1988; Gregson 1973; Schwab 1987).

Tick paralysis is believed to be due to a toxin present in the saliva of certain ticks. Oliver and Lorenz (1983; page 207) described the toxin as a neurotoxin that interferes with the movement of nerve impulses from nerves to muscles. The resulting paralysis may end in death; however, if the tick is removed the host may recover. For example, Schwab (1987) described a Yellow-rumped Warbler (*Dendroica coronata*) that recovered its ability to fly within five minutes after the removal of a tick (*I. brunneus*). Numerous other species of animals, including

humans, are similarly affected by tick neurotoxins (Gregson 1973). A definitive diagnosis of tick paralysis is based on the dramatic clinical improvement and recovery of the host following the removal of the tick (Oliver and Lorenz 1983). A presumptive diagnosis can be made, in the case of a dead animal, based on the presence of an engorged tick and the absence of any other pathologic changes to which the cause of death can be attributed.

The deaths of most small wild animals go undetected by humans. As noted by Gregson (1973) sick animals "usually retreat to their lairs and therefore are not likely to be seen." Adult bluebirds that appear to be in good health may disappear and no remains are found. The list of possible causes of death of bluebirds is long, and, based on the two cases cited above, ticks can be added. However, because of the difficulties just described it is hard to determine the percentage of tick infested birds that die as a result of their ticks. It is probably true, as Gregson (1956) stated, that "...there is reason to assume that these parasites [ticks] play an important and little-understood role in the overall picture of animal populations." ■

Literature Cited

Bishop, F.C., and H.L. Trembley. 1945. Dis-

- tribution and hosts of certain North American ticks. *J. Parasitol.* 31:1-54.
- Blake, C.H., 1964. Observations on bird ticks. *Bird-Banding* 35:127.
- Boyd, E.M. 1951. The external parasites of birds: a review. *Wilson Bull.* 63:363-369.
- Doster, G.L. (ed.) 1988. Tick paralysis in birds. *SCWDS Briefs* 4:3-4.
- Gregson, J.D. 1956. *The Ixodoidea of Canada*. Can. Dept. of Ag., Entomology Division Publ. 930.
- Gregson, J.D. 1973. Tick paralysis—an appraisal of natural and experimental data. *Canada Dept. of Agriculture Monograph No. 9*.
- Joyce, C.R., and G.W. Eddy. 1943. Hosts and seasonal notes on the rabbit tick, *Haemaphysalis leporis-palustris*. *Iowa State College Journal of Science* 17: 205-212.
- Oliver, J.E., and M.D. Lorenz. 1983. *Handbook of Veterinary Neurologic Diagnosis*. W.B. Saunders Co., Philadelphia.
- Pitts, T.D. 1985. Identification of second-year and after-second-year Eastern Bluebirds. *J. Field Ornithol.* 56:422-424.
- Roberts, T. 1981. Parasites of the Eastern Bluebird. *Sialia* 3:92-94.
- Schwab, Don. 1987. Partial paralysis in a Yellow-rumped Warbler may have been caused by a tick. *J. Field Ornithol.* 58:291-292.

T. David Pitts, Biology Dept., University of Tennessee at Martin, Martin, Tennessee 38238, and Lynn E. Hayes, Southeastern Cooperative Wildlife Disease Study, University of Georgia, Athens, Georgia 30602.

Bluebird Nest Box Infested With Northern Fowl Mite

Zach Neece

Eastern Bluebird (*Sialia sialis*) nestlings were discovered infested with northern fowl mite, a species of parasite not previously reported in *Sialia*. The nestlings apparently fledged successfully. A brief discussion of this parasite is included.

Collection and Identification

On 1 May 1988, during weekly inspection of nest boxes in rural Alachua

County, Florida, a box containing five Eastern Bluebird nestlings was discovered to be infested with mites. The mites literally covered all of the sur-

faces inside the nest box. The nestlings sat perfectly still with their eyes closed. They were in no apparent distress.

Several of the mites were brushed into a glass jar. Seventy percent alcohol was added to kill and preserve the mites. The collected sample was submitted to Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville. Dr. H.A. Denmark, chief entomologist and an authority on mites, identified the parasites as northern fowl mite (MACRONYSSIDAE: ACARINA *Ornithonyssus sylviarum*).

Nesting progress was henceforth monitored by observing for active feeding by the adult birds, since the nestlings were now older than 14 days and opening the box might unnecessarily disturb them. All five young apparently fledged successfully as evidenced by a typical flat nest with fecal sacs present on day 21. The box was removed and discarded. A new box was mounted one post away from the original location.

Bluebirds nested in this new box a little over two weeks later. Three young fledged on schedule. Upon removing the fledged nest, an infestation of similar appearance was noticed on 2 July 1988.

Another nest box located about 500 yards [457 m] away had a fledged nest with a similar appearing infestation on 7 July 1988.

I decided to leave these nest boxes in place for the winter. The boxes were NOT treated with an insecticide such as a pyrethroid. Interestingly, thus far during the nesting season of 1989, no infestation has been observed. Both boxes have had two successful nesting episodes as of 11 July 1989.

Discussion

To my knowledge, northern fowl mite has not been reported in *Sialia* as a parasite of the Eastern Bluebird (Chow, *et al.* 1983; Roberts 1981). Several facts about northern fowl mite are noteworthy (Denmark 1988). Northern

fowl mite is common in the North Temperate Zone (United States and Canada). It parasitizes domestic fowl and wild birds. Its life cycle includes five stages: egg, larva, protonymph, deutonymph, and adult. Mating usually occurs in the nest and eggs are laid on the host or in the nest. The time necessary for development from egg to adult is approximately five to seven days. The protonymph and adult stages take blood meals. Adult mites that are left behind in the nest box or that drop off on perches can attach themselves to new bird hosts that come along. Thus, they are able to colonize new nests. Neither the adult nor any stage of the mite's life cycle is able to overwinter in an unoccupied nest box.

Except for bandicoots and gerbils, the mite apparently does not attack other mammals except humans and this occurs only when a fowl host is not available. Humans thus become incidental hosts by handling infested birds or nesting materials. The bite produces temporary itching, discomfort and sometimes dermatitis. The mite is unable to develop on human blood and can only live about ten to twelve days away from the avian host. It is not known to be a vector of disease in humans. ■

Acknowledgments

Dr. Denmark provided valuable information used in deciding the proper course of action. Cathy Reno assisted in collection of parasites and in evaluating the health of the nestlings.

References

- Chow, W., E.H. Burt, Jr., and D.E. Johnston. 1983. Invertebrate fauna of Eastern Bluebird nests. *Sialia* 5(2):53-57.
Roberts, T.H. 1981. Parasites of the Eastern Bluebird. *Sialia* 3(3):92-94.

711 NE 5 Place
Gainesville, FL 32601



Tufted Titmouse Egg Successfully Fostered in Bluebird Nest

1989

Sarkis Acopian

April 21—I found a completed Tufted Titmouse nest in one of my bluebird boxes.

April 29—Conflict with House Sparrows began. At this point I looked for and found titmouse eggs (which, as usual, were covered with nesting material); however, I could not determine when last egg was laid but did know that eggs were not being incubated on the 27th.

May 1—Titmice abandoned the nest.

May 2—I was finally able to trap the male sparrow but the titmice did not return. I wanted to place some of the eggs in bluebird nests but had to be absolutely sure that it would not have any adverse effect on the bluebirds. After consulting with Dr. Zeleny I decided to place one titmouse egg in each of three different bluebird nests.

May 5—I transferred the eggs as follows:

First titmouse egg was placed in a bluebird nest with four eggs (same day as the fourth bluebird egg was laid). The titmouse egg was ejected from the nest the same day.

All four bluebird eggs hatched on 21 May and fledged on 9 June. On 11 June I saw all four young being fed by the parents.

Second titmouse egg was placed in a bluebird nest with four eggs (the fourth bluebird egg was laid the day before). The titmouse egg was accepted; however, on 9 May as I approached the box I saw a House Wren leaving the box where I found part of one egg in the nest and the remains of the other eggs on the ground in front of the box.

Third titmouse egg was placed in a bluebird nest with three eggs. The titmouse egg was accepted and the fourth bluebird egg was laid the next day (6 May). On 22 May all five eggs hatched.

On 7 June, three bluebird young left the nest and on 10 June the fourth bluebird and the titmouse fledged.

I photographed the young in the nest on the 7th, 10th, 12th, 14th, 15th and 16th days after they hatched. I feel that during the photography session on the 16th day I may have disturbed them enough to cause the three early bluebird departures from the nest.

June 28—I revisited the nest site and happened to see the parents feeding three of the young about fifty feet from the nest where they had their first egg of the second brood. ■

One Windwood Hill
Easton, PA 18042



Photographs by Sarkis Acopian

Four Eastern Bluebirds and one Tufted Titmouse on the sixteenth day after hatching. An "x" marks the titmouse.

QUESTION CORNER

Lawrence Zeleny



Do you believe that we have reduced the "90% gone" figure for bluebirds through all the efforts to help them?

J. Robert Gibney
Green Lake, Wisconsin

We know that the bluebird population has increased dramatically in many local areas where nesting boxes in sufficient numbers have been placed and properly monitored over a period of years. It is impossible to say, however, to what extent these efforts have increased the bluebird population of the continent as a whole. Many more people need to become involved to restore the population to any semblance of what it was in earlier times. This, of course, is our goal.

On one mini-trail, I have a group of boxes on every other power pole on an open rolling prairie. I had just one bluebird occupancy during the second brood. The other five houses contained one dead adult Tree Swallow each. No nesting material was present. Any idea of the cause? Boxes are 4 3/4 x 5 1/2 x 11 inches with the 1 1/2 inch hole 7 or 8 inches above the floor.

John Smith
Neenah, Wisconsin

Dead adult Tree Swallows in bluebird nesting boxes have been reported a good many times. No one knows for sure the cause of the birds' deaths, but several theories have been advanced.

It has been suggested that, unless the inside of the front board of the box is roughened, the birds are unable to

cling to the surface in making their way up to the entrance hole. Another theory is that because of the relatively broad wing span of the swallows they are unable to spread their wings well enough to flutter up to the entrance.

Both of these possible causes of swallow mortality may apply under some circumstances, yet it is known that thousands of Tree Swallows nest successfully every year in bluebird boxes with 4 x 4 inch smooth interiors.

It has been noted that most of the swallow deaths in nesting boxes appear to occur in early spring shortly after the birds have returned from the south. At that time the birds are likely to be somewhat exhausted and weakened from the long migration and if, as so often happens, the weather then turns cold and rainy the swallows may be unable to find the flying insects needed for food and to regain their strength. Under these circumstances the weakened birds seek safe shelter to rest and may die before the weather conditions improve. This, we believe, is probably the principal cause of swallow mortality in nesting boxes.

It is possible, of course, that in some instances swallows might be better able to save themselves if the floor dimensions of the nesting box were to be somewhat larger than the 4 x 4 inches usually recommended for bluebirds and if the interior of the front board were to be roughened. Also, it is noted that in your boxes the entrance hole is 8 inches above the floor rather than the usual 6 inches. This might make it a little more difficult for weakened swallows to leave the box. ■

EUROPEAN STARLING-EASTERN BLUEBIRD NEST SITE COMPETITION III

Peter A. Zerhusen

This article records nest site competition between the European Starling (*Sturnus vulgaris*) and the Eastern Bluebird (*Sialia sialis*) during the 1989 nesting season, and compares it with previous findings from the 1984 and 1985 nesting seasons. It would appear that natural cavity nest site competition remains intense and has been unaffected by the trapping of starlings in previous years. Also, the evidence suggests that a substantial population of non-breeding adult starlings exists because of the limited number of available nest sites, virtually precluding the possibility of bluebirds successfully nesting in natural cavities with openings large enough to accommodate starlings. In addition, the investigation of nest sites by immature starlings occurs during the months of June, July, and August when bluebirds traditionally attempt to nest for a second or third time. Their effect on bluebird nesting success is as yet undetermined. Finally, trapped starlings from the 1989 nesting season were sexed with males accounting for nearly 70 percent of the total. This finding awaits further study.

Introduction

It has long been recognized that the European Starling (*Sturnus vulgaris*) actively competes with the Eastern Bluebird (*Sialia sialis*) for available nest site cavities. Repeated mention is made in the literature documenting the devastating effect that the European Starling has had on bluebird populations (Zeleny 1976). Since the introduction of the bluebird nesting box, with its 1 1/2 inch [3.81 cm] opening, nest site competition between these two species was effectively eliminated in these man-made nesting boxes. However, competition surely continues in natural cavities where the entrance hole to nest sites is often in excess of 1 1/2 inches.

This study represents an ongoing attempt by this author to document both the intensity and duration of nest site competition between these two species over the course of a single nesting season. For the present study, the 1989 nesting season was used. Previous articles have documented the level of nest site competition for the 1984 and 1985 nesting seasons (Zerhusen, 1984, 1986). By combining the results of these three studies, it will be possible to begin to discover whether

longitudinal variations exist in the intensity of nest site competition between the European Starling and the Eastern Bluebird.

Methodology

As much as possible, methods identical to those utilized in the 1984 and 1986 studies were employed in the present study. The same nesting box was used for trapping European Starlings. The dimensions were 5 1/2 x 6 x 13 in. [13.97 x 15.24 x 33.02 cm]. The size of the opening was 2 1/2 in. [6.35 cm] to permit access by European Starlings. Although these dimensions are somewhat larger than those found on the standard bluebird nesting box, they were utilized to facilitate trapping.

The location of the starling box in the present study was identical to its location in the previous two studies. The box was placed on the trunk of a deciduous tree approximately 60 ft. [18.29 m] from the author's residence at a height of about five feet [1.52 m] from the ground. Surrounding habitat is a mixture of mown lawns, fields, and pastures. Individual homeowners typically own from 3 to 8 acres [1.21-3.23 ha] of ground. Bluebird nesting boxes

have been located within approximately 150 feet [45.72 m] of the starling box for the past several years, and they are used successfully each year by a pair of bluebirds.

The trapping method employed was as follows. A manual trap similar to the one described by Morris Green in the Winter 1984 issue of *Sialia* was used to capture the starlings (Green, 1984). During observation periods, every starling that entered the starling nesting box was live trapped and then disposed of to ensure that each bird would be counted only once.

The starling box was monitored from 12 February 1989, when it was placed outside, until the end of August. Peak observation periods occurred each morning before work and most afternoons after work. Weekends permitted increased observation time. The starling box was not monitored during vacation time which included 2 July to 14 July and 1 August to 4 August. However, nesting birds were not discovered upon the author's return from vacations. No female starling was able to lay a complete clutch of eggs successfully. A completed nest and two eggs within a two day period was the most progress observed.

Additionally, each trapped starling was sexed before disposal. The sexing criteria used was the color of the rami of the lower mandible. Kessel (1951) reported 100 percent accuracy using this procedure to sex 600 European Starlings. The lower mandible of the female is pink during the breeding season, while the male's is blue to blue-black.

Findings

A total of 53 adult starlings and 15 immature starlings were trapped dur-

ing the 1989 nesting season. Table 1 provides a comparison with the totals from the previous years (1984 and 1985). The 1989 totals compare favorably with the 1984 totals, but both are considerably below those of 1985. Much of the increase in the 1985 totals is accounted for by the large number of immature starlings trapped during that year. The average number of adult starlings trapped during the three years of study is in excess of 55 birds per year.

This finding suggests that competition between starlings and bluebirds for available nest sites remains intense. Comparing the total number of trapped adults for each of the three years suggests that the level of competition has remained consistently high. There has also been no reduction in the number of adult starlings trapped as a result of the previous years' trappings. Specifically, a total of 152 starlings were taken in 1984 and 1985, yet there was no reduction in the numbers trapped for 1989.

Table 2 records the number of adult starlings trapped by month for the 1985 and 1989 nesting seasons. This information was not available for the 1984 nesting season. The results suggest that the peak nesting months for starlings are March, April, and May, with April being the most intense. A female bluebird was observed carrying nesting material to the bluebird box on 19 March. It would appear from the data gathered that bluebird nesting occurs at the precise time that peak starling nesting begins.

Table 3 records the use of the starling box by immature starlings according to month. However, it must be noted that these results are artificially

Table 1. A Comparison of Trapped Starlings During the 1984, 1985, and 1989 Nesting Seasons.

	1984	1985	1989	Totals	Yearly Averages
Adults	48	65	53	166	55.3
Immatures	11	28	15	54	18
Total	59	93	68	220	73.3

Table 2. A Comparison of Trapped Adult Starlings by Month.

	Feb.	Mar.	Apr.	May	June	July	Aug.
1985*	0	17	21	16	7	4	0
1989	1	6	27	17	2	0	0
Total	1	23	48	33	9	4	0

*results not available from 1984 study

low as a result of the author's vacation time which typically lasted an average of two to three weeks during peak immature starling use. An annual average of about 18 immature birds was captured during the months of June, July, and August. As mentioned in the 1986 article (Zerhusen), these immature starlings began flooding potential bluebird nesting sites beginning in June, which is when bluebirds typically start their second nesting. This superabundance of immature birds apparently continues until the end of the bluebird nesting season. Their impact on nesting bluebirds is uncertain at best.

The last table (Table 4) is an accounting by month of the sex of each trapped starling. Information was available only for the 1989 nesting season. Immature birds were not counted. Almost 70 percent of the captured birds were males, while approximately 30 percent were females. The reason for the disproportionate number of males is unclear and awaits further investigation.

One incidental finding is worth mentioning. There was a period in May of 1989 where it rained daily for a period of 8 days. During this time, nest building behavior appeared diminished and only two birds were trapped. Perhaps nest building is temporarily dis-

rupted during wet periods, when nesting materials are rain soaked.

Conclusions

This article has reviewed the intensity and duration of cavity nest site use by European Starlings during the 1984, 1985, and 1989 nesting seasons. The results suggest intense competition between European Starlings and Eastern Bluebirds for available natural cavity nest sites, especially during the months of March, April, and May. It would also appear that just as the adult starlings' interest in nesting diminishes, cavity nesting sites are flooded with immature starlings which investigate nesting cavities regularly from June through August. The extent of the problem that these immature starlings create for nesting bluebirds is not currently understood.

A second conclusion tentatively drawn is that the removal of a considerable number of starlings in 1984 (59) had no impact on the use of the starling box in 1985, when 65 adult birds were captured. After the removal of a total number of 152 starlings during these two years (1984 and 1985), starling use remained constant during the 1989 nesting season.

These results have the following two implications, initially mentioned in this author's 1986 article (Zerhusen). Efforts at increasing the population of

Table 3. Use of Nest Site by Immature Starlings.

	June	July	Aug.	Totals
1984	0	2	9	11
1985	8	17	3	28
1989	5	1	9	15
Totals	13	20	21	54

Table 4. Use of Nest Site by Adult Starlings by Month and Sex for 1989.

	Feb.	Mar.	Apr.	May	June	July	Aug.	Totals	%
Male	0	4	17	14	2	0	0	37	69.81
Female	1	2	10	3	0	0	0	16	30.19

bluebirds may need to include measures which effectively reduce the starling population. Live-trapping and disposal is one method. The sterilization of trapped male starlings to be released back into the wild may prove to be an important second step.

The final implication has to do with actual starling numbers. The frequency of trapping of adult starlings over a three year period suggests that there may indeed be many more adult starlings than available nest sites. What results is a substantial population of non-breeding adults. If this were true, given the European Starling's competitive edge over the bluebird in nest site aggressiveness, it is possible to conclude that bluebirds occupy precious few, if any, natural nest site

cavities with openings large enough to accept a starling. ■

Literature Cited

- Green, M. 1984. A simple manual trap for House Sparrows. *Sialia* 6(1):8-11.
- Kessel, B. 1951. Criteria for sexing and aging European Starlings (*Sturnus vulgaris*). *Bird-Banding* 22:16-23.
- Zeleny, Lawrence. 1976. *The Bluebird*. Indiana Univ. Press, Bloomington, IN.
- Zerhusen, P. 1984. European Starling-Eastern Bluebird nest site competition. *Sialia* 6(4):125-126.
- _____. 1986. European Starling-Eastern Bluebird nest site competition revisited. *Sialia* 8(2):45-47.

12554 Indian Hill Dr.
Sykesville, MD 21784

Unusual Feeding Behaviors by Bluebirds

On 9 September 1989, near Alexandria (Rapides Parish), Louisiana, I observed bluebirds feeding at a security light. At 6:20 a.m. it was still rather dark, except around the security light. Eleven bluebirds were perched on electrical wires which passed within about 10 feet of the pole with the security light on it. Bluebirds swooped down and fed on insects that were attracted to the light.

This behavior reminded me of an observation made in 1983 by a friend who lived near Longview (Oktibbeha County), Mississippi. He had a Bug Zapper (electrical) in his back yard and saw a bluebird family (parents and juveniles) feeding on insects that had been attracted to the zapper/light.—George A. Hurst, R.R. 4, Box 258, Starkville, MS 39759.

THIRTEENTH ANNUAL MEETING OF THE NORTH AMERICAN BLUEBIRD SOCIETY

The 13th annual meeting of the North American Bluebird Society will be held in Gettysburg, Pennsylvania, October 26-28, 1990.

This meeting is being sponsored by the Pennsylvania Department of Environmental Resources, Bureau of State Parks.

Details for a Front Opening Bluebird Nest Box with a Slot Entrance

Richard M. Tuttle

I learned about the slot box in 1987 when fellow Ohio bluebirder, Reid Caldwell, mailed me an Agricultural Extension Service newsletter from Tennessee which described research originating in Kentucky (See McComb, *et al.*). Bluebirds had preferred boxes with the front slot entrances over conventional circular entrances, and the slot-box tenants also had built more nests, laid more eggs, and fledged more young. I found the idea of using a slot entrance for a bluebird nest box intriguing. Since sophisticated drills and bits are not needed to make slots, more conservationists, particularly young people, might be encouraged by the simplicity of a slot-box design. I also wanted to satisfy my curiosity about the concept. I saw great potential for promotion and acceptance of any box that is easy to construct.

I was forced to design my own slot box since I had no dimensions other than the size of the starling-proof slot 1 3/16 in. [3 cm] wide mentioned in the article. I borrowed ideas from several established boxes as a design took shape. I chose a rectangular box with a flat roof to keep all cuts at 90 degrees—the angle least threatening to beginners. I chose a 4-1/2 in. [11.4 cm] square bottom since little waste results from cutting 1 x 12 stock [3/4 in. x 11-1/4 in., 1.9 cm x 28.6 cm] into 4-1/2 in. and 6 in. [15.2 cm] wide boards used for the four sides and floor. Roofs are cut from 1 x 8 stock [3/4 in. x 9-1/4 in., 1.9 cm x 23.5 cm].

From the Dick Peterson box I borrowed the idea of a front which pivots near its base; the sides of the box are extended past the floor to accomplish this. When the front is open and hanging down, the nest chamber looks shallow even though the distance from the floor to the edge of the entrance, 5-1/2 in. [14 cm], is comparable to most boxes with circular entrances. The abil-

ity to substitute a sparrow trap insert for the front of an opened box is another idea borrowed from the Peterson box. I made several sparrow traps for slot boxes by attaching Huber Trap hardware to replacement front panels with round entrance holes. I make all of my Huber Sparrow Traps with 1-3/8 in. [3.5 cm] holes and sparrows have had no problem entering the smaller entrance.

Four 1/4 in. [0.6 cm] holes provide adequate drainage through the floor. For maximum ventilation, a vent slot 1/4 in. wide was added above the back. In Ohio, the back vent is stuffed with felt weather stripping to minimize heat loss during cold spells. The weather stripping is removed in early June to permit cross ventilation during the hottest days of summer. I recommend the "parking lot test" to demonstrate the need for a back ventilation slot. Choose a hot sunny day to sit in your car with one window rolled down. As the temperature inside the car rises above the comfort threshold, open a second window on the opposite side of the car and you will feel the temperature drop as the hot air is released, demonstrating the cooling effect of cross ventilation.

A large roof extends over all four sides of the box. Two rain grooves on the underside of the flat roof are required to stop rain from entering the nest chamber should water adhere to its underside. The greatest extension of the roof shades the entrance all day to prevent overheating. Also, the protruding roof may act as a predator guard against animals, both furred and feathered, by preventing troublemakers from positioning themselves above the entrance to reach down into the nest chamber. I added an extra board to a few boxes as increased insurance against probing bills and paws. I also wanted to test the accep-

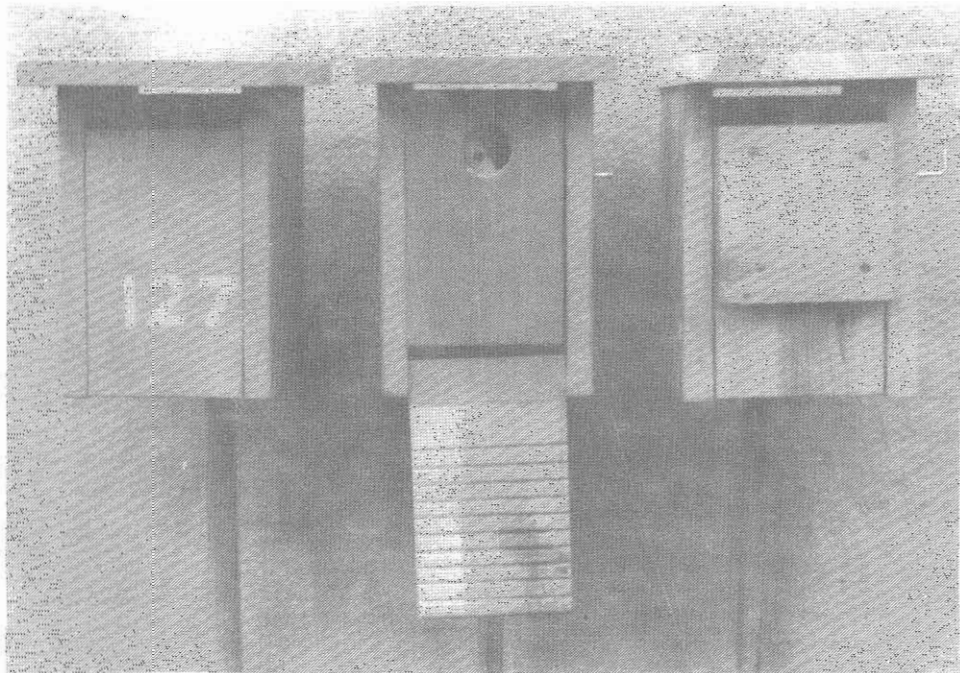
tability of slots with double thicknesses. Both types of boxes, those with standard fronts and some with double thicknesses, were used by Eastern Bluebirds and Tree Swallows. (All of my boxes are free of raccoons since they are mounted on greased pipes.)

I am impressed with the success of the slot box design. For the last two seasons, all trail species that normally nest in Ohio have nested in slot boxes. In addition to bluebirds and Tree Swallows nesting in my five boxes, another trail in my county fledged two families of Carolina Chickadees. One family of Tufted Titmice tried to nest but was evicted by House Wrens. The sparrow trap insert worked well for my brother who had to eliminate many sparrows before a family of swallows raised their young.

When I first read of the narrow en-

trance slot [3 cm], I wondered how birds entered the boxes. I imagined that acrobatic maneuvers, with twisting wings and flaring legs, were needed to negotiate the strange but simple entrance. I wanted to catch the facts on film. As I photographed both bluebirds and swallows entering slots, I saw that birds enter through slots the same way as circular entrances: head first. Birds are wider across the shoulders than they are from the back to the breast bone. Apparently, bluebirds are less than three centimeters thick between the back and breast allowing them to enter the slot entrance with ease. I can't help but wonder whether Mountain Bluebirds can enter a slot of this width.

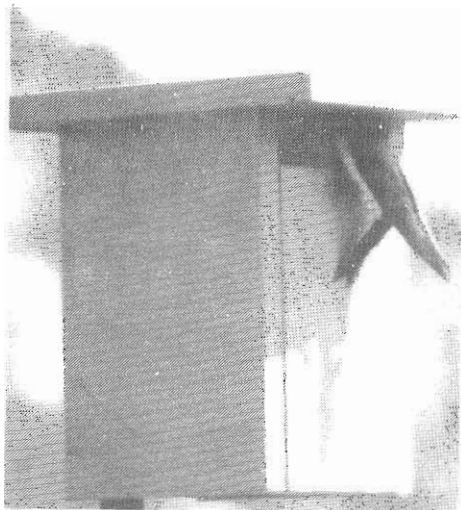
The horizontal slot allows older nestlings to cling side by side above their nest. I have seen as many as three swallow heads anticipating a feeding



Three Examples of Slot Box Uses

From left to right: a slot box with a standard front (notice that the slot is shaded); center, an opened front with a Huber Sparrow Trap inserted in place and tripped to show bar; and right, a cedar slot box with a double thickness front. Back ventilation slot can be seen in each. All have been field tested and work well to benefit native cavity nesters.

All photographs by Richard M. Tuttle



A Tree Swallow leans into a slot box.

parent's fly-by. Swallow nestlings need toe holds in order to perch; a table saw is used to cut horizontal grooves 1/2 in. [13 cm] apart. Toe holds are especially vital for adult Tree Swallows during cold weather before the nesting season. Adult swallows have been trapped in boxes with smooth surfaces below the entrances. As cold weather grounds flying insects, birds weaken in their roosts while awaiting the bounty of warmer weather. If there are no toe holds in the boxes, swallows cannot use their short legs to climb up to launch a search for food. They then must expend more energy flapping their wings and jumping to reach the edge of the opening. Several misses and an energy deficit results in death. Nest boxes without toe holds are swallow traps!

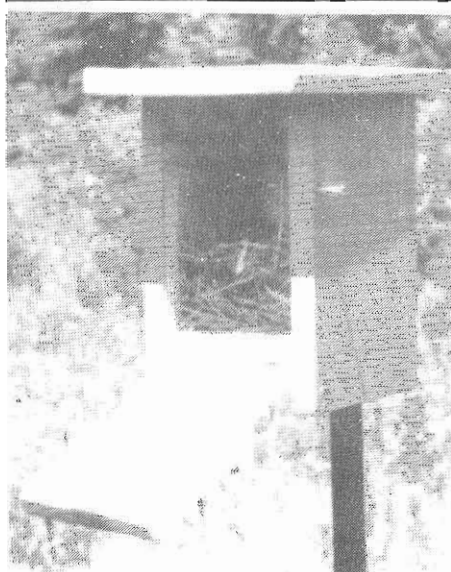
I can see only one drawback to the slot design: I cannot winterize the box to my satisfaction. At the end of each nesting season, I routinely plug all drain and vent holes in every nest box in preparation for winter roosting. (See Tuttle, 1987) A 4-1/2 inch wide slot entrance is three times as large as a 1-1/2 in. [3.8 cm] circular entrance. I suspect the larger slot entrance will permit too much heat to escape during winter roosting. Perhaps I'm too cautious but a study of winter use of slot boxes may be in order.

I have no plans to switch all 212 box locations to slot boxes. After 23 years I have too large an inventory of gadgets and parts for my standard boxes. It would be too time consuming to switch to any new system. I will continue to try new ideas and box designs since tinkering is a dimension of bluebirding that I truly enjoy. If I were starting over, however, I would not hesitate to use the slot box design for my first trail. Although there may be "better" boxes to fulfill other objectives, a simpler box will be hard to find. As far as its ability to raise healthy fledglings, that has been proven by the originators of the concept in Kentucky. The slot box is here to stay. Give it a try, you won't be sorry. ■

311 West Central Ave.
Delaware, OH 43015

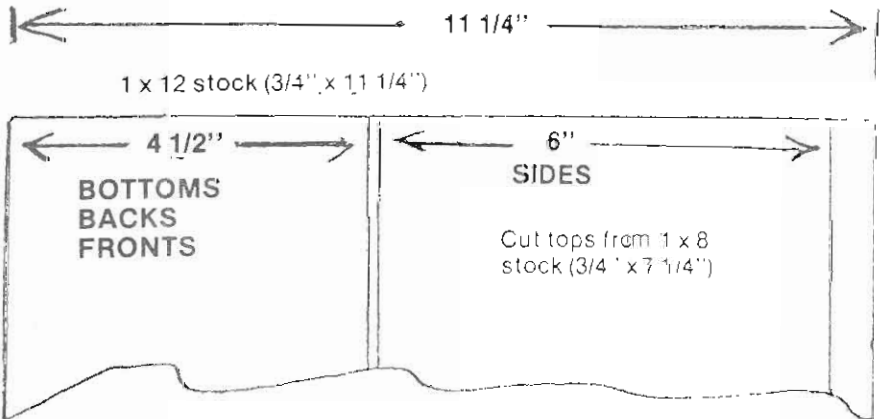
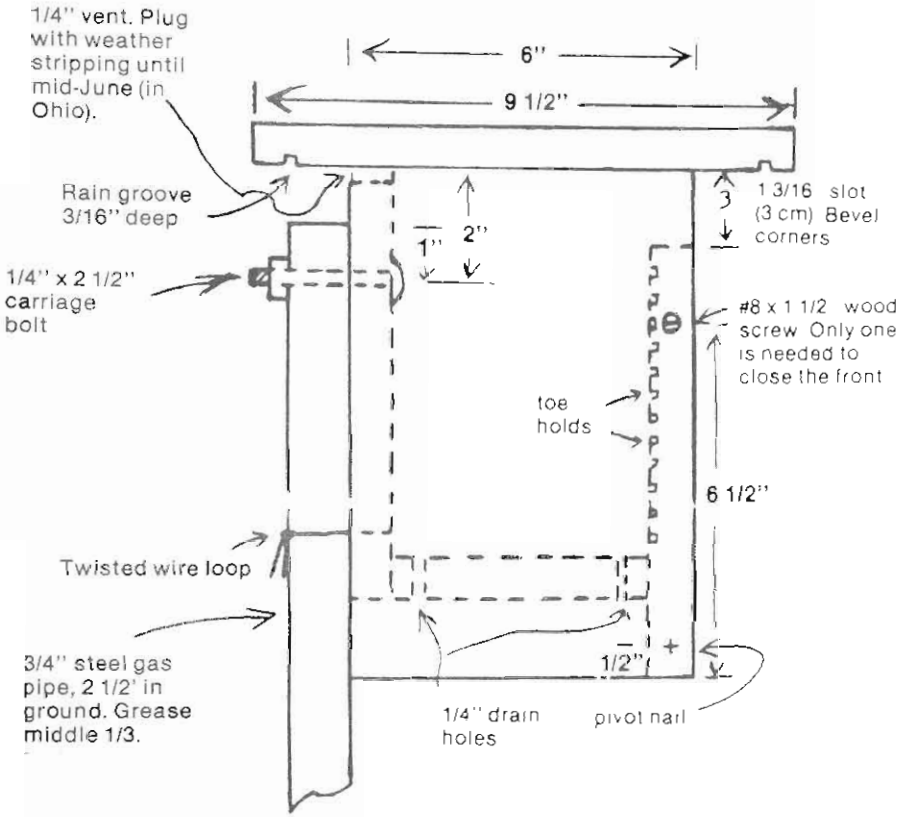
Literature Cited

- McComb, W.C., W.H. Davis, and P.N. Allaire. 1987. Excluding starlings from a slot-entrance bluebird nest box. *Wildlife Society Bulletin* 15:204-207.
- Tuttle, R.M. 1987. A study of winter roost site management and the use of sites by Eastern Bluebirds in Delaware State Park, Delaware, Ohio. *Sialia* 9:43-49.



An opened slot box reveals a bluebird nest.

FRONT OPENING BLUEBIRD SLOT BOX



Diagrams by Richard M. Tuttle

Metric Equivalents

		Inches	Centimeters	Inches	Centimeters
Materials					
2 sides	6" x 9 1/4"	3/16	0.5	4 1/2	11.4
1 front	4 7/16" x 8"	1/4	0.6	6	15.2
	(Don't forget toe-holds.)	1/2	1.3	6 1/2	16.5
1 back	4 1/2" x 7 1/4"	3/4	1.9	7 1/4	18.4
1 bottom	4 1/2" x 4 1/2"	1	2.5	8	20.3
1 top	7 1/4" x 9 1/2"	1 3/16	3.0	9 1/4	23.5
		1 1/2	3.8	9 1/2	24.1
		2	5.0	11 1/4	28.6
		2 1/2	6.5	2 1/2 ft	.76 m
		4 7/16	11.3	5 ft	1.5 m

Assembly

Pre-drill holes for the mounting bolt, wire loop, drain holes, wood screw, and pivot nails. Use #6 siding nails (twisted and galvanized). Glue all permanent joints. Slightly bevel the top corners of the front. Nail the back to the bottom. Add the sides. Make a slot spacer 1 3/16 in. (3 cm) wide and use it when the pivot nails are driven through the sides to affix the front. Add the top. Sand and paint the box "Lexington Green."

Pre-drill a 9/32 in. hole one inch from one end of a 7 1/2 ft. length of steel pipe. Use a post pounder to drive the pipe into the ground 2 1/2 ft. Bolt and wire the box to the pipe and use a pipe wrench to face the box toward the desired direction.

A Bird in the Bush

Karen Blackburn

Dorothy Roberts reports that bluebirds wintering in LaPlata, Maryland have been seen feeding on the fruits of *Liriope muscari*, commonly known as Lilyturf. Eastern Bluebirds were observed taking the fruits during the months of January and February, and Mrs. Roberts adds that bluebirds do not



take the fruits "until late winter after all the other berries seem to be gone." These observations indicate that Lilyturf may well serve as an emergency food for bluebirds when other sources of food are in short supply. However, because Lilyturf is a groundcover, its value as winter food will be limited in many areas by snow cover at a time when bluebirds and other wildlife are most in need of emergency food sources. Thus, as generally recommended, plantings for wintering bluebirds should include a wide variety of species that will offer food from the ground to the treetops.

Lilyturf is an evergreen groundcover with arching, grass-like

leaves. During late summer it produces clusters of lavender or white flowers depending upon the variety. The fruits that follow are black. Though hardy to Zone 6, Lilyturf dies back to the ground during the winter months in the northernmost parts of its range. Cutting or mowing in early spring will then encourage new growth.

We thank Mrs. Roberts for her report and invite other readers to share their observations concerning plant use by wildlife. If you have planted for wildlife, we'd like to hear from you, too! Please send your reports or comments to Karen Blackburn, Rt. 3, Box 650, Marianna, FL 32446. ■

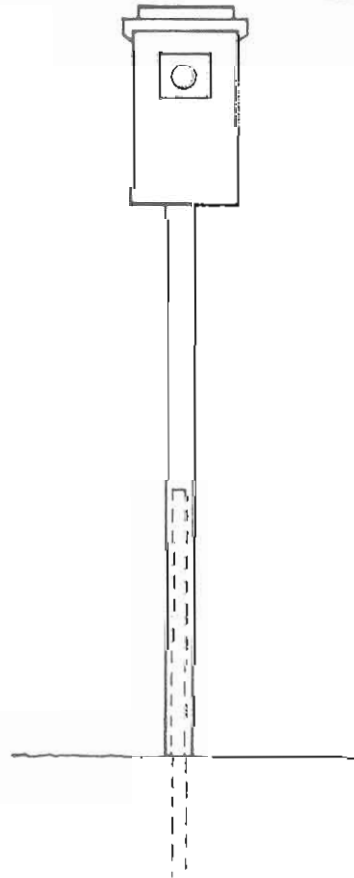
A Box Mounting Method

Horace Abee

I have used the following method of putting up a bluebird nesting box for about six years, and it really works. From my experience, nothing seems to be able to climb up the pipe. This method also makes it easy to clean the box.

Drive an iron rod about 4 feet long [1.22 m] into the ground until it is stable. Mount the nesting box on a 1 1/2 inch diameter [3.81 cm] PVC pipe which is about 6 ft. 6 in. long [2.01 m]. Put a piece of wood inside the PVC pipe and attach the nesting box. Set the PVC pipe with the attached box over the iron rod. After young bluebirds fledge, lift the plastic pipe off the iron rod, clean out the nest, and put the pipe back.

Before I adopted this mounting method, I used a wooden post which cats and snakes climbed and I lost nestlings. Now I often have three nestlings each season. ■



Rt. 5, Box 808
Lincolnton, NC 28092

Mutual Benefits of Raisin' Bluebirds

Norman B. Wilcox

I am fortunate to see and hear four to six bluebirds near my home every day during all seasons.

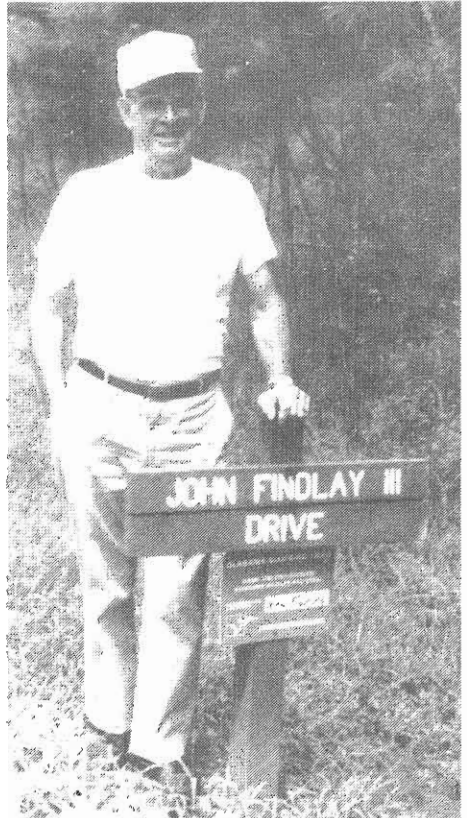
This past year was my first serious attempt to attract bluebirds to a feeder. Using a feeder from the North American Bluebird Society (holes on each end and Plexiglas® on both sides) brought *no results*.

Then in the fall, I tried something different. I removed one of the Plexiglas sides and soon the bluebirds found the new way into the feeder. Before, they looked in both openings, but never actually entered the feeder.

Now I had to find something that they would eat. We have many dogwood trees, so I started harvesting the red berries. Because the bluebirds liked them a *lot* I gathered all I could find; however, being too eager and new at this, I made a big mistake. In my haste to stockpile the berries, I failed to notice that they began to get moldy (so into the garbage went the winter supply of dogwood berries).

My *second attempt* was better and much more successful. The substitute berry was *raisins*. Why I had not thought of these sooner, I do not know. In the past I had fed *raisins* to mockingbirds, but never thought about bluebirds liking them also. The bluebirds became so fond of raisins that I had to set up a second feeding station. Every day four to six bluebirds repeatedly visit both feeders. They watch with clockwork precision every day as I put a handful or two in each feeder for their enjoyment and mine as well. When they are feeding their young, they treat them to the raisins also. Last spring brought about a very special emotional moment for me as I watched the parents and the young birds alike eating my raisins. Yes, a tremendous joy comes from *raisin' bluebirds!* ■

P.O. Box 580
Grayson, GA 30221



John Findlay III Honored

A major thoroughfare in Oak Mountain State Park near Birmingham, Alabama, has been named John Findlay III Drive. John is a former member of the NABS Board of Directors and a tireless promoter of bluebirding in the print media and on radio and television. The honor was bestowed on him by the Alabama Department of Conservation and Natural Resources for his outstanding efforts to help bring back the bluebird. For 12 years he has operated a trail in the park and the surrounding area regularly monitoring 170 boxes. The number of bluebirds fledged from his boxes is approaching 4,000.

PLANTINGS FOR BLUEBIRDS AND OTHER WILDLIFE

Heartleaf Ampelopsis

Karen Blackburn

Hearthleaf or American Ampelopsis is a woody vine which resembles the Muscadine Grape (*Vitis rotundifolia*). A resident of fertile woodlands, Heartleaf Ampelopsis bears large heart-shaped leaves and blue fruits which ripen in the fall. The berries are favored by the Brown Thrasher, Northern Flicker, and Wood Thrush and are also used by several other species, including the Eastern Bluebird.

Heartleaf Ampelopsis *Ampelopsis cordata*

Native Range—Virginia, southern Ohio and Illinois south to Florida and Mexico, North to Massachusetts, but rare.

Hardiness—To Zone 5.

Habitat—Fertile woodlands and bottomlands.

Habit—Plants may assume a vine or bush-like form. Heart-shaped leaves are toothed and 3 to 6 inches [7.62-15.24 cm] long. Can be distinguished from the similar Muscadine Grape by the white pith of the stems of Ampelopsis. Tendrils, when present, are unbranched.

Fruit and Flowers—Inconspicuous

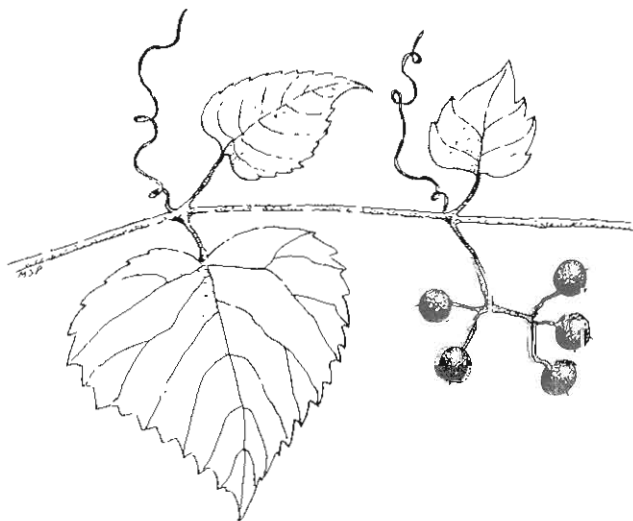
green flowers occur in clusters in early summer. Clusters of blue, pea-sized berries ripen in autumn.

Culture—Plant in rich soil in sun or partial shade. Propagate by tip layering during the summer months.

Landscape Value—May be grown on a trellis or other support or allowed to wander in natural areas.

Wildlife Value—The fruits of Heartleaf Ampelopsis are a preferred food of the Northern Flicker, Brown Thrasher, and Wood Thrush. Other species that take the fruit include the Eastern Bluebird, Wild Turkey, Ruffed Grouse, Ring-necked Pheasant, Northern Bobwhite, Mourning Dove and Gray Catbird. ■

Rt. 3, Box 650
Marianna, FL 32446



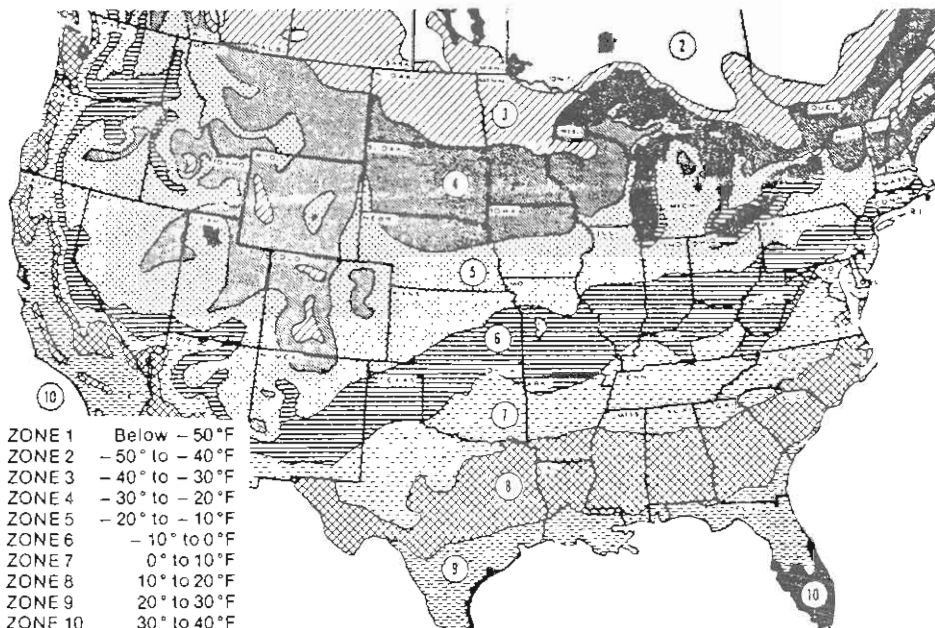


Figure 1. Hardiness Zones for the United States and southern Canada. Temperatures for each zone are the average annual minimum temperatures. When no zones are mentioned with the plant description, plants are hardy anywhere. Factors within zones such as altitude, exposure, soil type, moisture, etc. can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

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.

All contributions are tax deductible. Mail your check to NABS Boosters, P.O. Box 6295, Silver Spring, MD 20906-0295.

Announcements

Announcements of regional or state meetings pertaining to cavity nesters should reach us at least four months before publication date of issue in which item will appear. For example, the winter issue is published on 15 January so material should reach us by 15 September.

Mail to Editor J. Solem, 10617 Graeloch Rd., Laurel, MD 20723

Celebrate Wildlife

The Dahlem Environmental Education Center is sponsoring its sixth annual Bluebird Festival and Wildlife Art Show on March 10-11, 1990, on the campus of Jackson Community College in Jackson, Michigan. Admission fee.

For a schedule of events or additional information, write to the Dahlem Environmental Education Center
Jackson Community College
7117 S. Jackson Road
Jackson, Michigan 49201.

Bluebirds

All blue birds are not bluebirds, a fact you should know.
You can't always find bluebirds wherever you go.

Oh, there surely are blue birds like the blue jay, you see,
Who will gulp down the bird seed as fast as can be!
They look like policemen watching over the flock,
When there's danger about, you should hear them all squawk.

All blue birds are not bluebirds, a fact you should know.
You can't always find them wherever you go.

See, there's the kingfisher who likes fish for his lunch.
You may sometimes find one but never a bunch.
They live near the water to make dining easy
And can fly through the air even though it's quite breezy.

All blue birds are not bluebirds, a fact you should know.
You can't always find bluebirds wherever you go.

The indigo bunting is a sight to behold
When he sits in the sun, his colors aglow!
He can shimmer and shine, the blue's iridescent;
Everyone knows when this bird is present.

All blue birds are not bluebirds, a fact you should know.
You can't always find them wherever you go.

There's the tree swallow catching bugs in mid-air.
Those pests, the mosquitoes, are a favorite fare.
They swoop from the sky to catch a big bug;
They are really so useful I could give them a hug!

All blue birds are not bluebirds, a fact you should know.
You can't always find bluebirds wherever you go.

The bluebirds are rare, their numbers are small;
In some places you simply can't find them at all.
But when they're around—oh, what a sweet sound!
Just the sight of one somehow can make your heart pound.

They're a pretty soft blue, with a rust-orange chest;
If you put up a bird house, they'll pose for you best.
A bluebird's a blue bird, that everyone knows.
But not all blue birds are bluebirds as you now know.

Ruth E. Goodwin

A Quick Closing Solenoid Trap for House Sparrows

Morris M. Green, Jr.

In 1983, I developed a House Sparrow trap which enabled the operator to close the trap door by tugging on a long string attached to the door (*Sialia* 6(1):8-11 and 6(4):130-131). The trap proved quite useful to me and to others who wanted to trap House Sparrows which had usurped nesting boxes erected to attract bluebirds. That trap had one serious drawback however: often the sparrow was able to leave the trap before the operator could close the trap door.

In early 1989, I decided that a quicker closing trap might be developed by using a low voltage electric solenoid to close the trap door when a switch button was pressed. A solenoid is essentially an electric coil with a steel rod, called the "plunger," partially inserted into the center of the coil. When the coil is energized by an electric current, it becomes an electromagnet and the rod is quickly drawn back into the coil.

In March 1989, I ordered from a mail order electronics firm my first solenoid, a tubular one designed to operate on 12 volt direct current. UPS delivered it to my door on 6 April, and I immediately went to work on an experimental model of the trap I envisioned.

I built my first model by using a pipe clamp to attach the solenoid to one side of an existing bluebird nesting box. I then installed a horizontal 1 1/2 inch [3.8 cm] wide trap door above the entrance hole and used a wood screw to pivot it at one end. When I found that there was not enough space for the door between the top of the nesting box and the upper edge of the entrance hole, I cut a notch on the lower edge of the trap door so that House Sparrows or bluebirds could enter the nest box.

Even though that nest box was a temporary "jury-rig," it caught quite a few sparrows while I was building a new nest box specifically designed to

accommodate a 1 1/2 inch trap door and a solenoid.

I finished the sparrow trap on the afternoon of 7 April and mounted it on a post in our backyard. Then I quickly ran an electric extension cord to the switch button and batteries in our residence. While observing the trap door through my binoculars, I depressed the switch button. The trap door closed *instantly!*

On the first morning of operation (8 April) I saw a male House Sparrow (we trap only males) enter the trap. I pressed the switch button, the trap door closed *immediately* and I had my first sparrow.

After I disposed of the sparrow (House Sparrows are not protected by state or federal laws), I set the trap in readiness again. Here is the sparrow catch for the remainder of April:

Date	No. of Sparrows Caught
10	1
11	1
12	2
14	2
17	1
22	1
25	1
30	1

Total-April 8-30: 11 (all males)

Usually, soon after I caught a male, another pair of House Sparrows would move into our backyard from neighboring farms. But, suddenly, on 2 May, I simply "ran out of sparrows." For the remainder of the nesting season, no more sparrows showed an interest in the trap as a possible nesting site. By mid August, the pair of bluebirds nesting in our backyard had fledged two broods.

This trap has three features

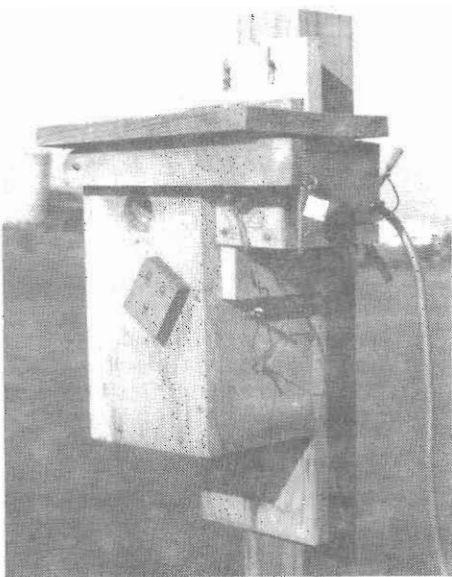


Figure 1. Trap door is supported in the upper (open) position by the solenoid's extended plunger.

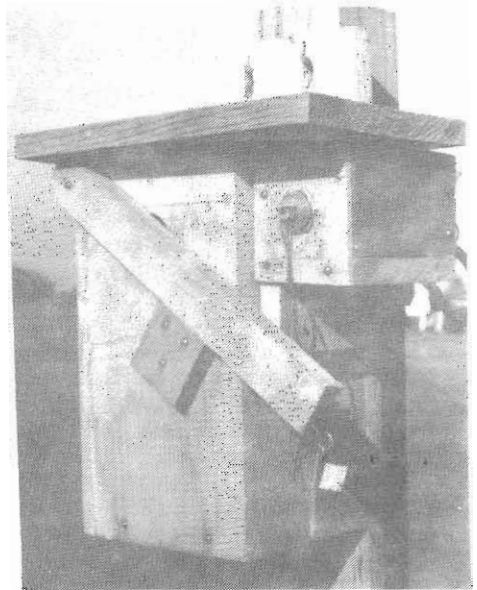


Figure 2. Plunger has withdrawn into coil and trap door has fallen to lower (closed) position.

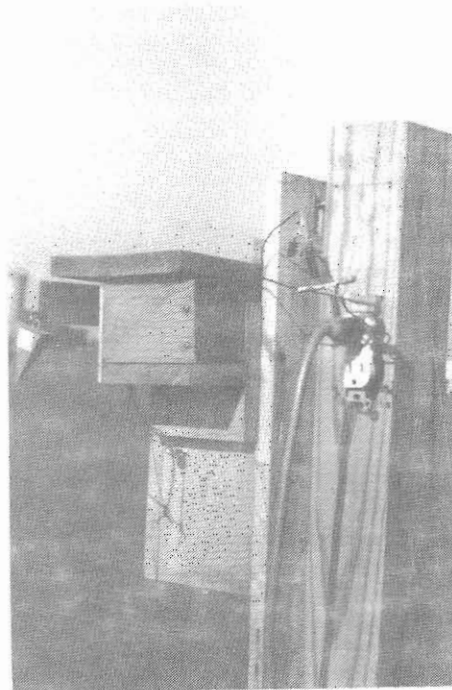


Figure 3. Side view showing (a) housing to protect solenoid from rain and snow, (b) outdoor extension cord plugged into receptacle, and (c) alligator clips.

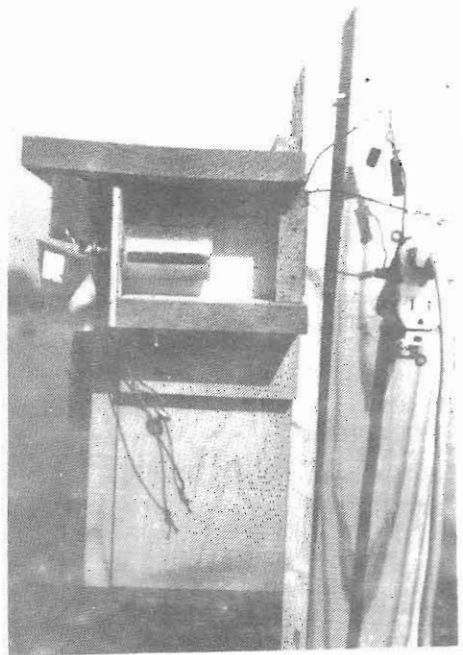


Figure 4. Side of housing has been temporarily removed to show tubular 12 volt direct current solenoid.

Photographs by Morris M. Green, Jr.

which, I think, make it superb:

1—The trap operator watching a sparrow enter the trap can close the trap door the *instant* the bird's tail disappears in the entrance hole.

2—The operator can concentrate on catching *only male* House Sparrows. That is a big advantage over automatic traps because the males are the real trouble makers. When the male disappears, the female soon abandons the nest box.

3—Even at *long distances*, the trap door closes *instantly* when one presses the switch's push button. I tested my trap when it was 285 feet [86.9 m] from the switch and the door closed immediately when I pushed the switch.

Some people use automatic traps to catch House Sparrows, but I have a personal aversion to such traps for this reason: sometimes careless or thoughtless individuals set such a trap, then walk away and forget about it for hours or days. If a bluebird or other protected bird is caught instead of a House Sparrow, it will often mortally injure itself thrashing about in the trap. If a solenoid type trap is used, however, the operator can observe, perhaps through binoculars, each bird as it enters the trap. If the bird is a protected one, the push button switch should not be depressed.

Until someone develops an automatic trap which will catch *only* House Sparrows, I believe a solenoid trap, such as the one I have described herein, may be the homeowner's best answer to the sparrow problem during the bluebird nesting season. Because the trap closes *instantly*, a bluebird with a nine to five job may often be able to catch a House Sparrow before leaving for work many mornings.

In central Maryland (Frederick County) where we live, House Sparrows begin to investigate our bluebird nesting boxes as early as February if the weather is mild. We live in a small residential subdivision surrounded by farms which harbor large colonies of House Sparrows. I plan to set up my solenoid trap again in mid-February of 1990. Based on my initial success in April 1989, I may be able to trap two, or

even three, dozen *male* House Sparrows during the 1990 bluebird nesting season (March-August) making it possible for bluebirds to nest peacefully in our yard with minimal harassment by House Sparrows.

To aid those who would like to construct this trap, I have prepared three construction drawings, a memo about construction details, and a list of suppliers of the materials needed. If readers who want that information will send me their name, address, and a check for \$1.60 (in U.S. funds; additional postage for Canada), payable to Morris M. Green, Jr., I will mail them all of the above items. Do *not* send any self-addressed envelopes or stamps. Your check will cover cost of envelope, postage and reproduction of items mailed. ■

Acknowledgement

I wish to thank Marvin Satchwell of Utica, MD, for his advice regarding electrical problems I have encountered from time to time. His extensive knowledge of that field has been very helpful to me in the construction of this trap.

8407 E. Lassie Ct.
Walkersville, MD 21793

Ontario Eastern Bluebird Society

The Ontario Eastern Bluebird Society will be holding a conference on 7 April 1990 at the Royal Botanical Gardens in Hamilton, Ontario. For further information contact William F. Read, 2-165 Green Valley Drive, Kitchener, Ontario N2D 1K3. Mr. Read is also reporting to the World Wildlife Fund on the status of the Eastern Bluebird and other native cavity nesters in Canada. He needs information for areas other than Ontario, especially Quebec, New Brunswick, Nova Scotia and Prince Edward Island. Survey forms for the 1989 nesting season will be sent to individuals responding.

CAMP BLUEBIRD—AN ADULT CANCER CAMP

Dan T. Peck

About four years ago at St. Vincent's Hospital in Birmingham, Alabama, an idea was conceived. The idea was to start a camp for adult cancer patients—a place close to God and nature where those diagnosed with cancer could rest, gain strength, hope, and support from loving counselors and other campers with the same disease. There were camps for children with cancer, but this would be the first for adults.

Louis Josef, the father of this idea, needed funding and help with this project. Louis, himself a cancer victim, knew firsthand the great need for a camp. One day he mentioned to two oncology volunteers his idea and his need for help. These people were Sandy Marriner and Pat Jones and that organization was Telephone Pioneers of America, a communications industry service organization with a membership of over 750,000 in the United States and Canada.

The name Camp Bluebird was chosen for two reasons: one, because the Alabama Pioneers build and place bluebird houses throughout the state, and two, because the beauty and personality of the bluebird is symbolic of love. This quality is illustrated in the following true story from the June 1988 *Guidepost Magazine* as written by Aletha Lindstrom.

"In an attempt to bring back the bluebird, my husband and I maintain 50 nesting boxes near our Lake Michigan cottage. This past summer we were delighted when a pair of these lovely, endearing birds settled into a box in our backyard.

"Then one morning, shortly after five babies hatched, I found the male dead by the roadside, apparently struck while fluttering down for insects to feed his young. Heartsick I picked up the small, limp, still warm body. Surely this was a double tragedy, for

the mother alone could never feed her young hungry brood.

"That evening the unbelievable happened. A pair of bluebirds from a nearby field and their five nearly grown fledglings appeared on the back fence. Daily from dawn til dusk they helped the widowed mother feed her nestlings. They stayed even after the babies were out of the box to assist in training them to become self-sufficient. At summer's end they migrated together.

"Love thy neighbor? These gentle unassuming birds *lived* their love...." What better symbol for Camp Bluebird!

There was a great need, an idea was conceived, and now with loving, helping people like Louis Josef, Sandy Marriner, Pat Jones and the Telephone Pioneers this idea has *bloomed* and is being nurtured.

This great need is being met, with love, by the caregivers at St. Vincent's Hospital and the Telephone Pioneers. This partnership has resulted in two, three day camps a year in Alabama—one session in the spring and one session in the fall, with more planned.

This idea has not only bloomed in Alabama, but the fruits of this flower have been carried on the winds of love to Kentucky, Tennessee, Louisiana, Georgia, and Mississippi in the South. Pioneers and hospitals in the Midwest and East are now investigating Camp Bluebird and the love and support they supply.

When the idea was presented to the Pioneers in Tennessee they decided to have two camps a year in *each* of the grand divisions of the *state*: east, middle, and west. The caregivers are St. Mary's Medical Center in the east, St. Thomas Hospital in the middle, and Jackson-Madison County General Hospital in the west. Camp Bluebird is funded by the Telephone Pioneers, Chapter 21. The camps are held in rented facilities such as church

camps and a state park. Each session was originally budgeted at \$3000.00, but that figure is coming down thanks to more campers, more volunteers, and more donations of supplies by concerned individuals and businesses. Weston Companies in Memphis donated two electric four person carts and a trailer to transport the carts to be used in the camps.

The councils that make up Chapter 21, the Chapter, the companies and employees of AT&T and Bell South (South Central Bell and Southern Bell)

have given over \$25,000 and 36,000 hours in *one* year in Tennessee. That is over 200 hours for each pioneer working in two, three day camps, and that does not include the many hours put in by the hospital people.

Dan Peck, Tennessee Camp Bluebird Chairman, said, "The Telephone Pioneer's motto is "Answering the Call of Those in Need." To a Pioneer that call does not have to be a shout, but just a whisper, to be answered. Pioneers are involved in their community because they care."



"The Window" is a limited edition (1350) lithograph of a water color created by award winning wildlife artist Ralph McDonald to benefit Camp Bluebird. The signed and numbered 19" x 22" print is available for \$60.00. Send checks to Telephone Pioneers of America, c/o Dan Peck at the address below. Prints are mailed flat.

Camp Bluebird is many things to many people, but one thing to all people: a place where the quality of life is improved, not only for the campers, but also for the volunteers. Camp Bluebird helps us all live *today* the *best* we can because none of us has a guarantee of tomorrow.

At every Camp Bluebird, nesting boxes are built by campers and volunteers. Some of these boxes are taken home by the campers. The rest are being placed along highways through all five southern states, from the Gulf in Alabama to Kentucky to help bring back this beautiful songbird. This is a Region 13 Telephone Pioneer project.

At Camp Bluebird campers find the strength they need to help them live with their disease. They meet others who are coping with the same feelings: fear, anger, helplessness, and loneliness. Through interaction with others like themselves, they learn to feel hope, strength and love. The numbness goes away and they open up to

feel the positive things that make life meaningful. Love, when accepted, can make a big difference in one's life. Not only the love of others, but, most importantly, spiritual love. One camper said "I found love and support from people I didn't even know yesterday. This love has changed my attitude, my very life, and I thank God for Camp Bluebird."

Like the bluebird, we at Camp Bluebird are tenacious, supporting, and loving. We learn to live one day at a time.

To quote from an ancient Sanskrit poem: "Look to this day, for it is life, the very life of life. The joy of growth, the splendor of action. For yesterday is but a memory, and tomorrow is only a vision. But today, well lived, makes every yesterday a memory of happiness and every tomorrow a vision of hope. Look well, therefore, to *this* day." ■

719A Old Nashville Hwy
Symrna, TN 37167

Bev Ketchum Gets Things Done for Bluebirds

Dear Friends:

I would like to tell you about a lady that "gets things done." Her name is Bev Ketchum and she works for our Carlton County [MN] Probation Department.

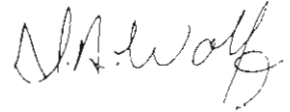
One of her assignments has been to find community work projects that defendants can be assigned when they do not have money to pay fines or when they qualify for work release from our jail under a program called Sentencing for Service. This program is paid for by the Minnesota Department of Corrections and is supervised by the Department of Natural Resources (DNR). Bev has been very creative and has helped the community tremendously in locating senior citizens who need their yard mowed or snow removed to disabled people who need some strong arms. Many charitable organizations have benefited as well.

She is also a tremendous friend for the bluebirds in our state. For many years she has given juvenile offenders patterns for the Peterson-type house and required them to build some on their own. She has worked with DNR so that the houses are properly located and mounted. This year [1989] she has also been instrumental in starting a formal trail system that will eventually extend throughout Carlton County. But you will not see her name mentioned nor credit given to her because she is too eager to give others the glory while she goes about being busy and getting things done.

I am also enclosing a photo of a lifelike bluebird wood carving she had one of the talented defendants make. As you can see, it is quite beautiful. She is using it as one of the prizes in a raffle she is promoting to raise money to help save a retarded boy and his parents from losing their home. (Knowing her, the home will not only be

saved, but it will also have several bluebird houses put up around the yard for the family to enjoy.)

The bluebirds in our part of the country will continue to make a comeback because they have a true friend who is a lady that "gets things done."



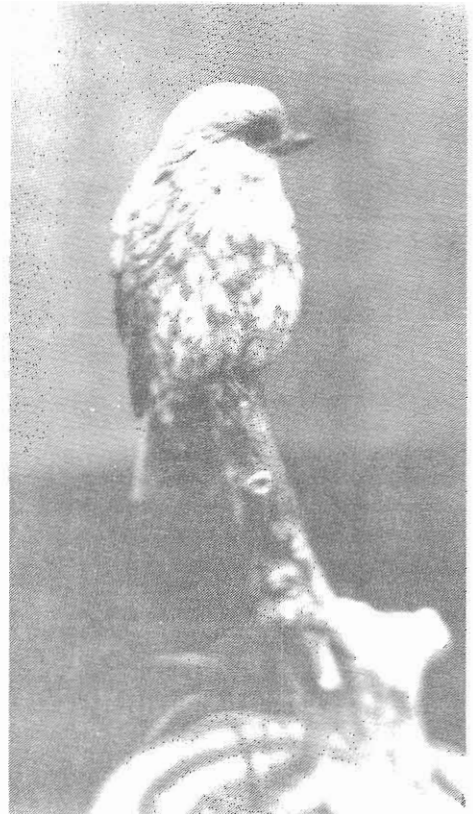
Dale A. Wolf
Judge of District Court

Editor's Note: Judge Wolf serves on the state Sentencing to Service board and is a veteran bluebirder. His sixth judicial district includes Carlton County.

Carlton County Courthouse
Carlton, MN 55718



Bev Ketchum, a lady that "gets things done" in the Carlton County, Minnesota Probation Department.



Male Eastern Bluebird wood carving made by a defendant for use in a raffle Bev Ketchum was promoting to help someone.

Bluebird Trouble Shooters

The following experienced bluebirders are contacts on a state, provincial, or regional level who have agreed to answer questions, provide advice, and generally serve in a resource capacity. Although some may be banders or even rehabilitators, their listing here is mainly advisory. Do NOT expect them to make trips to your trail unless they volunteer to do so. Under those circumstances, an offer to defray travel expenses should be made.

Alabama

John Findlay III
2749 Millbrook Road
Birmingham, AL 35243
(205) 967-0955

California

Donald Yoder
2021 Ptarmigan Drive #1
Walnut Creek, CA 94595
(415) 937-5974

Connecticut

See Massachusetts

Idaho

Al Larsen
3015 Silver Street
Boise, Idaho 83703
(208) 344-2919

Illinois

Lloyd Wilson
735 Jackson Lane
Godfrey, IL 62035
(618) 466-3596

Iowa

Rita E. Efta
RR#1, Box 39
Auburn, IA 51433
(712) 688-2873

Maine

See Massachusetts

Massachusetts

Lillian Files
Scribner Hill
Tyngsboro, MA 01879
(508) 692-2520

Michigan

Tom Hodgson
Dahlem Env. Ed. Center
Jackson Comm. College
7117 S. Jackson Rd.
Jackson, MI 49201
(517) 782-3453

Minnesota

Dorene Scriven
2044 Cedar Lake Parkway
Minneapolis, MN 55416
(715) 234-9474

Eleanor & Vic Mars

Rt 1, Box 217
Pillager, MN 56473
(218) 746-3148
(call after 5:00 PM)

Montana

Art Aylesworth
Box 794
Ronan, MT 59864
(406) 676-0300

Deni Hershberger
439 River Rd. West
Plains, MT 59859
(406) 826-3037

New Hampshire

See Massachusetts

Nevada

Donna Hagerman
5010 Eldorado Drive
Reno, NV 89509
(702) 747-1898

New York

Sadie Dorber
Underwood Road RR#4
Vestal, NY 13850
(607) 754-0444

Oklahoma

Charlotte Jernigan
Rt. 2, Box 404-A
Wagoner, OK 74467
(918) 485-5974

Oregon

Earl Gillis
14125 N.E. Cullen Rd.
Newberg, OR 97132
(503) 538-3844

Elsie Eitzroth

6980 NW Cardinal Dr
Corvallis, OR 97330
(503) 745-7806

Rhode Island

See Massachusetts

Texas

Keith Kridler
505 S. Sunny Lane
Mt. Pleasant, TX 75455
(214) 572-7529

Vermont

Steve Parren
Vermont Fish & Wildlife
324 N. Main St.
Barre, VT 05641
(802) 479-3241

See also Massachusetts

Virginia

Ron Kingston
3690 Country Lane
Charlottesville, VA 22901
(804) 293-5173

Alberta, CN

Myrna Pearman
Ellis Bird Farm
Box 2980
Lacombe, Alberta, CN
TOC 1S0
(403) 346-2211

Bluebird Trail Directory

Many bluebird trail operators with 50 or more nesting boxes monitored regularly for a minimum of three years have volunteered their help in assisting other members by arranging tours or providing information. Trail tours can be arranged for individuals and small groups by writing to or telephoning the monitor in advance. Nesting seasons vary, but generally May through August is the best time to visit trails. Please choose calling times considerably. No collect calls accepted.

This information is a combination of listings previously published in *Sialia* (5:69-71; 143-144; 7:68; 9:78) and additions that have been received since the spring 1987 issue. We do not foresee reprinting this material in the journal again. Additions, deletions, or changes will be maintained in a file at NABS headquarters. If you need information, wish to change your current listing, or want to be added to the list, please write to 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.

- * - telephone or write to arrange tours
- W - weekdays (Monday-Friday)
- SS - Saturday, Sunday
- D - days (8:00 a.m.-5:00 p.m.)
- E - evenings (6:30-9:00 p.m.)
- WSP - workshops can be arranged
- R - trail operator is willing to allow cavity nester research
- B - individual has banding permit and is willing to band nestlings; distance bander willing to travel varies; offer expenses; accurate nestling age essential when making arrangements.

TRAIL LOCATION	TRAIL OPERATOR PHONE	ADDRESS	INFO AND TOURS
ALABAMA			
Birmingham, AL	Findlay, John 111 205-987-0909	2129 Greentree Drive Birmingham, AL 35216	W:D-E;SS:D-E Tours*
Coffee County	Hartley, Gerald & Iris 205-347-3704	Rt. 1, Box 72A New Brockton, AL 36351	W:E;SS:E Tours*
ARKANSAS			
Benton County	Nelson, Chuck 501-855-1734	29 Britten Circle Bella Vista, AR 72714	W:D-E;SS:D-E Tours*;WSP
	Welland, Mrs. K. 501-855-1178	8 Ettington Drive Bella Vista, AR 72714	
COLORADO			
Larimer County	Zwenger, Joe 303-482-7726	1412 Beech Ct. Ft. Collins, CO 80521	W:D-E;SS:D-E Tours*
CONNECTICUT			
Litchfield County	Comstock, Fred 203-266-7337	168 Main St., North Bethlehem, CT 06751	W:D-E;SS:D-E Tours*;B
Litchfield County	Art Gingert 203-672-0077	River Rd., P.O. Box 185 W. Cornwall, CT 06796	W:D-E;SS:D-E Tours*
IDAHO			
Boise, Owyhee, Elmore Counties	Larson, Alfred G. 208-344-2919	3015 Silver St. Boise, ID 83703	W:D-E;SS:D-E Tours*
Owyhee County	Perry, Alfred & Mary 208-344-2784	139 Willoway Drive Boise, ID 83705	W:D-E;SS:D-E Tours*

ILLINOIS			
Madison County	Hayden, Tom A. 618-345-0954	106 Linda Collinsville, IL 62234	W:D-E;SS:D-E Tours*
Lee County	Keegon, Jack 815-288-6871	Box 463 Dixon, IL 61021	W:D-E;SS:D-E Tours*
McHenry County	Moreland, Gillian 312-639-4092	812 Three Oaks Road Cary, IL 60013	W:E;SS:E Tours*
Knox, Warren Counties	Olinger, Mrs. Stanley 309-462-2293	RR6, Box 59 Galesburg, IL 61401	W:D-E;SS:D-E Tours*
Knox	Smith, Mr. & Mrs. Sidney 309-875-3167	RR1 Gilson, IL 61436	W:D-E;SS:D-E Tours*
Crawford County	Walden, Furl E. 618-544-7308	Star Route Robinson, IL 62454	W:D-E;SS:D-E Tours*
INDIANA			
Dubois County	Hunefeld, Jerry 812-536-2136	RR 1, Box 626 Huntingburg, IN 47542	W:D-E;SS:D-E Tours*
IOWA			
Louisa County	Cross, Ronald M. 319-523-3282	303 S. Second St. Wapello, IA 52653	Tours*
Sac County	Efta, Rita E. 712-688-2873	Auburn, IA 51433	SS:D-E;W-E Tours*
Polk County	Mosman, Dean 515-967-2951	RR 1, Box 112A Elkhart, IA 50073	W:D-E;SS:D-E Tours*
Cass County	Rourick, Donna 712-243-4687	1700 Bryn Mawr Atlantic, IA 50022	Tours by Ap- pointment; WSP;R
MARYLAND			
Cecil County	Newman, Jerry & Madeline 301-658-5187	120 Cooper Street P.O. Box 53 Rising Sun, MD 21911	W:E;SS:D-E Tours*
Prince George's County	Patuxent River Pk. & Merkle Wildlife Sanc. 301-627-6074 (Div. of Interpre. & Conserv.)	MD Nat'l Capital Pk. & Planning Comm. 5700 Water St. Upper Marlboro, MD 20772	Tours Sun. 12-3 p.m. or by aptment.
Washington County	Raabe, Mark & Jean 703-683-4051	3300 Circle Hill Rd. Alexandria, VA 22305	W:D-E;SS:D-E Tours*
MASSACHUSETTS			
Middlesex County	Files, Lillian 508-692-2520	Scribner Hill Tyngsboro, MA 01879	W:D-E;SS:D-E Tours*
Essex County	Johnson, Peter M. 617-468-4304	36 Topsfield Rd. Nickerson Estate Wenham, MA 01984	W:D-E;SS:D-E Tours*
South Berkshire County, MA	Willamson, Stuart C. 413-229-8134	Box 55 Southfield, MA 01259	SS:E

MICHIGAN			
Tuscola County	Clark, Harry 517-673-3013	809 W. Sherman Caro, MI 48723	W:D-E;SS:D-E Tours*
Muskegon County	La Pres, Bob & Carol 616-755-3612	2121 Norman Road Muskegon, MI 49441	W:D-E;SS:D-E Tours*
MINNESOTA			
Chisago County	Hjort, Richard & Marilyns 612-257-2553	9571 - 270th St., N. Chisago City, MN 55013	W:E;SS:D-E Tours*
Grant County	Johnson, Mrs. Merl S. 218-685-4800	RR 2 Elbow Lake, MN 56531	Tours*
Mille Lacs County	Nyquist, Jeremy G.	RR 2, Box 111 Onamia, MN 56359	SS:D-E Tours*;R
MISSOURI			
Laclede County	Broyles, Reuel & Desoiee 417-869-1500	647 S. Fort Street Springfield, MO 65806	W:D-E;SS:D-E No Tours
Macon County	Romine, Marc W. 816-385-3540	Rt. 1 Macon, MO 63552	W:E;SS:D-E Tours*
Dent County	Sample, James E. 314-394-5839	1013 Carole Lane Ellisville, MO 63011	W:E(not Fri.) Tours*
MONTANA			
Lane, Sanders, Mineral Counties	Aylesworth, Art 406-676-0300	Box 794 Ronan, MT 59864	W:D-E;SS:D-E Tours*
Sanders	Harlan, A.D. 406-827-3212	P.O. Box 1454 Trout Creek, MT 59874	W:D-E;SS:D-E Tours*;R
NEVADA			
Washoe County	Hagerman, Donna 702-747-1898	5010 El Dorado Dr. Reno, NV 89509	SS:D-E Tours*
NEW JERSEY			
Cumberland County	Gandy, Jay 609-451-5586	Bx 109, RD 2 River Rd. Bridgeton, NJ 08302	W:D-E;SS:D-E No Tours
NEW YORK			
	Berner, Kevin L. 518-234-5252 (O) 518-234-4827 (H)	State Univ. of New York College of Agriculture & Technology Cobleskill, NY 12043	B
Onondaga & Cort- land Counties	Curtis, Karl 315-492-3766	6420 Coye Road Jamesville, NY 13078	SS:D Tours*;R
Dutchess County	Germond, Mrs. Homer 914-868-7484	Shunpike #254 Clinton Corners, NY 12514	W:D-E;SS:D-E Tours*
Oneida County	Hanes, Miss Frances 315-735-3527	138 Melrose Avenue Utica, NY 13502	W:E;SS:D-E Tours*
Broome County	Kienke, Rudolph & Ingeberge 607-693-1878	R.D. 1, Box 109 Port Crane, NY 13833	W:D-E;SS:D-E Tours*
Oswego County	Rogers, John H. 315-668-2207	9641 Bauer Rd. Brewerton, NY 13029	W:E;SS:D-E Tours*

NORTH CAROLINA Forsyth County	Abbey, Chas. (Bill) & Dr. Patrick Ober 919-766-0591	c/o Tanglewood Park Box 1040 Clemmons, NC 27012	SS:D-E or apptmt Tours*
Transylvania County, NC	Boozer, Jim C. 704-884-9189	Box 627 Brevard, NC 28712	W:D-E;SS:D-E Tours*
Southern Pines	Cranmer, Carl 919-692-7990	145 S. May Street Southern Pines, NC 28387	W:E;SS:D-E Tours*
Harnet, Lee, Yadkin Iredell Counties	Haynes, William D. 919-497-5013	1411 Elm Street Spring Lake, NC 28390	W:D-E;SS:D-E Tours*
Guilford County Browns Summit (Bryan Park)	Phillips, Linda 919-274-8208	208 Macy St Greensboro, NC 27408	W:D-E;SS:D-E Tours*
OHIO			
Richland County	Caldwell, F. Reid 419-892-2784	Malabar Farm State Park RD#1, Bromfield Road Lucas, OH 44834	W:D Tours*
Noble County	LeVasseur, Doug 614-685-5220	20680 Township Rd., #120 Senecaville, OH 43780	SS:D-E Tours*;R;B
Mercer & Van Wert Counties	Rager, Robert E. Rutger, Mona	RR 3, Box 305A Rockford, OH 45882 4504 Barshar Rd. Castalia, OH 44824	W:D-E;SS:D-E Tours* B
Huron County	Sheldon, Dean E., Jr. 419-752-1451	RR 1, Box 77 Greenwich, OH 44837	W:D-E;SS:D-E Tours*
OREGON			
Benton County	Eltzroth, Elsie K. 503-745-7806	6980 NW Cardinal Dr. Corvallis, OR 97330	W:D-E;SS:D-E Tours*;R;B
Lane County	Prigge, Allen A. 503-343-9504	283 E. 38th Avenue Eugene, OR 97405	W:E;SS:E Tours*
PENNSYLVANIA			
Perry County	Boyer, Steven (Skip) 717-957-2520	408 Front Street Marysville, PA 17053	W:D-E;SS:D-E Tours*
Chester County	Del Porte, Karl H. 215-667-7007	Marsh Creek State Pk. P.O. Box 446 Southeastern, PA 29599	Wed. p.m. & Sun. a.m. in breeding season Tours*
Dauphin County	Early, Robert C. 717-566-0090	RR 3, Box 196 Hummelstown, PA 17036	SS:D-E Tours*
Cumberland County	Hoffman, Warren O. 717-737-8201	45 N. 10th Street Lemoyne, PA 17043	W:E;SS:D-E Tours*
Union County	Schaefer, Mrs. Christine 717-433-3554	P.O. Box 135 Muncy, PA 17756	W:D-E;SS:D-E Tours*

Lancaster County	Schutsky, Robert M. 717-548-2121 (O)	Muddy Run Ecol. Lab RMC Environm. Services 1921 River Road P.O. Box 10 Drumore, PA 17518	Tours:W:8 a.m.-4 p.m.
TEXAS			
Titus & Camp Counties	Kridler, Keith 214-572-7529	RR 3, Box 291 Mt. Pleasant, TX 75455	W:E;SS:D-E Tours*
Marion, Upshur & Harrison Counties	Krueger, Harry 214-968-8538	RR 1, Box 632 Ore City, TX 75683	W:D-E;SS:D-E Tours*
VIRGINIA			
Prince William County	Holladay, Col. Van D. Mary Evalyn & Doug	8004 Stillbrooke Road Manassas, VA 22111	W:E;SS:D-E Tours*
Westmoreland County	Laubinger, Frank 804-224-9151	RR 2, Box 420 Colonial Beach, VA 22443	Tours*
WASHINGTON			
Klickitat County	Brinkerhoff, Jess 509-943-3811	703 Smith Avenue Richland, WA 99352	W:D-E;SS:D-E Tours*
Whitman County	Scalf, Rusty 509-332-8376	NW210 Anthony #9 Pullman, WA 99163	W:D-E;SS:D-E Tours*
WISCONSIN			
Monroe County	Attn: Mello, Kim (LMB) 608-388-2252	Commander, Ft. McCoy Sparta, WI 54656	W:D;SS:D Tours*
CANADA			
ALBERTA			
Calgary	Stiles, Donald J. 403-271-4689	20 Lake Wapta Rise S.E. Calgary, Alberta Canada T2J 2M9	W:E;SS:D-E Tours*
Calgary	Stillings, Blake 403-282-3354	4928 Brisebois Dr., NW Calgary, Alberta T2L 2G5	Tours*
Lethbridge, Alberta	Mackintosh, Duncan 403-327-5466	1719-9th Avenue S. Lethbridge, Alberta Canada T1J 1W4	W:D-E;SS:D-E Tours*
ONTARIO			
Lanark County	Braley, Robert C. 613-267-3028	96 Drummond Street Perth, Ontario Canada K7H 1G8	W:E;SS:E Tours*
Lanark County	Braley, Robert O. 705-743-6733	30 Champlain Crescent #21 Peterborough, Ontario Canada K91 1T1	W:E;SS:E Tours*
SASKATCHEWAN			
Saskatoon	Houston, Mary I. _____	863 University Drive Saskatoon, Saskatchewan Canada S7N 0J8	No Phone Info Tours*

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 think this is an exciting and very useful idea. [Included is an article about using abandoned railroad rights-of-way for a variety of uses.] As a long time bird watcher I see excellent opportunity. As a lover of bluebirds I see these as possible places for trails. My own trail is located on a golf course.

There may be readers of *Sialia* who would work in their own states to help save some of these areas. The Rails-to-Trails Conservancy is located at 1701 K St., N.W., Washington, D.C. 20006.

Betty H. McIlwain
109 Morningside Dr.
Brevard, NC 28712

Dear Editor:

I was very interested in Mr. G. O'Neil's letter in the Summer 1989 issue of *Sialia* regarding the eight bluebird eggs in his nesting box and the fact that seven young hatched. I would like to tell you of a similar nesting we had on our lines.

On 3 June 1989 there were eight Mountain Bluebird eggs in our 4 x 4 in. nest box. All eight eggs hatched, the young birds were banded, and all left the nest safely as they were seen with the male on several occasions.

On 29 June this same nesting box contained another seven eggs, a second hatch (the female was banded so we are sure). Six of these eggs were a normal size, one was much smaller; however, all eggs hatched and the small bird lived a week. The other six were healthy birds and these, too, were banded before they left the nest.

I'm wondering if this could be a record, or have other readers had the same experience?

I would like to know.

Jim Spear
Box 914
Russell, Manitoba
Canada RoJ 1W0

Dear Editor:

I thought you might be interested to know that bluebirds are alive and thriving in Fayette County. Despite competition from House Sparrows our bluebird house had fledged 15 bluebirds by the end of the summer.

I really thought that that was the last I would see of the bluebirds till the following spring, but on Sept. 24th about 9:30 a.m. a flock of about 25 settled in the yard and began checking all of the boxes. They stayed for an hour or so and were gone just as quickly as they arrived. Next day the same number.

None sighted again till Oct. 2nd at

the same time of day. This time only 12; on the 5th there were 8. On the 22nd of that month a large flock arrived. I stopped counting at 50 but I think there were about 75. I also counted 50 Cedar Waxwings who seemed to be traveling together with the bluebirds. They seemed to be everywhere: on the ground, on the wires, in the trees, and on the boxes. I have never seen anything like it.

On the 24th of October there were so many bluebirds I couldn't count them and, again, the waxwings were with them. Oct. 25th, at least 200 waxwings but no bluebirds. Nothing again till Nov. 20th, then only 15 waxwings, no bluebirds. Finally, on Dec. 22nd, a very cold day, there at the bluebird house were two bluebirds, both males. I put some raisins out just in case they came back, but there was no sign of them after that.

All of this was because of your bluebird house project that I got involved in. I thank you and I know the bluebirds thank you.

Mary A. Logan
R.D. 4, Box 60
Gibbon Glade, PA 15440

Dear Editor:

I just wanted you to know that the *Sialia* quarterly is responsible for there being four additional bluebirds in the world and, I hope, many more to come.

I have had bluebirds nest successfully in my box for several years and then we were discovered by Tree Swallows. Every April they would arrive, 14 or so of them, and would drive out the nesting bluebirds who usually had arrived in March. I tried putting up additional houses, moving a second box 30 feet from the original one, cursing, etc. Nothing made it possible for the bluebirds to raise a brood successfully.

Then I read Hubert Prescott's article "Using Paired Nesting Boxes to Reduce Swallow-Bluebird Competition" in the 1988 Tenth Anniversary *Sialia*, and President Sadie Dorber's state-

ment in "Presidential Points" in the Spring 1988 issue that she'd found a five foot distance between paired boxes best, and in the Spring 1987 issue "1986 Nesting Box Report" that Nancy and Ladd Masek had used a buzzer to drive sparrows from their bluebird house. So, in April, a friendly imaginative electrician rigged up a buzzer for me to drive last spring's resident Tree Swallows out. I moved the paired houses five feet apart and IT WORKED. The Tree Swallows moved to the adjacent house, the bluebirds returned to their original home with only minimum initial harassment, and both families settled down to their respective housekeeping chores.

I think the crucial difference was that since the Tree Swallows had already settled which pair owned that territory the returning bluebirds had to deal with fewer assailants than when the Tree Swallows first return and the sky is filled with attacking Tree Swallows who are both driving the bluebirds out AND settling the issue of territoriality among themselves.

Thank you for your help in solving my annual spring bluebird crisis. I'm planning to put up another pair of houses 500 feet from the first pair and see what happens.

Anne Fines
R.D. 3, Box 87
Putney, VT 05346

Dear Anne Fines:

We're happy to learn that you were able to solve some of your cavity nester problems with the help of NABS information. You should be aware, however, that, unlike the House Sparrow, the Tree Swallow is a protected species. It is illegal to interfere with, collect, or remove their nests. We hope the close spacing of the nesting boxes will be a satisfactory solution to your problem. ■

In response to requests from members, NABS is instituting a life membership category for \$500. Effective 1 January 1990.

Bluebird Tales

Mary D. Janetatos

In beginning the final decade of the century, the lengthening winter days give us the hope of spring and, with it, bluebirds!

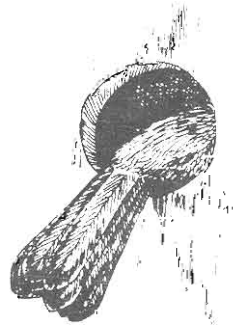
Shirley McCracken, of Comstock Park, MI, has 25 nest boxes around Alpine Township. Upon returning home from her job, she sees the bluebirds playing in the bird-bath, chattering loudly. "There is something about those bluebirds I love," she says, "I love their singing and they are as blue as the sky." Shirley and her husband **Robert** have been in the forefront of bluebird conservation activity. **Bob Hess**, nongame wildlife coordinator for the Michigan Department of Natural Resources, said the area is benefiting because of bluebird conservation activity. As quoted in the *Grand Rapids Press*, he said, "Bluebirds are one of the neatest ways of getting people involved in protecting wildlife."

In Westmoreland County, PA, **Emil Klanchar** and **Al Goga** continued their marathon of bluebird talks giving their presentation for the Westmoreland County Junior Conservation School. As reported by **Vanessa Schantz**, director, "The 13-15 year old students enjoyed the program and found it very informative. At the end of the program, Emil and Al raffled off five bluebird boxes. The students were thrilled and I thought it was a nice touch."

John Monroe of the Soil Conservation Service in Purvis, MS, called NABS to say that he'd given his bluebird program 26 times in one week to 850 sixth graders—surely a record! **Fred Doepkens** reported that as chairman of the Agriscience Department at Hereford Middle School, Monkton, MD, he presents a unit on the importance of agriculture to 450 seventh and eighth grade students each year. This unit includes building a bluebird house by students who then take the nesting box home and erect it on their property. There is also a bluebird trail on the school property maintained by the Hereford Middle School Chapter of Future Farmers of America.

When **Mary Egleston** of Royal, AR, had a bluebird exhibit at the Garland County [AR] Extension Arts and Crafts Show, she told us that "the stories we heard could fill a book, some happy, some sad, all very touching."

Merlin Lehman of Middlebury, IN, noted that for the last three winters "bluebirds have been feeding on my Droll Yankee tube feeders filled with sunflower chips."



He also mentioned that for the past three years he has attended the Jackson, MI, Bluebird Festival. He asks, "Could this possibly be a site for the Society's annual meeting sometime?"

From Chappell Hill, TX, **Wayne H. Hestery** wrote "For the past three years I have been making bluebird houses according to your instructions, modified, totaling nearly 500. It is my estimate that we have increased the [local] population three-fold during that time...We, my wife and I, are also working with Scout groups to spread interest. We've also used T.V. and radio with a good measure of success."

Nancy D. Rowe of Cockeysville, MD, was instrumental in finding a very enthusiastic sixth grade science teacher, **Joan Broderick**, at Catonsville [MD] Middle School, who will receive a one year subscription to *Sialia* from a donor who wishes to remain anonymous. Mrs. Broderick has already had bluebirds fledge from her nest boxes—you can't argue with success!

Mary Chevalier of Mount Airy, MD, went home from the July '89 tour of **Larry Zeleny's** Beltsville Bluebird Trail fired up with enthusiasm. She erected a pair of bluebird nest boxes at her own place and also helped out with the local elementary school's nature trail.

Camp Fire members have often been enthusiastic bluebirders and this was borne out by **Jennifer Miller** whose mother, **Donna**, told us of Jennifer's efforts in the Wom-Co-Wei Adventure Group. They were to do a project consisting of five steps: find out, choose, plan, do, and share. Jennifer's project was "Treasures in Trash"—aluminum recycling. She circulated flyers in the neighborhood, collected aluminum cans, took the 39 pounds to a recycling center, and received \$17.16. Camp Fire members are supporters of bluebird conservation so "Jennifer has chosen your organization to receive the \$17.16. We hope you will put the check to good use." The bluebirds thank you, Jennifer!

From the Ellis Bird Farm (EBS) in Lacombe, Alberta, NABS Board Member

Myrna Pearman sent the EBF newsletter which had a picture on its front page with the story, "Grade Six Class Supports Ellis Bird Farm Programs." Ms. **Colleen Elston's** grade six class from Olds Elementary School raised funds for environmental projects, toured the EBF, and made a donation to the nest box program.

Lu Kirkland, of Lexington, KY, ordered three extra copies of Larry Zeleny's *The Bluebird*, because "I can't seem to keep one, even in the library." Again from Kentucky, **A.L. Powell** spoke of giving the NABS slide program at a joint museum-Kentucky Ornithological Society meeting, and later to a ladies' club.

Milam Cater is definitely in the bluebird marathon. From his retirement home in Culpepper, VA, he has promoted bluebird conservation for 15 years.

Positive feedback is still coming in about the Twelfth Annual Meeting. **H.S. Pollock** of Victoria, British Columbia, enjoyed the meeting so much that he and his wife are promoting attendance at the next one among his neighbors. After working with bluebird conservation for at least 15 years and recently reporting to the Bluebird Recovery Program in Minneapolis, MN, **Mr. and Mrs. Norton E. Shepard** of Black River, NY, enjoyed seeing a copy of *Sialia*. Welcome aboard, Shepards—the bluebirds need all the (shepherds) they can get!

Long lost high school classmates **LaRue A. Deem** of Slatonsville, WV, and **Mrs. Elizabeth Nichols** of Middletown, MD, discovered their mutual interest in bluebirds at a class reunion recently.

Michael Kulk of Centerville, OH, arrived at his love for bluebirds early in life. He wrote, "Over the summer for Cub Scouts at Grant Nature Park we went to look for bluebirds. Every week we would rotate weeks looking at the bird houses...The book was very interesting and I hope she writes another one about rescuing bluebirds."

I hope **Joan Rattner Hellman**, who wrote *Bluebird Rescue* (now unavailable from NABS and out of print), is duly edited, seeing that her book is still out there inspiring youngsters.

Friend and seasoned bluebirder **Park Perkins** of Conneaut, OH, wishes NABS would hold a meeting in Cleveland or Buffalo. This brought back memories of NABS' Fourth Annual meeting at the Holden Arboretum near Cleveland, OH. We enjoyed meeting the bluebirders from the Buckeye State and elsewhere and hearing Park regale his listeners with tales of his Lake Erie days.

I'm sure **Jane Dollar** of Tampa, FL, has fond memories of the visit she had from a

bluebird when early one October morning, "I woke to a tapping sound at my window. When I opened the curtain I saw a tiny little bird, the most beautiful shade of blue I have ever seen. It had a beautiful shade of red on its chest. I must have seen a bluebird in the suburbs of Tampa."

Recently we were informed by **Lawrence Fillmore** of Whitinsville, MA, that he had completed 100 bluebird boxes and intended to involve local Boy Scouts in placing them.

At last the great question is answered by **Mary A. Mullusky** of Walton, NY. "Where have all the bluebirds gone? Why they've gone to our 'country estate,' six acres in the foothills of the Catskills."

For those winter days when the Mullusky's are bereft of their bluebirds when they move back to their Staten Island home, **Ms. Katie Tedder** of Donalsonville, GA, had a good idea. "I received the cassette, 'Bluebird Fly.' Let me say it is an excellent quality tape. When I finished listening to it the first time, I had a huge lump in my throat and tears in my eyes. It is just beautiful!"

Just to unconfuse me, **Carol Ratzloff** of Spartanburg, SC, sent a postcard followup to a letter. The postcard said, "Yesterday I wrote you a letter in which I used the word 'comic' in regard to bluebirds. Upon reflection, I now realize that word should have been 'mischievous' instead of 'comic!'"

I will close with Carol's thoughts, and I wish all of you a bluebird-happy 1990!

"I just want to suggest that, in addition to all their other positive qualities, bluebirds apparently have a sense of humor.

"My husband installed two new bluebird houses on 3" PVC pipe in our garden this spring, and bluebirds have used both houses, to our intense satisfaction. But where the humor comes in is that we very seldom see the birds. Our house is situated where I can easily watch it as I wash dishes or cook, and I would swear no birds ever come near it. Nevertheless, when my husband opened the hinged side of the house a few weeks ago, he was astonished to see a nest containing enough babies to crowd it thoroughly! Within a few days they must have fledged because we never saw anything further of them (or their parents).

"But that was quite some weeks ago. Yesterday he reported that the other house (not in my line of vision) has a nest with four eggs in it. Again, we have not seen bluebirds around for many weeks.

With such beautiful and comic [mischievous] (although seemingly invisible) feathered friends, who could be discouraged? 'God's in His heaven; all's right with the world!'"

**NORTH AMERICAN BLUEBIRD SOCIETY, INC.
STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
NOVEMBER 1, 1988 THROUGH OCTOBER 31, 1989**

Cash Balance - November 1, 1988		\$ 1,079.04
Add:		
Cash Received		
Sale of <i>Sialia</i> Magazine	\$30,060.00	
Sale of boxes, books, stationery, etc.	71,562.80	
Contributions	16,643.97	
Membership Dues	31,115.30	
Sales Tax Collected	423.88	
Savings account (Maryland National Bank)	1,000.00	
Loan	4,000.00	
Bank credits	270.27	155,076.22
		156,155.26
Less:		
Cash Disbursements		
<i>Sialia</i> Magazine	27,933.03	
Boxes, books, stationery, etc.	64,860.63	
Educational Material	15,489.04	
Membership fulfillment	12,780.43	
Research	8,861.26	
Salaries	6,356.00	
Expense accounts	18,500.00	
Office supplies	546.31	
Maryland sales tax remitted	421.89	
Payment on loan	2,000.00	
Bank charges	147.20	155,895.79
Cash Balance - October 31, 1989		259.47
Assets:		
Checking account (Citizens Bank & Trust) (10-31-89)	259.47	
Savings account (Maryland National Bank) (9-8-89)	735.09	
Value of inventory (10-31-89)	27,864.26	
Investments - Dean Witter Reynolds (9-27-89) 1,813,311 shares @9.09	16,482.99	
Net Worth		\$ 45,341.81

Respectfully submitted,

Delos C. Dupree

Delos C. Dupree, Treasurer NABS

Art Credits

Jon E. Boone: 2, 36
Suzanne Pennell: 5, 8, 38
M. Suzanne Probst: 17, 18, 20

BLUEBIRD BOOSTERS

Eastern Bluebird

Sarkis Acopian
Mrs. G.C. Anderson
Martin J. Bambrick, Jr.
Mrs. Nancy Baron
Dr. James M. Barr
Robert H. Batchelor, D.V.M.
Dorothy A. Battle
Lois Bennett
Anne Bent
Elva Bernat
H.J. Blair
Robert P. Bodine
Bowater Carolina Corp.
Lyllia Bryant
George C. Buzby, Jr.
Edith F. Camp
Jane C. Chaplin
Mrs. Dwight Collmus
Adrienne Ryder-Cook
G.R. Cook
Mr. J.P. Cook
John G. Davidson
David & Joyce Didde
Francis M. Dorer
Patricia N. Dubois
Haskell Duncan
George Elkins
Dill B. Ellis
Dick English
Dorothy M. Evans
Larry Gasper, III
Ms. Vivian Glenn
Michael A. Godfrey
Kathy Goldsberry
Gunston Land Company
Delilah C. Gwaltney
Miss Georgia Hariton
Edmond M. Hayes
Heritage Hills Bluebird Club
Mrs. Robert Holland
Fred A. Huntress, Jr.
Wilbur O. Huth
Kenneth W. Jacobs, Jr.
Henry Jacobs
Pauline R. Kasserman
Kathy Keating
Kingsley Kelly
Joyce Leingang
Ron Ligon
Aletha J. Lindstrom
Mrs. F. Leslie Long
Mrs. Lois M. Lyon
James E. Marquardt
Richard McGovern
Mrs. Betty H. McIlwain
Leland M. Moss
Mr. & Mrs. John Mulliner
Elaine M. Ohannessian
David B. Oliver, II
George P. O'Neil
Dan F. Penney
Mrs. M.A. Reber
Mrs. Kay Rochotte
Julius Rosenwald, III
Clovis L. Ryan
Robert A. Schoentag, M.D.
Maria A. Shipp

Glenn H. Sikes
Russell C. Slutz
Charles F. Stewart, Jr.
T.J. Stokes
Anne Sturm
Martha R. Sullivan
Paul R. Theobald
Chris Thoma
Mrs. Garnett T. Tunstall, Sr.
Nancy L. Weiss, M.D.
David Welch
Key Wiley
Mrs. James L. Williams
Robert D. Williams, M.D.

Fledgling Bluebird

Robert E. Ahearn, M.D.
Monica Ahrens
Donald F. Anderson
Argyle Country Club, Inc.
Arrow Wiring Contractors
Joyce A. Asbury
The Backyard Naturalist
Mrs. Robert Bainum
Brenda Baldwin
Hans Beacham
GFWC Berwyn Women's Club, Inc.
Mrs. M.W. Bouwensch
Mrs. Betty L. Conner
Mary L. Contakos
G. Dunn Davis
Gloria J. Davis
Mrs. Diane T. Desibour
Paul Detweiler
Ann Donaldson
Mr. & Mrs. Malcolm Dorber
Mrs. Leslie Douglas
Frances J. Ehlers
Dorothy M. Evans
Carol Fleming
Mrs. Irene S. Frantz
Dee Friar
M.A. Garth
Mrs. Mary Beth Gaylor
Pat Givens
Charles B. Grafton
George N. Grant
T.E. Gurley
Hilltop Garden Club
Charles Huthmacher
Mrs. R.N. Jespersen
Elizabeth A. Jones
Robert Q. Jones
Mary Kassenbrock
Ron E. Kingston
Virginia C. Kost
Mrs. Norah E.K. Lane
Mrs. Marty V. Leonard
Mr. & Mrs. George Luce
Allison S. Maciean
Robert W. Maris
John A. Mason
Mike & Priscilla McGee
Mr. & Mrs. James Messner
Mr. & Mrs. Lee F. Miller
Kate Nelson
L.E. Nelson, Jr.

Cyndy Oney
P.P. Olson
Mrs. Robert B. Ourisman
Roger Peloquin
Linda D. Phillips
Mrs. William A. Porter
Mark & Jean Raabe
Katrina Rencuf
James H. Resau, Ph.D.
Don Rhodes
Col. W.R. Robertson
Mr. & Mrs. V. Rodeberg
Craig Secosan
William E. Sefler
Mr. & Mrs. E.B. Sheaff
Dean E. Sheldon, Jr.
Myra E. Simpson
John W. Skooglund
Mr. & Mrs. G.J. Tankersly
Richard F. Taylor
Van Thompson
Mrs. Albert Tilt
Sherry Ullius
Deborah L. Van Dyke
Nancy L. Weiss, M.D.
Norman B. Wilcox
Robert H. Williams
Michael Owen Willson
Jeannie Wright
Lawrence Zeleny

Nestling

Delos C. Dupree
Harriet H. Fanus
Canby Oregon D.A.R.

Western Bluebird

Mrs. A.G. Andrews
Jim D. Barfield
Countess Patricia S. DePatra
Mike & Priscilla McGee
Barbara Moore
William B. Watling

Mountain Bluebird

Gary Black, Jr.
Ralph S. Martin
Roseanne Olds

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 maladroit actions 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.

Membership: Student (under 21) \$10.00; Senior (over 60) \$10.00; Regular \$15; Sustaining \$30; Supporting \$50; Contributing \$100; Corporate \$100; Donor \$250; Life \$500. Add \$2 per year for Canada and Mexico and \$3 per year for other countries (Surface mail). U.S. funds only, please. Amounts over \$6 are tax deductible.

