

# *Sialia*

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Of  
The North American  
Bluebird Society



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

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

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# Sialia

The Quarterly Journal  
About Bluebirds

Volume 18, Number 4  
Autumn 1996  
Pages 121-160

**EDITOR**

Joanne K. Solem

**ART EDITOR**

M. Suzanne Probst

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## COVER

Art Editor M. Suzanne Probst's cover shows Chimney Swifts near a chimney. This species is featured in an article beginning on page 123.

*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 Graeoch Road, Laurel, Maryland 20723.

# Presidential Points

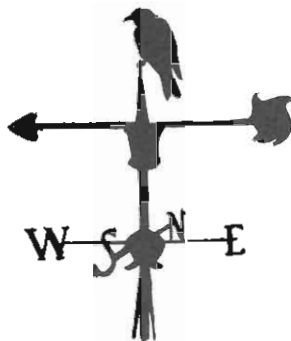
Charlotte Jernigan

Several years ago my husband and I drove from Oklahoma to Minnesota on our way to a NABS annual meeting. While passing through Iowa we were amazed at the miles and miles of nesting boxes that we were seeing high up on telephone poles along I-35. We noted that the boxes and entrance holes would be too big for bluebirds, so I made an inquiry to clear up the mystery. They were nesting boxes for American Kestrels.

The American Kestrel (*Falco sparverius*) is our smallest and most common falcon. It is found in open and semi-open country throughout the continent. Sometimes it is called Sparrow Hawk or Grasshopper Hawk. The male is 8-10 inches; however, the female is always larger and measures 9-12 inches. The male has beautiful slate-blue wings and rust plumage which is in vivid contrast with the duller, reddish-brown hue of the female. They both have conspicuous black face markings and a reddish-brown tail with a black tip. Like all falcons, they have large dark eyes, pointed wings, and a toothed upper bill. Their sharp talons, long toes, and hooked bill enable them to kill prey.

The kestrel hovers in mid-air as if suspended from a string. He balances himself adroitly with widespread tail and rapidly beating wings. Insects are its main food; grasshoppers probably head the list. Small rodents and an occasional small bird complete the diet.

One of the most sociable falcons, kestrels are often found nesting close to humans. Cavities in trees serve as nest sites, but this species will also nest in old buildings or be attracted by openings in sheds or by man-made boxes. Like other falcons, they bring no nest material to the site and lay their four or five whitish eggs with brown spots on the bottom of the nest cavity. The female incubates for about 30 days; the young stay in the nest a month.



No two guides gave identical dimensions for constructing a kestrel nest box although all were similar. The box should be between 8 and 9 inches square and 12 to 15 inches tall with an entrance hole of 3 inches. The suggestion has been made that adding an inch of straw or shavings to the bottom of the box can be beneficial. Such insulation helps to keep eggs warm, reduces the risk of damage, and helps to prevent eggs from rolling to the edges of the box.

---

In May of 1996 NABS lost a reliable treasurer, and said good-bye to someone who had made it possible for us to be the organization that we are today. Chuck Dupree was not a bluebirding spectator—he was out there in the game. His enthusiasm, energy, and encouragement were contagious, and he was instrumental in “making it all happen.” Chuck had never missed a single one of our annual meetings. He will be sorely missed. For all that he did, we are BLESSED. ■

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# Chimney Swift Nest Site Research Project

*Wildlife rehabilitators Paul and Georgean Kyle of Driftwood Wildlife Association (DWA), Austin, Texas, pioneered and perfected methods of rehabilitating Chimney Swifts (*Chaetura pelagica*). In 1989 they built two towers as roosting sites for released birds and as an attractant for free-flying swifts. The inspiration for these towers was cited as Althea Sherman, an Iowa naturalist, whose research in the early part of this century centered about a tower constructed to allow her to observe the swifts using it. (That tower is now in the hands of the Johnson County [Iowa] Songbird Project and will be re-erected when a suitable site is located.)*

*During the following five years the Kyles netted, banded, and observed numerous swifts as they roosted and bred in the towers. They recaptured adults which had successfully migrated; they battled parasites and predators in the towers; and they came to the realization that suitable sites for use by swifts were dwindling.*

*The following material has been extracted from publications and brochures written by the Kyles. These include Chimney Swift Chronicles, "Providing and Maintaining Nesting Habitat for Chimney Swifts: A Guide for Homeowners," "Environmental Tips for Professional Chimney Sweeps," and Chaetura, the new newsletter devoted to swifts.--Ed.*

There is no doubt that the number of sites suitable for Chimney Swifts is declining. In January of 1994 we met with Chuck Hunter of the U.S. Fish and Wildlife Service and Madge Lindsay of the Texas Parks and Wildlife Department to discuss ways of addressing the problem. All of us agreed that public education was critical. The result of our efforts is a brochure entitled "Providing and Maintaining Nesting Habitat for Chimney Swifts. a Guide for Homeowners." The publication contains a brief life history of Chimney Swifts, suggestions for maintaining fireplace



chimneys for swifts (and homeowners), and information on how to construct towers such as ours. The brochure is available at no charge from Texas Parks and Wildlife, 4200 Smith School Road, Austin, Texas 78744. Ask for publication PWS BR N7100-246.

Small, sleek, bluish-black with silver-gray throats, Chimney Swifts have been called "flying cigars" and "bows and arrows." Their stiff, flickering movements alternate with long, graceful sweeps of flight as they scour the skies for flying insects. As captivating as their flight is to watch, their clandestine terrestrial behavior is even more remarkable.

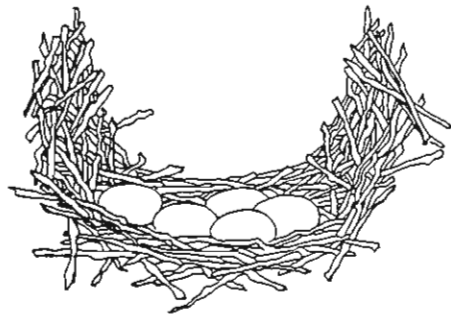
Unable to perch or stand upright as songbirds do, Chimney Swifts are uniquely equipped to roost clinging to vertical surfaces. Their small but strong feet are tipped with four forward-facing claws which act as grappling hooks to hold them firmly to their roost. Their tail feather shafts extend as stiff exposed spines to provide additional support for their vertical lifestyle. Although they will occasionally roost in the open, Chimney Swifts prefer the safety of an enclosed area such as a chimney, air shaft, or abandoned building. It is in these inaccessible locations that they not only roost but build their nests, raise their families, and congregate prior to

migration.

The adaptation by Chimney Swifts to make use of man-made structures is a result of deforestation and the loss of large hollow trees as natural roosting and nesting sites. This ability to adapt has not only allowed Chimney Swifts to survive as a species, but it has caused their range to greatly expand. As recently as the 1940s, Chimney Swifts were rarely sighted west of the Mississippi River. They are currently common from the east coast to the foot of the Rocky Mountains.

It is possible to construct habitat specifically for Chimney Swifts. The most elaborate project of this kind was designed and built by Althea Sherman in 1915. The Chimney Swift tower was nine feet square and 28 feet tall. In the center was a two foot square chimney which ran to a depth of 14 feet. The artificial chimney was made of rough-sawn lumber, and was equipped with viewing ports and auger holes for observing and recording the home life of the Chimney Swifts.

Considerably less ambitious attempts have produced artificial chimneys which have been readily accepted by Chimney Swifts. In central Texas several towers have been erected in recent years. These more modest structures have, on every



occasion, attracted nesting pairs of swifts the first year they were in place. Several have even been used as colonial roosts and have consistently attracted flocks of more than 100 individuals in the late summer and early fall. Although the sheer size still makes the construction of a Chimney Swift tower a major undertaking, modern building materials place the project within the capabilities of most "do-it-yourselfers."

Chimney Swifts prefer a shaft which is 12 to 20 feet in depth and closed at the bottom. They will generally build their nest several feet from the bottom to protect their young from direct sunlight and rain showers. An internal diameter of 16 inches is adequate for the birds but 18 to 24 inches will allow human access for cleaning and other maintenance. Larger towers are also more attractive to swifts as communal roosts.

In December of 1994 we were contacted by Sam Droege of the National Biological Service. Sam is one of the growing number of wildlife professionals who share our concern about the plight of Chimney Swifts. He was aware of the success of our towers and wanted to enlist our help in setting up a program to encourage experimentation with new designs of nesting structures. With his generous funding and our administration, the North American Chimney Swift Nest Site Research Project (NSRP) was initiated.

Until 1995 all of our towers had been rather large, ambitious projects. The primary goal of the NSRP is to develop smaller nesting structures which are as appealing to the average homeowner as



11"X 11"X 8' tower

they are to Chimney Swifts. By doing so, it is our hope that the overall number of active nesting sites will be increased enough to help offset the declining number of Chimney Swifts. Similar projects have been extremely successful for bluebirds and Purple Martins. To appeal to swifts, a structure must be roughly textured enough on the inside to be easy to hold onto with their sharp claws, wide enough for them to be able to fly in and out easily, and deep enough to protect a nest in the lower portion of the structure from rain and direct sunlight. To appeal to homeowners the structures presumably must be relatively inexpensive, easy to assemble and install, and not unattractive in appearance.

Our first step was to announce the project to the public. Sam placed a message on the Internet, and Cecelia Riley of Texas Partners in Flight along with Texas Parks and Wildlife helped produce and distribute an informational brochure. Those individuals and agencies which responded were sent informational packets about the project. The packet contained several pamphlets co-produced by DWA and TP&W on Chimney Swift conservation, a paper which addresses specific housing requirements and a nest/roost monitoring form. Also included was an application for financial assistance for the construction of promising new prototype designs.

As a next step we designed a "mini-tower" which measures 11 in. x 11 in. inside and stands 8 feet tall. We believe that this is as small a tower as we can build and still have a chance of attracting swifts. We built and distributed 10 of these throughout Central Texas and sent one to Louisiana. Sam erected several similar structures on top of the offices at NBS [Laurel Maryland] as well. Two medium-

sized towers measuring 15 in. x 15 in. inside and standing 12 feet tall were also set up: one at Jandarosa near Driftwood and another at the Austin Nature Center at Zilker Park in Austin. The process of construction, site selection, and installation went on throughout the year. Consequently, none of the new designs was used by swifts in 1995.

Chimney Swifts have been known to use a variety of structures other than chimneys including cisterns, abandoned buildings, and architectural features such as hollow sign columns and ornamental turrets. The identification and observation of any unusual nest or roost site may provide important insight into new designs for the NSRP. Anyone who discovers such a site is encouraged to report it to us and monitor it whenever possible. Free monitoring forms and information packets are available for the asking.

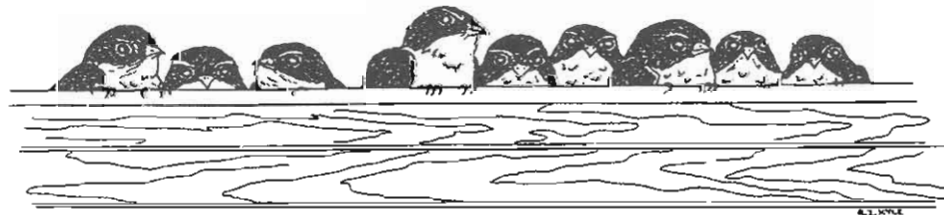
#### What Can I Do to Help Chimney Swifts?

\*If you have a masonry or clay flue-tile chimney, keep the top open and the damper closed from March through October to provide a nest site for these insect eaters. Metal chimneys should be capped to prevent birds from being trapped.

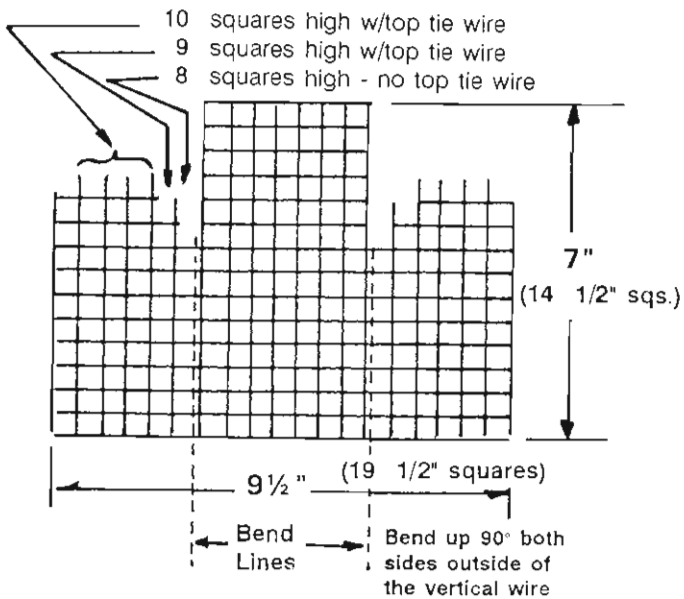
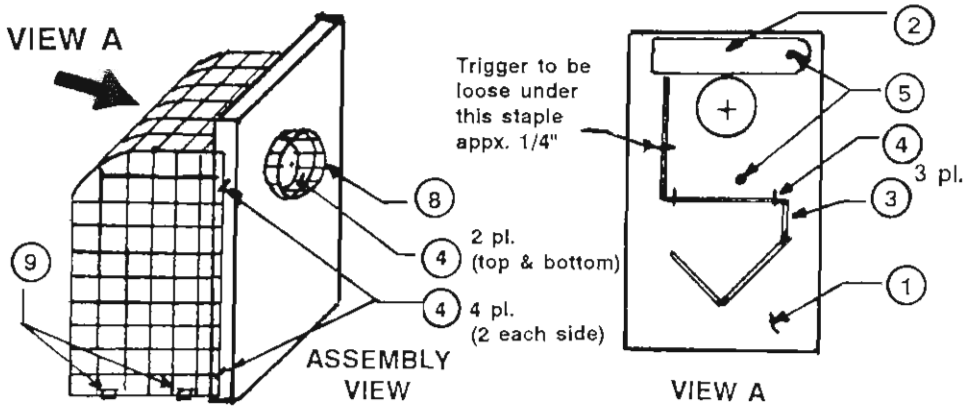
\*Have your chimney cleaned around 1 March before the Chimney Swifts return from their winter home in South America.

\*Work with local conservation groups to construct Chimney Swift towers and educate your friends and neighbors about Chimney Swifts.

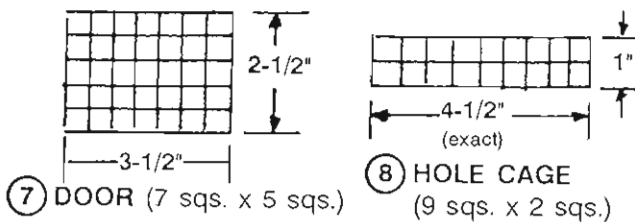
\*Become a volunteer research associate with the North American Swift Nest Site Research Project. For more information write to the Driftwood Wildlife Association, 1206 West 38th, Suite 1105, Austin, TX 78705. ■



# BOLT'S SPARROW TRAP - TYPE F

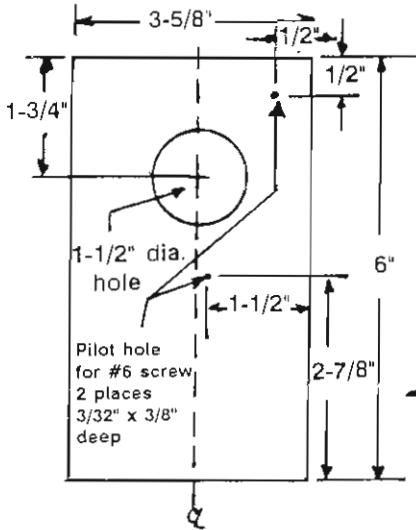
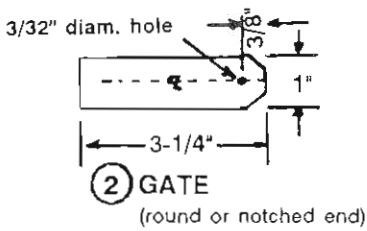


⑥ CAGE WIRE - cut while flat

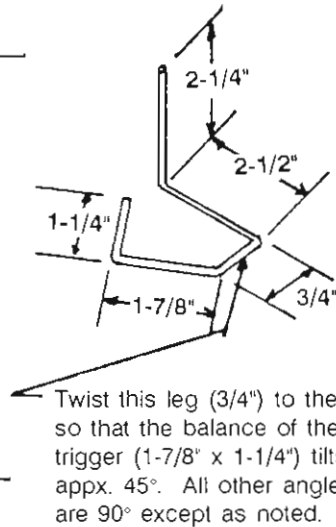




Trap designed by  
Melvin B. Bolt  
1571 Oil City Road  
Wooster, OH 44691



① WOOD BLOCK BASE



③ TRIGGER

A. Construction

1. Drill wood block ① as shown above. Form hole cage ⑧ over 1-1/2" tubing and install to base ① using 2 pc. staples. (Note: squeeze all staples ④ to appx. 1/4" inside to better grip the wire & make driving easier.)
2. Install balance of attachments shown in view A.
3. Cut cage wire ⑥ as shown; bend at 90° in 2 places, bend top to sides and loop the extended side wires over the top forming a cage. Staple cage to wood base.
4. Cut door and hinge straps; roll straps over door and cage sides.
5. Sand or grind all sides of hardware cloth while flat.

B. Mark your trap.

1. Monitor trap hourly.
2. Install only after sparrow nest is started.
3. Beware of sharp/rusty cage wires. Use at your own risk.

C. Specifications. This drawing is subject to change without notice. →

This sparrow trap utilizes Joe Huber's concept of "trigger and gate" trapping. His specifications have been modified to enable the entire system to fit inside a wire cage in lieu of a bird box. Mr. Huber has examined a prototype of this trap and has verbally approved the concept.

It is important to emphasize that anyone making or using this trap must be extremely careful of sharp or rusty cage wires. Use this cage at your own risk!

--Melvin B. Bolt

List of Materials			
Item	Qty.	Description	Use
①	1	1" x 3-5/8" x 6" wood block	Base
②	1	1/8" x 1" x 3-1/4" steel bar stock	Gate
③	1	12 ga. x 8-1/2" galvanized wire	Trigger
④	9	13 ga. x 3/4" galvanized fence staples	Trigger & Cages
⑤	2	#6 x 1/2" pan head sheet metal screws	Gate
⑥	1	19 ga. x 9-1/2" x 7" hardware cloth	Cage
⑦	1	19 ga. x 3-1/2" x 2-1/2" hardware cloth	Door
⑧	1	19 ga. x 4-1/2" x 1" hardware cloth	Hole Cage
⑨	2	3/8" x 1" metal strips (from tin can)	Door Hinges
⑩	1	twist tie	Door Latch

### Bluebird Boosters

*Appearing on the inside back cover is a list of those individuals who have made a financial commitment to bluebirds and 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 20916-6295.*

### New Research Committee Member

Dr. Michael Losito is the newest member of the NABS Research Committee. He is filling the vacancy left by the resignation of Dr. David Pitts, a long-time committee member. Dr. Losito is a faculty member at SUNY College of Agriculture and Technology at Cobleskill. He teaches courses in ornithology, herpetology, wetlands, and evolutionary biology, as well as an introductory fisheries and wildlife class.

Dr. Losito has earned wildlife degrees from SUNY College of Environmental Sciences and Forestry (Ph.D.), Auburn University (M.S.), and the University of Maine (B.S.). He has extensive experience with waterfowl, Mourning Doves, and wetlands. Before coming to Cobleskill, he worked for an environmental consulting company.

*--Kevin Berner, Ch.*

# Effects of High-Voltage Powerlines on Birds Breeding within the Powerlines' Electromagnetic Fields

Paul F. Doherty, Jr. and Thomas C. Grubb, Jr.

## Abstract

Recently, the possible biological effects of electromagnetic fields (EMFs) produced by high-voltage transmission lines have come under intense scrutiny. Most of this attention has been focused on possible consequences for human health. Because very little has been done to assess the possible effects of EMFs on the biology of free-ranging animals living and reproducing within such fields, this study probed for EMF effects on cavity nesting birds.

We monitored the breeding biology of birds using nest boxes placed under three transmission lines and in three control areas. In Tree Swallows (*Iridoprocne bicolor*), there was a consistent trend across all three areas for reproductive success to be lower under the powerlines than in the control sites. No such effect was apparent in Eastern Bluebirds (*Sialia sialis*) or House Wrens (*Troglodytes aedon*).

## Introduction

Recently, the possible biological effects of electromagnetic fields (EMFs) produced by high-voltage transmission lines have come under intense scrutiny. Results to date have been complex and inconclusive (Algers and Hennichs 1983, Nair *et al.* 1989, Tornqvist *et al.* 1991, Bernhardt 1992). Many studies probing for EMF effects have produced negative results, but there is a growing record of studies showing EMF effects on the cellular, whole-animal and epidemiological levels. Most of this attention has been focused on possible consequences for human health (Nair *et al.* 1989).

According to the U.S. Department of Energy, there are currently 347,200 miles (560,000 km) of high-voltage transmission line, and 3.2 million km of lower-voltage distribution line in service in the United States (Minner 1987). Very little is known about possible EMF effects on free-ranging animals near these lines. Orbrecht *et al.* (1991) suggested that areas beneath high-voltage power lines may be good conservation habitat in urban areas. Published research

accounts deal mostly with the effects of habitat change caused by clearing transmission line corridors on the species composition and densities (Anderson 1979, Kroodsma 1982, Niemi and Hanowski 1984) and with audible noise caused by transmission lines (Lee and Griffith 1978). Electromagnetic fields produced by a 500-kv powerline in northern Minnesota did not affect bird densities as compared to nearby control areas (Niemi and Hanowski 1984), nor did EMFs produced by an extremely low-frequency antenna system in Wisconsin affect the abundance of species richness of breeding and migrating birds (Blake *et al.* 1990).

None of the many studies relating EMF to field crops, meat production, or milk output has shown any effect (Morgan 1989). Some migratory birds and fish have been shown to use naturally-occurring electromagnetic fields as a cue for navigation. Although no specific manipulative tests have been done, there is no evidence that man-made fields around powerlines disrupt reception of such cues (Morgan 1989).

In the few animal populations where

reproductive output within EMFs has been monitored, no effects have been shown. Gilmer (1977) found only slight, non-significant differences between the productivity of Ferruginous Hawks (*Buteo regalis*) nesting on 230-kv transmission-line towers and that of hawks nesting on other substrates, while Steenhoff *et al.* (Steenhoff and Kochert 1993) found no difference in nesting success between various raptors or Common Ravens (*Corvus corax*) nesting along a 500-kv line and those nesting away from the powerline.

The objective of our study was to probe for effects associated with high-voltage transmission lines on the reproductive biology of cavity nesting birds breeding directly beneath the powerlines. Our approach was to compare treatment groups situated beneath powerlines with nearby control groups that were out of the range of electromagnetic fields.

## Methods

Treatment sites were selected directly under the midline of a 765,000-volt transmission line in Alum Creek State Park (Delaware County, Ohio), a 69,000-volt transmission line in Caesar Creek State Park (Warren County, Ohio) and a 69,000-volt transmission line near the city of Tiffin (Seneca County, Ohio). At each location, a control site was established nearby, but out of the electromagnetic field. The control site was chosen to match the treatment site in vegetation structure, plant species composition, and proximity to water (Doherty 1994). At each of the six sites, nest boxes were erected 11 to 38 ft (10 to 35 m) apart in a line and were monitored throughout the breeding season of 1993.

At all study sites, clutch size, number hatched, and number fledged were recorded, as well as electric and magnetic field strengths at each box. We compared treatment and control groups at all three locations combined, using first the nest box and then, to increase the

scope of statistical inference, the location as the primary sampling unit. When the nest box was the primary sampling unit the scope of statistical inference was limited to all the birds that could have bred within the particular boxes we used. For this analysis, we used a Two-way ANOVA with unequal sample sizes to test for differences among location (Alum Creek, Caesar Creek, and Tiffin) and between treatment (under a powerline or not) and for any interaction between the two (GLM - Minitab, 1993). When the location was used as the primary sampling unit the scope of statistical inference was expanded to birds breeding under high-voltage powerlines. For this latter analysis, we used two-sample t-tests and performed power analyses to determine the minimum sample sizes required to detect statistically significant ( $\alpha = 0.05$ ,  $\beta = 0.05$ ) differences between powerline and control areas.

## Results

We found no effect of transmission lines on any measure of reproduction in either Eastern Bluebirds (*Sialia sialis*) or House Wrens (*Troglodytes aedon*) (Tables 1 and 2). However, in Tree Swallows (*Iridoprocne bicolor*), reductions in breeding success under the powerline occurred at all three study sites. When the nest box was considered the primary sampling unit, pairs of Tree Swallows under powerlines produced significantly fewer fledglings (Table 3), resulting in significant reductions in percentage of nestlings fledged and overall reproductive success (percentage of eggs fledged, Table 3). No significant interactions between location and treatment were detected. The statistical inference to be drawn from these results extends only to the set of Tree Swallows that could have nested in the particular boxes we monitored, but the scope of biological inference may be greater. To widen the scope of the statistical inference and to strengthen the biological inference, the data were also analyzed using the site as

**Table 1.** Comparison of reproductive biology of Eastern Bluebird nesting under high-voltage transmission lines with that of conspecifics nesting in nearby control areas. Each analysis is shown with the box and site as the primary sampling unit.

Variable	Powerline		Control		P-value
	N	Mean $\pm$ SD	N	Mean $\pm$ SD	
Clutch size					
Box	9	4.14 $\pm$ 0.32	11	3.81 $\pm$ 0.30	0.452
Site	3	4.19 $\pm$ 0.18	3	3.78 $\pm$ 0.18	0.177
Number hatched					
Box	9	3.67 $\pm$ 0.47	10	3.43 $\pm$ 0.38	0.715
Site	3	3.77 $\pm$ 0.39	3	3.36 $\pm$ 0.39	0.491
Percent hatched					
Box	9	85.63 $\pm$ 8.96	10	88.39 $\pm$ 8.66	0.826
Site	3	88.33 $\pm$ 8.76	3	86.67 $\pm$ 8.76	0.900
Number fledged					
Box	9	3.60 $\pm$ 0.58	10	2.38 $\pm$ 0.56	0.114
Site	3	3.67 $\pm$ 0.47	3	2.16 $\pm$ 0.47	0.087
Percent fledged					
Box	8	99.64 $\pm$ 10.66	10	71.69 $\pm$ 9.81	0.074
Site	3	97.67 $\pm$ 15.94	3	68.33 $\pm$ 15.94	0.263
Reproductive success (%)					
Box	9	84.78 $\pm$ 12.62	10	60.18 $\pm$ 12.18	0.176
Site	3	86.00 $\pm$ 11.38	3	55.00 $\pm$ 11.38	0.126

the primary sampling unit. No statistically significant effects could be found with these small sample sizes (Table 3), although the difference in percent fledged would have been significant had we employed a less conservative one-tailed test. Power analysis suggests that sample sizes from 6-9 would have caused results from our two-tailed tests to reach statistical significance (Table 4).

#### Discussion

No correlation was detected across the three study sites between any reproductive measure and electric or magnetic field strength. Unlike biohazards such as chemicals, where more exposure to a substance is generally worse, no dosage response relationship has so far been demonstrated for electromagnetic

fields (Nair *et al.* 1989). Other theories put forward to describe how electromagnetic fields might influence biological systems have focused on "windows" within electromagnetic fields (Wilson *et al.* 1981), transient responses (Byus *et al.* 1986), threshold values (Liboff *et al.* 1984), and synergisms with certain strength DC fields (Nair *et al.* 1989).

Why powerline effects might have occurred in Tree Swallows, but not in House Wrens or Eastern Bluebirds is not known. Tree Swallows could be more environmentally "sensitive" than the other two species. As they are aerial insectivores, their productivity is probably more vulnerable to reduction in food supply from inclement weather than are those of the other species we studied (e.g. Martin 1995). Possibly, such vulnerability to reduced food intake could

**Table 2.** Comparison of reproductive biology of House Wrens nesting under high-voltage transmission lines with that of conspecifics nesting in nearby control areas. Each analysis is shown with both the box and site as the primary sampling unit.

Variable	Powerline		Control		P-value
	N	Mean $\pm$ SD	N	Mean $\pm$ SD	
Clutch size					
Box	29	5.66 $\pm$ 0.22	26	5.83 $\pm$ 0.25	0.557
Site	2	5.70 $\pm$ 0.12	2	5.73 $\pm$ 0.12	0.882
Number hatched					
Box	29	4.93 $\pm$ 0.35	26	4.97 $\pm$ 0.41	0.929
Site	2	4.94 $\pm$ 0.45	2	4.93 $\pm$ 0.45	0.982
Percent hatched					
Box	29	86.78 $\pm$ 5.43	26	86.17 $\pm$ 6.26	0.933
Site	2	86.43 $\pm$ 7.06	2	87.23 $\pm$ 7.06	0.943
Number fledged					
Box	29	4.68 $\pm$ 0.42	26	4.36 $\pm$ 0.48	0.560
Site	2	4.69 $\pm$ 0.71	2	4.33 $\pm$ 0.71	0.749
Percent fledged					
Box	28	94.90 $\pm$ 5.90	24	87.56 $\pm$ 6.89	0.361
Site	2	94.64 $\pm$ 6.18	2	88.34 $\pm$ 6.18	0.545
Reproductive success (%)					
Box	29	81.82 $\pm$ 6.75	26	76.07 $\pm$ 7.79	0.522
Site	2	81.42 $\pm$ 12.1	2	77.24 $\pm$ 12.15	0.830

interact with effects of electromagnetic fields. When the insect prey base was assessed by sweep-net sampling, no significant differences were found between the treatment and control areas. In any case, any local differences in prey abundance beneath treatment and control areas probably had little effect on the ability to the parent swallows to find food, since they appeared to forage at significant distances from both control and powerline sites.

If the reduced number of fledglings under powerlines was indeed caused by electromagnetic fields or some other aspect associated with powerlines, habitats under such high-voltage lines could be acting as population sinks for Tree Swallows and perhaps for other animal populations as well. ■

#### Acknowledgments

Ron Dewald, Jim Coffman, Jay Dillon, Tom Kashmer, Steven Lee, Mark Shieldcastle, Bob Thobaben, and Jim Wylam helped us in securing nest boxes and other aspects of the project. We owe John Condit many thanks for his knowledge and companionship in the field. The Army Corps of Engineers gave us permission to work at Alum Creek State Park and Caesar Creek State Park. This project was funded by the North American Bluebird Society.

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**Table 3.** Comparison of reproductive biology of Tree Swallows nesting under high-voltage transmission lines with that of conspecifics nesting in nearby control areas. Each analysis is shown with the box and site as the primary sampling unit. Significant *P*-values are underlined.

Variable	Powerline		Control		<i>P</i> -value
	N	Mean ± SD	N	Mean ± SD	
Clutch size					
Box	19	5.85 ± 0.19	35	5.48 ± 0.15	0.111
Site	3	5.75 ± 0.10	3	5.53 ± 0.10	0.203
Number hatched					
Box	19	4.87 ± 1.98	35	4.90 ± 0.30	0.956
Site	3	4.83 ± 0.56	3	4.94 ± 0.41	0.863
Percent hatched					
Box	19	83.40 ± 6.19	35	88.11 ± 4.79	0.525
Site	3	84.27 ± 6.75	3	88.33 ± 6.75	0.692
Number fledged					
Box	19	3.53 ± 0.40	35	4.54 ± 0.31	<u>0.040</u>
Site	3	3.58 ± 0.49	3	4.60 ± 0.49	<u>0.220</u>
Percent fledged					
Box	17	71.83 ± 6.30	35	94.20 ± 4.75	<u>0.005</u>
Site	3	84.30 ± 6.05	3	94.24 ± 6.05	0.094
Reproductive success (%)					
Box	19	62.33 ± 7.02	35	82.28 ± 5.43	<u>0.021</u>
Site	3	64.33 ± 8.72	3	82.33 ± 8.72	0.218

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**Table 4.** Estimated minimum treatment and control sample sizes for Tree Swallows required for statistically significant differences from two-tailed tests between powerline and control when  $\alpha = 0.05$ ,  $\beta = 0.05$ , and the site is considered the primary sampling unit.

Variable	Observed <i>P</i> -value based on 3 treatment and 3 control sites	Estimated number of treatment and control sites required for significance
Clutch size	0.203	8
Number hatched	0.863	186
Percent hatched	0.692	68
Number fledged	0.220	8
Percent fledged	0.094	6
Reproductive success	0.218	9

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(BLUEBIRD TALES--Continued from page 159) since the U.S. Navy wouldn't donate a submarine for monitoring their underwater trail. However, thanks to the bequest of two bluebirders, Kenneth and Patsy Hussman, the refuge and NABS can work together and identify new habitats on the refuge and reestablish the bluebird trail. So, no submarines needed! (Previously racing cars, then submarines--what next? Spaceship monitoring?)

Anyway, we hope to have seen many of you at the NABS Nineteenth Annual Meeting, where many a tall bluebird tale was swapped! And keep those e-mails and letters and calls coming--you don't want to see me get lonesome over the winter. Right? ■

## STATE ORGANIZERS

If you are in the process of forming a new state or provincial bluebird organization, be sure to send details to NABS so that an announcement can be made in "Bluebird Exchange." We want to help you reach as many experienced and interested bluebirders as possible.

### Art Credits

Jon E. Boone: 122, 156  
Georgean Z. Kyle: 124, 125  
Suzanne Pennell: 158  
Texas Parks and Wildlife Department: 123



# A Bluebird Paradise: The Merit Club

Ken Schar

The Merit Club, located in Gurnee, Illinois, is a 325 acre golf course and is a member of the Audubon Cooperative Sanctuary System. This course is dedicated to creating a wildlife habitat, improving the water quality, and using natural pest controls wherever possible.

This year (1994) was the first year in which a bluebird trail was in operation. In the fall of 1993, we placed 43 bluebird boxes on the course to orient the many bluebirds seen there in the fall, hoping to bring them back in the spring. They were flying to the boxes as soon as we put them up. In the spring of 1994, we increased the number of boxes to 56. In the fall we added more boxes, placing them in areas where bluebirds were often seen and where there were no boxes. All the boxes are located in the rough, under or near trees. The boxes cannot be in the direct line of sight with the green or fairway, so as not to distract the golfer's view as he plays the hole.

We were very successful in 1994, as we fledged 109 bluebirds, 69 Tree Swallows, and 8 House Wrens. Next year we hope to do even better.

The Merit Club is a bluebird paradise because of the habitat and the abundant food supply. The low cut grasses, along with many wildflowers, the ponds, and the wood chips beneath the trees are examples of good wildlife habitat. The chips are full of insects, providing a food supply for the birds, especially the bluebirds. The trees provide protection as well as perches for the birds. The ponds attract Mallards and also flying insects that the swallows eat. We purposely placed some boxes close to the ponds for the swallows, which proved to be very successful.

The problems associated with the bluebirds are the House Sparrow, the House Wren, the European Starling, and four-legged predators such as raccoons. We had a box and pipe support stolen right

off the course this year which must have been a two-legged "predator."

We check our boxes every week. We were successful in relocating those in which sparrows had been a problem. The wrens are a protected bird and are difficult to control. We tried to control them by putting our houses in as open a space as we could, far away from trees and brush areas.

European Starlings have not been a problem. We are using a front-opening house with a slot entrance designed by Richard Tuttle. His design appeared in *Sialia* 12(1)13-17. The last two sentences in the article are, "The slot box is here to stay. Give it a try, you won't be sorry." Fifty-two of my fifty-six boxes are of his design. In my nine years of bluebirding, I have only had two cases of starling problems. They were both in another style of box. There are always two sides to all stories, however. Early in the morning on the fairways you will see huge flocks of starlings gleaning the grubs. We also see the Killdeer doing the same thing. They are in a group by themselves, away from the starlings. Oscar Miles, the Golf Course Superintendent of The Merit Club, says they go from fairway to fairway until they cover the whole course. This helps reduce the use of pesticides.

I have had a bluebird trail for the past nine years and have had raccoon problems. Three years ago I started to spray the supporting pipes of the houses, which are either PVC or electric thin-wall pipe, with a silicon lubricant. Spraying begins from the time a nest is begun and continues through fledging. Silicon is sprayed onto a rag which is used to wipe the pipe; this cleans and polishes the pipe and makes it very slippery. We have not had one case of raccoon predator in this three year period.

We have made some interesting observations on our bluebird trail. There were

seven boxes in which there were bluebird nestlings on the last inspection. One week later, on the next inspection, the nestlings had fledged and two, three, or four new eggs had been laid. The bluebirds were in a hurry to have another family! One box had seven eggs in a second nesting. All fledged. There was also a box in which a Tree Swallow raised a family of four. We cleaned out the house and a bluebird family moved in, they also fledged four. An observation Mr. Miles made was that during a rain storm, the bluebirds move down on the ground under the trees.

It takes us three to four hours to check all our boxes, even using a golf cart. There is much data to be recorded. I have a card system preprinted on 4x6 inch index cards. A card can be folded in half to fit nicely in a shirt pocket. I fill in the data for each box and when I get home, I transfer all the data to a single sheet which contains the data for every box for every week for a season. We start out in March and wind up in September or so. In 1994, we had over 1,100 entries.

In the fall, boxes are cleaned out and sterilized with a solution of household bleach and water. Then they are ready for the bluebirds to return in the spring.

Because we had one box stolen, we are adding a copper metal tag to each box that says, "BLUEBIRD NEST BOX TAMPERING VIOLATES FEDERAL LAW." I do not know if it will do any good, but it is worth a try.

1995 update: I added 11 more Tuttle slot-entrance boxes bringing the total to 67. We had cold weather during April and May. The Eastern Bluebirds and Tree Swallows returned about the same time, unlike 1994 when the bluebirds arrived a week or so earlier. Maybe this helps to explain some of the difference between the 1994 and 1995 statistics.

By 1 May 1994 I had 10 bluebird nests and 10 swallow nests. By 2 May 1995, I had 10 bluebird nests and 29 swallow nests! All of these nests fledged birds. I had almost three times the number of


swallow nests in 1995 that I had had in 1994.

With so many swallows, I had five double nestings which I never had before. Three boxes fledged swallows and then bluebirds. In one case, five bluebird eggs were buried when a swallow built a nest over the bluebirds' nest.

The summary for 1995 is as follows: 25 bluebird nests with 129 eggs and 106 fledglings; 44 Tree Swallow nests, 254 eggs, 233 fledglings; 2 House Wren nests contained a total of 9 eggs and fledged 8. A comparison of figures for the last two years shows a decrease of bluebirds by 3, an increase in swallows by 164, and no change in wrens.

I lost no boxes to vandalism in 1995, but it's hard to say whether the copper tags were a deterrent since the material oxidizes turning a dark color making it hard to read.

For the fourth year in a row I have not had a raccoon predator. I credit the use of silicon spray on the mounting pipes. I spray from the time of the first nest appearance through the time the young fledge. There is no buildup on the pipes, as with grease, and the pipes become very slippery.

I have had a faithful bluebird partner for the past five years in Roy Wellman. The Merit Club management was just great to work with and I appreciated that. I must say, it has been a wonderful sight to see all the beautiful wildflowers and the bluebirds from early spring to late fall on the course. 

500 Broadway  
Libertyville, IL 60048

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## NEW RATE OPTIONS FOR NABS MEMBERS

Effective 1 January 1996, individuals who choose the Student, Senior, or Regular category of membership in the North American Bluebird Society have the opportunity to renew for either a single year or for a three year period. See back cover for complete list.

# Success in Chicago's Western Suburbs

Frank Navratil

North Riverside, Brookfield, Westchester, Hillside: these communities are becoming a haven for bluebirds. Let me explain.

Establishing a bluebird trail began for me some five years ago. I often walked on a six mile bike path that runs along Salt Creek here in Cook County, Illinois and that ends at Chicago's Brookfield Zoo. I would stare at a prairie area just north of the zoo and think how neat it would be to have bluebirds nesting there.

My good friend John Skach is a lifelong bird lover and a licensed bird bander. Four years ago he pushed my interest past the dream state by lending me some books about bluebirds. I was hooked. I have always enjoyed nature and working with tools so building bird boxes was a natural outcome.

Al Swale joined our team in the spring of 1995. He had been maintaining and monitoring 15 bluebird boxes at the Wolf Road Prairie (a newly established nature preserve). He offered to also monitor some of our boxes.

And so our team evolved:  
John Skach the bird bander;  
Al Swale the tenacious trail monitor;  
Frank Navratil (that's me) the bird box builder.

It has been three years since we began establishing bluebird trails. During year one we placed 14 NABS boxes in and around the Brookfield Zoo north parking lot. During year two we placed six NABS boxes at the Cook County Forest Preserve Salt Creek Nursery. During year three we placed 10 slot-entrance boxes at Fresh Meadow Golf Course and 10 slot-entrance boxes at Meadowlark Golf Course.

Our first year was a big zero in attracting birds. Year two we had a successful nesting of one pair of Tree Swallows at Brookfield Zoo and four successful nestings of House Wrens at Salt Creek Nursery.

We knew some bluebirds were nesting at the Wolf Road Prairie Preserve. Our nursery and golf course locations are within 1/2 mile of this preserve. We thought, "Wouldn't it be nice if just one pair of bluebirds nested in just one of our 40 pristine bird boxes?".

Well, lady luck was with us this third year! Within a week, bluebirds had completed a nest in a wooden slot-entrance box (Fresh Meadow Golf Course). Naturally this was at the location we voted least likely to attract a bluebird. It was a lone box below large trees and 30 feet from the golf cart path. Eventually, four young bluebirds were fledged from that box followed by a fledging of five House Wrens.

Fresh Meadow Golf Course closed the season with bluebirds building complete nests in five of the 10 newly-installed slot-entrance boxes. Two boxes yielded a total of six fledged bluebirds; two nests were abandoned; and all three eggs disappeared from one nest. Tree Swallows fledged two young in the sixth occupied box.

Meadow Lark Golf Course closed the season with bluebirds building nests in two of 10 boxes and fledging eight young. Chickadees finished but abandoned a nest in a third box.

Salt Creek Nursery had bluebirds occupy two boxes, but one was abandoned and all four eggs disappeared from the other. Chickadees fledged seven young from one box, and House Wrens claimed three boxes for themselves fledging 16 young.

One of the rewards in this activity is meeting the people who manage the sites. Their cooperation, their enthusiasm, their excitement is almost overwhelming. The Cook County Forest Preserve District sums it up with "Anything for the bluebirds!" Golf course managers say, "Wonderful! Great! We will help you locate the boxes. Feel free to use the

golf carts." Sometimes being a fanatic (bluebirder, that is) can be good.

### Slot-Entrance Bird Boxes-- PVC versus Wood

I constructed 10 PVC and 10 wooden slot-entrance bird boxes last winter. As stated earlier, we located them in the spring of 1995 at two golf courses. These golf courses never had bird boxes on their premises. At Fresh Meadow Golf Course we placed four pairs of PVC and wooden slot-entrance bluebird boxes. The houses in each PVC/wood pairing were spaced 40 to 80 feet apart. Another four pair installation was made at Meadowlark Golf Course. An additional five slot-entrance boxes were located singly. Occupancy results follow:

16 paired boxes:

PVC 6 occupied, 2 empty  
Wood 2 occupied, 6 empty

21 total boxes:

PVC 8 occupied, 3 empty  
Wood 3 occupied, 7 empty

Our one year's experience indicates a definite preference for the PVC construction. Or at the very least, a definite acceptance of PVC.

### Garlic and House Sparrows

After reading about the possible effectiveness of garlic in deterring House Sparrows from nesting, I gave it a try. My backyard is a good testing area because House Sparrows take over any bird box or cavity that exists.

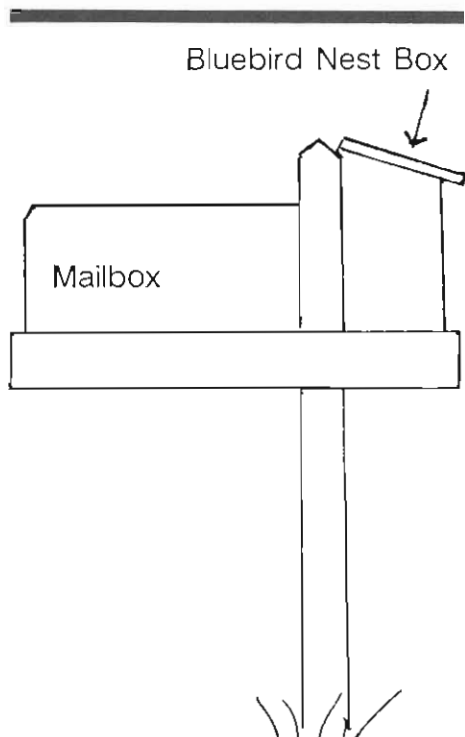
I tossed a clove of garlic into each of two bird boxes. Sure enough, the sparrows did not like the garlic! They promptly tossed the clove out of the box. We played that game for three days. The sparrows always won. Next, I wrapped the garlic clove in netting and secured the netting near the bottom of the bird box. The sparrows pecked away about one-half of the garlic clove, gave up, and built

their nest over what remained. So much for garlic as a House Sparrow repellent.

### Exactly 1-1/8 inch Slot Entrance Boxes and House Sparrows

I placed two wooden and two PVC slot-entrance bird boxes in my backyard. Within three weeks they were all claimed and occupied by House Sparrows. Scratch off 1-1/8 inch slots as House Sparrow deterrents. ■

2323 So. 14th Ave.  
North Riverside, IL 60546



If you have a mailbox post as shown, it's a great location for a bluebird box. --  
*David A. Alpert, M.D., 9203 Stephens Manor Dr., Mechanicsville, VA 23111.*

### CORRECTION

*Mike Schwab took the photographs of the three cage traps on pages 106, 107, and 108 in 18(3). We regret not crediting him for the fine photos.*

# Interstate Travel Sightings

Joan D. Davis

In recent travels in our motor home, we witnessed the delightful appearance of the Eastern Bluebird in unexpected places. We were showing off the floral beauty of Callaway Gardens, in Georgia, to my elder sister who, like me, lives in a city where we don't have the privilege of seeing bluebirds out our windows. As we walked in the Victory Garden, we noticed that there was a Peterson nesting box mounted on the end post of the Muscadine grape arbor. An Eastern Bluebird, a male with brilliant colors, flew across the vineyard to a post 50 feet away. We watched him for a time before we decided he needed to have clearance to the box.

Another time, as we turned off the interstate, at Verbena, Alabama, to a campground, we noticed a woodland south of the camp. We went to sleep hearing the uncommon song, to us city folks, of a whip-poor-will repeating his name in the warm darkness. When we broke camp the next morning, we were greeted by a male bluebird who flew from the woods to a lightpost on the other side of our motor home. Such a vivid blue in the morning sunlight! What a treat, we thought, as he darted earthward for a breakfast insect. It goes without saying that we found the campground owner and gave him some literature on the Eastern Bluebird. He promised to cut out a nesting box and install it soon.

It was a rainy, gray day as we traveled across the Bluegrass Parkway of Kentucky and spotted the slot boxes that Dr. Wayne Davis, retired from the University of Kentucky, had erected on the fences of fertile fields. If there were bluebirds in the boxes, they were keeping dry and we didn't see them. However, we were not denied a glimpse of one more the next day.

We had promised the Monroe County Soil and Water Division that we would

take part in their environmental field day for fifth graders at the county fairgrounds in Woodsfield, Ohio. They had several units of exhibitors, and the children were divided into groups of 15 to 20 for rotation among the stations. We were situated in the tall grass, just beyond the line of woods behind us, with a picnic table for show and tell. Bill pounded in a steel post and mounted a sample nesting box on it, to demonstrate the way to put up a bird house. We had a tray of mealworms, and box kits were ready. We had about 12 groups of students come through for 20 minute periods. Bill taught conservation of native cavity nesting species to the group while he pounded a nest box together. I circulated among the adults, giving them the literature packets--a NABS "Where Have All the Bluebirds Gone" brochure, an ODNR folder with box plans, and an Ohio Bluebird Society trifold. We gave the completed box to the teacher of each group that visited our table.

It was exhausting to work so rapidly and repeat the same talk every 20 minutes. Bill was just about tuckered out before the lunch break. He had a group before him when suddenly he heard a sweet song coming from the woods behind us. As if on cue, the male bluebird flew across our table to a post nearby. The group of students and adults watched the bird who could be seen clearly without binoculars. The gorgeous male seemed to be eyeing the nest box that Bill had placed for an example on the slope.

If we learned anything on this trip, it is to stay alert for these unexpected pleasures. Thank you, all you bluebirders, who have helped the bluebirds come back. Keep doing what you are doing for it is having an impact, as I can testify from our travel on the interstates. ■

1642 Humphrey Ave.  
Dayton, OH 45410

## Two Cavity Nesters

Hubert Brandenburg of Hagerstown, Maryland photographed a male Eastern Bluebird feeding a nestling (below) and a Carolina Chickadee (opposite) also feeding young. Both species were nesting at the same time in the same yard a few miles north of Hagerstown in the late spring of 1995.





## 1997 Awards for Bluebird Conservation

The North American Bluebird Society annually makes awards for outstanding contributions to bluebird conservation. If you wish to nominate an individual, a group, or someone involved in research for an award, please provide the following information.

### INDIVIDUAL

1. Name, address, county, state, telephone number
2. Affiliation(s) with bluebird group(s) or other bird or conservation societies with bluebird programs. Describe the individual's involvement and activities.
3. Number of years active with bluebird/cavity nester conservation (minimum of seven years necessary)
4. If nominee has a trail, describe its location, when established, number of boxes, production, record-keeping techniques, etc.
5. Describe any ways in which nominee has publicized or aided bluebird/cavity nester conservation. Examples might include (but are not limited to) speaking before groups; working with young people; obtaining publicity in newspapers, radio, or television; working at nature centers, workshops, or fairs; inventing or improving trap or box designs; designing and producing publications; plantings, etc.
6. Anything else you feel is relevant to understanding the outstanding commitment to bluebird/cavity nester conservation of the nominee.

### GROUP

1. Complete name, address, location, current president or other officer or contact (for governmental agency)
2. Specific information about the bluebird program: printed information (enclose samples), workshops, number of boxes, increase in bluebird production, methods of recruiting monitors, successful fledgings, etc. (Program must have been in place for a minimum of five years.)

### RESEARCH

1. Name, address, telephone number, academic affiliation
2. Briefly summarize research completed (and in progress) involving bluebirds/cavity nesters
3. Bibliographic citations of articles published about bluebirds or other North American cavity nesters (copies of articles or abstracts are desirable)

Send all nominations to President Charlotte Jernigan, R.R. 2, Box 434-B, Wagoner, OK 74467 by 1 March 1997. ■



*This feature extracts items from the newsletters of bluebird organizations and the periodic reports of groups with bluebird or cavity nester projects. Please be sure this editor or NABS is on your mailing list. We want to include your material!*

#### **ALBERTA--Ellis Bird Farm Ltd., Update**

Marijke Jalink-Wijbrans explains that commemorations of fiftieth anniversary events of World War II in 1995 raised the question with her of what kind of birds were those in the song "Bluebirds Over the White Cliffs of Dover" since the North American species is not found in Europe. She eventually found that the birds referred to are House Martins, similar to Tree Swallows, which originally nested on cliffs but have adapted to urbanization and now build their nests on the outsides of buildings.

After the passing of Duncan Mackintosh, Allan Kuzyk of Coaldale assumed the job of compiling trail statistics for Mountain Bluebird Trails Society (Lethbridge). In 1995 rain resulted in less than ideal conditions. Second broods were low. Of the 3,308 boxes available, 1,152 were used by bluebirds. Of those 959 were successful. Of 5,631 eggs laid, 4,521 bluebirds fledged.

Carol and Leon Burkard of Rosalind have a trail of 32 boxes. One box contained eight eggs and fledged eight young.

Art Aylesworth of Ronan, Montana, reported that 1995 was a disastrous year for the bluebirds. Bad weather and an increasing number of raccoons were the major problems. In 1995, 10,455 bluebirds fledged, a major drop from the 20,391 in 1994 and 16,118 in 1993.

*--Ellis Bird Farm Ltd.*

#### **COLORADO--COLORADO BLUEBIRD NEWS, Summer 1996**

Park County should fledge the year's first bluebirds with nests of both Western Bluebirds and Mountain Bluebirds containing nestlings of about the same age. Jefferson County also reported Mountain Chickadees ready to fledge.

Among the interesting bluebird nest locations noted in Elbert County were Mountain Bluebirds in the gooseneck of Larry Dewald's fifth wheeler and a nest in a tire hanging on a fence post reported by Joe Tenbrink.

Sherry Chapman of Colorado's Division of Wildlife (DOW) encourages bluebirders to read widely and learn as much as possible with active monitoring in order to become a "Bluebird Buddy." These individuals would be a network of people able to give advice and assistance to new bluebirders on a local basis. Volunteers in towns and counties are being sought.

The Colorado Bluebird Trail, planned eventually to cross the state, is gradually taking shape. Volunteers from co-sponsors DOW and the Denver Audubon Society met a number of times to build nest boxes. Donors of kits (\$12.50) will be able to specify a brief message to be wood-burned onto the box.

The 1996 Monitoring Results Form is included with this newsletter.

*--The Bluebird Project*

#### **IOWA--WINGS..., Spring 1996**

Jim Walters in his "President's Column" fills readers in on the progress in restoring Althea Sherman's Chimney Swift tower. Like all major projects, this has proven to be more complex and expensive than originally anticipated. The delay, in some way, has been beneficial for it has provided a better focus for placement. The location of the tower from 1917 to 1962 was on the Sherman homestead in Johnson County, so it is hoped that a site can be found in the same county which could serve both as a bird sanctuary and as

a center for environmental education. Since the structure will be on the National Register of Historic Places, it is important to find a site where a caretaker will be available to protect the tower and to monitor public access. Currently an estimated five year budget, including property acquisition and tower restoration, is \$300,000. A major fund-raising effort is planned to preserve this important part of ornithological history.

In "The View from the Roof" Lon Drake reviews the evolution of chimneys and their use by the swifts which bear that name. He sees the re-erection of Miss Sherman's tower as a way to encourage research at the site to address the needs of swifts as technology reduces man's need for chimneys.

Jim Walters discusses "E-mail for Birdwatchers." He describes how to subscribe or access various electronic links and discusses netiquette. You may contact him at james-walters@uiowa.edu.

Each spring some homeowners find that woodpeckers have attacked wooden exteriors or metal gutters or downspouts. Two different items extracted from electronic BIRDCHAT claim success using long plastic or chromed polyester streamers attached to a location near the spot the woodpecker is using.

*--Johnson County Songbird Project*

#### **MAINE--DOWNEAST BLUEBIRD, Spring 1996**

Lisa Paige, Bluebird Association of Maine (BAM) treasurer and membership coordinator, is in the process of devising a notification system for membership fees. Unfortunately, it is not presently in place so individuals are asked to cooperate in sending in dues without notification.

June Ficker color-banded 214 Eastern Bluebirds in 1995. She asks observers of various combinations of color-bands on bluebirds to notify her at 2 Holland Place, Kennebunk, ME 04043.

Bluebird questions and answers, among other things, whether active Tree Swallow nests should be removed from boxes to encourage bluebirds. The answer, quite correctly, points out that it is illegal to tamper with or remove the nests and/or eggs of any nesting birds, with the exception of House Sparrows and [European] Starlings.

The census results for the 1995 season from 15 regions saw approximately 1,700 boxes fledge approximately 850 bluebirds. Newsletter Editor Wendy Howes says, "It appears that 1995 was a much more successful year [than 1994] for the bluebirds."

*--Bluebird Association of Maine*

#### **MARYLAND--Nest Box News, May 1996**

After unusually cold, snowy weather in the mid-Atlantic last winter, bluebirds were slow to begin nesting.

The Calvert County Natural Resources Division formed the Calvert Bluebird Council to handle details of bluebirding in the county. John Zyla, a naturalist at Battle Creek Cypress Swamp, oversees the Council and coordinates trails and monitors.

The final production results for 1995 saw 454 boxes produce 1,644 eggs and eventually fledge 1,129 bluebirds.

*--Calvert Bluebird Council*

#### **MINNESOTA--BLUEBIRD NEWS, May 1996**

The Fifteenth Bluebird Conference, April 1996 at Faribault Junior High School, was a great success. A varied and stimulating program kept the audience's interest. A page of photographs in the newsletter provided highlights of the conference including the following who were recognized with plaques for their extraordinary contributions to bluebirding: Jan and Dave Ahlgren, Stillwater, Minnesota (they sent out the 40,000th Peterson nest box in March); Steve and Cheryl Eno, Raymond, Nebraska; Jaclyn Hill, Ellsworth, Iowa; Marlys and Richard Hjort, Chisago City, Minnesota; and Delores and Ernie Wendt, Rice Lake,

Wisconsin. Those in attendance voted overwhelmingly for an annual spring conference instead of a fall one.

The Bluebird Recovery Program (BBRP) announced research grants to the following individuals: Jason Smith, senior in the Environmental Studies Program at Bemidji State University, for "Study and spacing relationships between bluebirds and Tree Swallows"; Kevin Berner, professor at State University of New York at Cobleskill, "Identifying desirable features of Peterson box; study of wren-detering boxes and preferred wren habitat; comparing box designs"; and Robert J. Hursh, Edina, Minnesota, "Comparison of Zuern tree-branch nest boxes with traditional nest boxes." In addition, Tom Wille was given a donation of Peterson and Gilbertson nest box kits with poles to set up a trail in a newly-opened area of Frontenac State Park.

BBRP is making a donation toward a large interpretive signboard for Lake Marie State Park. Bluebird life history and the park's bluebird restoration efforts will be depicted. The project should be finished by fall or in the early spring of 1997.

A computer link is helping forge understanding about birds as well as people. Fifth grade teacher Paula Andrzejewski began a bluebird trail at Rice Lake Elementary School three years ago. She met and began corresponding with a Japanese teacher via the Internet. The Japanese children are involved with a Barn Swallow project. Paul had a display at the April BBRP conference.

Julianne Anderson, Wonder Lake, Illinois, reported that after Tree Swallows destroyed bluebird eggs when her paired boxes were 15-20 feet apart in 1994, moving the boxes to 40 feet apart resulted in harmony in 1995 between the two species.

Dick Hjort assembled several pages of drawings and letters for "The Kids Page."

BBRP will soon have a library of slides to lend for use in presenting bluebird workshops and programs. For those in the Twin Cities area, a projector and screen will also be available. Dick Hjort, Peter Meyer, and Dick Peterson have all made major contributions to this effort. At this point there is still a need for unusual slides relating to the life history of bluebirds and other cavity nesters. If you have slides that you think might be an addition to the collection, correspond with Peter Meyer, BBRP Slide Program, 5748 Sunset Road, Mound, MN 55364.

Monitors, especially in the upper Midwest and Northeast, should be aware of another disease (besides Lyme) that can be spread by deer ticks. It is referred to as HGE. It has a 5% fatality rate but, as yet, has no lab test to separate it from Lyme. Symptoms of chills, major muscle aches, headaches, and low fever are similar to Lyme but they come on in HGE with great speed--usually in one day. Be aware and do tick checks immediately after returning from monitoring.

An interesting historical note reprinted from the September/October 1995 *Dakota Naturalist* related that based on records kept by doctors assigned to the fort, soldiers in the vicinity of Fort Sisseton [South Dakota] in the 1870's probably saw Eastern Bluebirds.

--The Bluebird Recovery Program

#### **NEBRASKA--Bluebirds Across Nebraska Newsletter, Spring 1996**

Mary Zimmerman in "Those Cats!" makes the point once again that cats are a major predator of all songbirds. Cats are fine pets but, if allowed to roam, they are likely to have a major detrimental effect on the local bird population. With an estimated U.S. population of 55 million cats, if even one in ten killed a single bird a day, the loss would be 4.4 million songbirds a day. Over the course of a breeding season the impact is enormous. Keep cats inside as much as possible, especially during the nesting season, trim the front claws, place a noisy bell around its neck (limited usefulness), have the cat spayed or neutered, and protect nest boxes and bird feeders with baffles and guards. Erect low fences near feeders, keep ground areas near feeders clear, repel intruding cats with water from a hose, and support local laws that prohibit any domestic animals from running at large on another person's property.

BAN is still looking for regional representatives for regions 3, 5, and 6. These individuals provide contact for bluebirders with problems.

BAN's second annual state conference was held at the Lee and Helen Sapp Riverview Lodge at Mahoney State Park, 30 March 1996. A varied and interesting program was held. Awards were presented to the following individuals. Kevin Holliday received the Youth Bluebirder of the Year award; Steve Gilbertson, Andover, Minnesota, received an Honorary Lifetime Membership for his assistance in establishing BAN; and John Holm, of Gothenburg, was named Bluebirder of the Year. The following officers were elected for the coming year: President Steve Eno, Vice-President Anne DeVries, Treasurer Larry Fletcher, and Secretary Sue Guild.

The 1995 Nebraska Bluebird Directory showed 3,639 bluebirds fledged from 5,015 eggs laid in 3,292 boxes which is the highest number ever fledged. Compilations began in 1989. The 1995 Directory Supplement addresses the following topics: 1. fledging sparrows from your bluebird trail; 2. excessive number of wrens using bluebird boxes; 3. trails not being monitored; and 4. no bluebirds fledged. It also contains a reprint from the Summer 1993 issue of *WINGS...*, newsletter of the Johnson County [Iowa] Songbird Project entitled, "The Great Wren Debate Revisited."

--*Bluebirds Across Nebraska*

#### NEW HAMPSHIRE--update as of 8 May 1996

Bruce Burdett provided another update of his attempts to publicize cavity nesters in New Hampshire. He gave his first slide presentation at the Howe Library in Hanover on 1 May. He continues to submit letters to editors of state newspapers and has mailed in excess of 700 free information packets in response to requests. He notes that bluebirds are very late this year probably because of severe winter storms in late March and early April.

--*The Great New Hampshire Bluebird Conspiracy*

#### NEW YORK--*Bluebird News*, Spring '96

The 1995 nesting survey results by Ray Arendt showed outstanding results. The 7,223 boxes (an all-time high) fledged a record 8,230 Eastern Bluebirds along with 8,599 Tree Swallows, 1,923 House Wrens, and 416 Black-capped Chickadees. Of more significance was the ratio of bluebirds fledged to the number of nest boxes. The 1.11 bluebirds per box was the highest ever recorded in the survey and the first time since 1991 that the number has exceeded 1.0. House Wren fledging indicated approximately the same level of competition as in 1994. Complete nest survey results compiled by last name of monitor are listed.

Ray Briggs summarizes useful tips for "Attracting Bluebirds to Your Nestbox." Box location, pairing to prevent Tree Swallow domination, House Sparrow control and raccoon deterrents are essential.

--*New York State Bluebird Society*

#### NORTH CAROLINA--*BLUEBIRD NOTES*, March-May 1996

The annual meeting of the North Carolina Bluebird Society (NCBS) was held at E. Everett Jordan Elementary School, Saxapahaw, North Carolina. The Saxapahaw Red Bud Festival at the same time proved to be a good combination.

William Davis, of the Ohio Bluebird Society, presented information from his experience in increasing membership in a state society by attending county and state fairs.

Jack Finch, who has been a prominent bluebird supporter for decades, is currently attempting to produce an artificial dogwood berry. Unfortunately, early experiments have not been successful.

President Chuck Bliss presented three certificates: Dick Pockmire, for building and donating 4,000 boxes; Don Adams, for his longterm efforts to improve bluebird awareness and habitat in southeastern North Carolina; and John Jordan who, as chairman of the

Redbud (and Bluebird) Festival, has helped to bring bluebirds back to Saxapahaw.

Membership in NCBS has remained constant at about 370.

The 1995 nest box survey recorded 5,254 bluebirds fledging. The 1996 nesting survey form is enclosed.

The NCBS will award a number of grants to individuals and groups for projects to increase the bluebird population. Grant requests will be reviewed by 1 September.

Three productive bluebird trails in Forsyth County have virtually been destroyed since 1989 by Northern Mockingbirds. Any advice should be directed to Chuck Bliss, 834 Shamrock Rd., Asheboro, NC 27203.

--North Carolina Bluebird Society

#### OHIO--Bluebird Monitor, Summer 1996

Membership in the Ohio Bluebird Society (OBS) has risen to 446. The annual meeting is planned for 19 October at the Ohio State University East District Office in Caldwell.

Dean Sheldon, Jr.'s "Ohio Blue Tips" column addresses ant infestation in nest boxes. He advises use of the following three insecticides which are friendly to birds and the environment: "Schultz-Instant" house plant/garden spray, "Raid Tomato and Vegetable Fogger," and "Do-In (HWI) Ant, Roach & Spider Killer." He uses them sparingly and never when birds or nests are in the box. (Heaviest infestations are most likely after fledging.) In 12 nesting seasons, he has had no nest failure or bird deaths using these insecticides carefully.

*Bluebird Monitor* is initiating "Kiddy Korner" as an occasional insert. Joan Davis is soliciting material relating to birding and/or the natural world.

Richard Poffenbaugh discusses "Winter-Friendly Plantings for Bluebirds." As insects disappear in late fall, bluebirds depend increasingly on fruits. A bluebird friendly landscape will offer a variety of fruits, especially some which hold into spring.

A Clark County family recently placed five bluebird boxes in George Rogers Clark Park to memorialize family member Bill Lord. Mr. Lord, a longtime Springfield resident, died in 1988.

"Notes from Kentucky" by Wayne Davis spotlights the need for exploring the acceptability of nest boxes with multiple entrance holes. Might they be acceptable to bluebirds and not to wrens? Davis also summarizes recent findings of Randell and Verbeek in the *Condor* 98:142-152 in an article "Old nest material of Tree Swallows: effects on reproductive success." They found no difference in reproductive success or nestling growth when old nests were in the boxes, although there were more fleas. They did find a positive correlation between clutch size and cavity size. This study in British Columbia also found a tendency for swallows to start nesting earlier in empty boxes.

A form is enclosed enabling bluebirders to register their trails with OBS. Registrants will receive a certificate. In order to register a trail, the applicant must agree to monitor on a regular basis, take reasonable precautions to protect boxes from predators, and complete a short survey form at the end of the season.

William Davis reports that several more people volunteered as county coordinators so that 25 of the 26 counties are covered.

--Ohio Bluebird Society

#### ---Erie-Ottawa Chapter of *Pheasants Forever*

Bluebirders Lois and Vic Harder were given the 1996 Habitat Award by the Erie-Ottawa Chapter of *Pheasants Forever*. In 1992 they enrolled their 77 acre farm in the Conservation Reserve Program and have provided grasses, food plots, and a three acre wetland. This improving habitat attracts a wide variety of wildlife in addition to Eastern Bluebirds and Tree Swallows.

**OKLAHOMA--***Watchable Wildlife NEWS*, Spring 1996

One article spotlights a number of bird species that may nest in bluebird boxes. In Oklahoma that includes Carolina Chickadee, Tufted Titmouse, White-breasted Nuthatch, Tree Swallow, House Finch, and three species of wrens (Bewick's, Carolina, and House). Although the non-native House Sparrow and European Starling are included, it is noted that correctly-sized entrance holes exclude the latter species.

Helen Miller's "Bird lists on the refrigerator door" describes a family ritual that took place from 1960 to 1994. A list of all bird species seen or heard in the yard was created in the course of each year. Miller notes, "In 1978 Eastern Bluebird dropped off our lists and didn't reappear until 1993, when one found our pond for a drink on a cold December 21. Birdwatchers remember that several severe winters at the end of the '70s reduced their populations severely over all of central Oklahoma, and it seemed to take a decade for them to recover."

--*Oklahoma Department of Wildlife Conservation*

**OREGON--***Western Bluebird Newsletter*, April 1996

Earl Gillis, who died in November 1995, is eulogized. Earl carried on the work of the late Hubert Prescott in aiding the Western Bluebird in the Willamette Valley and was instrumental in founding the *Hubert Prescott Western Bluebird Recovery Project*. The Project has a committed and enthusiastic group of monitors which gained 12 new enthusiasts at the annual January training session.

--*Hubert Prescott Western Bluebird Recovery Project*

**TENNESSEE--**Letters, 19 May and 26 June 1996

The McMinn Clean Community Commission (MCCC) announced its 1996 membership drive in early spring. New and returning members were offered either a bluebird box or a recycling bin. According to Executive Director Connie H. Allen, the nest boxes were designed and crafted by a Sweetwater, Tennessee resident using scrap lumber. The cost was underwritten by a local financial institution. Each box contained an information sheet to help novice bluebirders. Feedback on box success was requested.

--*McMinn Clean Community Commission*

**TEXAS--***Chaetura*, Summer 1996

Welcome to another publication featuring cavity nesters! *Chaetura* is the newsletter of the North American Chimney Swift Nest Site Research Project and is published by the Driftwood Wildlife Association. (Chimney Swifts and this project are featured in an article in this issue of *Sialia* on page 123.) An informational brochure, developed in conjunction with Texas Partners in Flight and the Non-game Division of the Texas Parks and Wildlife Department, is entitled "Environmental Tips for Professional Chimney Sweeps." It has made its way into the nationwide journal for sweeps and has received a positive reaction.

--*North American Chimney Swift Nest Site Research Project*

**VERMONT--***BLUEBIRDS ACROSS VERMONT NEWSLETTER*, Spring 1996

New Director of Bluebirds Across Vermont (BAV) Greg Hennemuth, introduces himself providing background and his experience with cavity nesters.

Readers are encouraged to provide plantings for cover for bluebirds. Ideally, anything planted should do double duty producing fruit to help bluebirds winter over.

The BAV 1995 nesting survey returns are down again. They dropped to 127 from 160 in 1994 and 200 in 1991. A total of 972 boxes were monitored, 210 boxes had bluebird nests, and 388 boxes had Tree Swallow nests. Of 923 bluebird eggs laid, 797 fledged young while Tree Swallows fledged 1,494, House Wrens 75, and Black-capped Chickadees 79.

BAV's Bluebird Nest Box Survey Form for 1996 is enclosed.

--Bluebirds Across Vermont

#### WISCONSIN--WISCONSIN BLUEBIRD, Spring 1996

The box report for 1995 showed a good year for bluebirds in Wisconsin. The results confirmed last year's East Zone and West Zone discoveries. Again, there were high bluebird and low Tree Swallow ratios in the West Zone; low bluebird and high Tree Swallow ratios in the East Zone. "Twelve out of the 14 listed box-types *highly* favored Tree Swallow production over bluebird production in the East Zone. *Only the Peterson and slot-entrance box types favored bluebird production over Tree Swallow production in both the West Zone and East Zone.*"

Statewide, 5,477 boxes in 1995 produced 5,781 bluebirds and 7,421 Tree Swallows.

BRAW is attempting to create a video on bluebirds and cavity nesters in Wisconsin. They are requesting photographs, slides, 16 mm movies, or videos that show monitoring, documentation of problems, cavity nester activities, etc. For further instructions, contact BRAW Video Project, P.O. Box 207, Phillips, WI 54555.

A nest box summary sheet for 1996 is enclosed.

BRAW's County Coordinator Mary Rather reports that 25 county coordinators in 1995 gave 75 workshops in 27 counties. About 1,550 people participated. Placing BRAW's information flyer in public places is effective.

BRAW's Eleventh Annual Membership Meeting was held 21 September 1996 at Treehaven, an outdoor educational facility operated by the University of Wisconsin-Stevens Point.

--Bluebird Restoration Association of Wisconsin, Inc.

## NORTH AMERICAN BLUEBIRD SOCIETY RESEARCH GRANTS

The North American Bluebird Society announces the fourteenth annual grants-in-aid for ornithological research directed toward North American cavity nesting species with emphasis on the genus *Sialia*. Single or multiple awards may be made within the following three categories.

**Bluebird Research Grant**--Available to student, professional, or individual researchers for a suitable research project focused on any of the three species in the genus *Sialia*.

**General Research Grant**--Available to student, professional, and individual researchers for a suitable research project focused on a North American cavity nesting species.

**Student Research Grant**--Available to full-time college or university students for a suitable research project focused on a North American cavity nesting species.

Further guidelines and application materials are available upon request from Kevin L. Berner, Research Committee Chairman, State University of New York, Cobleskill, NY 12043. Completed applications must be received by 1 December 1996; decisions will be announced by 15 January 1997.

## Cavity Nester License Plates

The New York conservation license plates not only display a drawing of an Eastern Bluebird, but two bluebirders proudly proclaim their commitment with the message. SIALIA belongs to Pat Lynch of Rochester who has a small but productive trail. BLUEBD is owned by Kate Wylie of Farmington who has a trail on her farm. Both women are members of the New York State Bluebird Society and NABS.



*Any other cavity nester boosters out there using vanity plates to advertise their enthusiasm? Send us a photo if you can or, if that isn't convenient, drop us a postcard indicating the state and the exact spelling of what appears on your license plate(s). We'll continue to print them from time to time. Send to Sialia, 10617 Graeoch Rd., Laurel, MD 20723.*

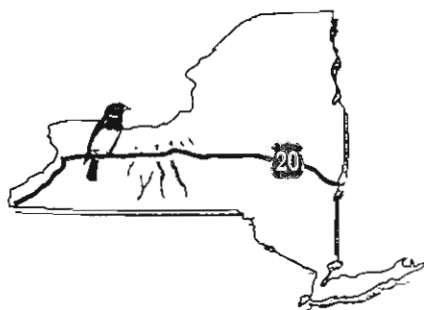


# Route 20 Bluebird Research Trail Update

Joseph E. Therrien

During the summer a long anticipated dream became a reality. The New York State Route 20 Bluebird Research Trail, which last spring existed only in Schoharie County, now stretches across the state from the Massachusetts border in the east to the Pennsylvania border 410 miles away to the west. The New York State Bluebird Society has undertaken this impressive conservation effort and, with the help of many bluebirders across the state, has made excellent progress on the trail with anticipated completion well ahead of the original estimates of three to five years. All of the 17 counties that Route 20 runs through in New York now have an excellent composition of nest boxes through them with only a few prime nest sites left. Approximately 1750 nest boxes are on the trail now with an estimated 200-250 more to be added for completion. The eastern half of the trail, from the beginning of the finger lakes in Cayuga County to the Massachusetts border, is approximately 90-95% complete. The tail leg of the trail from Buffalo south to the Pennsylvania border is also well on its way to completion and is about 90% intact now. The western half of the trail, which includes the counties of Ontario, Livingston, and Genesee, is between 75-80% finished and will be the focus of the remaining work.

There are three main goals of this trail: (1) to provide New York's state bird with abundant, readily available nest sites; (2) to create a statewide study area for research into various aspects relating to our state bird and other cavity nesters; and (3) to increase the opportunities for motorists traveling along the highway to view bluebirds and to introduce the nest box program to the public as well. It is hoped that the interest generated in the Route 20 Bluebird Research Trail will encourage others in the state to erect nest boxes in their own backyards which will assist the



bluebird in developing healthy, sustainable populations statewide.

Funding for the trail has come from the "Adopt-a-Box" program in which people, for a \$10.00 donation, can adopt a box or boxes along the trail. This money helps to purchase boxes, pipe, and hardware for the project. Each adopted box bears the name of the contributor on a tag attached to the side. Each person is notified where his box is located. The program has not only been instrumental in providing funding for materials but has also given the public in New York the opportunity to become a part of the bluebird trail. Anyone interested in getting involved in the Route 20 Bluebird Research Trail can contact the New York State Bluebird Society Adopt-a-Box Program, 15 Bridle Lane, Dryden, New York 13053.

Many volunteers have donated their time erecting boxes throughout the state, building nest boxes, finding pipe (which is used to mount the boxes), monitoring the boxes, and handling the paperwork involved with this great undertaking. Others involved with the trail have included homeowners and farmers, who were delighted to have the nest boxes put up on their lawns or between their fields, and the many people who donated money for the Adopt-a-Box Program. Thanks to all of these individuals working together with the New York State Bluebird Society this dream is fast becoming a reality. What's

next after the trail is complete? Who knows, Pennsylvania, Massachusetts, maybe Nebraska... ■

P.O. Box 21  
Central Bridge, NY 12035

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(EXPRESS--Continued from page 157)

walking up by the rest of the seedlings and a flock of Cedar Waxwings flew right up to where we were. I assume they were coming for the berries!

Down the road from me a friend had a bluebird box up and reported getting bluebirds. As it turned out, they were BLUE birds all right--Tree Swallows.

At my father's place at Lake Wallenpaupack, Pennsylvania, he got some Tree Swallows nesting in his Peterson box, but no bluebirds.

At my grandmother-in-law's house in Hobbie, Pennsylvania, the crude bluebird house we built first nested Tree Swallows, then a pair of bluebirds.

James Kunz  
454 Ashley Road  
Maine, NY 13760

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## NEW NABS SLIDE SHOW

The new NABS slide show is available for rental at \$10.00 or purchase at \$75.00 + \$7.50 shipping and handling. The show consists of 110 collated, plastic framed 35 mm slides and a printed script (no slide tray). If a cassette narration is desired, add \$10.00 + \$1.50 shipping and handling to the purchase price.

To rent or purchase the bluebird slide show, write to the following address: NABS Slides, P.O. Box 6295, Silver Spring, MD 20916-6295. Please allow one to two weeks for delivery and, if possible, specify several dates for rental.

(BOOSTERS--Continued from inside back cover)

Edward R. Bucklin  
Mr. Lynn E. Burket  
Bruce Carlson  
Paul Chance  
Amy A. Cox  
David A. Cummings  
The Rev. P.F. Davidson  
Phillip Davidson  
Kathy Dodd Family  
Edward P. Dowdall  
Thad & Jan Edmonds  
Mrs. George Ewing  
Mr. & Mrs. Jack Gineo  
Mr. & Mrs. Charles Hawkins  
Dick & Pat Henley  
Wesley L. Hodges Family  
Steve & Tammy Holliday  
Danny & Gail Hulva  
Mr. & Mrs. Dale Humiston  
Karen Huss  
Mr. & Mrs. John Kalasky  
Sandy Karlin  
James C. Karr  
Don & Mary Jo Kennard  
Mr. & Mrs. Wallace Knapp  
Bobby Kramer Family  
Richard Leatherman  
Louise Lehrman  
John & Margaret Lester  
Mr. & Mrs. Stephen Levin  
Brenda Majestic  
Ann May  
Karen S. Metz  
Fred & Barbara Nuss  
Margaret E. Owens  
Karen Poull  
Peggy & Joel Rapisarda  
Ken & Ann Richardson  
Shumaker Family  
Dr. Alan Sidel  
Brenda Snider  
Mr. & Mrs. W. John Soliday  
Nancy M. Stevens  
Mr. & Mrs. Glenn Taylor  
James West Family  
Dennis & JoAnn Williams  
Kay S. Yandell  
Mr. & Mrs. J.D. Zachery  
Fred & Shelley Zalran  
Abbie Zola

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## Getting to Know...Bluebirds!

See the enclosed picture catalogue for information concerning the 36 page educator's packet produced by the NABS Education Committee. Designed to be used in grades four through six, the material can be adjusted for use with younger or older students.

# Bluebirds: A Mixed Blessing

Paul B. Campbell

Bluebirds are attractive little creatures with soft appealing colors and devoted domestic habits that make them prized additions to any country home. Well, maybe.

Let me tell you about some experiences that have taxed my charity somewhat regarding bluebirds. When we lived in northern Michigan, our neighbors put up two bluebird boxes within easy view of our kitchen window. We watched with interest the contest between the bluebirds and the Tree Swallows until it was finally resolved by the bluebirds occupying one box and the Tree Swallows taking the other.

About this time we discovered that one of the bluebirds' favorite roosting places was the top of our mailbox. That was okay, except that the box began to slowly turn white. Of course the white material came from those gentle and graceful little bluebirds, but it was still bird dirt.

Many of our neighbors used artificial owls to keep gulls off of their boats, so we decided that maybe an owl on the mailbox might encourage the bluebirds to choose another perch for their favorite privy. We stopped by the garden store one day to see what was available in owls, and looked at several life-sized Great Horned Owl models.

Then I spotted a neat little ceramic owl that was not only a replica of an owl's shape but was a very attractive piece of artwork. We bought it and I constructed an elaborate frame to hold the ceramic creature onto the top of the mailbox. Finally it was mounted and we watched with interest to see the bluebirds' reaction to the fierce little owl. Well, they did stop alighting on the mailbox. Instead, they landed on the owl's head. At least it was not as large an area as the mailbox top so the weekly cleanup involved a smaller space.

We eventually sold that house and moved to the Shenandoah Valley of Vir-

ginia. Here we set up a bluebird box about sixty yards from the house and in easy proximity to a hawthorne tree, to which the young could launch their first solo flights. We watched the usual contest between the Tree Swallows and the bluebirds, but this time the bluebirds refused to be displaced. One brood was successfully fledged and then the trouble began. For some reason, the new bluebirds developed the habit of flying to the house, clinging to the screens on the front windows, and, you guessed it, depositing white streaks on the screens. After about the third removal of the screens for washing, my wife declared that she had had enough. The bird box had to go! I tried to plan a way to make the move with a minimum of disturbance, hoping that the birds would not abandon the new clutch of eggs in the nest. I dug a new hole for the post about 150 yards from the nest box and opposite a grove of towering oaks that would provide plenty of perches for the bluebird family. I waited until evening when the female was on the nest, and then, very quietly, slipped up behind the box. In my hand was an old sock full of cotton balls. This I quickly stuffed in the entrance hole to keep the female in the box until we got to the new location. I then lifted the pole out of its hole and trekked across the yard to the new site. By the time I got there I had an aching back and the mother bird had torn through the sock and was pecking at my fingers. We set the pole in the ground and carefully packed the earth around it. Only then did we get behind the pole and I removed the sock and my hand from the box. The mother bird took off like a shot and flew to the top of the tallest oak. We went back to the house, hoping that she would realize that the trauma was over, but she never went back to the box. Later that summer, another pair of birds investigated the box and may have used it. When I cleaned it in the fall the nest

was empty.

But that is not the end of our bluebird story. The same fall we planted a small home orchard. In hopes of keeping the deer from destroying the trees, we installed an electronic high frequency sound generator in the orchard. It is too far from the house to conveniently run an electric line to the orchard, so I installed a solar cell and a battery to power the sound generator. So far the trees have been safe, but the battery has run down twice. You see, the bluebirds like to perch on the solar cell and the white

streaks they make down the cell blocks the sunlight which powers the cell. I wash it about once a week, but I'm thinking of other alternatives. My present idea is to put a brass rod across the top of the solar cell and encase it with short sections of tubing that will roll when the birds alight on it. If they fall on their chins a few times, maybe they will use the trees for landing places rather than the solar cell. We shall see. ■

Rt. 1, Box 321 E  
Fishersville, VA 22939

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## Exploits of a Young Bluebirder

Benjamin Leese

Since third grade I have had eight bluebird boxes in the field behind my house. I estimate that these few boxes have fledged five clutches of bluebirds and four clutches of chickadees. After sixth grade however my bluebirding interest grew and I, with the help of my father and the Lutheran Camping Corporation of South Central Pennsylvania established a 35 box research bluebird trail. This trail is located on the Wittel Farm which is outside of Elizabethtown, Pennsylvania. The farm is about 40 acres agricultural, 40 acres forested, and two acres of wetlands.

Thirty-five bluebird boxes were placed on this farm. The boxes were evenly divided among five habitat areas. Each habitat contained one each of the following seven predator guard designs: Noel wire mesh guard, wooden block extension, PVC pipe extension (previous three extending from the hole), pipe on pole, metal apron around pole, spiked pole (which is a post with nails radiating in many directions), and control. This trail

served as my science fair project the following year. The Noel wire mesh guard ranked highest in my project, having no predator problems during the breeding season. The spiked ranked lowest, having seven predator problems. The others were clustered closely in the middle, each with about four predator problems.

I hate wrens with a passion. Many people will tell you that the wren is a sweet innocent bird. I disagree. That cute little Jenny Wren is a tyrant of the bird kingdom. In the first year of my trail at the Wittel Farm, I lost my only nests of bluebirds and Tree Swallows to wrens, as well as two nests of chickadees. Two years ago I decided to make them fly their little wings off if they wanted one of my boxes. I put half of the boxes in the middle of a field, at least 15 yards from the woods. The wrens didn't like this location. That year, however, a wren decided to take over one of the boxes still on the fencerow that was occupied by a nest of bluebirds. Not only did the wrens evict the bluebirds, but they killed the

male bluebird and wove his body into their nest.

I like Tree Swallows. They have fledged five broods of young on my trail over the past three years. Tree Swallows are an interesting species. They attack in squadrons. If I disturb one female sitting on her nest, within thirty seconds I will have all the Tree Swallows within a half-mile radius dive bombing me. At one time I resorted to crawling between nest boxes. My father said that it was hilarious (he was standing safely on the driveway) to see someone fall to the ground for no apparent reason.

Tree Swallows, through their squadrons, also serve double duty as a bluebird predator control, for while they protect their own nests, they also protect neighboring bluebird nests. This year I plan to wear feathers in my cap. Hopefully the swallows will try to steal these rather than diving too close for comfort past my ears.

Chickadees are agreeable little acrobats. They have raised quite a few clutches of young in their moss nests along my trail. One problem I have had with these birds is ants in the nest. While the ants don't seem to bother the chickadees, they do annoy me when they crawl onto me while I check the boxes. I have dealt with this problem with limited success by using ant traps for homes. These traps did not appear to have any ill effects on the birds.

I have also had a successful nesting of another species of cavity nester. Four years ago I erected a kestrel box, which is considerably larger than a bluebird box, in the field behind my house. Within two days a pair had taken up residence in the box, which was placed in a weeping willow tree. This pair received a warning not to harm any bluebirds, and I have found no evidence of their ever successfully capturing one. American Kestrels are interesting in the way they enter their nest sites. Instead of stopping outside of the nest box, like most birds do, kestrels will fly as fast as they can across a field and not slow down until they are inside the box.

Bluebirds are my favorite birds. I almost feel guilty when I disturb their nest to check it. I know of nothing bad to say against them. It is very saddening when a nest fails, especially the incident when a nestling got stuck in the hole. I did not discover it until a week later when I checked my trail. The parents couldn't feed the chicks in the box, and so all of the young perished. These mishaps don't take away the thrill of watching a group of bluebirds in the fields near the end of summer knowing that some of them probably fledged from my boxes.

If all goes well, and the wren population doesn't explode, I hope to have another year of frustration and joy with the birds. I wouldn't trade it for anything. ■

RD 5, Box 5565  
Spring Grove, PA 17362

## TWENTIETH ANNUAL MEETING OF THE NORTH AMERICAN BLUEBIRD SOCIETY

The Twentieth Annual Meeting of the North American Bluebird Society will be held at the Sheraton Hotel in Newport Beach, California, May 16-17, 1997.

*The sponsor of the meeting will be the Sea and Sage Audubon Society.*

# 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:

For all nest box builders, I now have up on The Bluebird Box WWW page accurate drawings of bluebird nest box designs. The drawings are all scanned images of drawings from Dorene Scriven's book *Bluebird Trails: A Guide to Success*. Dorene has given me permission to do this and I think it will provide the Internet community with an accurate resource of bluebird nest box designs. The URL of The Bluebird Box is as follows: <http://users.aol.com/jimmcl/index.html>

Jim McLochlin  
Omaha, NE

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Dear Editor:

A non-toxic product, Tangle-Trap, has been an effective fire ant deterrent.

When applied in a three to four inch wide band around the nest box mounting pole, the Tangle-Trap prevents fire ants from reaching and preying on hatchlings and/or eggs. Reapply according to weather conditions. It is available from Gardens Alive, 5100 Schenley Place, Lawrenceburg, IN 47025.

Laura Nielsen  
617 NW 202nd St.  
Newberry, FL 32669

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Dear Editor:

I have had tremendous success with Peterson boxes, my first, this season.

At one location in reasonably close proximity, I have a standard box, one made from the hollow trunk of a small tree with a knothole for an entrance, a Zuern tree branch box, and this year, I added a Peterson box.

Bluebirds have never chosen the tree branch box or the natural cavity box. Last season they nested in the standard box. This year they are, at present, nesting for the third time in the Peterson box.

Interestingly, after the second brood fledged, I was a few days cleaning out the Peterson box. I observed what I thought to be a different pair building in the standard box. That same day I cleaned and fumigated the Peterson box. The next day they abandoned their new nest in the standard box and built in the Peterson box.

James Tuten  
2250 Cedar Creek Road  
Blythewood, SC 29016

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Dear Editor:

I have had various bird nest boxes in place for most of my life, and I am now monitoring 80. Until using PVC pipe last year, I was discouraged by losses due to predation and domination by House Sparrows. I have had no losses due to raccoons so far this season and have either shot or otherwise discouraged House Sparrows. Fox squirrels have been a problem for years. They gnaw the

entrance hole large enough to gain access, even through well-cured one inch white oak--and will chew a box made of plywood into nothing within a year. PVC pipe has almost eliminated the squirrel problem.

I am to present programs on bluebirds at Conservation Expo 96 in Knox County, Illinois, on 20, 21, and 22 August.

James O. Smith  
RR 1, Box 327  
Homer, IL 61849

each box of a pair, though usually only one box produces eggs.)

We are NOT advocating more densely saturated trails. It may prove to be a better idea to have more space between pairs, but in order to examine the apparent correlation between drop in bluebird productivity and increase in Tree Swallow productivity, one must take into account how far apart the boxes were, in pairs, and/or singly spaced; and the total area the trail covers.

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Dorene H. Scriven, Chair  
Bluebird Recovery Program  
P.O. Box 3801  
Minneapolis, MN 55403

Dear Editor:

We bluebirders in Minnesota would like to comment on the analysis by Joe O'Halloran of the "Impact of Trail Size on the 1994 Per-Box Bird Productivity in the East Wisconsin Zone" (*Sialia* 18(3): 100-101). We've corresponded with Mr. O'Halloran about this.

The data he has collected so far is very interesting, as was the hypothesis of D.D. Boone some time ago, regarding a "boomerang" theory. However, there is at least one very important parameter missing, and that is SPACING. Neither paper includes data on how the boxes in densely saturated trail areas were spaced. We have been studying the fluctuating cycles of Tree Swallow populations on bluebird trails for over 11 years. Over 10 years ago we started experimenting with pairing of boxes, and, as we have stated in earlier papers, the implementation of pairing boxes, where Tree Swallows occupied more than 50% of the boxes, has made a tremendous difference. Putting nest boxes in pairs 15 or 25 feet apart (at least) with at least 300 feet between pairs usually not only keeps at least half the boxes available for bluebirds, but on trails where Tree Swallows had virtually taken over a conventionally spaced (300 feet between single boxes) trail, pairing has brought back up the original number of bluebirds nesting. (There are exceptions of course: bluebirds have nested close together on occasion; Tree Swallows, especially near water, have nested very close; in early spring we sometimes find a Tree Swallow nest in

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Dear Editor:

On my acreage (in eastern Iowa) I've essentially driven House Sparrows to return to their "natural"(?) nesting habits by denying them access to any nest boxes, eaves, dry spaces. This means they build very tightly-woven nests in hedges and trees. These nests are not "humid and dirty." They are exceptionally dry, soft, clean, and absolutely weather-tight. They do not blow out of the trees in the worst of storms. They are nearly perfect. These nests are not at all like the nests that House Sparrows build in my bluebird boxes--much looser and not nearly so well crafted (why put out all that energy if you don't have to face the storm?). You may dislike House Sparrows, but their nest-building skills, not to mention their other adaptations, are truly wonderful.

Jim Walters  
Johnson County Songbird Project  
2511 Hwy 1 SW  
Iowa City, IA 52240

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Dear Editor:

On a flora note, the cardinal autumn olive seedlings that I bought two years ago from the NYS DEC were large enough to transplant. I put them around my house and shed. Some even had berries on them. One day we were  
(Continued on page 152)

# Bluebird Tales

Mary D. Janetatos

"Your bluebirds built their second nest *where?*" I couldn't believe my ears. "In our bluebird feeder!" replied Betty Hoofnagle, of Phoenix, MD. The telephone caller was very concerned about possible predators and had installed some guards after the female bluebird had built her nest. Betty then worried that the predator guard would frighten off the female. We mulled over the problem and decided she should forego the predator guard so as not to "spook" the bluebird, perhaps causing her to abandon the nest. She called back a few days later to report that she had taken off the guard; the female was again frequenting the feeder-turned-nest box.

I had previously heard of bluebirds building nests in Purple Martin boxes. Alice Saunders, of Petersburg, PA described just such a situation a while back. "In late June...I noticed a bluebird carrying nest material to our vacant Purple Martin house. After a few minutes of observing, I noticed that she was entering more than one compartment with the material. It ended up that she built a nest in all 12 compartments (using pine needles) but laid eggs in only one nest. After a routine check, I discovered her active nest had been predated by wrens. She then abandoned the Purple Martin house.

George Laicono of Aiken, SC had bluebirds building in schoolhouses--though not the big kind. His snapshot showed a cleverly made nest box which was a *miniature* schoolhouse! He said that he adapts the interiors of all of his designs for bluebirds! Creativity abounds in humans *and* in bluebirds!

What also abounds is the enthusiasm for our "banner bird"--bluebirds. Longtime NABS member James Royal of Fayetteville, NC wrote that the men of Gardners Methodist Church "are putting up a bluebird trail at Camp Rockfish" (which he tells us is a Christian program serving eastern North Carolina).



From the Hotchkiss School in Lakeville, CT, *new* NABS member Joseph Merrill wrote that their school (on 500+ acres) "has a substantial bluebird population. Our science classes have built bird houses and monitor their occupancy. The students are also responsible for the placement and cleaning of the 50+ houses." Great way to ensure more bluebirds for the next generation! We also heard from Whitney Lucado, of Falmouth, VA who reported that she is working in the Gold Award Project in the Girl Scout Council which she explained corresponds to the Boy Scout Eagle program. She had a four month goal to construct bluebird boxes and place them on a bluebird trail at the Girl Scout camp, Camp Kittamaquand, in Burgess, VA. Since she would be involving younger girls in the effort, she wanted "fun quizzes and games" to help her project. Of course, we immediately recommended the NABS Education Packet, compiled by past-President Sadie Dorber. It has just what Whitney is looking for: learning materials with a "fun focus" for the younger elementary level students.

Working with another scouting-type group is John Phillips of Los Angeles, CA who described the bluebird results of his *We Pia Galt* Camp Fire Group. "Last year we had 17 fledged plus 14 [nuthatches] with 10 or 11 eggs stolen. That in 12 boxes. This year we have so far had a better result. We raised several boxes 10-12 feet above ground and this stopped much of the T.H.A. (talking hairless ape) problem. No houses stolen.



To date our 12 boxes have fledged about 31 bluebirds."

Leo F. Terzia, Jr., of Monroe, LA is a NABS "member recruiter" and recently sent another membership in. The comment with the dues noted, "This membership was very interesting and a real switch from usual procedure--*he* approached *me* about becoming a member. Honestly, Sarah [Funkhouser, NABS' office administrative assistant], I do have a good thing going. I am involved with BLUEBIRDS and GOOD FOLKS." *That's what it's all about, Leo!*

*Birds & Blooms*, that delightful new magazine, continues to yield a good harvest of names of folks who want more bluebird information. We recently heard from Bertha Hughes of Groveton, TX who sent a clipping of the article on Jennifer Jones, NABS' teen member, from Kalona, IA whose bluebirding was described in an earlier issue. Carol Alexander of Montrose, CO also wrote for NABS information after seeing the address in the same publication. Many thanks, *Birds & Blooms!*

Mrs. E.L. Caneva, of Fort Morgan, CO quoted the *Denver Post* saying it "had mentioned that the Society is trying to get a trail of bluebirds from Julesburg, Colorado to Estes Park. We hope to help promote this project and would appreciate any information on their conservation." I wonder who the NABS member is who is spearheading *this* praiseworthy effort?

From Seneca Falls, NY, Nancy O'Connor sent the very fine *Guide to Bluebird Conservation* published by the Soil and Water Conservation District in that area describing ways people can help the state bird of New York State--yes, *Sialia sialis*.

Our NABS' home page (<http://look.net/nabluebird>) is becoming a very good place to tell the "virtual world" about the Society's approach to bluebird conservation. On our e-mail address, [[nabluebird@mnsinc.com](mailto:nabluebird@mnsinc.com)] we can answer *some* bluebird questions. It is still good to have each person's postal address and telephone number, since so many

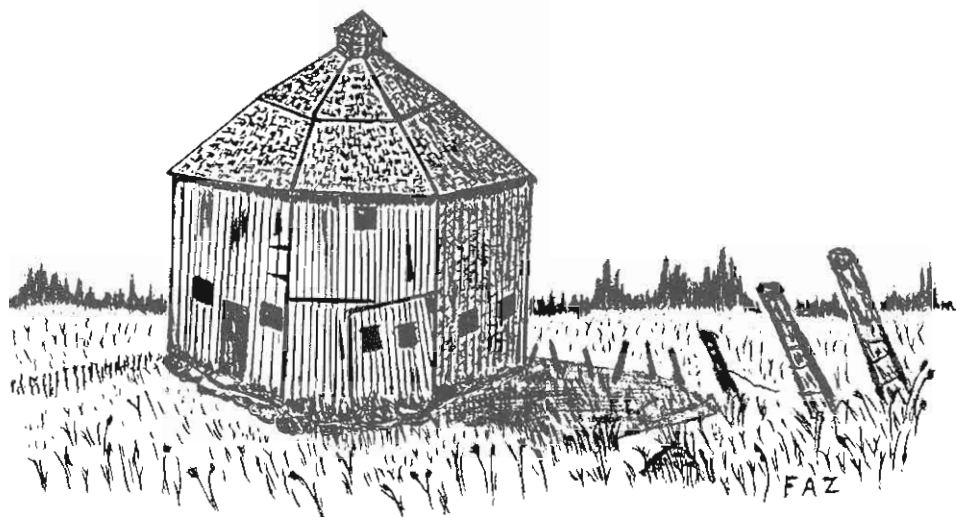
questions need "fast follow-up" which is not always feasible by e-mail. At any rate, we're getting a lot of "visits" on the home page.

The gaping hole left by our recently dear departed Treasurer Chuck Dupree, (who died 6 May 1996) is being filled by *all* of us. Glenn Funkhouser as the new treasurer is taking to the position like a (cavity nesting) Wood Duck to water. His wife, Sarah, is capably keeping us all in order. Betty Dupree comes in and helps us cope with the mail--and yours truly answers the telephone, the e-mail, and the etcetera (another cavity nester?) questions.

The most neglected cavity nester in my own backyard (and NABS' headquarters) this season has been what Chuck used to call the "wheep-bird": Great Crested Flycatcher to you and me. I was hearing his plaintive call (yes, it's "wheep, wheep") all through the spring and early summer. And then a phone call came that may be the solution to my flycatcher's housing problem. Dave Eastman, of County Ecology, Center Sandwich, NH 03227 told me of the Great Crested Flycatcher nest box he builds. Recalling a conversation I had recently with Sadie Dorber wherein we remembered Larry Zeleny's growing concern for this flycatcher's lack of nesting sites, I asked Dave to send me one. NABS may soon have another cavity nester to aid in its practice of "Effective Conservation." Stay tuned!

For now, the most unusual problem to surface is the "Case of the Submerged Bluebird Trail." At the Waubay National Wildlife Refuge, Waubay, SD, the husband-wife co-managers Connie Meulier and Doug LeschlsIn and bluebird bander/monitor Dennis Scadsen watched helplessly as their bluebird trail went glub, glub, down the drain so that it looked like they would have to monitor the 100+ boxes by submarine! The bluebird trail in 1993 had stretched along the shoreline of the glacial Lake Waubay. Then the area was hit with torrential rains and the water rose 10 feet or more. They were about to give up on the situation,

(Continued on page 134)



### The Bluebird Barn

This abandoned barn stood so forlorn,  
 In September's clear and frosty morn.  
 From 'neath its darkened rafters flew,  
 These seven migrating gems of blue.

Flying down to perch, one by one,  
 They warmed themselves in the morning sun.  
 Settling on posts that were slanted and old,  
 With moves and song they seemed so bold.

Their bodies and spirits thus warmed  
 through,  
 That southward journey they did renew.  
 We bid farewell, each went his way,  
 Parting. Perhaps to meet some  
 other day.

FRANK A. ZUERN

## BLUEBIRD BOOSTERS

### Life Members

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Clark W. Hart  
Katrina Renouf  
Mrs. Irene S. Frantz  
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Augusta Bird Club  
David Alpert, M.D.  
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Mrs. Nancy Baron  
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Mrs. Constance Benson  
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William J. Broussard, M.D.  
Jane H. Brown  
Robert J. Brown  
Todd & Deb Burns  
Edith F. Camp  
Chesterfield Christian Church  
Mary L. Contakos  
G.R. Cook  
Ruth M. Coppedge  
Amy A. Cox

Kristine Crutch  
Mr. & Mrs. William Davis  
Marvin Dicker  
Mr. & Mrs. Malcolm Dorber  
Dowling Public Library  
Susan Doyle  
Stuart C. Farmer  
H. N. Fogel, M.D.  
Forest Garden Club  
Dee & Odell Friar  
Frank & Jacque Furnari  
Ms. Vivian Glenn  
Betty Harmon Family  
Mr. & Mrs. George Harmon  
Mr. & Mrs. Dennis L. Hayford  
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Gretchen N. Schwartz  
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Mrs. Madeline M. Walters Family  
Elizabeth Warnke  
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Dr. & Mrs. Robert Williams  
Woodbury Woman's Club  
Jeannie Wright  
**Nestling Bluebird**  
Don & Lucy Anderson  
Mr. & Mrs. Gerald T. Arnold  
Gray Baird  
Bonnie Barry  
Donna Bretz  
Dr. & Mrs. Juan A. Brown

(Continued on page 152)

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 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; Family \$25; Sustaining \$30; Supporting \$50; Contributing \$100; Corporate \$100; Donor \$250; Life \$500. Three year rates: Student and Senior \$28.50; Regular \$42.00. Add \$2.00 per year for Canada and Mexico and \$3.00 per year for other countries (surface mail). U.S. funds only, please. Amounts over \$6.00 are tax deductible.

**Address:**  
North American Bluebird Society  
Box 6295  
Silver Spring, MD 20916-6295

