

# *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-ahl'-ee-ah see'-ahl-iss). Similarly, the Western Bluebird and Mountain Bluebird, the two other species within the genus, were named *Sialia mexicana* and *Sialia currucoides* (coo-roo-coy-dees) respectively. Their species names are descriptive of their locations. All three bluebird species are native only to the North American continent, although each inhabits different regions generally separated by the Rocky Mountains and by altitudinal preferences.

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

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# Sialia

The Quarterly Journal  
About Bluebirds

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**EDITOR**  
Joanne K. Solem  
**CONTRIBUTING  
EDITOR**  
Lawrence Zeleny

**ART EDITOR**  
M. Suzanne Probst

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## COVER

Art Editor M. Suzanne Probst has chosen to depict a White-breasted Nuthatch near its nest site as this issue's cavity nester.

*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

Sadie Dorber

**T**urquoise water, pink sand beaches and pastel-colored houses snuggled among lush vegetation—this is Bermuda.

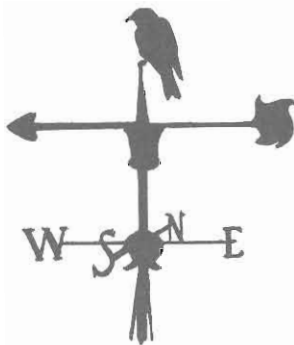
Research Chairman Kevin Berner and I were invited to speak at the Annual General Meeting of the Bermuda Bluebird Society. Kevin, my husband and I left New York on a crisp, cold morning and arrived to 75 degree temperature.

Angela Outerbridge met us at the airport and whisked us to St. David's Elementary School for the dedication of the new addition to the school. The students and teachers at St. David's are very active in the bluebird movement and Tommy Outerbridge still plays a big role in keeping the enthusiasm high. The children have apparently found a solution to House Sparrow competition by using the fruit of the calabash tree for nesting boxes. The round, large fruit dries hard and hollow, similar to our gourds, and is hung from trees. Sparrows don't seem to like them, which leaves them free for bluebirds.

The next day was spent checking bluebird trails with Steven DeSilva. Besides helping the bluebird, Steven also has Barn Owl boxes.

That evening the three of us attended the meeting of the Bermuda Bluebird Society. The meeting, held at Government House, was hosted by Lady Langley, the Governor's wife. She told me of her seven boxes and the enjoyment she derives from the bluebirds. Because sparrows are a serious problem on the island, both Kevin and I focused our talks on the control of House Sparrows. We described the success bluebirders have experienced when they trap continuously.

No trip to Bermuda would be complete without a visit to Nonsuch Island. The island, located in Castle Harbour just off the eastern tip of Bermuda, is about 15 acres in size. Conservation Officer Dave Wingate, has spent years restoring the plants and



trees indigenous to Nonsuch. The island now looks like Bermuda did many years ago before urbanization took over.

From Nonsuch the islands where the endangered Bermuda Petrel (Cahow) breeds were visible. These islands are the only place the Cahows nest—the entire breeding population consists of only 29 pairs. The small islands are strictly off limits to anyone except Dave Wingate. Even when Dave visits the islands to check the Cahows' burrows, he will never permit more than two people at a time to accompany him. The plant life is extremely fragile and the Cahows won't tolerate much disturbance. Since the nests needed to be checked, Dave wanted to stop on the return trip. Getting from the boat to the rocks was a little tricky, as you have to judge the waves, then jump to the sharp rocks. If you fall you'll either fall into the water or cut yourself on the coral rocks. Carefully, we wound our way over rocks to reach the only place that you could climb to the top of the island. Dave talked me up the first ledges that had to be climbed, but the last one was the big one. When I realized I had to get one leg up nearly shoulder high with nothing to hold on to, I said, "I can't do this, Dave." His reply of "Sure you can," didn't do much to convince me at all. Then I voiced my concern, "If I do get up there, how will I get down?" Dave again tried to reassure me with "Everyone says that, but it's easier to get down than to go up." After a few more of my "I can't do this" comments, Dave said, "Sadie, it's like this. You're here. If you don't climb to

(Continued on page 103)

# Eastern Bluebirds Nest Over Water

Richard M. Tuttle

**B**efore the 1982 nesting season, I mounted two bluebird nest boxes in an ice skating pond in an effort to attract Tree Swallows (*Tachycineta bicolor*).

I knew that Tree Swallows had nested over water in Wood Duck (*Aix sponsa*) nest boxes in Delaware County, Ohio, since 1968 (Tuttle 1987). Although I had no intention of providing additional nest sites for Eastern Bluebirds (*Sialia sialis*), since 1982, in addition to 55 Tree Swallow nests, Eastern Bluebirds have nested 12 times in bluebird nest boxes mounted above water.

## Two Pond Trails

I mount boxes in ponds on two of my bluebird trails. An ice skating pond located in Delaware State Park (DSP) 5 miles (8 km) north of Delaware, Ohio occupies 0.7 acre (0.3 ha) and has a surface area of 0.5 acre (0.2 ha). Shallow by design, its water never reaches higher than my knees. I placed the first two nest boxes in the pond in 1982, one more in 1983, and added the fourth box the following year. A slot box was paired 7 yards (6.4 m) from an original pond box in 1988, bringing the total to five. Two nest boxes, one 70 yards (64 m) from the pond and another at 100 yards (91 m), were the two closest alternatives to nesting over water.

The second pond is located on the campus of the Methodist Theological School of Ohio, also called Methesco, 4 miles (6.4 km) south of Delaware. The Methesco campus is one of four properties included in a trail of 26 boxes. The 2.2 acre (0.9 ha) pond is deep enough to support populations of several species of pan fishes and a healthy population of frogs that keep things hopping around the well manicured bank. In 1985, I removed two boxes from sites infested with House Wrens (*Triglyodytes aedon*) and relocated them in the pond in an effort to attract swallows. I relocated one box each succeeding season until five boxes have been available to pond nesters since 1988. The closest alternative to nesting over water was a pair of boxes 70 yards (64 m) from the pond.

Because both ponds are used for ice skating, I must remove the boxes and their mounting pipes early each fall. I use a modified car jack to extract some of the pipe mounts (the subject for a future *Sialia* article). I reconstruct the pond trails by 15 March. While standing in water, I use a post pounder to drive 7 1/2 foot (2.3 m) length of 3/4 inch (1.9 cm) gas pipe into the pond bottom until I can touch the pipe edge with my nose. After the nest boxes are bolted to their mounts, their entrance holes are 1.8 yards (1.7 m) above the pond bottom. Water depth varies and box entrances average 48 inches (1.2 m) above the DSP pond surface and 40 inches (1 m) above the water at Methesco. I smear chassis grease, as thick as cake frosting, on several feet of pipe below each box in order to make each raccoon proof.

I space pond boxes a minimum of 30 yards (27.3 m) apart to allow each pair of swallows a 15 yard (13.7 m) radius to defend their nesting territory. The small pond at DSP can accommodate one nest site in each corner. The larger Methesco pond can accommodate a line of ten evenly spaced nest boxes, paralleling its bank. Since I have only five boxes to locate in the pond, more than 30 yards is allotted between sites.

I mount boxes at least 2-10 yards (1.8-9.1 m) from shore for two reasons. First, I want the boxes to be a safe distance from fishermen and the overly

curious. Ponds attract people but none has ever waded to a box. Swallows nesting in ponds adjust quickly to fishermen who sit patiently on the bank waiting for bites. Fishermen are frequently converted to bird watching while watching the aerial acrobatics of the resident Tree Swallows.

Second, lawn maintenance workers love bluebird nest boxes mounted above water—they don't have to mow and trim around them. A nest box above water is safe from mower collisions. Everyone is happy, including the birds. Your welcome earns tenure anytime that you plan a bluebird trail that does not create problems for maintenance personnel.

Two factors determine the direction to face the entrance hole. The entrance should avoid the hot sun while providing nestlings a vista of the nearest shore. Most of my pond boxes face east or north and are aimed parallel to the shore line. If a nestling can lean forward from the entrance hole and peer to its right and left, theoretically, it can choose which direction to fly to a perch; toward the shortest distance over water or over the most water. I

have no way of knowing if this works, but I feel better when I provide fledglings with a choice.

I monitor all my boxes every 5-7 days during the nesting season. I wear hip waders when I monitor the park pond during cool weather. In the summer, I look forward to wearing old sneakers when I wade to the DSP boxes—the pond water is refreshing. I use chest waders to monitor the deeper Methesco pond, although the water never reaches my waist.

### Tree Swallows Nest Above Water

Both pond trails were successful in achieving the original objective of the project—Tree Swallows were produced (Table 1). During nine seasons, swallows attempted to nest (laid at least one egg) 55 times, were successful (fledged at least one) 43 times (78.2%). An assortment of typical bluebird trail events accounted for the 12 nest failures: House Sparrows (*Passer domesticus*) and House Wrens committed two usurpations each; weather, blowflies, human interference, and flooding caused one nest failure each; and reasons for four failures were un-



Photographs by Richard M. Tuttle

The author wears chest waders as he wades through algae and water to clean a used bluebird nest from a nest box. Excellent bluebird habitat surrounds the pond on the campus of the Methodist Theological School of Ohio.

known. I do not know how many "abandoned" nests recorded in my data book can be attributed to aerial snatches by resident Cooper's Hawks (*Accipiter cooperii*), but they have been seen numerous times at both ponds testing escape behaviors of the nesting swallows.

Human interference occurred in 1989 when the pond was being drained for an overhaul; someone shook the box and left behind a trail of foot prints, a greasy hand print on the box, and six dead swallow nestlings. During 1990, a flash flood ravaged the Methesco pond after 4 inches (10 cm) of rain fell within several hours. Until that fateful night, the water had risen only several feet during the deepest floods, never threatening box inhabitants. Flash floods, on the other hand, sprout as rampaging rivers from small streams carrying debris and large limbs in their expanding waters. Debris plugged the concrete spillway and an entire family of five, and five of seven nestlings of another swallow family, drowned. I thought that I had committed the boxes to a safe situation after I had researched the flood history of the pond. I hope that the latest chapter of the pond's flood history remains a fluke of nature, never to be repeated.

During the nine season history of the pond boxes, Tree Swallows laid 304 eggs, hatched 249 (81.9%), fledged 192 (63.2%), with 77.1% of the nestlings fledging. These values compare well to a six year study of nesting swallows in DSP (Tuttle 1987); Of 1761 eggs laid, 73.8% hatched, 62.2% fledged, with 84.3% of the nestlings fledging.

### Eastern Bluebirds Nest Over Water

The first of 12 nestings of Eastern Bluebirds above water occurred in 1983 when all five eggs matured to fledge. No bluebirds nested above water in 1984 and two nesting attempts, possibly by the same pair, failed in 1985. One nest was usurped by House Sparrows on 2 July after the second bluebird egg was laid. I used a Huber sparrow trap (Huber 1982) to remove the sparrows permanently. Bluebirds renested

in another skating pond box only to have their first egg thrown out by a House Wren on 19 July. The box was within 20 yards (18.3 m) of brush which allowed the wren easy access to the nest box. Tree Swallow neighbors had fledged all of their young from the pond by 17 June, leaving it unguarded by the otherwise diligent swallows who normally chase pesky wrens from the pond area (Tuttle 1990).

The 1985 experiences proved that bluebirds nesting above water are not immune from interspecific competition since their most common enemies, House Sparrows and House Wrens, also nest above water. Traditional management practices must not be abandoned once boxes are mounted in water.

In 1987, a family of four nestlings died after a broad spectrum herbicide was used to trim around the skating pond parking lot. I became aware of its application when strips of green vegetation started to turn brown. At that time, I forecast the death of the nestlings at eight to ten days since fellow Ohio bluebird, Reid Caldwell, and I had witnessed this phenomenon on our trails before. Nestlings frequently failed to achieve warm-bloodedness at the proper stage of nestling development if an herbicide was applied to their parents' feeding grounds. The DSP pond nestlings died at eight days, as I had predicted.

Later that year, the park management banned the use of all herbicide trimmers after I presented data to support probable cause and effect relationships linking herbicide applications and nesting failures throughout the park. I normally avoid herbicide controversies since I believe that many will be banned once their negative effects on HUMAN health are documented. For now, I hope the recipe for this chemical has been reformulated to rob the Grim Reaper of another round-up of bluebird nestlings.

The next bluebird failure took place during the infamous drought of 1988. The drought alone should be reason enough for three nestlings to die on 8 July, but things are usually not so

Table 1. The Numerical and Reproductive History of Two Bluebird Trails Located in Water, Delaware County Ohio

Year	Pond Trails	Number of Boxes	Successful Nests: Nest Attempts		Number Fledged	
			TRES*	EABL**	TRES*	EABL**
1982	DSP	2	1:2	—	3	—
1983	DSP	3	3:3	1:1	12	5
1984	DSP	4	2:3	—	10	—
1985	DSP	4	3:5	0:2	16	0
1986	Methesco	2	0:1	—	0	—
	DSP	4	3:3	1:1	12	4
1987	Methesco	3	1:1	—	6	—
	DSP	4	4:4	0:1	21	0
1988	Methesco	4	2:4	1:1	11	4
	DSP	5	5:5	—	16	—
1989	Methesco	5	2:2	1:2	12	3
	DSP	5	5:5	1:1	19	5
1990	Methesco	5	7:8	—	33	—
	DSP	5	4:7	1:1	19	4
	Methesco	5	1:2	1:2	2	3
		Total	43:55	7:12	192	28
% of Nest Attempts That Succeeded			78.2%	58.3%		

\* TRES—Tree Swallow

\*\* EABL—Eastern Bluebird

simple on the bluebird trail. The pond at Methesco developed into a godsend for bluebirds during the drought. By mid-June, the central Ohio landscape had been baked during a summer of 43 days hotter than 90° F. (32° C), five days hotter than 100° F. (38° C) (Tuttle 1989). By July, insects were absent to very rare in fields and lawns, the normal feeding table for bluebirds. Water from the Methesco pond soaked into the bank, recharged the parched soil, and supported a strip of green grass ten or more feet (3 m) wide around the pond. This green oasis supported populations of invertebrates which became food for the birds, including two families of bluebirds that were nesting in pond boxes 67 yards (61 m) apart. Only one day separated the initial egg dates of the two clutches (17 and 18 June).

Two synchronized nests of bluebirds only 67 yards apart would doom one family during normal summers, let alone a drought. The 1988 drought caused a depletion of prey so that competition increased between the blue-

bird pairs. I was not surprised to find a family of dead nestlings on 8 July. (The other box fledged three after losing one nestling which died at six days.)

Another bluebird clutch was evicted by sparrows during the first week of May 1990. After I removed the sparrows, the bluebirds nested successfully.

Nesting above water affects neither hatching nor nestling survival rates. The seven bluebird families that were successful had very respectable reproduction rates for their eggs (N = 31): 93.5% hatched, 90.3% fledged, and 96.6% of the nestlings fledged. Reproduction rates for bluebirds and swallows that have nested over water show that water mounts pose no unique problems such as overheating from reflected light, etc.

Do bluebirds have a preference as to when they use boxes mounted over water? Three of the twelve clutches were started between 17 April and 16 May, within the first egg laying period in Ohio (Tuttle 1990). The remaining





Nest box no. 8, mounted in the pond on the campus of the Methodist Theological School of Ohio is the favorite pond box of the bluebirds; they have nested in it three times in six years. The earth dam and cement spillway can be seen in the background.

nine clutches were started between 9 June and 4 July, within the second egg laying period. I hesitate to claim that bluebirds use pond boxes for the second nesting period 75% (9/12) of the time because three nestings during the second egg laying period were most likely second attempts by pairs that had failed earlier during the same egg laying period. Such an explanation reduces the sample size from 12 to 9; therefore, we must wait for data from future seasons to reveal the answer to this question.

### Conclusions and Discussion

The fact that bluebirds successfully nest above water is the most important conclusion of this study. Bluebird conservationists have a new option when it comes to box placement; they can mount nest boxes over water. Mower collisions, vandalism and harmful inspections by the curious, can be avoided by placing nest boxes in water. Only bodies of water with stable water depths should be considered for a pond trial; the histories of ponds should be researched for floods before boxes are committed. Keep in mind that flash floods can erase all of your precautionary efforts.

I installed pond boxes to attract Tree Swallows and was pleased when bluebirds nested. No nest usurpations between bluebirds and swallows were recorded during the nine year study of pond boxes. This very important statistic represents the close examination of

67 nesting attempts, 55 by Tree Swallows, and 12 by Eastern Bluebirds. Whether or not your conservation efforts are within the breeding range of Tree Swallows, you can mount boxes in water to attract bluebirds. Traditional management techniques must be practiced, however, since most of the bluebirds' problems, such as House Sparrows, House Wrens, and blowfly infestations, can also be found in boxes above water. ■

### Acknowledgements

I thank the Methodist Theological School of Ohio for their willingness to share their beautiful campus with bluebirds, swallows, and one bald wader. As always, I thank the Ohio Department of Resources and the management of Delaware State Park for the privilege which led to this study.

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311 West Central Ave.  
Delaware, OH 43015

# QUESTION CORNER

Lawrence Zeleny

Because of wren competition I installed a second nesting box in my yard about 60 feet from the first. To my surprise, bluebirds nested in both during the same period of time. I thought they did not nest that close unless one male had two females which was not the case here.

Laurette Bentrewicz  
Clinton, Connecticut

During the nesting season the male bluebird seems to "stake out" a piece of territory surrounding his and his mate's chosen nesting site and will not permit any other bluebirds to enter this territory until after his family has been raised. This system usually prevents bluebirds from nesting closer than about 100 yards from other nesting bluebirds. The purpose of the system is presumably to prevent unnecessary competition for the needed supply of the preferred insects to feed the anticipated nestlings.

Sometimes, however, two pairs of bluebirds will nest much closer together than 100 yards, probably because of the location of suitable cavities or boxes for nesting. In such cases the feeding territories defended by the two male birds will extend in different directions and will not overlap. If one of the bluebirds wanders into the territory claimed by the other pair, it will likely be challenged and driven out.

Territorial claims for nesting locations rarely occur between bluebirds and other species. Bluebirds and Tree Swallows, for example, will often nest peacefully in nesting boxes only a few feet apart since they do not compete for the same food supply. The swallows eat mostly flying insects taken on the wing while bluebirds obtain most of their food from the ground.



Our neighbors told us that an interesting nesting box improvement has been used successfully in the St. Lawrence River area of New York State. A hole was cut in the top of a bluebird box and screening installed. Do bluebirds prefer a wet nest and does this idea have any merit?

William D. Stemples  
Binghamton, New York

Experiments were conducted several years ago with open-top bluebird nesting boxes similar to those mentioned in your letter. Initially there was some evidence that, although bluebirds accepted these boxes readily, House Sparrows tended to dislike them. Later work, however, indicated that this advantage was very small or nonexistent.

It is doubtful that bluebirds prefer wet nests, although it is true that under extremely arid conditions their eggs in dry nests may lose enough moisture during incubation to render them nonviable. This, however, is rarely a serious problem.

Experience has shown that wet bluebird nests are more likely than dry nests to be infested with the larvae of the bluebird parasitic blowfly (*Protophthora sialia*) which is often a serious pest. Another disadvantage of the open-top box is that during periods of very heavy rain they may become flooded if the drainage holes become clogged.

Generally, we do not recommend open-top nesting boxes although they may have some advantages under some circumstances. ■

# Avian Predation of Bluebird Nestlings

Myrna Pearman

In *Sialia* 13:22, Mr. Kent G. Hanert noted, in Question Corner, that his son had observed a crow or raven pulling baby bluebirds from a nest box.

At our Mountain Bluebird sanctuary, the Ellis Bird Farm, we have experienced a similar problem. Our culprits, Black-billed Magpies, also belong to the crow family and are one of the most serious avian predators in Alberta.

During the 1988 breeding season, one magpie learned how to pluck nestlings from a nest box. Within weeks this behavior was learned by an unknown number of other magpies and the resulting predation of both Tree Swallow and bluebird nestlings was quite heavy.

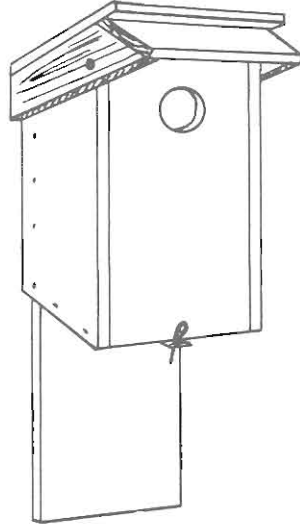
Since magpies are so intelligent and wary, direct observations of their nest box raids were infrequent, although several people saw them near or on top of the nest boxes. Winnie Ellis watched in horror one morning as a magpie, balancing on the front latch of a box, reached in and deftly plucked out an entire clutch of newly-hatched Tree Swallows—all within a matter of minutes.

It was soon obvious that the boxes most heavily predated were the shallow front-opening ones (Fig. 1) designed and constructed by Charlie Ellis (5.5 inches [14.0 cm] from bottom of entrance hole to floor). All of his boxes had a front latch; some also had perches. The magpies would either sit on the perch or balance on the latch and reach into the entrance hole.

Although shallow boxes suffered the most, some loss also occurred in deeper boxes or when the nestlings were nine days or older. This led us to believe that the magpies would sometimes wait until the nestlings were large enough to come up to the entrance hole for food. When the little ones would get within reach, they would be plucked out, carried off, and eaten.

The breeding season was well un-

Figure 1. Nest Box Design by Charlie Ellis.



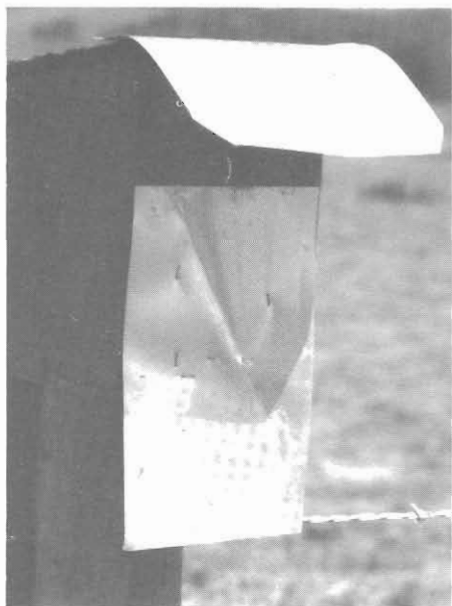
derway when we first recognized the magpie problem, so the only feasible option was to predator-proof the nest boxes in the field. Since raccoons are very rare in this area, none of our boxes are equipped with predator guards. After some discussion about the merits of adding predator guards, we felt that they, while effectively preventing the magpies from accessing the smaller nestlings, would not likely prevent them from plucking older babies out, especially those old enough to reach up to or out of the entrance hole.

Our magpie-proofing started with the removal of both perches and front latches. The latch was replaced by drilling a hole through the side wall into the front panel and inserting a double-headed nail. We then took printing press plates (thin aluminum sheets available at most printers), cut them into small rectangular pieces, and stapled them on the fronts and lids of the boxes. The front plate prevented even the most dexterous magpie from clinging to the face of the box, while the roof plate made it impossible for them to perch anywhere near the peak

of the roof. This retrofitting successfully prevented any further predation, and neither the bluebirds nor swallows were discouraged from using such space age-looking boxes.

In 1992, we plan to replace the Ellis boxes with top-opening boxes equipped with extra large lids. We are confident that this should prevent a repeat of what turned out to be a frustrating and serious predation problem. We just hope that the magpies don't learn a trick that at least one Swainson's Hawk performed last summer on another Alberta bluebird trail, that is the art of capturing baby bluebirds moments after they fledge. The hawk simply waited on a fence post adjacent to the nest box, then swooped down and snatched each fledgling, in mid-air, as it attempted to make its maiden voyage to safety. ■

Ellis Bird Farm Ltd.  
Box 2980  
Lacombe, Alberta  
Canada T0C 1S0



Photograph by Myrna Pearman

Sheet metal protection of bluebird nest boxes used at Ellis Bird Farm to prevent Black-billed Magpie predation.

## Cement Bluebird House

We have had wooden bluebird houses up for a few years but have not had much luck with them. We read about cement block houses that someone used. Bluebirds have nested two years in a row since we put up our cement block condos. Last year we had two broods: four the first time and five the second. The photograph shows one of the young birds looking out at the big world.

A cement bluebird house is easy to assemble. I use a treated pole for support, a cement block with a 1 1/2 inch hole in the center, a leftover cedar shake shingle for the floor and another for the roof, and a brick to keep the roof on. It is very easy to clean. Remove brick, shingle, and cement block. It can all be rinsed and reassembled for the next use.—William L. Lowe, Jr., Rt. 1, Box 1580, Callahan, FL 32011. ■



# Verified Fourth Nesting by Pair of Eastern Bluebirds

Harry Krueger

Since 1981 I have been studying nonmigratory Eastern Bluebirds (*Sialia sialis*) in the northeast Texas area. The study site contains old fields, pastures and forest edge. Sixty-five nest boxes are located in this habitat in parts of Marion, Harrison and Upshur counties. Nest box no. 45, reported here is the same nest box reported in *Sialia* 12:43-45. This box is located at the east end of a cow pasture in Marion County.

The following entries from my field notes describe the sequence of events during the breeding season of 1990. Several entries have been omitted to simplify this report.

## History of Nest Box No. 45

1. 14 April 1990—Adult male and female captured and *color* banded. Male no. 55774 had been previously banded with a U.S. Fish and Wildlife Service aluminum band as a nestling in nest box no. 47, 24 April 1989. He was now in the After Hatch Year (AHY) category. Female no. 55947 previously banded with a U.S. Fish and Wildlife Service aluminum band as a nestling in nest box no. 33, 15 June 1989. She was now AHY.

### First Clutch

This pair had four eggs, one hatched, three infertile eggs. One nestling was banded and fledged successfully.

2. 1 June 1990—Same male no. 74 and female no. 47 recaptured and identified.

### Second Clutch

Five eggs laid, two hatched, three infertile eggs. Two nestlings were banded and fledged successfully.

3. 12 July 1990—Same male no. 74 and female no. 47 recaptured and identified.

### Third Clutch

Five eggs laid, one hatched, four infertile eggs. One nestling was banded and fledged successfully. Note: third nest was built over second nest.

4. 22 August 1990—Same male no. 74 and female no. 47 recaptured and identified.

### Fourth Clutch

Four eggs laid, four hatched, were banded and fledged successfully.

Note: fourth nest was built over third and second nests.

It is interesting to note that male no. 74 was born in nest box no. 47 (which had been moved to a new location in 1988) that was approximately 2 miles (3.2 km) southeast of nest box no. 45. Generally, female birds disperse farther from their birthplace than do males before settling (Welty, J.C. and Baptista, L. 1988. *The Life of Birds*. 4th ed., Saunders College Pub., N.Y.); in this instance, however, the male had moved farther from his birthplace than the female, the opposite of studies based on marked populations.

Another factor in the history of the fourth nesting was that on 9 August 1990 a hired man used a brush hog near nest box no. 45 for approximately one hour. When he finished, I monitored the four eggs and found that they were barely warm. In spite of this disturbance, all four eggs hatched.

The building of a new nest over a previous nest probably hastened the laying of each new clutch. The female added only a small amount of nesting material to complete each successive nest. When there are only one or two nestlings per hatch, they do not compress the nest very much, so it takes very little nesting material to refurbish a new nest.

## History of Nestling Banding from Fourth Nest

29 August 1990, the four nestlings were 13 days old. At 7:00 a.m., I monitored nest box no. 45 in order to band the four nestlings. There was not enough feather development to determine the sex of each nestling. The primary feathers were completely en-

cased in the feather sheaths. By 7:00 p.m., 30 August 1990, the primary feathers had emerged and it was easy to identify two males and two females—a matter of 36 hours from encased feather to complete primary feather development. The four nestlings were then banded.

On 3 September 1990, the four nestlings were still in the nest. They were now 18 days old. The female bird was on a nearby utility wire making the usual vocalizations of concern. These are the same sounds all adult bluebirds make when I am at the nest box and nestlings are in the box.

4 September 1990, 7:30 a.m. Three nestling remained in the nest, one nestling had already fledged. When monitoring at 5:30 p.m. all nestling had

left the box. They were 19 days old when they fledged. I removed the nest and wire-brushed the interior walls. The box was now ready for the 1991 season.

This is the first verified fourth nesting on my trail in ten years. During the 1990 breeding season, I had more nests built over existing nests than in the previous nine years and more third nestings by the *same* parents (22), than ever before.

Rt. 2, Box OR28  
Ore City, Texas 75683

**Note:** On 11 April 1991 I captured the male and female bluebird in nest box no 45. It was the *same* pair described in the above article. ■

## NORTH AMERICAN BLUEBIRD SOCIETY RESEARCH GRANTS

The North American Bluebird Society announces the ninth 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 1991; decisions will be announced by 15 January 1992.

## FOURTEENTH ANNUAL MEETING OF THE NORTH AMERICAN BLUEBIRD SOCIETY

The 14th annual meeting of the North American Bluebird Society will be held in Bermuda, October 11-13, 1991, at the Bermuda Biological Station for Research, Inc. Reservation materials are enclosed with this issue.

*The Bermuda Bluebird Society is the host.*

# New PVC House Attracts Bluebirds, Not Sparrows

Steven L. Gilbertson

*Note: In the following article, metric equivalents are given following the first mention only.*

**F**or several decades bluebirders have been experimenting with various box designs to meet the established requisites for success. They want a box that is attractive to bluebirds, but which will prevent most kinds of predation and sparrow usurpation. It must also mitigate the extremes of weather, yet be inexpensive, simple to erect, and easy to monitor. Minor alterations in design and mounting techniques may still come, but two years of extensive field testing of a small PVC box mounted on conduit and rebar have shown very promising results for Eastern Bluebirds here in east-central Minnesota.

The body of the box is an 8 in. (20 cm) piece of 4 in. (10.1 cm) PVC pipe, provided with a 1 1/2 in. (3.8 cm) entrance hole and two small vent holes. The ideal distance from the bottom of the entrance hole to the floor is 4 1/2 in. (11.4 cm). The box is removed by gentle squeezing of the top opposite the pins of the small brace underneath the 8 x 8 in. (20.3 cm) wooden roof. Bluebirds have fledged successfully from 27 of 67 of these boxes. Fifteen swallow broods and seven wren broods have also been fledged. House Sparrows attracted to wood boxes have avoided all but two of the 4 1/2 in. deep boxes. The sparrows did not make a second attempt when their nest and first eggs were removed; they did not usurp boxes already occupied by bluebirds. There were no nestling deaths in the extreme drought and heat in the summer of 1989 nor in the continuous cold rains of May 1990.

I experimented with various depths between the bottom of the entrance hole and the top of the floor and determined that for my trials, 4 1/2 inches was ideal. At 4 inches I had some wren sticks, only occasionally bluebirds, and no sparrows. At 4 1/2 inches wrens, Tree Swallows, chickadees and bluebirds all nested successfully, with sparrows trying only twice. Bluebirds seemed to like a 5 inch (12.6 cm) depth also, but sparrows became more interested, and Tree Swallows, who were weak in the early spring, before mid-May had trouble getting out. (They had no trouble exiting the 4 1/2 inch depth at any time.) At more than 5 1/2 inches (13.9 cm) sparrows became more of a problem, Tree Swallows were more likely to be trapped, and bluebird use decreased.

## Construction

### Materials:

All materials are available at building or farm supply stores. A 10 foot (3 m) length of 1/2 in. (1.3 cm) (i.d.) metal electrical conduit costs under \$2.00 here and provides three 3 ft. 4 in. lengths of mounting top-posts; a 10 foot length of 1/2 in. (o.d.) concrete reinforcing bar ("rebar") will provide ground posts for two posts, and also costs around \$2.00. A 10 foot length of 4 in. solid thin-wall PVC pipe selling for under \$5.00 will make about 14 8-inch boxes. An eight foot (2.4 m) piece of

1x8 cedar is around \$4.50; an eight foot piece of 1x4 cedar is under \$2.00; two eight-foot lengths of 1x2 are \$1.00. A 1/2 in. conduit clamp costs \$0.50. Some 1 1/4-2 in. (3.2-5.1 cm) sheet-rock screws, 10d nails and a small amount of brown oil stain round out the essentials. Each box with mounts costs about \$3.00. Tools required are a drill and bits, screwdriver, wood saw, hacksaw, jigsaw, 1 1/2 in. hole saw, and a hammer.

### Body:

One end of the PVC section will be bell-shaped (to allow one section to

slip inside another). With a jigsaw and fairly fine blade, make a *straight* 2 in. (5.1 cm) cut off the larger end. With a pencil and a tape measure, mark off 8 in. intervals on the remaining pipe. Use the two inch piece to mark straight cuts around the circumference for each 8 in. piece. (If your edges are not straight, some grinding or sanding may be needed to keep the top of the body flush with the roof and thus water resistant. The roof brace will prevent moisture from entering the back.) It will probably be easier to drill the 1 1/2 in. entrance holes at this time, 3/4 in. (1.9 cm) below the tops (1 1/2 in. to center of hole). The 3/8 in. (0.9 cm) vent holes on either side 1 in. (2.5 cm) below the roof (1-1/8 in (2.7 cm) to center of hole) may be drilled now or later. *PVC drills and saws easily, but it must not be forced or it will crack without warning.*

#### *Floor:*

Recess the floor 1/4 in. (0.6 cm) up from the bottom of the body, resulting in a 4 1/2 in. depth from the bottom of the entrance hole to the floor. Construction adhesive PL200, or liquid nails, will secure the floor, or it can be nailed or screwed from the sides.

#### *Roof:*

Cut an 8 in. piece of cedar 1x8, actually 3/4 in. x 7 1/2 in. (1.9 cm x 19.1 cm) cedar board, and a 7 1/2 in. piece of 1x2 for the back brace. The brace is flush with the back edge of the roof. With the roof upside-down, push the upside-down body over the roof centering it against the roof brace. Drill a 7/64 in. (0.3 cm) hole through the brace and body, enlarging the body hole to 1/8 in. Hammer a 10d finish nail entirely through the brace plus 1/4 in. Bend off the head end flush with the back of the roof. A simple no-spin pin for the front is made by snipping the head off another 10d finishing nail. Bend this end back nearly to itself and hammer in from the top so that it comes through 4 in. from roof brace. Clamp a vice grip onto nail against roof under-

side and hammer remainder of nail toward rear until nearly parallel with the roof. Snip off all but 1/4 in. Place body on rear pin, squeeze and rest body against front pin. Mark and drill 1/8 in. hole in body front with house right side up. Both pins will be slightly adjustable.

#### *Painting:*

I achieve a "birch" look by using brown solid color *oil* stain applied *sparingly* with a 1 1/2 in. trim paint brush, applying gentle pressure as I turn the body with one hand. As small brown lines appear, the brush is moved to a new area so it doesn't become too dark. Coat inside liberally, as a natural cavity is dark. (The bottom of the floor can be painted or covered with the indoor/outdoor carpet.) Brown spray paint can also be used, wiping off with horizontal motions while wet. No health hazards of any kind to nestlings or adults have been apparent when the box was well dried prior to use.

#### *Mounting:*

The combination of 1/2 in. rebar and 1/2 in. greased conduit pipe is an economical and practical mount where no previous posts exist. Cut the 10 ft conduit into thirds with a hacksaw. Flatten one end for about two inches and drill two 1/8 in. holes, the first 1/4 in. from the end, the second 1 in. from the end and use two 1 1/2 in. sheetrock screws to attach to the roof and back brace. The rebar is driven into the ground two feet and the conduit shoved down over the rebar and secured with a 1/2 in. conduit connector. The bottom bolt of the two supplied with the connector should be replaced by one at least 1/2 in. long so as to secure it to the rebar. The house will be about 5 1/2 ft above the ground and will not turn.

If you wish to use an existing wooden post or fenceline instead of rebar, the conduit should have 1/8 in. or 3/16 in. holes at the free end drilled approximately six inches apart to accept sheetrock screws or wire. Screw the conduit to wood posts so

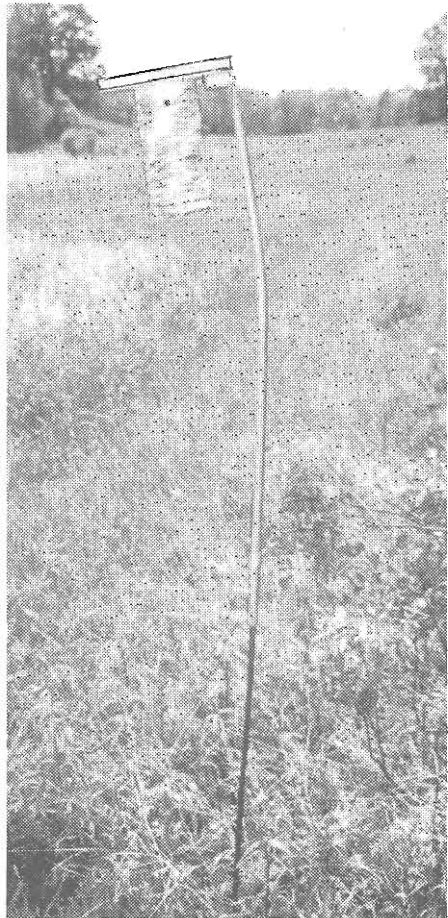


the house is as high as reachable, directly over the wood post. If using steel T-posts along a fence line, gently wedge the fencing wire away from the post, slip the conduit in, and wire it through the holes with doubled 17-gauge wire to the post to prevent turning. Doubled wire does not break readily when twisted.

By itself, this house design is not resistant to mammalian predation. Initially I felt that 1/2 in. conduit was raccoon-proof. While it is a challenge to them, they did on two occasions manipulate it. One-half ounce of non-fibered wheel-bearing grease should be applied to the 3 or 4 in. conduit section, no matter what the bottom mount may be. There has been no raccoon or cat predation with this procedure. One advantage of conduit is that it can easily be bent slightly forward and/or down even after the box is mounted. The total cost of box and mount should be about \$3.00. Obviously, it is extremely easy to move these boxes to different locations.

### Summary

The literature indicates that House Sparrows are discouraged by shallow boxes, restricted floor space, and sometimes low houses, though low boxes are definitely more predator-prone. Zeleny (1983) found bluebirds nested successfully in plastic jugs though they had a distinct preference for wooden boxes. House Sparrows, on the other hand, seemed to find the jugs unacceptable and did not interfere with bluebirds that did use them, even in sparrow-infested areas. Kridler (1988) experimented with six-inch and four-inch PVC pipe with the floor-to-hole distance 5 in. to 9 in. (22.9 cm) and found sparrows apparently disliked the slick outside surface and small inner dimensions. Theisinger (1984) found that increased depth attracted more House Sparrows, but by reducing the depth in 3 1/4 x 3 1/4 in. (8.26 cm) boxes the sparrows were discouraged. Baxter (1982) found that shallow boxes resulted in surprisingly successful bluebird production while discouraging

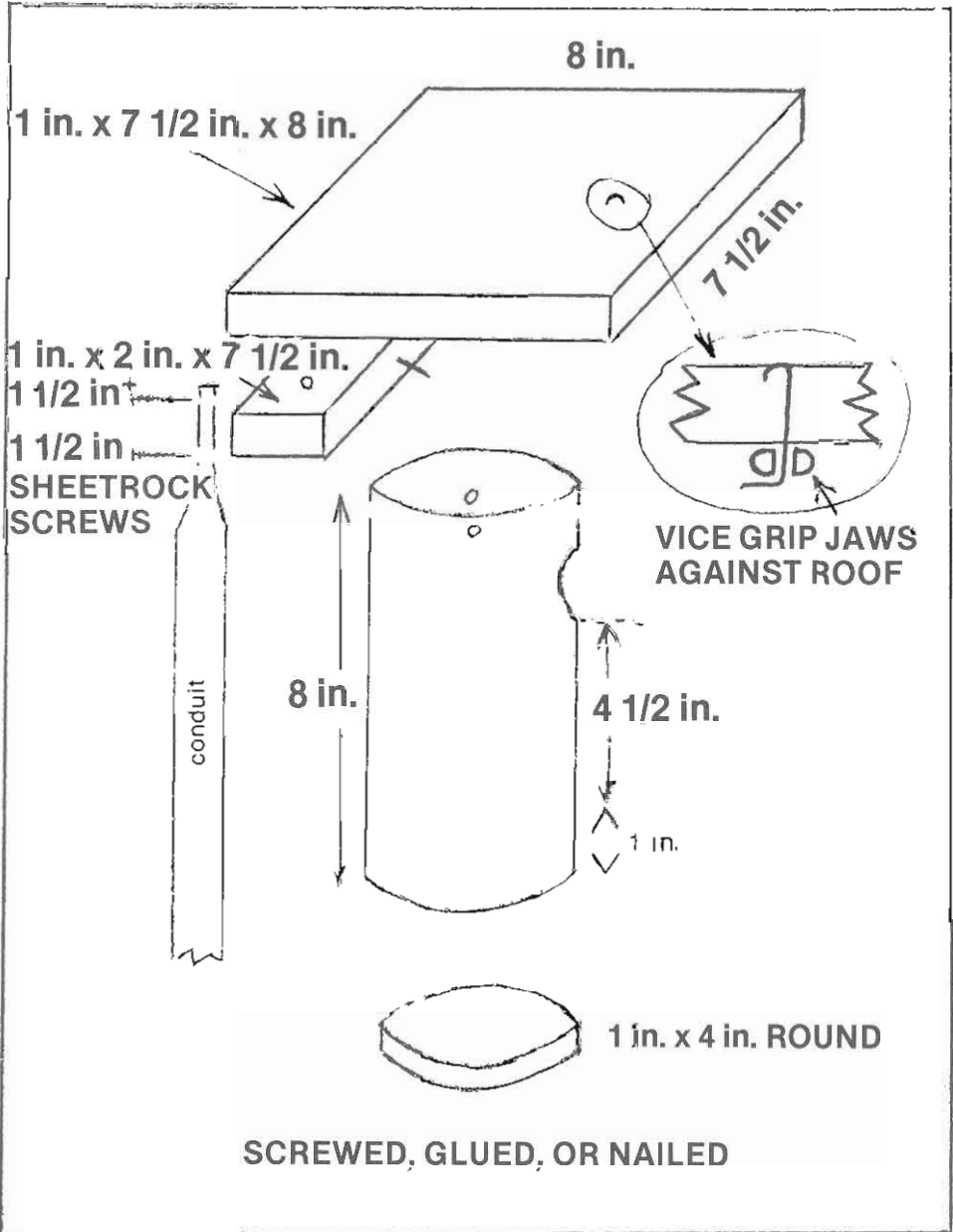


Photograph shows method of mounting PVC house using a combination of rebar and greased conduit pipe.

House Sparrows. He had no sparrow problems with a depth of 3 1/2 in. (8.9 cm) to 4 in. Tuttle and Caldwell (1985) found that swaying of sign-mounted nesting boxes was not a deterrent to successful bluebird nestings.

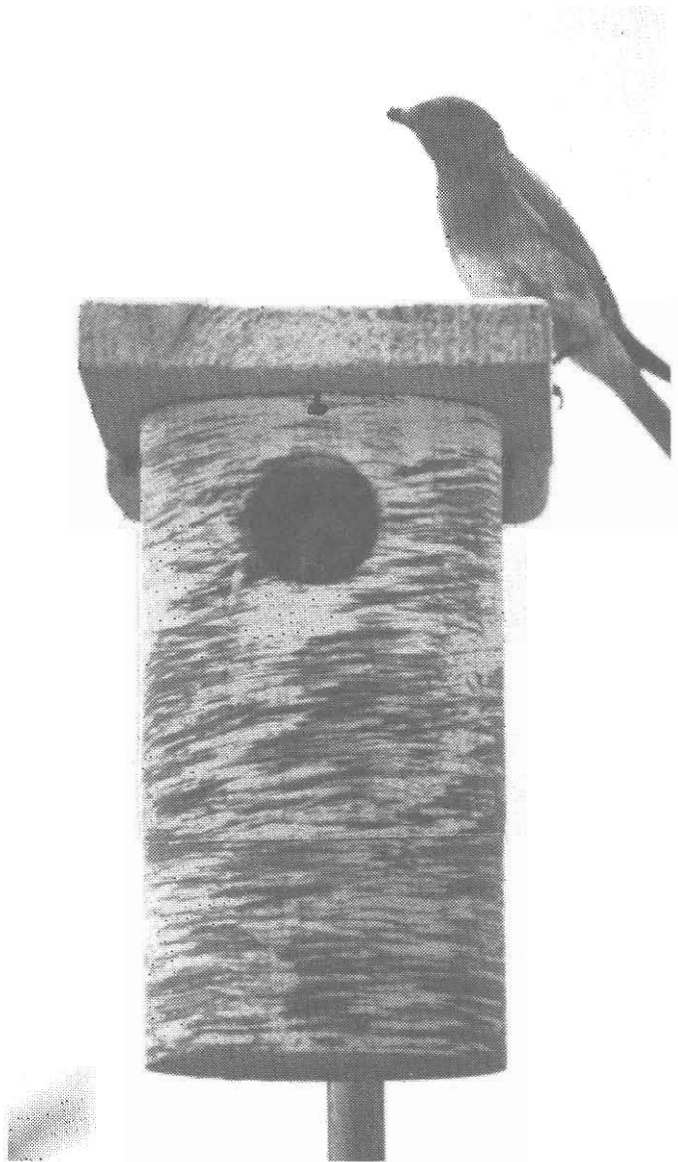
Two years of successful field trials of a conduit-mounted 4 in. PVC house with a 4 1/2 in. floor-to-hole depth, seem to reinforce previous research while presenting a new and relatively inexpensive design. There is room for a lot more experimenting on different variations of this bluebird house. I would appreciate other bluebird trail operators trying this design and sharing their opinions.

Figure 1. Construction Diagram for PVC House.



Metric Equivalents

- 1 in. (2.5 cm)
- 1 1/2 in. (3.8 cm)
- 2 in. (5.1 cm)
- 4 in. (10.2 cm)
- 4 1/2 in. (11.4 cm)
- 7 1/2 in. (19.1 cm)
- 8 in. (20.3 cm)



Photograph by Steven L. Gilbertson

Steve Gilbertson's PVC house with bluebird perched atop it. The exterior has been finished to resemble birch.

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3521 135th Lane N.W.  
Andover, MN 55304

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#### Acknowledgement

I would like to thank Dorene H. Scriven for her continuing support and assistance. She has encouraged my efforts from the beginning for which I am most grateful.

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# My Tests of Raccoon Guards

Karl E. Curtis

The problem of raccoon predation at nest boxes has been a concern of mine for some time. Like many bluebirders, I have used various devices to deter raccoons without knowing their effectiveness. I, personally, do not like to rely on entrance hole guards as I believe that a raccoon climbing around on a box may cause desertion. I do not want raccoons on my boxes.

In July of 1990 I put cat food and water in my back yard. In four days raccoons were coming to it. I then put up some bluebird boxes on pipes and posts and put dog and cat food in them. No attempt was made to make it difficult for the raccoons to get the food out of the boxes once they got up to the boxes. I even raised the floors of the boxes.

My goal was to condition the raccoons to take food from boxes. I would then place guards on the pipes and posts to see if the raccoons could climb past the guards. I have long believed that a determined raccoon, conditioned to raid boxes, can be a real problem on a bluebird trail.

My volunteers for this experiment were two males: one a very dark animal of medium size, the other a silver-colored larger raccoon. I put an amber light up so I could sit quietly by a window and watch as they demonstrated their skill at raiding boxes. I watched these raccoons make visits on 24 nights during a 46-day period from 29 July through 12 September. Evidence suggests that they came on a total of 35 nights.

Not surprisingly, a box on a plain cedar post was readily and easily raided. I then placed a 5 inch (12.7 cm) diameter X 24 inch (61.0 cm) long galvanized sheet metal pipe guard around the cedar post just below the box. The bottom of the guard was 32 inches (81.3 cm) above the ground. Both raccoons climbed this easily by hugging the sheet metal. The cedar post with a 7 inch (17.8 cm) diameter x 30 inch (7.6 cm) long galvanized sheet metal

pipe with the bottom of the sheet metal 26 inches (66.0 cm) above the ground also was climbed with little difficulty.

The raccoons had little trouble climbing to a box on a 1 1/2 inch (3.8 cm) outside diameter (o.d.) galvanized water pipe (unguarded).

Another box was on a 3/4 inch (1.9 cm) o.d. galvanized water pipe (bottom of the box 42 inches (106.7 cm) above the ground). The raccoons climbed this easily when unguarded. After hanging a piece of black plastic pipe 4 1/2 inch (11.4 cm) o.d. X 16 inch (40.6 cm) long below this box, it was raided only twice in several nights.

Another box was on a galvanized steel fence post with the bottom of the box 5 feet (1.5 m) above the ground. Unguarded, this box was infrequently raided. When I hung a 6 inch (15.2 cm) diameter X 24 inch (61.0 cm) long galvanized sheet metal pipe (bottom end of guard 33 inches (83.8 cm) above ground) below the box, the raccoons did not raid it again.

I had planned to do more testing. In particular I wanted to watch a raccoon react to grease on a pipe. Unfortunately, the raccoons simply stopped coming around 12 September, probably due to shifts in natural food sources.

It was very apparent that the raccoons most readily climbed wood. Though they could and did climb smooth metal pipes, they did so more reluctantly and cautiously. The steel post with a sheet metal pipe guard seems to be raccoon-proof, although I never saw a coon actually attempt to climb it. The guard should be hung loosely as raccoons dislike anything that feels unstable when they attempt to climb it. Although the plastic pipe guard failed twice and cannot be labeled 'coon-proof, it appears to offer some deterrence. Without fail, the raccoons would go to the boxes offering the least resistance. They would often

(Continued on page 103)

# PLANTINGS FOR BLUEBIRDS AND OTHER WILDLIFE

## A Guide to Bluebird Plantings

Karen Blackburn

Since all of the major food plants for bluebirds have been individually featured in previous issues of *Sialia*, this issue marks the conclusion of the "Plantings for Bluebirds" series. For the convenience of NABS members, I have compiled the following "Guide to Bluebird Plantings." It is my hope that this chart will serve as a quick and handy reference for those who wish to select plants to improve wildlife habitat. It should be noted, however, that this chart is intended only as a general guide, and further reading is recommended prior to purchasing plants. Selections of plantings should always be based on the plant's specific cultural requirements and whether or not local site conditions can meet these requirements.

In making selections, it is important to bear in mind that VARIETY is the key to attracting birds. A wildlife area will invite many more species if it includes a variety of habitats such as open lawns or fields that merge into natural tangles of weeds and vines, or an oasis of fruiting shrubs, bordering a wooded area. The goal should be to achieve a layered effect with transitional areas of weeds, vines or shrubs between open lawns and woodlands. Variety should also be evident in the types of plants that are used. Ideally, these should include a mix of deciduous and evergreen trees and shrubs to provide food and shelter for birds and other wildlife. In developing a garden for wildlife, it is advisable to give attention to the fruiting periods of plants so an effort can be made to have a year-round supply of natural foods available to wildlife. As has been noted many times in previous "Plantings" articles, Eastern Bluebirds, which depend more heavily upon fruits than do the Mountain and Western Bluebirds, may perish during the winter or early spring months if fruit is unavailable. Therefore, it is important, particularly in areas that receive snowfall, to make available an abundance of plants which possess fruits that persist through the winter months. Among the best plants for this purpose are sumacs, bayberries, viburnums, and American Holly. Although some of these plants, like the sumacs, do not necessarily provide "preferred" food for bluebirds, they, nevertheless, offer life-sustaining food when little else is available.

Finally, when planning a wildlife area, thought should always be given to preserving as many native plants as possible on the property. Even the much-maligned Poison Ivy has its place in an out-of-the-way corner of the property, and, as mentioned in a previous article, there are many weeds, such as Pokeweed, that are well worth cultivating for wildlife.

In closing this final "Plantings" article, I would like to take this opportunity to say that I have enjoyed serving NABS in this capacity over the years and have also enjoyed "meeting" so many members through the mail. Your comments and observations concerning the use of plants by wildlife remain welcome for the "Bird in the Bush" column. I thank you for your interest in these columns and wish all of you "Bluebirds of Happiness."

## Key

\* Non-native plant. All other plants listed are native to North America.

Fruiting Period: S—Summer; F—Fall; W—Fruits persist through winter.

Bluebird Use: P—Preferred Food; F—Fair Food; E—Emergency food used during late winter or early spring. (Survival food when little else is available); N—Nesting

Habit: D—Deciduous; E—Evergreen; S—Shrub; T—Tree; ST—Can occur as either shrub or tree; SW—Shrubby Weed; SV—Can occur as either shrub or vine; V—Vine

Height: Heights given are optimum height at maturity under best conditions. Following are metric equivalents of heights listed in the chart: 1 ft (0.3 m), 3 ft (0.9 m), 5 ft (1.5 m), 7 ft (2.1 m), 8 ft (2.4 m), 10 ft (3.0 m), 12 ft (3.7 m), 15 ft (4.6 m), 20 ft (6.1 m), 25 ft (7.6 m), 30 ft (9.1 m), 50 ft (15.2 m), 70 ft (21.3 m), 100 ft (30.5 m).

Botanical Name	Common Name	Fruiting Period	Blue-bird Use	Habit and Height	Cold Hardiness Zone	Comments
<i>Amelanchier laevis</i>	Smooth Serviceberry	S	F	DT 30'	5	Many related species. At least 35 species of birds use <i>Amelanchier</i> species within their ranges.
<i>Ampelopsis cordata</i>	Heartleaf Ampelopsis	F	F	DV	5	Resembles grape vines.
<i>Aralia spinosa</i>	Devil's Walkingstick	F	F	DST 15'	6	Coarsely textured thorny plant. Useful for natural areas.
<i>Aronia arbutifolia</i>	Red Chokeberry	FW	FE	DS 8'	5	Prefers moist sites.
<i>Celastrus scandens</i>	American Bittersweet	FW	FE	DV	2	Spreads rapidly—may be undesirable on some sites. Ornamental vine. Male and female plants necessary.
<i>Celtis occidentalis</i>	Common Hackberry	F	P	DT 50'	5	Several related species are also attractive to birds.
<i>Cornus alternifolia</i>	Alternate-leaf Dogwood	F	P	DST 30'	4	Ornamental value. Tolerates sun or shade. Fruits used by at least 35 species of birds.
<i>Cornus amomum</i>	Silky Dogwood	F	P	DS 10'	6	Ornamental value. Tolerates poorly drained soils.
<i>Cornus florida</i>	Flowering Dogwood	FW	P	DT to 30'	5	Ornamental value. Fruits attract at least 40 species of birds.
<i>Cornus racemosa</i>	Gray Dogwood	FW	P	DS 10'	5	Forms thickets. Good nesting and protective cover.
<i>Cornus stolonifera</i>	Red-osier Dogwood	SF	P	DS 15'	2	Forms thickets. Good nesting and protective cover.
<i>Elaeagnus angustifolia</i> *	Russian Olive	F	F	DST 20'	2	Drought tolerant. Widely used in West and Southwest.
<i>Elaeagnus umbellata</i> *	Autumn Olive	F	P	DS 15'	4	Drought tolerant. May be invasive, check with County Agent before planting.
<i>Gaylussacia baccata</i>	Black Huckleberry	S	F	DS 3'	2	Useful for sandy or rocky acidic soils. Many related species.
<i>Ilex decidua</i>	Deciduous Holly Possumhaw	FW	FE	DST 30'	7	Native to south eastern states. Male and female plants necessary.
<i>Ilex glabra</i>	Inkberry	FW	FE	ES 10'	4	Thicket forming. Acidic soil. Male and female plants necessary.

Botanical Name	Common Name	Fruit- ing Period	Blue- bird Use	Habit and Height	Cold Hardi- ness Zone	Comments
<i>Ilex opaca</i>	American Holly Christmas Holly	FW	PE	ET 50'	6	One of best winter food sources. Male and female plants necessary. Prefers moist shady sites.
<i>Ilex verticillata</i>	Common Winterberry	FW	FE	DS 15'	4	Prefers moist acidic soils. Male and female plants necessary.
<i>Juniperus virginiana</i>	Eastern Red Cedar	FW	PE	ET 50'	2	Year-round protective cover. Nesting. Many related species ("juni-pers" and "cedars"), all of value to wildlife. Male and female plants necessary.
<i>Lonicera japonica</i> *	Japanese Honeysuckle	FW	FE	V	5	Evergreen in South, tops die back in North. Aggres-sive-invasive, capable of smothering other desirable vegetation.
<i>Lonicera maackii</i> *	Rem Red Honeysuckle	FW	FE	DS 12'	4	Good winter food source for bluebirds.
<i>Malus</i> sp	Apples Crabapples	F	N	DST	Varies with variety	Great variation among varieties. Check suitability for local conditions. Fruits of many varieties attract birds. Old trees with cavi-ties provide desirable nesting for bluebirds.
<i>Morus rubra</i>	Red Mulberry	S	P	DT 70'	6	Fruits attract 40 species of birds. Male and female plants usually required. Related species also attractive to wildlife.
<i>Myrica pensylvanica</i>	Northern Bayberry	FW	PE	OS 8'	2	Excellent for sandy soils, coastal areas. Male and female plants required. Related species also attract wildlife.
<i>Nyssa sylvatica</i>	Black Tupelo	F	P	OT 100'	5	Male and female plants required. Prefers moist sites.
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	FW	PE	DV	4	Ornamental vine. Drought tolerant. Attracts 40 species of birds.
<i>Phoradendron serotinum</i>	Mistletoe	FW	P	ES 1'	6	A semi-parasitic plant growing on trees. Male and female plants separate. Related species also attract wildlife.
<i>Phytolacca americana</i>	Pokeweed	SF	P	SW 12'	3	Perennial weed—dies back to ground each winter. Attracts many species of birds.
<i>Prunus virginiana</i>	Common Chokecherry	S	P	DST 25'	2	Many related species attractive to wildlife. 50 species of birds use. Common Chokecherry.
<i>Pyracantha coccinea</i> *	Scarlet Firethorn	FW	PE	ES 10'	6	Deciduous in northern zones. Ornamental plant.

Botanical Name	Common Name	Fruit- ing Period	Blue- bird Use	Habit and Height	Cold Hardi- ness Zone	Comments
<i>Rhus glabra</i>	Smooth Sumac	FW	FE	DS 20'	2	Thicket-forming. Fruits persist through spring. Many related species, all very important bluebird survival food. Male and female plants usually necessary.
<i>Ribes americanum</i>	American Black Currant	SF	P	DS 5'	5	Host to disease that threatens live-needle pines. Check with County Agent before planting. Related species also attract wildlife.
<i>Rosa carolina</i>	Pasture Rose	FW	FE	DS 7'	5	Many related species. Wild roses good source of winter food for bluebirds.
<i>Rosa multiflora</i> *	Multiflora Rose	SFW	FE	DS 12'	6	Thicket-forming. Highly invasive. Check with County Agent before planting. Good source of winter food for bluebirds.
<i>Rubus allegheniensis</i>	American Blackberry	S	F	DS 8'	2	Thicket-forming. Many related species which together appeal to over 150 species of birds and mammals.
<i>Sambucus canadensis</i>	American Elder	S	P	DS 12'	4	Thicket-forming. Fruits attract 50 species of birds. Related species also attractive to wildlife.
<i>Sassafras albidum</i>	Sassafras	SF	P	DST 10' to 100'	5	Thickets or individual trees. Male and female plants usually necessary.
<i>Smilax rotundifolia</i>	Common Greenbrier	FW	F	DV	5	Aggressive, invasive. Thicket-forming, thorny vine offering good nesting, protective cover. Many related species.
<i>Sorbus americana</i>	American Mountain-Ash	FW	P	DT 30'	2	Ornamental. Fruits preferred by many species of birds. European Mountain-Ash ( <i>S. acupana</i> ) also excellent food source.
<i>Toxicodendron radicans</i>	Poison Ivy	FW	F	DSV	4	Suitable only for natural areas. Fruits preferred by many species of birds.
<i>Vaccinium corymbosum</i>	Highbush Blueberry	S	P	DS 15'	4	Requires acidic soil. Preferred food for many species of birds. Related species also attract wildlife.
<i>Viburnum lentago</i>	Nannyberry	FW	FE	DST 30'	2	Rapid growth rate. Tolerates partial shade. Good source emergency food.
<i>Viburnum trilobum</i>	Highbush Cranberry	FW	FE	DS 12'	2	Tolerates partial shade. Ornamental. Good source emergency food. Many related native species also good winter food sources.
<i>Vitis</i> sp.	Wild Grapes	F	P	DV	Varies with variety	Wild grapes taken by 100 species of birds. Vines provide nest sites and protective cover.



The North American Bluebird Society has long recognized the necessity for bluebirders to preserve and plant those fruiting trees and shrubs which will be most beneficial to bluebirds for food, cover, and nesting. Beginning with the third issue of *Sialia*, George N. Grant initiated the "Plantings for Bluebirds and Other Wildlife" series which he authored for two years. When he was unable to continue the column, Karen Blackburn assumed responsibility for them. With professionalism, dedication, and an attention to deadlines much appreciated by this editor, she has contributed "Plantings" columns for almost a decade. This is a remarkable record for a volunteer and NABS is enormously grateful for her strong commitment to bluebird conservation.

Although her "Plantings" columns have reached an end with this summary chart, fortunately for *Sialia* readers, Karen will continue to write her "Bird in the Bush" column on an aperiodic basis. Since most of the material for these columns is based on experiences furnished by readers, she encourages careful observations of bluebird use of fruit-bearing plants as well as bluebird interactions with other fruit-eating bird species. Please send your observations to Karen Blackburn, 4961 Dogwood Dr., Marianna, FL 32446—J.K. Solem

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(PRESIDENTIAL POINTS—Continued from page 82)

the top you'll never see the Cahows; now do you want me to push?" I replied with a weak "yes" and the next thing I knew I was on top where I could crawl to an area where I could stand up and walk. Walking across the island I concentrated on the prickly pear cactus, since Dave kept warning me that the thorns would go through my sneakers.

Dave has placed large concrete caps over the nesting chambers so that, by lifting them off carefully, he can view the Cahow incubating the single egg. The birds don't reach breeding age until they're eight years old, so the work of restoring this species is a very slow process. We both became very excited and a little emotional when three new nests were found.

As we started the walk back across the island, I looked out at the crashing waves and realized how high I was and just how close the path ran to the edge of the cliff. I once again concentrated on looking for prickly pear cactus to take my eyes off the steep drop. Also on my mind was the fact that I had to get back down, but Dave had been correct when he told me getting down was easier than going up. I still feel very fortunate to have been able to accompany Dave to this very private island and very proud that I climbed to the top of that island.

Soon it was time for us to return to the winter weather in New York, so the next day we left for home. The plane took off under sunny skies; as it banked to turn toward the United

States the entire outline of Bermuda, surrounded by turquoise water and coral reefs, was visible from the window.

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(RACCOON GUARDS—Continued from page 98)

times look at a box and upon seeing a guard on the post decide not to bother with it.

Based on these tests, I would recommend that a bluebird box be mounted 5 feet above the ground on a galvanized steel pipe or post with a sheet metal guard hung loosely below the box. Boxes should be several feet from other structures so that raccoons cannot climb up and over to the box to thwart the guard.

I hope readers find this information helpful. I may try some more tests in 1991 and report the results.

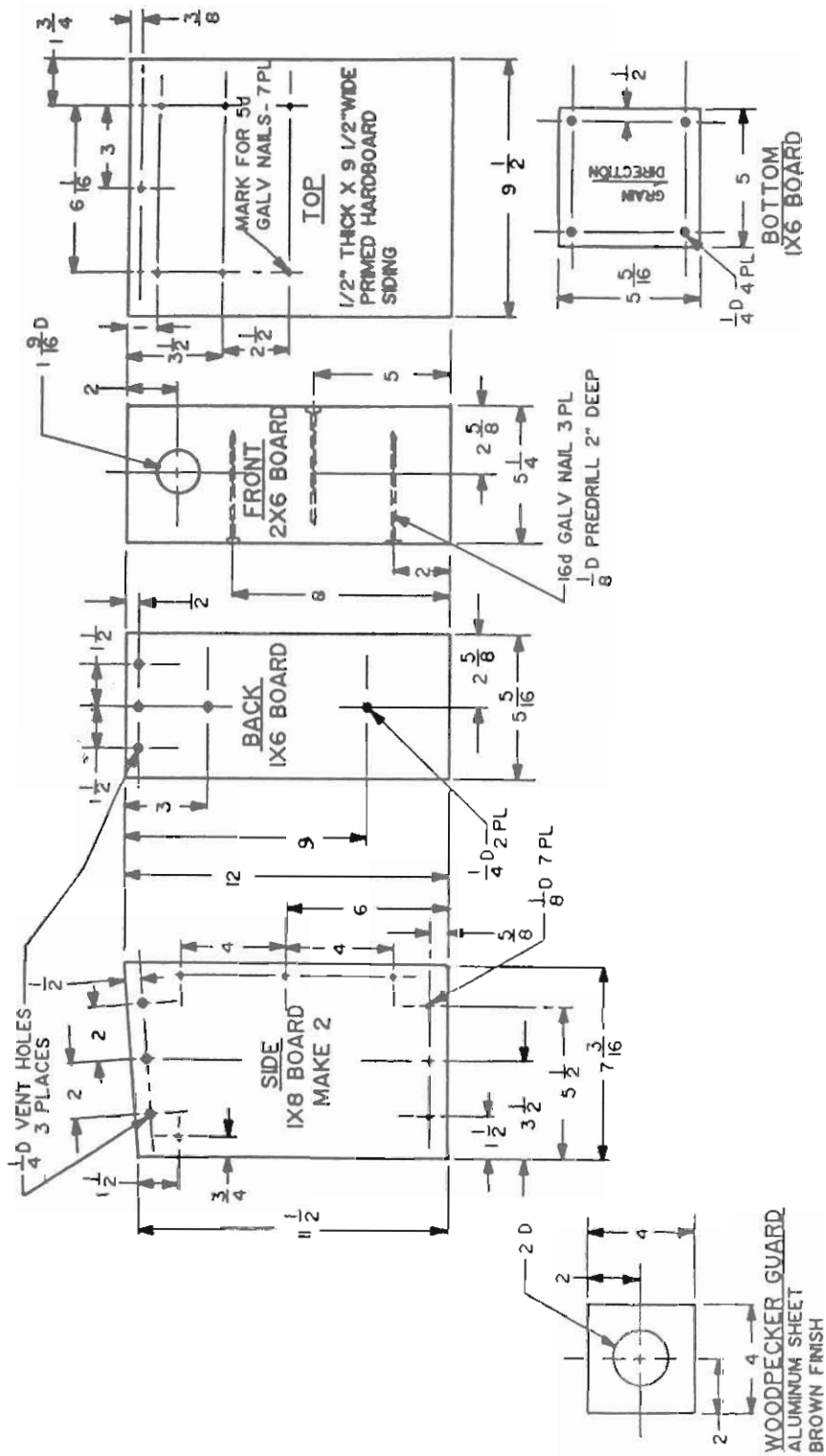
6420 Coye Road  
Jamesville, NY 13078

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### Historian's Request

Please send newspaper and magazine articles about bluebirds to Historian Jane Williams, Box 123, Ware Neck, VA 23178. Be sure name and address of publication, volume and date are included. Photographs of members engaged in publicizing bluebirds or those documenting some unusual occurrence are also welcome. They will be added to scrapbooks which are a permanent record of activity on behalf of bluebirds and other cavity nesters.

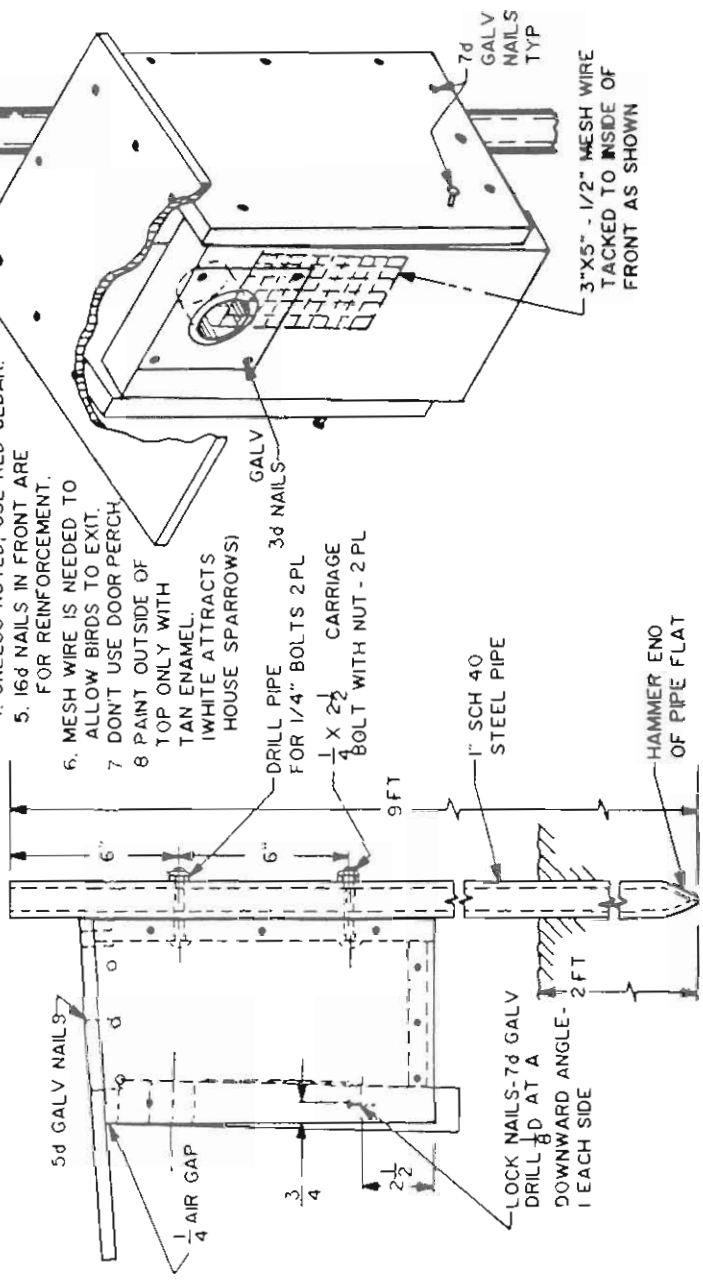
# MOUNTAIN AND WESTERN BLUEBIRD NESTING BOX - Glenn F. Savage



Birds which will use this nesting box include all bluebirds, Tree Swallows, Violet-green Swallows, nuthatches, wrens, titmice, and chickadees.

**NOTES:** 1 DIMENSIONS SHOWN IN INCHES.

- 2. "D" INDICATES "DIAMETER".
- 3. "PL" INDICATES "PLACES".
- 4. UNLESS NOTED, USE RED CEDAR.
- 5. 16d NAILS IN FRONT ARE FOR REINFORCEMENT.
- 6. MESH WIRE IS NEEDED TO ALLOW BIRDS TO EXIT.
- 7. DON'T USE DOOR PERCH.
- 8. PAINT OUTSIDE OF TOP ONLY WITH TAN ENAMEL. WHITE ATTRACTS HOUSE SPARROWS.



## Earth Day Project at Pike School Aids Bluebirds



Four students from the Pike School contacted Marc Koolen, a biology teacher at Phillips Academy, Andover, Massachusetts, who has a bluebird trail on the campus, about an Earth Day project. They wanted to build bluebird nesting boxes to sell during an Earth Day fair at Pike School. The students worked with Mr. Koolen several weekends constructing boxes and sold 38 to parents, teachers, and friends. After the fair they asked Mr. Koolen for the names of organizations to which they could donate the money raised. He provided them with a list of five or six groups. It was the unanimous and independent choice of the students to donate the entire \$330.25 to the North American Bluebird Society.

Lillian Files, a past president of NABS, later presented Certificates of Appreciation to (front row, left to right) Dan Tracy, Weston Smith, Jackie Lemaitre, and Michael Kim. Standing are Walter Morris, headmaster of Pike School; Lillian Files; and Marc Koolen, biology teacher, Phillips Academy.

# *A Father's Day Tribute to a Bluebird!*

*Lillian Franklin*

Bluebirds are considered to have an exemplary family life. Careful observations have shown that they appear to have strong family ties and individual behavioral characteristics. Bluebirds are wonderful parents, and the male's devotion to the youngsters fully matches that of the female. I know of one Eastern Bluebird who is an extraordinary father—a "super dad"—and this story is about him.

On Thursday, 3 May, I monitored the nest boxes on my bluebird trail. One box was special because it held six babies that were 11 days old. When I opened the box, my heart sank at the sight and smell of two dead baby birds. I thought the other four nestlings were dead also, but I picked them up and examined them one by one. They were weak and droopy-looking but alive! There was no sign of the bluebird parents in the area; judging from the condition of the four survivors, I was certain they had been abandoned. It was late afternoon. I took the four nestlings to the house, fed them twice, and tucked them in for the night in an extra bluebird box, one complete with a human-made straw nest.

The next morning the four orphans looked much better and were ready to eat again. I was confident that I could successfully raise the young bluebirds, but what would happen to them when they were old enough to fledge? Bluebird parents feed their youngsters several days after fledging and teach them the ways of the world. What I needed was bluebird foster parents.

I searched my nest box records for boxes containing young near the same age as the orphans. There was only one such box, but it had five nestlings that were 13 days old—a completely full house. My four large orphans could use a whole nest box for themselves. I had an idea!

The bluebird nest box in our back yard had a newly finished nest and was ready for its first egg. The bluebird pair

visited the box every day. Would these adults possibly adopt the orphans? It was worth a try, especially since I could keep a constant watch. Early Friday morning, I placed the four little bluebirds in the box with its clean, cupped nest and then watched for the arrival of the bluebird tenants from my kitchen window.

The female bluebird came first. She went to the nest box and looked in the entrance hole—and just kept looking. Finally, she hopped up on the lid, hung her head over the edge and stared down at the entrance hole unbelievably. Soon her mate arrived. He also looked inside the nest box for a long time. One word can describe the male bluebird's reaction: overjoyed! No matter that these were four large "instant" babies. They were hungry. He immediately dropped to the ground to catch an insect, quickly returned to the box, and fed the orphans. The female bluebird remained on top of the box and watched as her mate scurried about hunting for more insects. When he returned to the box again with a full mouth, he perched beside her on the box top. The female did the most surprising thing. She opened her mouth, fluttered her wings and begged her mate to feed HER the insect, and he did!

Begging posture is typical of immature birds around their parents. The male often feeds the female during courtship or when she is incubating. This female bluebird's begging behavior seemed to be triggered by a stressful situation. These large nestlings were suddenly in possession of the nest she'd built for a family of her own. Her mate was thrilled with the instant family; she obviously was not.

The pair of bluebirds stayed near the nest box all morning, the female fluffing her feathers as if she were cold. She was watchful, but inactive, except to beg her mate for food when

he came near. The male bluebird seemed so happy. He sang frequently and kept up an excited conversation while busily catching insects. Sometimes he fed his mate, at other times, the four orphans. I had to leave the house, and when I returned in the afternoon, the female bluebird was gone. I never saw her again.

The tireless male threw himself into being a foster father to the orphans, literally working from daylight to dark. One adult feeding four large nestlings appeared to be a difficult task. He carried away some of the droppings from the nest box, but, in general, he fell behind with housekeeping; however, he still found the energy to be protective of his adopted family. When a Blue Jay perched on the nest box, the bluebird furiously dived at the jay until it left. On another occasion, he attacked a Red-bellied Woodpecker feeding several feet from the nest box. I helped the busy, single parent by putting burger-type dog food on top of the nest box for him and he ate it. He'd come to the box and feed the young, then take a piece of dog food in his mouth and fly away with it, even eating on the go!

True to his nature, father bluebird was on hand when his adopted youngsters fledged at 17 days. As one young bird flew from the box, "dad" came and flew by its side. The next bird to leave the box failed to reach a perch and settled to the ground. I placed it on the roof of a shed and later saw the male feed the new fledgling there. I had complete confidence that the four fledglings would continue to receive the utmost in TLC from their foster father.

A perfect ending to this story would have been that the bluebird pair reached a reconciliation and re-nested in our back yard box. That didn't happen. He returned the last week in May but with a different female. I was reasonably sure that it was the same male bluebird because he occupied his favorite perch near the nest box and immediately took an aggressive attitude toward other birds in the yard. His new mate was noticeably darker than his first mate, especially in the throat and breast area. She built a nest, laid

four eggs, and started incubation on 10 June.

Having "super dad" in the back yard again caused me to reflect on his past behavior. How could he possibly be any more attentive to his own offspring than to the four orphans that he unhesitatingly accepted and raised single-handedly, taking care of them with cheerful exuberance. This male bluebird epitomized loving, devoted fatherhood.

In an article by Lawrence Zeleny published in the May/June 1989 issue of *Bird Watcher's Digest*, he said: "We are warned against ascribing human attributes to 'lower' animals, particularly to birds, which are presumed to have a low order of intelligence and to be guided only by blind instinct. Yet, when we have the time and patience to study intimately the lives of individual wild creatures, we are often filled with wonder and may ask ourselves if we are really as superior to all other creatures as our conceit has led us to believe." ■

Route 1, Box 417  
Hattiesville, AR 72063

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## NABS SLIDE SHOW

The NABS slide show is available for rental at \$10.00 or purchase at \$55.00. The show consists of 141 collated, cardboard-framed 35 mm slides and a printed script (no slide tray). If a cassette narration is desired add \$5.00 to the purchase price.

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

# My First Experience with Bluebirds

Dorothy Hall

February 1990 was an unusually warm month for southern Virginia. One day while I was in the back yard enjoying the sunshine, I saw a bluebird sitting on the basketball goal. I could not believe my eyes. I ran into the house to get my camera so I could show my husband. I thought, "He won't believe there really was a bluebird here." I was hoping that I hadn't scared it off with my camera.

Each day after that I watched for it. I saw it again; in fact, I saw it several times. Sometimes it would sit on a tree at the edge of the woods, sometimes on the basketball goal, and once it came to the patio. Then one day I saw two at the same time. I began to ask questions and read books trying to find out all that I could about bluebirds. I couldn't remember studying about them in school, and I knew very little about them. The more I found out about them, the more I fell in love with them.

I read that they would start searching for a place to nest in March. "That's next month," I thought. "I've

got to get busy putting up a house. I would just love to have these beautiful birds nest near by." So I asked my brother-in-law, who does a lot of wood-working, to build me a bluebird house out of cedar as quickly as he could.

Then I sweet-talked my husband into taking down the girls' basketball goal (they hardly ever used it anyway) and putting up my bird house on that particular post. It was right outside my kitchen window. I thought that would be a perfect spot since I spend more time in the kitchen than in any other room. He hung up my bird house on 10 March. Every time that I passed that window, I would look outside. The next morning, 11 March, as I was getting ready to leave for church, I looked outside one more time. This time there was a male bluebird checking out the new houses. I began to jump up and down and holler. My daughter walked in and asked, "Did you just win a million dollars or something?" The rest of my family came to the window to watch. In a few minutes, he came back with a female bluebird and she also



checked out the house. After a few minutes of watching, I knew we had to leave for church. (Was bird-watching a good excuse for being late?) On this day, I adopted them as my very own. I would actually find myself talking to them.

As soon as we got home from church, I began watching for "my" bluebirds again. I saw them often. In a couple of days she began bringing nesting material to the house. Then there was a period of time when I didn't see much of her, so I assumed that she was sitting on the eggs. Then one day I saw both of them bring food, and I knew that there had to be some babies in there. Late one afternoon, I saw two baby bluebirds at the edge of the yard, the adults were close by. They rested again, and the second time there were three babies. Even though this was

only a small number, I am glad that I had a little part in their conservation.

I have since put up another bluebird house (one that I can monitor), and I would love to someday have my very own bluebird trail. We operate a retail nursery shop. I have purchased several bluebird houses to sell and encourage others to help the bluebirds in our area. I also had some of my bird pictures enlarged and hung them in the shop so others could see the bluebirds' beauty.

I still see "my" bluebirds every day, especially late in the evening. I try to take a few minutes every day to sit on the porch and watch for them. I hope that my first experience with bluebirds will be a lifelong one. They have given me more enjoyment than words can begin to describe. ■

P.O. Box 49  
Ararat, VA 24053



Henry Van Natta built and gave away more than 80 bluebird nesting boxes last year at Brown & Williamson Tobacco Co., Macon, Georgia, where he and his wife, Linda, are employed. They are looking forward to continuing their campaign during 1991. Employees, according to Linda, have "caught the bluebird fever." Holding boxes and brochures are (left to right) Bian Windham, Ken Parker, Mike Leaptrot, and Henry Van Natta.



# A Bluebird Saved

Joan Brown

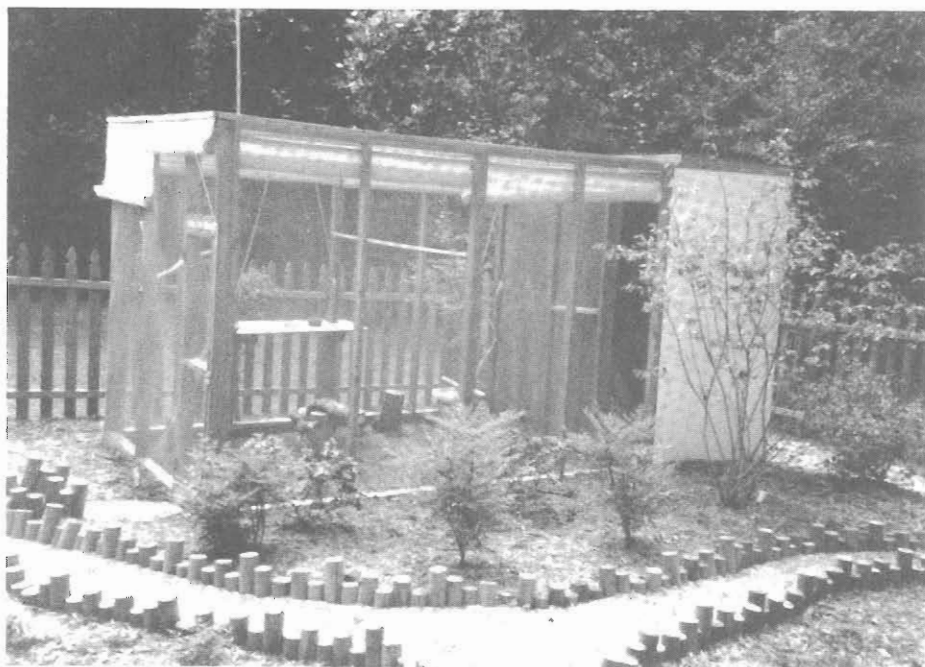
It was a very exciting day in May when I found five bluebird eggs in one of my nest boxes. Several weeks passed and the parents were feeding their babies. Everything was going according to nature's plan when one morning I noticed that a House Sparrow was preventing the bluebird parents from entering the nesting box. I observed the events for about an hour until the sparrow entered the box. I decided then to check the babies. To my horror, three of the babies had the feathers on their heads and wings pulled out or broken. I quickly removed the babies and set up the manual sparrow trap. It took two hours to catch the wily male sparrow. I replaced the babies and became concerned when the bluebird parents entered a neighboring box and seemed to be totally frightened away from the box with their nestlings. I placed a piece of paper in the entrance of the neighboring box and after a short time the parents reentered their original box.

All went well till fledging time. There were four nestlings in the box. I assumed one had left before I opened the box. I watched as each of the previously injured babies came to the entrance and fell to the ground, unable to fly. Calling a wildlife rehabilitator left me with no definite decision as to what I should do. I placed them in a nearby tree and watched helplessly as the parents frantically tried to get the fledglings to follow them. The babies fell to the ground. I decided to retrieve them and feed them till their flight feathers grew back. Within 48 hours two had died and the third, a female, stabilized and adapted to eating moistened dry dog food. I purchased a cage from a pet store, but the metal sides only caused more feather damage. I contacted another wildlife rehabilitator that had a flight cage, but she seemed less than enthusiastic about taking my bluebird. The rehabilitator did mention that she had wooden cages with

screening. She also recommended that I start the bluebirds on mealworms and crickets. I decided to use fiberglass screening on the inside of the cage. (Three years ago I raised three orphaned starlings in a cardboard box; I believe this is less damaging to the birds.) I hand fed the bluebird crickets with their rear legs removed. I also placed some in one of the cage's feeding trays; each morning they were gone. I continued the dog food as a supplement.

The bluebird was placed in a large cardboard box for the next 1 1/2 months. Each day crickets with their rear legs removed were placed in a feeding tray. Fresh water and moistened dry dog food were also placed in the box. On my days off I would take her outside and exercise her wings. Most times she would flutter from my hand straight to the ground. Then on 30 August she flew about 100 feet, but when I retrieved her she seemed exhausted. I made a couple of calls to different wildlife rehabilitators and was placed in contact with Paula. She had a home among many acres of woods and a large outdoor aviary. I delivered my bluebird to her and got a tour of her wildlife accommodations and instructions on wildlife rehabilitation. Paula's primary involvement was with crows, but at this late time in the breeding season none were being boarded. The large aviary had a male bluebird and an injured cowbird. Paula showed me individual cages of wood and fiber glass netting her husband had made. The fiberglass netting could be replaced when very soiled by stapling the netting onto the wooden frames. The outside aviary was raccoon proof with hardware cloth siding and wire fencing under the dirt floor. Her charges were locked up every night in an enclosure at the rear of the aviary.

Paula emphasized that inexperienced people should not be trying to rehabilitate wildlife; it should be done



Photograph by Joan Brown

Paula's aviary where the bluebird gained strength before her release.

by wildlife rehabilitators who are licensed to do it. Keeping in touch with the wildlife rehabilitator undoubtedly helped me be successful with my bluebird.

Paula's facilities were extremely clean and her attitude was one of complete involvement and commitment to her work. She spoke of her losses with much caring. My bluebird was released

10 days after her arrival. There is food available and Paula's back yard contains many seed bearing plants for the birds. We both feel the bluebird has a good chance for survival and will be productive. ■

13137 Tuckaway Dr.  
Herndon, VA 22071

## BLUEBIRD BOOSTERS

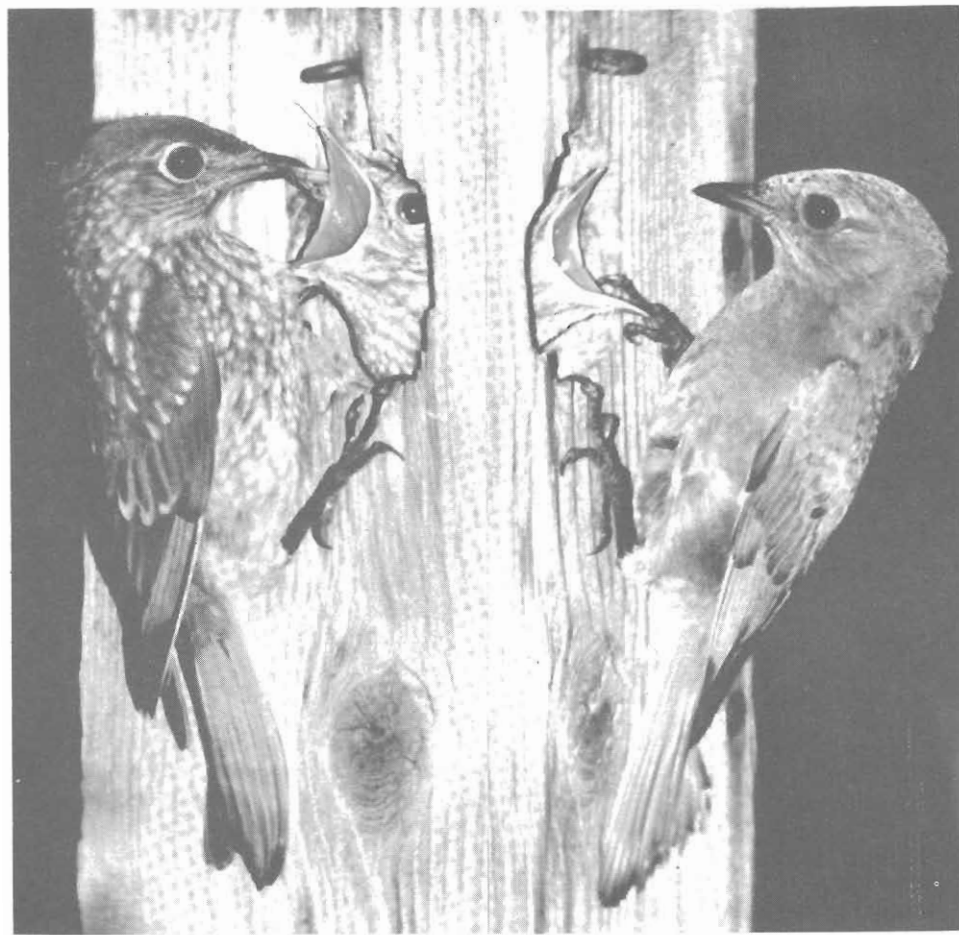
*Appearing on the inside back cover is a list of those individuals who have made a financial commitment to bluebirds and cavity nesters over and above their annual dues. Such support is essential in maintaining a stable dues structure. We thank the individuals, organizations, and businesses for their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

## IMMATURE BLUEBIRD HELPS FEED NESTLINGS



*I have often read that immature bluebirds from the first hatching of a season will assist their parents in feeding the babies of later broods. In the 20 or more years that I have been photographing bluebirds, I had never seen this happening until 22 July 1990 when I was snapping bluebird pictures in the yard of some friends near Sykesville, Maryland. All morning the female (right) had been feeding the four babies generously, while the male sat on a nearby branch fussing at my presence and not getting up the nerve to join the female at the box. In the afternoon I was surprised by the appearance at the box of a spotted bird with a blue tail (left). This bird returned frequently to help the female with her feeding chores.*

—Hubert A. Brandenburg

# A Happy Ending

Patricia Ann Johnston

In July and August of 1988, two orphaned Western Bluebirds were raised to fledging stage by the Audubon Wildlife Care Center in Portland, Oregon (*Sialia* 13:28).

When it was time for their release, Earl Gillis, director of the "Hubert Prescott Bluebird Recovery Project," asked me to release them on my trail since I had a nest that was very close to fledging. The orphaned bluebirds, a male and a female, had recently been in the flight cages at the wildlife care center, were able to fly, and could forage for themselves.

I decided that the little bluebirds should have something of a normal fledging, so I put them in a nest box with a nest in it and plugged the hole. My husband drove us up to Chehalem Mountain to the release site. Much to my dismay, the bluebirds had already fledged from the box that I was hoping to release the orphans near.

My plan had been to place the box containing the orphans on the fence post next to the nesting birds. What a dilemma! It was already well into August. There were no other nesting bluebirds in the area, so I had no alternative. I had to release the birds and hope that they could make it.

I could hear bluebirds "churring" in the filbert orchard behind us, so I put the nest box on a fence post and unplugged the hole. We stood back to watch.

The young male immediately jumped up to the nest box hole, looked out for a short time, and then flew about 60 feet to a walnut tree. I was pleasantly surprised to see him fly so far on his maiden flight. The smaller bird took much longer to get up to the nest hole, but finally she appeared. She sat in the hole about 15 minutes surveying the world before her and churring back and forth with her brother who was still in the walnut tree. We could hear the other bluebirds churring behind us in the filbert orchard.

Finally, the little female hopped down onto the fence wire. Suddenly, from out of nowhere, a pair of adult bluebirds appeared and landed right next to her, the male on one side of her and the female on the other. The adult birds postured, throwing their breasts forward and their heads back, with their bills pointed straight up. I had never seen this behavior before and neither had the young bluebird! She flew to the ground in a panic, followed closely by the adults. The adults, for their part, seemed thoroughly confused. They flew back to the nest box, looked it over carefully, flew back to the young bird, then back to the nest box, looked inside it, flew back to the young bird, then back to the nest box, inspected it again, hopped up on top, looked behind it.

Meanwhile, the four young of the bluebird pair had flown to the other released bluebird in the walnut tree. Excitedly, he flew to the ground, followed by the four young birds calling and churring. Such fluttering and chirping and carrying on. Every bird in the area joined in the excitement. Violet-green Swallows and Chipping Sparrows were swooping and calling excitedly. The human spectators were also excited as they stood motionless to one side observing it all.

This activity went on for about 15 minutes with the adult birds flying between the strange new box and the little bluebird, and all the young bluebirds making the acquaintance of the other stranger. Finally, the newly released birds flew off toward the filbert orchard with all six of the other bluebirds following as their escort. Soon they were lost to our view. Remember the old movies that ended with the hero and heroine walking off, hand in hand, into the sunset? That was the way this little play ended.

The landowner reported that in the weeks after the release, he saw eight  
(Continued on page 119)

## Bermuda Bluebird Society's Annual Meeting



North American Bluebird Society President Sadie Dorber and Research Chairman Kevin L. Berner were invited to speak to the annual meeting of the Bermuda Bluebird Society 26 February 1991. Shown (left to right) are Tommy Outerbridge, President of the Bermuda Bluebird Society; Kevin Berner; Lady Langley, wife of the Governor of Bermuda; and Sadie Dorber. This organization will host the fourteenth annual meeting of the North American Bluebird Society, 11-13 October 1991.

# 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:

In 1979 our family moved into the country outside Laurel, Delaware. About the same time we attended the wildlife exhibition at Salisbury, Maryland. At this show I bought some publications on birds and found that they contained the Zeleny bluebird box which could be changed in size to accommodate other species of birds. I started with five boxes and now have 30 in about a two square mile area. This year (1990) I was somewhat disappointed since I had only three pairs of bluebirds nest in the boxes. We have some friends and family in Worcester County, Maryland. They also report fewer nesting pairs this year as opposed to last year. They found quite a few dead last year after the very cold and snowy December we had.

Here is a report of the nestings in my boxes, some of which were in boxes that had been altered for different species.

- 1 pr. Tufted Titmice, 4 fledged
- 4 prs. Carolina Chickadees, 4 to 5 fledged by each
- 1 pr. Great Crested Flycatchers, 2 fledged
- 3 prs. Eastern Bluebirds, 13 fledged
- 5 prs. Tree Swallows, 21 fledged.

H. Craig Metz  
Chris Ave., RFD 2  
Laurel, DE 19956

Dear Editor:

On 3 March 1991 I noticed a distur-



bance at the base of the bluebird box that is located about 15 feet from the side of our house. Two female bluebirds were locked in "mortal" combat on the ground in front of the box. Alternately, one and then the other would get the upper hand (or wing, or talon) and press her adversary flat to the ground with both wings spread out. How long the battle had been going on before I noticed it is anybody's guess, but it lasted ten minutes more. Perched on the box above the two combatants was the male, cheering them on by flapping his wings vigorously. At one point he landed on the ground nearby, but he didn't dare join in. Finally, the vanquished female flew off with the victor in hot pursuit. Later the winner was perched on top of the box while the male flew back and forth, as if to congratulate her on her victory. She stayed there quite a while in order to solidify her conquest.

Henry M. Ditman  
2800 Sykesville Rd.  
Westminster, MD 21157

Dear Editor:

It was with great interest that I read Kevin Berner's results concerning the testing of the "Bird Guardian" commercial predator guard (12:83-87, 123-128). Last year I placed the device with tail guard on all boxes used for nesting and, fortunately, bluebirds readily accepted the boxes. The device kept nest predation down to zero on my trail compared to the previous year when a raccoon destroyed several nests.

I used one guard which did not have a tail brace and this was not accepted by any species of cavity nesting bird.

I am now monitoring a trail for a local park district. If anyone is not pleased with their guards with tail braces, I will be most happy to accept them and put them to good use.

Carol Daugherty  
8551 Strimple Rd.  
Cleveland, OH 45002-9711

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Dear Editor:

As a staff member looking for activities which can benefit Oregon State University Research Forests' wildlife populations as well as local community youths, I coordinated a nest box project for Eagle Scout David Baldassano and Troop 377 of Albany, Oregon, and Elsie Eltzroth of Corvallis who assisted in locating suitable sites for those boxes within OSU's Peavy Arboretum.

Many hours were spent constructing superb housing for birds, but it took persistence on the part of the young men involved in the muddy installation of posts and boxes. The scouts with their "good nature" prevailed, and four bluebird houses, ten wren houses and two martin complexes were put in place.

Deborah S. Messenger  
Recreation & Education Assistant  
Research Forests Office  
Oregon State University  
Corvallis, OR 97331-5711

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Dear Editor:

Just wanted to let *Sialia* readers know that the sixth Bluebird Festival at the Dahlem Environmental Center in Jackson, Michigan, 9-10 March 1991, was a huge success. About 4,000 people attended the festival. The local newspaper, the *Jackson Citizen Patriot*, noted the event.

Walter Berlet  
1646 W. Kimmel Rd.  
Jackson, MI 49201

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Dear Editor:

Bluebirds play! Two boxes on my two acres on Taylor's Island on the Eastern Shore of the Chesapeake Bay raised 14 young in 1990. Seven feed regularly on small balls of ground beef chuck on a feeding station ten feet from my kitchen window. On two occasions this winter, my wife observed them flying acrobatically around and above each other at the feeder for several minutes, chit-chatting all the while among themselves. They were not feeding. The 14 young were fed on pea-sized ground beef balls with a little powdered oyster shell lime mixed in.

One morning I saw a large number of blue birds flying toward our place but dismissed them as Blue Jays. Later our neighbor told my wife her shrubbery had been covered with bluebirds. I assume this was a migratory flock.

Bluebirds are numerous here. I attribute this to countless holly trees. I have interested three friends in this activity. I know of one other person ten miles distant who provides this help to these birds. The state of Maryland has erected about 20 boxes around a 20 acre field where I know a flock resides. I have 20 boxes on this island.

Stanley G. Thomas  
P.O. Box 97  
Taylor's Island, MD 21669

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Dear Editor:

I had one box used by bluebirds out of the 23 I have erected. All charts and maps show that my area is about 100 miles south of the northern limit of the Eastern Bluebird's *original* range. This first nesting on my farm, therefore, means that the bluebird has finally returned to the entire territory which it formerly occupied. This is the result of the work done in constructing bird boxes by *all* bluebird supporters in eastern North America. I know I will be seeing more and more bluebirds in my houses in future years.

Albert Guilbault  
P.O. Box 338  
Rouyn-Noranda, Quebec  
Canada J9X 5C3

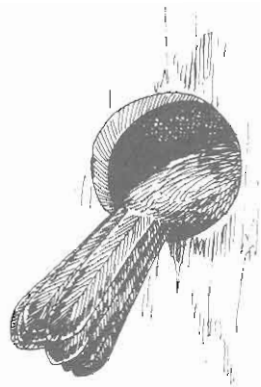
# Bluebird Tales

Mary D. Janetatos

"Not if I have any say, you won't!" was the reaction from **Jerry Hartley**, veteran bluebirder of New Brockton, AL. Was he speaking sternly to a House Sparrow trying to usurp one of his bluebird nest boxes? Was he speaking to a stray cat, a wandering raccoon, or a slithering snake, each trying to abscond with a clutch of bluebird young? No, he was reacting to the news that he had been selected by the NABS Award Committee to receive a plaque at the next annual meeting, October 11-13, 1991 in Bermuda. This would be in recognition of the many years Jerry has worked to maintain trails and promote bluebird conservation in his home area of Alabama. He and **Irls** had reported on their many activities at the NABS annual meetings that they had attended over the years. Jerry's latest success story involved his appearance on the "**Gene Ragan and Friends**" television program which airs on the tri-state channel for Florida, Georgia, and Alabama. Years before, Jerry had given Gene two bluebird nest boxes—which Gene promptly gave away. Owning up to this defection, Gene asked Jerry for more. He bought a dozen which he dutifully placed in suitable habitat. When he monitored them, he found a large percentage had been used by bluebirds and, you guessed it, folks, he fell in love with our beautiful "blues"! (We can identify with the feeling, right?)

I'll bet **Mike and Kathy Queen** of Falkville, AL, felt the same way when they wrote: "Last year we accepted stewardship of one of our local Audubon chapter's bluebird trails. We received great pleasure in rearing 54 birds from our 22 boxes. This year we increased the number of boxes to 26 and, hopefully, next year will start a second trail of our own, near home."

**Ray and Lillian Remus** of Muskegon, MI, recently began to carry the ball for longtime bluebird activists **Bob and Carol LaPres**, now of Twin Lake, MI. "We are in charge of monitoring a 97 box trail within our large Muskegon Waste Water System. The Bob LaPreses started it many years ago, but have had to give it up for health reasons. We are enjoying it very much since we have more time now that we are retired and sure are learning a lot about the many cavity nesting birds. We just had our Bluebird Weekend at our state park where we talked to many people interested in bluebirds."



Another one bitten by the bluebird lovebug was **Mrs. Kevin Gallagher** of Phillipsburg, NJ, who said she was given the NABS brochure, "Where Have All the Bluebirds Gone?" as a Valentine's Day present. "I have always loved bluebirds. One day we found one in the middle of the road and were actually able to hold it in our hands. It was apparently disoriented. We placed it on a log far off the road and it later flew away. We only wish we'd had a camera for a closeup picture. It was a very special experience."

As you read this in sweltering summer, bask in the cool thoughts expressed by **Margaret A. Dixon** of Lawrence, KS: "This winter when we were having 15° F or lower, we noticed bluebirds coming to our bird bath (it has a warmer). At several times we counted 20, and once there were 26 at one time! Very thirsty—never did eat from our feeders, but they let us know they had been feeding on wild junipers in nearby fields. My husband put a small plank in our stock watering tank (which also has a heater) and they watered some there as well."

A long time relationship with bluebirds was established by **Freda M. Brooks** of Metamora, IL. "Just want to tell you we have had bluebird houses out for 24 years. We have lived here since 1968 and there have been nine or ten baby birds raised here every year. Some years there were three batches of babies born. One year we had 18 birds just outside our door on the clothesline. We love them. They are so pretty. We have about 3 1/2 acres that we mow. We also have raspberries, strawberries, and wild cherries so it is a good place for bluebirds. But it was **Don and Marcy Hopfner** of rural Metamora who got her to join the society. Marcy had a very fine article about her bluebird activities printed last winter in the *Journal Star*. Veteran bluebirder **Marle Olinger** of Galesburg, IL, reported that, in addition to the coverage given Marcy, she herself would be



featured in *Country Woman*.

The bluebird continues to spread happiness as **Robert L. Himmelberg** of Glasgow, MO, reported. "I have built and given to my family nearly a dozen bluebird houses in the past three years since I retired. I have seen more than a dozen families reared in boxes I have put up myself. They are a beautiful bird. My grandchildren have seen one nest of the babies; that was a thrill."

Senior involvement in bluebird conservation is everywhere. **James Kessler** wanted his father **William R. Kessler** of Corning, NY, enrolled in NABS. He wrote, "One of his most prized activities since his retirement a number of years ago has been his bluebirds. His photographs and videotapes (including placing a microphone inside boxes) are wonderful."

**J.L. Kinney** of Albany, GA, sends a sparse note saying, "As information, we have over 500 nest boxes in the Albany, GA, area."

Whole towns and cities become aware of bluebirds as reported by several activists. In Dublin, OH, **Darlene Sillick** wrote, "I've been involved with bluebird trails through the Metro Parks here and the park system in Dublin. I've helped four boys earn their Eagle award by having them help me set up my 110 box trail system over three years. I started with 15 boxes in the park system my first year. Year two brought 68 boxes and enlargement to more parks here and school properties. This year I'm adding businesses and will stop at 110."

**A.C. Lopinot** of Litchfield, IL, related that "A group of us are managing a city-owned nature preserve which includes setting up a bluebird house trail."

**Gerald M. Slager** of Newtown, PA, is ensuring bluebirds for his community. "The community which I live in is called Country Bend. The land was once part of Styer's orchards. The apple trees are not sprayed with insecticides. I built the bluebird boxes from a booklet called 'Bluebird Trails in Pennsylvania State Parks'."

And the Camp Fire groups continue their vigilance for a banner bird, the bluebird. With help from **Dave Talbot** and others, the group (Sparkle Adventure Camp Fire Group) completed the "Save the Bluebirds" project near Riverside, WA, by building, setting out in suitable habitat, and monitoring nest boxes. The report was sent to NABS by **Ann Sullivan**, of Omak, WA.

Is this a first? The Massachusetts Bowhunters Association, Inc. reported through **Walter Ashley** of Oak Bluffs, MA, on their Eastern Bluebird project conducted

at historic scenic Martha's Vineyard. They report that "We can go any time now [to Martha's Vineyard] and see bluebirds. Sometimes we see as many as 15 or 20 on one trip to visit the boxes in the morning."

Do some people get "carried away" on this bluebird "trip"? **Tom Tait** of Derwood, MD, NABS' vice president, has a tire cover on his 4 wheel drive Ford Bronco which has the NABS logo imprinted on it. **Ralph Green** of Pittsburgh, PA, sent a photo of the back end of his VW bus. It reads "Blue Bird"!

But the marathon bluebirders are **Meade Flinn** of Alberta, VA, and **Larry Zelony** of University Park, MD. Meade, at 99 years, shares with Larry the distinction of being honored by the National Society of the Daughters of the American Revolution which separately awarded to each veteran bluebirder their Conservation Medal. The peripatetic Larry is turning up everywhere: introducing **Dr. Shirl Brunell** (past NABS board member and author of *I Hear Bluebirds*) when she spoke at the Audubon Naturalist Society in Chevy Chase, MD; acting as "author in residence" at the Wild Bird Stores in the Washington, D.C. area. He also journeyed to Fort Bragg, NC, where he spoke at the annual meeting of the North Carolina Bluebird Society on April 12.

Larry had been nominated to receive the D.A.R. Conservation Medal by NABS volunteer **Maxine Montgomery**. At the meeting of the local chapter on March 23, we sang the national anthem and prayed in thanksgiving for the victorious conclusion of hostilities in the Persian Gulf. It crossed my mind that God's will for bluebirds can be realized through leadership such as Larry's, and through the rest of us who are moved by the love of God's creatures, such as the bluebird, getting involved in any way we can. How are *your* bluebirds, dear reader? ■

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(HAPPY ENDING—Continued from page 114)

bluebirds together. This could very well be the two adult bluebirds plus their four young and the two orphaned birds. The landowner also reported that he frequently saw a bluebird sit on the nest box from which we released the two youngsters.

My husband and I felt really privileged to have witnessed this little drama. ■

7717 S.W. 50th Ave.  
Portland, OR 97219

## They Called Him "Mister Bluebird"

*In memory of Jack Woodworth,  
who cared for bluebirds in central Montana.*

They called him "Mr. Bluebird,"  
He really was their friend;  
Without all his work and love  
Their lives would surely end.

Up went his sleeves when  
He saw their sad plight;  
In many hills and broad fields  
He began his fight.

He built houses by the hundreds  
And started his bluebird trail;  
With work and dedication  
His efforts could not fail.

He excited all his friends  
And they became involved;  
With love and work and caring  
Bluebird problems have been solved.

The mountains once more have bluebirds,  
They come back every spring.  
Their chirps and vivid color  
Brighten everything.

The hills echo back their chirping  
With a little sadness, too.  
The bluebirds all are saying,  
"Jack, we do miss you."

—Mickey Sorensen

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### Art Credits

Jon E. Boone: 82, 116  
Suzanne Pennell: 88, 118

### (BOOSTERS—Continued from inside back cover)

#### Nestling Booster

Marjorie Bedford  
Herman Bressler  
Mrs. Rena H. Bishop  
Mrs. Sara S. Capps  
Joseph Corba  
Arne T. Fliflett

George C. Gibson  
Allen C. Hopes  
David Keim  
Mr. & Mrs. Wallace Knapp  
Henry & Wylene Seflan  
Mrs. Robert T. Shone  
Meike M. Snyder  
Richard P. Wilcox

## BLUEBIRD BOOSTERS

### Life Members

Mrs. Irene S. Frantz  
Clark W. Hart  
Charlotte Jernigan  
Barbara L. Matlock  
Katrina Renouf  
John H. Rogers  
Lawrence Zeleny

### Eastern Bluebird

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Robert E. Ahearn, M.D.  
Leonard Angermeier  
Louis J. Appell, III  
Kay Asaki  
Sonus Manus Austin  
Mrs. Henry N. Barkhausen  
J.E. Barrett  
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James L. Beers  
Anne Bent  
Mrs. Thomas Bomar  
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Susan Davens  
G. Dunn Davis  
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Alexander F. Draper  
Francis N. Dubois  
Haskell Duncan  
Eastako Aluminum Co.  
Harry Eichbaum  
Peter & Theresa Elmendorf  
Dorothy M. Evans  
William & Pauline Everett  
Mrs. Betty G. Fisher  
Marion Frank  
Franklin Garden Club  
Julia D. Gallagher  
Bill Garros  
Carol Gheblian  
Pat Givens  
Dr. & Mrs. H.J. Gowaty  
George N. Grant  
T.E. Gurley  
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Stanley D. Silsby  
Kay Smith  
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Lindsey W. Spencer  
Pat A. Stevens  
Ralph Stolle  
Martha R. Sullivan  
Thomas A. Temple, Jr.  
David L. Tobias, Jr.  
Pamela F. Walker  
Charles Richard Watson  
Diana Wege  
Susan F.C. Weil  
Nancy L. Weiss, M.D.  
Mrs. Joann Williams  
Robert D. Williams, M.D.  
Williamsburg Bird Club  
Steven B. Wilson  
Mark E. Winslow  
Ms. Betty M. Wise  
John & Gayle Wix  
R. Edward Zimmerman, Jr.

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Mrs. A.G. Andrews  
Duncan Mills Restorations  
Neal Lowen  
Barbara Moore

### Mountain Bluebird

Donna Hagerman  
Mr. & Mrs. George Nalinski

### Fledgling Bluebird

Raymond L. Allison  
Donald F. Anderson  
John F. Anderson  
Arrow Wiring Contractors  
Joyce A. Asbury

The Backyard Naturalist  
Brenda Baldwin  
GFWC Berwyn Woman Club, Inc.  
Mrs. Constance Benson  
George Boos  
J. Boyce  
Stan Blezinski  
Sarah S. Braunwell  
Dr. Shirl Brunell  
J. William Bruner  
Mrs. Dwight Collmus  
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Joyce & Joseph Coyne  
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Wendell Edgar  
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Forest Garden Club  
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Mr. & Mrs. A.F. Hall  
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Richard & Linda Taylor  
Van Thompson  
Cheryl Smith Tolley  
Sherry Ullius  
Kevin White  
Phil & Debbie Whitehouse  
Robert H. Williams  
Michael Owen Willson  
Jeannie Wright  
(Continued on page 120)

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

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

