

Sialia

Volume 13, Number 2
Spring 1991
Pages 41-80
Index

The Quarterly Journal
of
The North American
Bluebird Society



NORTH AMERICAN BLUEBIRD SOCIETY

Founder	
Lawrence Zeleny	
President	
Sadie Dorber	
Vice President	
Thomas Tait	
Treasurer	
Delos Dupree	
Recording Secretary	
Doug LeVasseur	
Corresponding Secretary	
Joseph Tait	
Directors	
Ron Kingston	1991
Virginia	
Thomas Matsko	1991
Montana	
Myrna Pearman	1991
Alberta	
John Rogers	1991
New York	
Donna Hagerman	1992
Nevada	
J. Douglas Quinn	1992
Massachusetts	
Dorene Scriven	1992
Minnesota	
John Trott	1992
Virginia	
Andre Dion	1993
Quebec	
Kenneth Jankowski	1993
Indiana	
Alfred Larson	1993
Idaho	
Marlon Liles	1993
Oklahoma	
Executive Director	
Mary Janetatos	
Editor	
Joanne K. Solem	

Sialia means bluebirds. Hence the title of this journal. Technically, *sialia* is the Latinized, neuter plural version of the Greek word *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 juvenal bluebird for its logo. Since bluebirds almost always choose to raise their young in small enclosed cavities, a young bluebird sitting near a nesting box seemed to symbolize our mission. The hope of any species resides in its young. Because of bluebird nesting preferences, the survival of their young may depend on the nesting box, especially since natural cavities, for a variety of reasons, are disappearing rapidly. The theme of bluebird young nurtured in man-made structures will be a recurring one in our art and literature. We hope that this theme will remind all about the plight of the bluebird, and will stimulate action which will allow this beautiful creature to prosper.

Sialia is published quarterly by the North American Bluebird Society, Box 6295, Silver Spring, MD 20916-6295. Subscription price is included in annual membership dues. Single copies: \$2.50. Write for information about bulk quantities. Checks and money orders should be made payable to North American Bluebird Society and should be in United States funds. Issues are dated Winter, Spring, Summer and Autumn and appear approximately on the fifteenth of January, April, July and October respectively. Deadline for submission of material is three months prior to date of publication; dated items only, two months.



Sialia

The Quarterly Journal
About Bluebirds

Volume 13, Number 2
Spring 1991
Pages 41-80
Index

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

CONTENTS

Presidential Points	42
Sadie Dorber	
Question Corner	44
Lawrence Zeleny	
1990 Nesting Box Report	45
Kevin L. Berner, Jeanne D. Wigen, Janine A. Grindrod, Nancy E. Niles	
Literature Review	50
T. David Pitts	
Foiling House Sparrows	51
Wayne H. Davis	
Eastern Bluebird Dispersals from Delaware County, Ohio	54
Richard M. Tuttle	
Ron Kingston's Snake/Predator Guard	56
Jim Noel's Cat and Coon Guard	58
Bluebird Creek	60
Diane Noll	
A Bird in the Bush	62
Karen Blackburn	
Harry Krueger's Snake Trap	63
Guard Foils Predators	68
Don Hutchings	
Photographing Birds—Bluebirds, Too!	69
John Findlay, III	
Bluebird Express	72
Bluebird Tales	74
Mary D. Janetatos	
Bluebird Box Fledges Robin	76
Kay E. MacNeil	
Index to Volume 12 (1990)	77
Poetry: Metalman	80

COVER

A bluebird in a Flowering Dogwood tree, here depicted by Art Editor M. Suzanne Probst, is a welcome sign of spring in many areas.

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

Several years ago in this column, I addressed the problem of bluebirds exploring all types of holes above the ground that are large enough to permit their entry. The presence of holes as continuing hazards to bluebirds and other cavity nesters prompts me to, once again, bring this situation to the attention of our members.

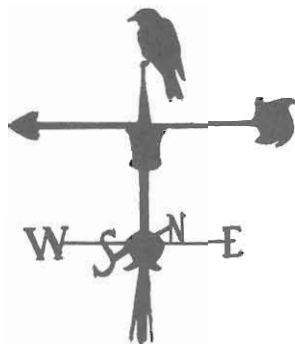
During late winter and early spring, bluebirds search and enter any opening that resembles a cavity. I feel they explore even on their migration north to their nesting grounds, as they do to some extent on their way south during the fall.

In the late 1940s, tobacco barns were equipped with stoves to aid in curing the tobacco. The stoves had pipes that extended through the roofs and were covered with a cap. During the late winter and early spring when bluebirds were searching any opening, the stoves weren't in use. The birds, upon entering the pipe, would not be able to get out and would be found, later, dead in the stove.

Jack Finch of Bailey, NC, conducted a survey of farmers and found that many reported finding up to 20 bluebirds per stove. With approximately 100,000 barns in use at that time, the toll on bluebirds was devastating. By 1955, few dead bluebirds were being found in the barns, but, by that time, very few bluebirds were left. Tobacco curing has been modernized. Although the barns are no longer used, hazards still remain for the bluebird.

Wood stoves are still popular in the North; many people continue to replenish their wood supply by taking the dead trees that contain the necessary cavities for birds. Bird-proof caps are available for stove pipes which could virtually eliminate this hazard for bluebirds.

Open-end pipes supporting fences or backstops at ball diamonds are prevalent all over North America. Many of these open pipes are large enough for bluebirds to enter. Several tall



open-end pipes were installed as supports for a backstop on Larry Zeleny's trail. When the pipes were taken down for painting, the remains of a considerable number of bluebirds were found.

In September of 1990, yet another hazard for bluebirds was brought to my attention by Fred Huntress, Jr. of The New England Forestry Foundation. Appearing in the recent issue of *American Forests* was a letter to the editor explaining that dead bluebirds were being found in Tubex® treeshelters. The treeshelter is a translucent plastic tube placed around seedlings or transplants at planting time. The shelters create a greenhouse environment for individual plants that increase survival, accelerate growth and provide protection from animals. They are also very attractive to bluebirds.

I live in an area that sometimes receives heavy deer browse. We've spent many hours placing fencing around fruit trees and shrubs. Periodically, the fence must be removed, the weeds or grass cut, and the fence put back in place. I understood the necessity for the shelter. I promptly wrote to Tubex® to ask if they could devise a barrier to eliminate the bluebirds' entry into the shelter. Joe Lais of Tubex® called as soon as they received my letter. Joe related that their company started working on a solution as soon as they were made aware of the problem.

Jack Finch had been enlisted to help and was supplied with several possible solutions for this problem. Jack and Tubex® had already agreed that a flexible, tubular mesh placed over the top of the shelter would prevent the bluebirds' entry. I knew right

then that the problem was in good hands. During the evening, Larry King, president of Tubex®, called to ask if he could visit me the following week when he was in New York State. At this point I was a little overwhelmed when I realized the efforts to which this company was going in order to find a solution to the problem. Larry King arrived with a supply of treeshelters which were quickly taken by my son to place around his black walnut seedlings. Larry left with a better understanding of bluebirds and the many perils they face daily.

Many of us, at one time or another, encounter companies which affect wildlife. All too often it seems that a company doesn't care nor do they want to be bothered with working out a solution for the welfare of wildlife. It has been heart-warming to deal with a com-

pany that took such prompt action to help preserve bluebirds. Tubex® is to be commended for their commitment to the preservation of our natural resources.

Openings of various kinds are always going to be a hazard for bluebirds. It's up to us to educate the public to remove or mitigate as many of the hazards as possible. Plug fence posts, place bird-proof caps on stove pipes or cover the opening with hardware cloth. Make people aware of these problems when you present bluebird programs. NABS would be pleased if you copied and used this column to show to companies as an example of one company's effort. Tubex® *does* care about our valuable wildlife and is doing everything possible to correct the problem inadvertently created by its product. ■

New Mesh Guard Prevents Bird Entry Offered Free To Past TUBEX Customers

Starting October 15, 1990 a flexible, tubular mesh will be included with all orders of 4 foot and taller TUBEX. The mesh serves a number of purposes, but most importantly it prevents birds from entering the tubes and becoming trapped. *Customers who ordered before October 15 can call toll-free 1-800-328-4827 ext. 1906 to receive mesh, free of charge, for their TUBEX.*

Cavity nesting birds such as bluebirds sometimes enter TUBEX tree shelters for protection or to nest. Unfortunately, they are sometimes unable to get out of the tube.

We did not anticipate this problem when we began selling TUBEX in the United States, because foresters did not experience it in Great Britain. Once we heard about it we acted quickly. We contacted Jack Finch, a bluebird expert from Bailey, North Carolina. We supplied him with a variety of possible solutions, and he has tested them on his own property, where there is a dense, year-round bluebird population.

A photo-degradable mesh, similar to that used to bag fruit, has given us the results we want. Bird loss has been eliminated on test sites, without damaging the leaders of emerging trees. When a seedling reaches the top of the tube, its leaves bunch up against the mesh, creating an opening for the terminal bud. At that point the mesh can be removed or simply left to break down, which takes about 20 months. Birds will not get trapped in tubes after the tree reaches the top.

The mesh has other benefits as well. It guards against damage by grasshoppers and other large leaf-eating insects.

Proper installation is important. An instruction sheet accompanies every order.

We are proud that trees protected by TUBEX are creating valuable wildlife habitat across the country. However, the loss of song birds in the process is an unacceptable trade off. We worked hard to find and test a solution, and are happy to offer it to our customers.

— From the Winter-Spring, 1990-1991 TUBEX® catalog, page 7.

QUESTION CORNER

Lawrence Zeleny

After 15 years of bluebird trail-tending, I've discovered a new problem: cowbird parasitism. Never before have I seen a cowbird's egg in a bluebird box. Today there were three cowbird eggs, one each in three separate nests. Is this a new menace or just an old menace that never turned up in my back yard before?

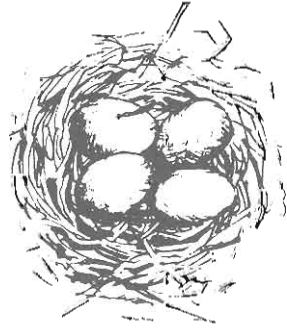
Patricia Folley
Noble, Oklahoma

Cowbirds are known to lay their eggs in bluebird nests occasionally but rarely, if ever, often enough to create a serious problem. The 1 1/2 inch entrance hole in a bluebird nesting box is believed to be a rather tight fit for the female cowbird and, therefore, usually discourages her from trying to enter. Our guess is that, in your case, the same female cowbird laid an egg in each of the three boxes where the cowbird eggs were found.

If cowbird parasitism should prove to be a serious problem on your trail, you might try reducing the size of the entrance holes in your boxes to 1 7/16 inches. This could be done by attaching small boards with the smaller opening to the fronts of the present boxes. Eastern Bluebirds, as well as Western Bluebirds, but not Mountain Bluebirds, are quite capable of entering the 1 7/16 inch hole. This smaller hole would probably effectively exclude cowbirds.

I have two questions. I watched a bluebird fledgling perched on fencing surrounding a young apricot tree fall into the fenced-in area around the tree. Both parents immediately went to him. The adult male began pecking at the fledgling as if attacking him. Why? I ran out and all three birds flew to a nearby tree.

My other situation concerns a box



erected on a golf course in which three eggs were laid between June 28-30. They have not hatched and I know the female has not abandoned them [early August] because I recently saw her leave the box as I approached. A cart path was established past the box after the nest was made. Should I have moved the box? Why won't any of the eggs hatch? How long do I wait to remove any unhatched eggs?

Nancy J. Moore
Milton, Pennsylvania

The apparent attack that you mentioned by a male bluebird on its fledgling that fell to the ground was probably simply an attempt by the parent to get the young bird to fly to a safer location off the ground. Adult birds seem to know instinctively that inexperienced fledglings on the ground are in great danger from predators such as cats.

Concerning your other question, the female bluebird usually starts to incubate her eggs on the day the last egg of the clutch is laid. The eggs then usually hatch after 13 or 14 days of incubation. If the eggs then fail to hatch within a few days of the expected time, the female will almost always abandon them. Sometimes she seems to sense somehow that the eggs will fail to hatch and will stop trying to incubate them well before the end of the usual incubation period.

In many cases the female bluebird will cover the clutch of eggs that failed to hatch with fresh nesting material and then proceed to lay another clutch of eggs and try to hatch them. This second attempt to raise a family is very

(Continued on page 49)

1990 Nesting Box Report

Kevin L. Berner, Jeanne D. Wigen, Janine A. Grindrod, and Nancy E. Niles

Annual surveys of nest productivity are valuable for identification of population trends for cavity nesting birds. When combined with Christmas Bird Counts, nesting information can be used to evaluate overall population fluctuations and productivity, which vary due to weather factors, rates of predation by mammals, snakes, and other birds, or parasitism. For this information to be of value, it is important that it be collected in as consistent a manner as possible. Annual surveys of birds using nesting boxes have been conducted by NABS each year since 1980. Variables affecting accuracy of the results reported include changes in reporting rates, number of reports submitted and completeness of data submitted. Society members can minimize this type of variation by keeping detailed and accurate data during the nesting season and carefully, completely, and promptly filling out the survey forms.

The total number of bluebirds fledged was the highest of any year since NABS began to conduct comprehensive surveys in 1980. In 1990, 39,779 nesting boxes, an all time high, were monitored by NABS reportees, up from 34,088 last year and three times the number (13,415) reported in 1980. This year 64,192 bluebirds fledged in the U.S., Canada, and Bermuda, up from last year's 59,309. The next highest reported total was 60,431 in 1987. Fledging numbers have increased fairly steadily over the 11 year period. This growth probably reflects increases in boxes in the field, reporting rates, and actual populations of bluebirds. Slightly fewer total nesting boxes (11,075) were reported to have been used by bluebirds than in 1989 (12,917), but this decrease is most likely due to the absence of final reports from some birding groups or monitors of large trails, not a decline in boxes actually present in the field. Some very large organizations submitted data on total number of boxes and number of fledglings but had not yet compiled the number of boxes used when this issue went to print.

Tree and Violet-green Swallows were the most common other species reported by NABS members, nesting in 2266 boxes. Additional boxes were used by House, Carolina, and Bewick's Wrens (1594), Black-capped, Carolina, and Mountain Chickadees (927), Plain and Tufted Titmice (246), White-breasted Nuthatches (87), and Great-crested and Ash-throated Flycatchers (17).

EAST

Survey results indicate that more nesting boxes in the East were used by bluebirds in 1990 than in any year since NABS first surveyed its members. This year 17,202 bluebirds fledged from 4161 nesting boxes, up considerably from last year (12,931) but down from the 19,063 reported in 1988. The north-east had an extended period of cold and damp weather in May which coincided with the time that many young were present in first nests. High mortality was widespread as a result. Sparrow, raccoon, and snake predation also reduced the productivity of many trails.

The authors summarized data for the Schoharie County (NY) Bluebird Society. The county had record high num-

bers of fledglings of Eastern Bluebirds (1553), Tree Swallows (1955), House Wrens (624), and Black-capped Chickadees (88). These record levels were observed despite high mortality during the first nesting due to harsh weather conditions. A total of 312 bluebirds, 117 swallows, 21 wrens and 6 chickadees were found dead in nests. Dan Schuppel led the county with 152 bluebirds fledging from his 63 boxes. Sixty-seven of 145 survey respondents who had boxes paired 8-10 feet apart had simultaneous nestings of bluebirds and swallows. Peterson boxes were used in the county for the first time and received heavy use by bluebirds.

Martha Sheikay of Dahlgren, Vir-

ginia had suffered predation from snakes in the past. She felt that she successfully snakeproofed her nesting boxes with "Gutter Guard" screening attached to the back and base of her boxes and extending outwards from the box with sharp end-wires exposed. Her boxes have produced bluebirds for several years without further predation since she adopted this strategy.

Dr. Ouida Craig of Atlanta, Georgia reported that a pair of bluebirds in his neighborhood nested in a gourd. They have also used other nonconventional boxes in that area.

Dave Eastman of Sandwich, New Hampshire commercially produces bark-faced nesting boxes which he markets nationally under the "Country Ecology" name. He also holds classes in which children build boxes from pre-cut kits. His personal boxes were used by bluebirds, swallows, and chickadees.

Charles Reber of Marietta, Georgia had problems with a mockingbird harassing his bluebirds. The bluebirds aggressively fought back, attacking the mockingbird and successfully completed a nesting. Martha Abell reported that bluebirds evicted a nuthatch from one of her nesting boxes in Roanoke, Virginia.

Dawn MacLaren of Monrovia, Maryland, like many other respondents, reported losing six bluebird nestlings during a four day period of steady rain in May. She also had wrens build a nest in a bluebird feeder box and later had a successful bluebird nesting on top of the wren nest. The clutch of bluebird eggs was white.

Scott Adamson, Director of the Genesee Country Nature Center in Mumford, New York documented the loss of 40 young bluebirds to cold damp weather in May. He noted a decline of 42% in his trail's productivity compared to 1989 but still fledged 62 young, primarily in 3 3/4 x 3 3/4 in. (9.5 cm x 9.5 cm) boxes with milk carton inserts. The Center's boxes also fledged 658 Wood Ducks, 33 Hooded Mergansers, 11 Great-crested Flycatchers, 7 kestrels, 3 Common Flickers, and 2 Eastern Screech-Owls.

John Muscato, a 50 year resident

of Livonia, New York, reported that in his youth in the 1940s bluebirds were abundant; however, in the last 30-40 years they completely disappeared. This year he sighted two pairs but, so far, has not had any use of his nesting boxes.

Willard Cash, Sr. of Goldsboro, North Carolina reported the fledging of 830 bluebirds from 230 nesting boxes. He also had 22 boxes used by chickadees, titmice, nuthatches, and wrens. He noted that a House Wren with two eggs in a nest accepted three bluebird eggs after a predator killed the female bluebird. These eggs were incubated, hatched, and the young fed by the wren which fledged two of her own young and the three bluebirds.

In Montgomery County park areas in Maryland, 104 nesting boxes were used by numerous chickadees, titmice, and House and Carolina Wrens. Forty-seven bluebirds fledged in the parks; however, ten chicks close to fledging and two adult bluebirds were found dead. Insecticide poisoning was suspected to be the cause of the deaths.

Mark Oakly of Westfield, North Carolina fledged 348 bluebirds from his 73 boxes but had severe problems with sparrows. Sparrows killed four adult males and four bluebird chicks in his boxes. He lost 42 additional eggs or young bluebirds to snakes.

Ignoring nearby conventional nesting boxes, bluebirds nested in a Purple Martin box owned by Tina and Curtis Dew in Leonardtown, Maryland. They took nest material into each of the nine compartments before settling on a middle floor space where they successfully fledged five young.

CENTRAL

Reported numbers of nesting boxes used by bluebirds and total number of bluebirds fledged were both down from last year's record high levels in the central region. This year 27,227 bluebirds were fledged compared to 1989's 32,931. Great fluctuations in fledglings have been noted in the central region's data reported to NABS in the last six years. Some of

this may be due to timing of reports being submitted for publication. Large reports which take more time to compile unfortunately may not always be received in time for the data to be included in the annual summary report published in *Sialia*.

Edwin Edlund of Muskegon, Michigan documented a nest of bluebird young which were fed 3/4 in. (1.9 cm) tadpoles as the major component of their diet. The young fledged in 14 days rather than the 18-19 day period that he had usually observed. This same phenomenon was observed closely from blinds last year also.

Robert Rager of Rochford, Ohio exceeded his goal for 1990, fledging 220 bluebirds despite cold and wet weather during the first nesting. He used insulation to close box vents and replaced wet nests with dry ones made from grass.

Gary Tucker, Chattanooga, Tennessee, fledged 24 bluebirds using 5 gallon plastic jugs.

Wayne Zaininger of Warrenville, Illinois, who fledged 37 bluebirds, suggests an experiment in which boxes are mounted back to back "with one box always being the same and the other being of a variety of styles. This way the data collected would tell you what bluebirds prefer if different sizes or materials are used regardless of the location."

Lee Deneweth and Mary Karshner of Royal Oak, Michigan fledged 129 bluebirds on four trails. They also fledged three kestrels on one trail. Kestrels have nested there four of the five years they have monitored the trail.

Despite heavy losses in the first nesting due to cold, wet weather and losses in the second nesting from predation (snakes, wrens, and House Sparrows), Patricia Andrascik of Indiana, Pennsylvania fledged 184 bluebirds. She also reports suspected losses of two broods because of chemical spraying by homeowners. In her fifth year of monitoring boxes, she has fledged over 500 bluebirds.

Martha Reynolds, Raleigh, Mississippi, noted that she became a bluebirder after double surgery in 1987. "As

soon as I could hold a Skillsaw® in my hands I made three boxes and put them up." The bluebirds and bird-watching have helped me through some tough times."

Bob and Carol LaPres, Twin Lake, Michigan, fledged 222 bluebirds. Since 1978, when they purchased the NABS slide program and launched an education program, there has been a continuing increase in bluebirds in western Michigan, so much so that a bluebird celebration weekend is held each March at Hoffmaster State Park.

When vandals shot several of his 4 in. (10.2 cm) diameter PVC pipe boxes, Dick Walker of Loogootee, Indiana noticed that House Sparrows stopped using those boxes which had holes low in the box. As a result he started experimenting with PVC boxes with low vents (saw kerfs) six to eight in number up to 3 in. (7.6 cm) above the bottom to let light in the box. "Sparrows stopped using my lighted open-air boxes and the bluebirds make use of them by building their nests above the vents."

This summer Eric Vebelhör of Ferdinand, Indiana field-tested a new box design. The box had mesh wire screen (hardware cloth) for the bottom which was stapled to the inside wall; beneath the mesh screen was a removable wooden floor which he removed once hot weather arrived. This design may help prevent problems with blowflies and ants. "During early nesting months, when day or evening temperatures may be cool, I insert the wooden floor on runners beneath the mesh screen to help the nest stay warm."

David Durnell, St. Mary, Ohio reported great success using the Jim Noel hardware cloth raccoon guard, judging from the muddy footprints on the wood post and all over the nesting boxes and not one loss of eggs or nestlings.

The Bella Vista (Arkansas) Bluebird Society fledged 1043 bluebirds, just seven short of the goal of 1050.

Tom Barber of Cambridge, Ohio reported that 1990 was a big year for white eggs: 8% of all eggs were white (32 white eggs laid in 7 nests). "In one box, white eggs have been laid for 3

Table 1. 1990 Nesting Box Data by Geographic Region.

Types of Boxes Used	4" x 4"			5" x 5"			Other			Total
	E	C	W	E	C	W	E	C	W	
Total Number of Boxes	5831	5863	171	1787	1450	1293	536	8692	495	37,747
Boxes Used by Bluebirds	2492	1051	20	565	716	302	292	346*	95	11,075
No. of Bluebirds Fledged	7863	10,060	73	2117	3177	1269	1312	12,619	404	64,192
Boxes Used: Chickadees	172	103	4	32	22	13	9	12	20	927
Boxes Used: Titmice	51	34	13	24	15	18	5	4	7	246
Boxes Used: Nuthatches	16	4	5	4	7	8	3	5	10	87
Boxes Used: Swallows	489	196	18	181	192	155	88	70	61	2766
Boxes Used: Wrens	334	152	1	43	71	27	54	34	71	1594
Boxes Used: Flycatchers	1	0	1	1	1	2	1	0	10	17
Total No. Boxes Used	3555	1540	62	850	1024	525	452	471	274	16,712
% of Boxes Used by All Species	61.0	26.3	36.3	47.6	70.6	40.6	84.3	5.4*	55.4	44.3
% of Boxes Used by Bluebirds	42.7	17.9	11.7	31.6	49.4	23.4	54.5	4.0*	19.2	29.3
% of Boxes Used by Others	18.2	8.3	24.6	15.9	21.2	17.2	29.9	1.4*	36.2	14.9

*Incomplete data available (total boxes numbers complete but box use data was not complete).

Geographic Regions According to States and Provinces

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

years in a row." Gary Boone of Lincoln, Indiana also reported that out of the first five clutches of eggs, two females laid white eggs.

JoAnn Moss of Big Cabin, Oklahoma mentioned in her report that a female bluebird incubated six eggs which yielded two bluebirds and four titmice, all of which fledged normally.

Phyllis Kneeder of Mason City, Illinois is doing her part to solve the sparrow problem. Of the 484 sparrow eggs laid in her boxes, none hatched.

Senter Jackson of Jonesborough, Tennessee had five nestings fledging 23 bluebirds from the same box. The fifth nest was built upon the last nest before there was time to clean the box out!

Jerry Martin of Bell Buckle, Tennessee tried an assortment of lithium grease, electric fence, and PVC pipe to deter predators, successfully fledging 50 bluebirds out of ten boxes.

The Bluebird Recovery Program of the Audubon Chapter of Minneapolis fledged a total of 16,447 bluebirds.

WEST

Fledging rates for bluebirds in the western region report increased to a record high of 19,763 following last year's drop to 13,447 from 18,592 in 1988. Bluebirds were reported to have used 4520 nesting boxes, a significant increase from the 2565 reported in 1989; however, 4215 boxes were reported used in 1988. This aberration is probably due to reports submitted too late for inclusion in this year's summary for some large trails, not due to radical changes in numbers of boxes from year to year.

Quite a few members mentioned switching or planning to switch to metal pipes for box supports. Jeff and Bob Schulz of White, South Dakota switched boxes with nesting bluebirds to metal pipe mounts and reported no predation.

Besides fledging 34 bluebirds, Janet Wasserman of Camarillo, California fledged 7 titmice, 15 Violet-green Swallows, 6 Ash-throated Flycatchers, kestrels, and flickers. Two

nests of screech-owls were unsuccessful.

The Mountain Bluebird Trails conservation group from Lethbridge, Alberta fledged 791 bluebirds, despite losing 2000 eggs late in May because of a snow storm. The group has a 12,000 square mile trail area with almost 600 linear miles of trail checked by 41 monitors.

Art Aylesworth of Ronan, Montana reported that nearly 12,000 bluebirds were fledged on Mountain Bluebird Trails in Montana and adjoining areas without any great changes in numbers of nesting boxes monitored. He noted with regret the death of Jack Woodworth who was instrumental in the re-establishment of Mountain Bluebirds in central Montana.

This is the time of year to prepare for the upcoming nesting season. After reviewing the data that is needed on the NABS nesting survey form at the season's end, prepare your own field sheet to record your observations at each nest check. This will ensure that accurate and complete data can be reported to NABS or other birding organizations that you belong to. Many groups may already have developed forms which they could provide as examples. The information contributed by each NABS member is vital to our efforts to monitor and document the recovery of the three species of bluebirds native to North America. ■

State University of New York
Cobleskill, NY 12043 (Berner)

(QUESTION CORNER—Continued from page 44)

likely to be successful. Such a sequence of events is often not detected in the course of weekly monitoring. This is quite possibly what happened in your case. In monitoring bluebird nests, one should never remove any eggs as long as they are being attended by the female bird.

The golf cart path that you mentioned close to one of your nesting boxes probably would cause no serious problem, but it might be safer to move the box to a quieter location. ■

Literature Review

T. David Pitts

Sauer, John R., and Sam Droege. 1990. Recent population trends of the Eastern Bluebird. *Wilson Bulletin* 102: 239-252.—The authors used data from the Breeding Bird Surveys of 1966 through 1987 to investigate changes in the population of Eastern Bluebirds. The title implies, at least to me, that data were gathered from all parts of the range of Eastern Bluebirds, which was not the case. Breeding Bird Surveys are conducted annually in Canada and the U.S., but not in Mexico or northern Central America where Eastern Bluebirds are also known to occur; nothing is presented here about bluebird populations south of the U.S. (To my knowledge nothing has been published, other than incidental observations and reports of specimens collected, about any aspects of the biology or ecology of bluebirds south of the U.S.) The authors point out that analyses of population changes are more meaningful when large geographical areas are considered as opposed to the examination of local or regional areas. The data clearly show a population “crash” associated with the severe winters of the late 1970s. Abnormal spring weather (e.g., hurricanes) is also shown to negatively affect bluebird populations. Breeding Bird Survey data clearly show the recovery of bluebird populations in the last decade; this increase in numbers more than offset the earlier decline in most areas. The result is a slight increase in Eastern Bluebirds in North America in 1987 as compared to 1966. The authors are to be congratulated for their presentation of data and methods that will be used in many future comparisons.

Kerpez, T.A., and N.S. Smith. 1990. Competition between European Starlings and native woodpeckers for nest cavities in saguaros. *Auk* 107:367-375.—Since the introduction of European Starlings into the U.S. in 1890 they have occupied much of the nation.

Starlings apparently began nesting in Arizona in the mid-1940s; they still do not nest in some parts of the state. The authors capitalized on this situation and compared nesting densities of Gila Woodpeckers and Northern Flickers in areas having starlings with areas not having starlings. All three species nested in saguaro cacti; starlings, as elsewhere, usurped cavities previously excavated by other species. Starlings used cavities of Gila Woodpeckers but did not use cavities of Northern Flickers. Consequently, as the number of starlings in the area has increased, the number of Gila Woodpeckers has decreased. Starlings apparently do not compete with flickers in this area; starlings did not use cavities of flickers and there was no relationship between the number of starlings and the number of flickers present on an area. At least six other species of secondary-cavity nesters use woodpecker cavities in the saguaros; all are likely to be adversely affected by starlings.

Ginaven, John H. 1989. Luring Purple Martins. *Pennsylvania Birds* 3:133.—This article could have been entitled, “Unsuccessful attempts to increase numbers of nesting Purple Martins.” The author discusses his use of wood decoys and mirrors on unoccupied nest boxes in an attempt to attract nesting pairs of martins. While several martins, possibly lured by the decoys, were observed near the boxes, none of the martins remained to nest. The author suggests that the combination of tape-recorded martin songs (which he did not use) and decoys might be successful. Readers who are attempting to attract martins will find several interesting ideas in this article.

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

Foiling House Sparrows

Wayne H. Davis

House Sparrows (*Passer domesticus*) are one of the most serious threats to bluebirds. They often take over houses provided for bluebirds, sometimes evicting them after they have started nesting, and occasionally killing the young and even an adult bluebird to acquire the nest site (Gowaty 1984).

People have tried various methods to discourage House Sparrows. Placing boxes no higher than fence post level is helpful. The farther from buildings the less likely a box will be taken by House Sparrows. The only way to assure freedom from sparrow problems is to place boxes in areas remote from buildings. (Even this protection seems to be breaking down. During the past season I have had sparrow problems at several boxes along Kentucky highways where they were out of sight of buildings and more than half a mile [0.8 km] from the nearest building.) Most people would like to have bluebirds nesting in their yard, however, where they can easily be watched from the house. Some people are successful. In such situations House Sparrows are a constant threat.

For several years I have been trying to develop a box that Eastern Bluebirds (*Sialia sialis*) like and House Sparrows will not use. In our experiments we found that bluebirds prefer a slot-entrance box (McComb, *et al.* 1987) while House Sparrows prefer a circular entrance (Davis 1989). During 1989, I tested boxes with a Plexiglas skylight at the rear of the roof. This was a failure: the sparrows simply arched over their nests to shut out the light, building a tunnel-like passage and laying their eggs almost on the floor. Knowing that sparrows like to nest far back in crevices, out of reach of predators, I decided to test a shallow box which would minimize this opportunity.

Materials and Methods

All boxes had floor dimensions of

4 x 4 inches (10 x 10 cm). House Sparrows like to build bulky nests; a larger chamber is an invitation to House Sparrows. For the University of Kentucky agricultural experiment farms north of Lexington, 64 boxes were constructed of half inch (13 mm) plywood and painted gray. These boxes had 29 mm slot entrances. The 32 experimental boxes had a depth of 3 in. (8 cm) from entrance to floor and the controls were 5 in. (13 cm) deep. The shallow boxes were placed at all 14 sites where House Sparrows had nested in 1989. The 34 sites where bluebirds had nested were equally divided between experimental and control boxes. Sites are 0.2 mile (320 m) apart. The UK farms provide ideal habitat for a heavy population of House Sparrows. Livestock feeding and waste grain provide an abundance of food. Numerous buildings in a sad state of disrepair provide plentiful nesting sites.

Fifty boxes of the described dimensions were built for use at the Bluegrass Army Ordnance Depot at Richmond, Kentucky. They were the same except that they were made from used horse farm fence. This is unfinished oak lumber one inch (2.5 cm) thick. It is a natural weathered gray. These boxes were placed on utility poles about 4 feet (1.2 m) above ground at intervals 0.1 mile (160 m) or more (depending upon habitat) apart in an area where there had been no boxes before. Experimental and control boxes were alternated. The habitat is lightly grazed grassland interspersed with woodlots. There are no House Sparrows.

Sixty boxes were constructed to place on a private horse farm near Lexington. Half of these were slot-entrance boxes made of old horse farm fence with a depth of 4 inches (10 cm) from the entrance to the floor. The other 30 boxes were circular entrance boxes constructed according to the original NABS plan. They were made of unfinished cured hemlock one inch thick.

These were placed alternately at 0.1 mile intervals on the Juddmonte Farms near Lexington. They were nailed to posts of the wooden horse farm fences on the outside away from the horses. The roof of each box was only 3 feet (0.9 m) above ground; this low height was necessary to prevent the horses from chewing on and destroying boxes.

Juddmonte Farms are among the most elegantly manicured of Lexington horse farms. There are no nest sites available for bluebirds. House Sparrows are fairly common and nest in a few of the buildings, but nest sites are limited.

All boxes were erected in the fall of 1989. They were checked in late February 1990. Weekly monitoring began in late March and continued until all nesting activity was over in late August.

House Sparrow nests were removed from all control boxes 30 April to see if this would induce them to try the experimental boxes. After that the sparrow nests were left intact, but completed clutches were removed to prevent their fledgling young. Bluebird nests were removed only in the few cases where dead broods were found. When a nesting is successful bluebirds will readily build a second nest atop the old one. I wanted to see if they would do so in the shallow experimental boxes.

Results

At the UK farms House Sparrows built nests in eight of the control boxes but none of the shallow ones. The difference is highly significant. Unfortunately, bluebirds did not seem to like the shallow boxes either. They started nests in fewer of the shallow boxes than the controls. They also showed a

tendency to build nests and not use them in the shallow boxes. Second nesting in the shallow boxes, however, was not a problem. In 4 of the 10 boxes used second nests were built on top of the old ones, a proportion comparable to that in the controls. Brood sizes were as large and fledging as successful in the shallow boxes that were used by bluebirds as in the controls.

At the Army Depot bluebirds showed no preference for box styles, readily using both. They began nesting in both styles at the same time and used all available boxes. Second nestings were prevalent in both styles, the bluebirds showing no hesitation to build a second nest on top of the first in the shallow boxes. Most birds that were successful at raising a brood built a new nest and started a second brood. Clutch and brood size did not differ between the two styles. More young were fledged from the deeper boxes, but this difference was not significant.

At Juddmonte Farms there were significantly more bluebirds using the 4 inch deep slot entrance boxes than the circular entrance and significantly more of the circular entrance boxes were left empty. This confirms previous findings that bluebirds prefer a slot entrance. More House Sparrows used the circular entrance box than the slot entrance, but numbers were small and the difference not significant. Perhaps the low-mounted boxes discouraged House Sparrows.

Discussion and Recommendations

House Sparrows apparently are not interested in a shallow box made of plywood and mounted on a fence post. (I have had them nest in such boxes placed on farm buildings.) Bluebirds will use such boxes but prefer deeper

Table 1. Nest Box Use at the UK Farms.

	Number	blue- birds started nests in	used nests in	second nesting in	predator raided	total fledged	used by House Sparrows	used by other species	empty boxes
3 in. boxes	32	17	10	4	2	47	0	3	12
5 in. boxes	32	28	27	9	6	79	8	3	1

Table 2. Nest Box Use at the Army Depot.

	boxes used	raided by predators	second nesting in	first success but no 2nd nesting	bluebirds fledged
3 inch boxes	25	10	19	3	141
5 inch boxes	25*	9	19	2	160

*one box raised Tree Swallows and House Wrens; all others had bluebirds.

Table 3. Nest Box Use at Juddmonte Farms.

	number	blue-birds nested in	House Sparrows nested in	other species* nested in	empty boxes
circular entrance	30	16	4	4	8
4 inch boxes	30	26	1	2	1

*Carolina Wren, House Wren, Tufted Titmouse, Carolina Chickadee

ones. If you have a bluebird box in your yard where House Sparrows are a threat, you should consider adding a shallow box to the area.

Bluebirds readily accept a shallow box made of one inch thick lumber. Such boxes look much sturdier than my shallow plywood boxes; this may account for their acceptance, or it may be that bluebirds at the Army Depot are less particular. House Sparrows likely would not be very interested in these boxes, but this has not been tested. I will do that next year.

One can build a 5 inch deep slot box, and if it is taken by sparrows remove the nest and stick in a piece of 2 x 4 to make it more shallow. I have done this with my boxes along the highways in Kentucky with mixed results. Once a House Sparrow has chosen a site it is not easily discouraged. In no case yet, however, have I had a sparrow take over when the original box was 3 inches deep and placed on a fence.

In constructing shallow boxes one should use Richard Tuttle's (1990) modification of my design. Inset the floor and hinge the front at the bottom. Set your entrance size at 28-30 mm and drill to make the hinge with nails. ■

Acknowledgements

I thank the North American Bluebird Society for help financing this study; Shirley Davis, Martina Krumm and Philippe Roca for help with the field work; and Billie Morgan Hazlett, Land Manager of the Bluegrass Army Ordnance Depot, for help in getting access to study areas.

Literature Cited

- Davis, W.H. 1989. House Sparrows prefer a circular entrance. *Sialia* 11:8-10.
- Gowaty, P.A. 1984. House Sparrows kill Eastern Bluebirds. *J. Field Ornithol.* 55:378-380.
- McComb, W.C., W.H. Davis and P.N. Allarie. 1987. Excluding starlings from a slot-entrance bluebird nest box. *Wildl. Soc. Bull.* 15:204-207.
- Tuttle, R.M. 1990. Details for a front opening bluebird nest box with a slot entrance. *Sialia* 12:13-17.

School of Biological Sciences
University of Kentucky
Lexington, KY 40506

Announcements

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

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

Eastern Bluebird Dispersals from Delaware County, Ohio

Richard M. Tuttle

Since 1980, I have been placing U.S. Fish and Wildlife Service aluminum leg bands on all nestlings in my nest boxes on five trails in Delaware County. Also, in order to produce a better data base for my local studies, I have also banded nestlings on other trails in the same county. During the last two years, five bluebirders have assisted with the banding. We band nearly 400 bluebirds and 900 Tree Swallows each year.

Do bluebirds nest on their ancestral trails? Do they change mates? Do they disperse to other trails within the county? These questions can be answered when the bander captures nesting birds on his or her trails, but the question, "How far will bluebirds travel from where they have been raised?" can be answered only when a banded bird is found by someone other than the bander.

After banded birds are found, the finder must contact a wildlife official, a bird bander, or the Bird Banding Laboratory (BBL) at Patuxent Wildlife Research Center, Laurel, MD 20708. All information collected from the band finder is recorded on a special form for processing. Computers at the BBL store information that has been submitted by the bird bander. The band finder receives a "Certificate of Appreciation" which lists where the bird was banded and by whom. The bander is sent a computer printout including the finder's address and all known information about the bird's condition and location.

Four of my banded bluebirds have been found far from their birth trails and their stories will help answer questions about long dispersals. All four Eastern Bluebirds were banded as nestlings in Delaware County. Unfortunately, all four were found dead. Three of the four definitely died during the local nesting season.

No. 1381-37632 was banded 26

May 1986 and found in Northville, Michigan, 24 June 1987. Northville is west of Detroit and is 136 miles [219 km] north of where the male bluebird was banded as a nestling. He was found dead on the ground, the result of a window collision or of being grabbed by a cat.

No. 1381-37530 was banded 6 May 1986 and found near Valley City, Ohio, 25 June 1988. Valley City is below Cleveland, a dispersal of 88 miles [142 km].

No. 1441-34123 was banded 14 June 1989 and found in Phenix City, Alabama in mid April 1990. Phenix City, spelled without an "o," is directly west of Columbus, Georgia. The male bluebird had collided with a window 560 miles [901 km] south of where it was banded.

No. 1411-58337 was banded 4 July 1988 and found mummified in a wood burning stove 14 April 1990, 4 miles south of Indian River, Michigan, 375 miles [604 km] north of where it fledged. Indian River is 45 miles [72 km] south of the Mackinaw Bridge. I am awaiting more information about this male bluebird. The stove may have been in an abandoned cottage and I want to know if the stove had been used in 1989. This case is a good reminder that we lose many screech-owls and bluebirds when stove pipes are not screened. Starlings also drop down chimneys frequently; undesirable and hated as they may be, they deserve a better fate.

These four bluebirds demonstrate that our conservation efforts are contributing to more than our local populations. As I talked with Mrs. Loren West of Phenix City, Alabama, she told me how much her family enjoyed the bluebirds and how unfortunate it was to have one that had flown from Ohio die in their yard. I told her not to worry, we'd send more. ■

Fig. 1. Eastern Bluebird Dispersals from Delaware County Ohio.

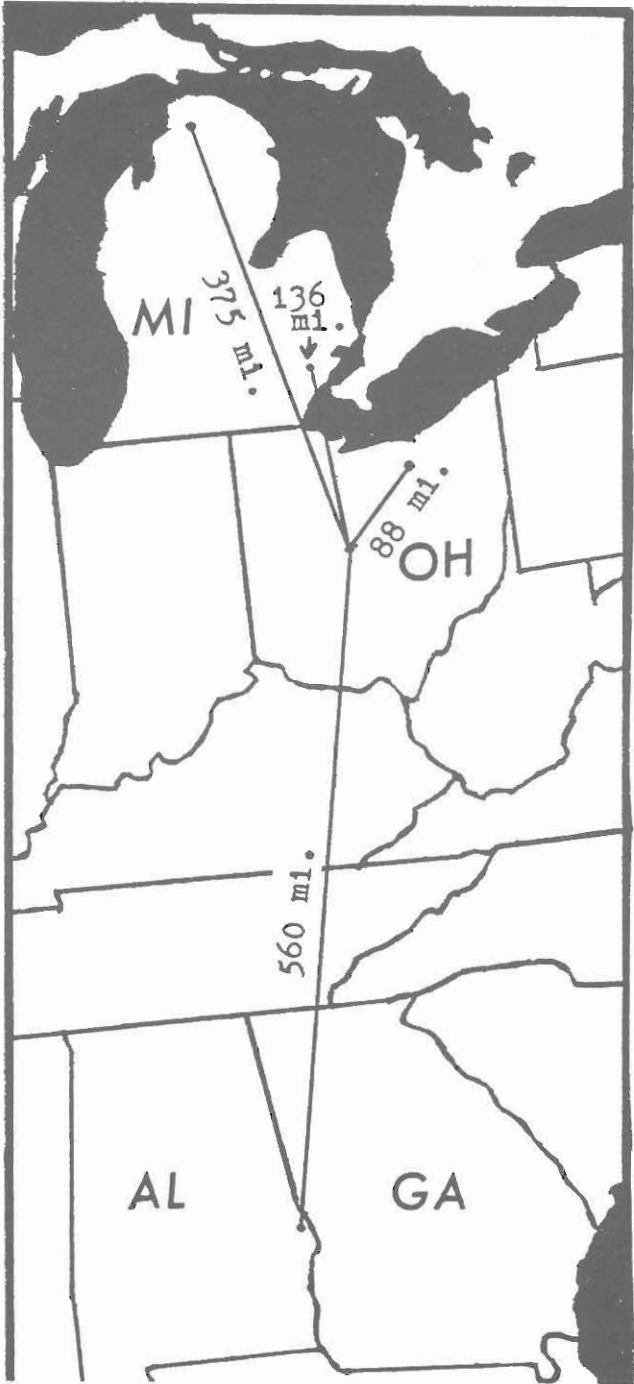


Diagram by Richard M. Tuttle

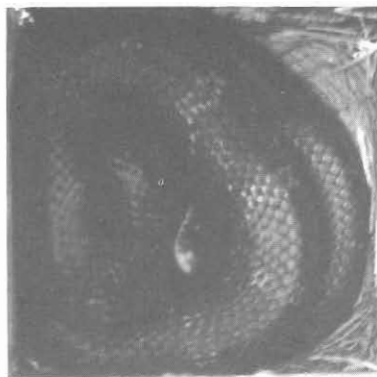
311 W. Central Ave.
Delaware, OH 43015

This article was written originally for the Delaware County Bird Club Newsletter and the Bluebird Monitor, the newsletter of the Ohio Bluebird Society.

RON KINGSTON'S SNAKE/PREDATOR GUARD

By using a section of stovepipe, a round piece of hardware cloth, and two strips of hanging iron, a pipe-mounted nest box guard can be made which will stop most climbing predators including snakes (Fig. 1).

Figure 1. Black Rat Snake in Box.



Photograph by Henry M. Dilman

Materials Needed

- 1 stovepipe 24 in. (61.0 cm) x 7 in. (17.8 cm)
- 1 hanger iron 14 in. (35.6 cm) x 3/4 in. (1.9 cm)
- 1 piece hardware cloth 8 in. (20.3 cm) x 8 in. (20.3 cm)
- 2 machine screws with nuts 8 - 32 x 1/2 in. (1.3 cm)

The hanger iron is cut into two 7 inch (17.8 cm) strips and bolted together around the nest box mounting pipe (Fig. 2). The hardware cloth is cut into a circle with a diameter of 8 inches (20.3 cm). The outer edge is bent down to fit snugly into the stovepipe. A hole is cut in the hardware cloth so it will fit around and down onto the mounting pipe (Fig. 3).

Using tin snips, cut the stovepipe so that "flaps" can be bent inward to hold the stovepipe over the circular hardware cloth. Note: the hardware cloth and stovepipe can be assembled before installation on the mounting pipe.

The hardware cloth and stovepipe assembly rests on the hanger iron which acts as a bracket. The entire

assembly is stable and should keep the stovepipe rigid, not allowing it to touch the mounting pipe (Fig. 4).

The guards were used in 1990 on nest boxes which were mounted in areas where black rat snakes were known to exist. Grease was smeared on all mounting pipes to indicate predator activity and to stop ants (Fig. 5).

Snakes tried to reach the nest boxes but were unsuccessful. They went up the mounting pipe, tried to get through the hardware cloth, could not, went down the pipe, and left the area. Raccoons never were able to go up the stovepipe either.

The more open the habitat in which a

Figure 2. Hanger Iron.

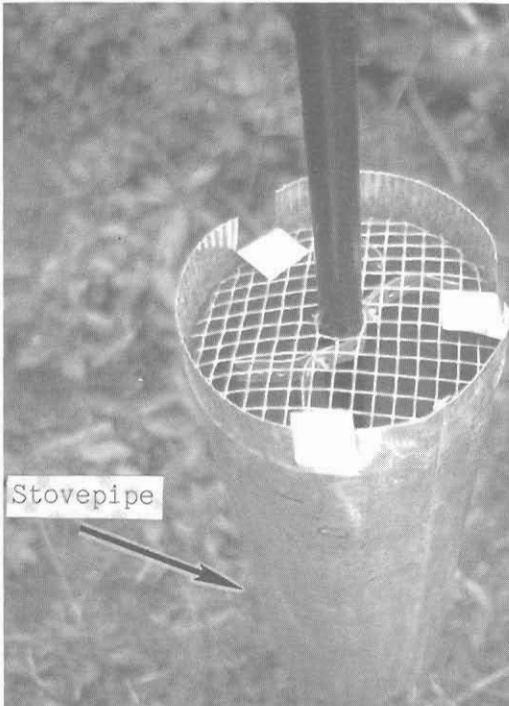


Photographs 2-5 by Ron Kingston

Figure 3. Hardware Cloth.



Figure 4. Stovepipe and Hardware Cloth on Hanger Iron.



nest box is located the less likely it will be predated. If boxes must be placed near areas where there are predators, a box mounted on a pipe with a stovepipe guard will fledge more young birds year after year than an unprotected one.

I've also found that spreading 2 cups (0.47 l) of garden sulphur powder around the base of a nest box pipe has proved successful in areas where guards cannot be used for aesthetic reasons. The smell deters predators. Further studies will provide more data as to the effectiveness of garden sulphur powder as a predator deterrent. ■

3690 Country Lane
Charlottesville, VA 22901

Figure 5. Completed Predator Guard.



JIM NOEL'S CAT AND COON GUARD

In 1985 my good friend William Atwood persuaded me to build and erect five Peterson bluebird boxes. Within a year I had 80 boxes on a trail that wound through Cass and Morgan counties in central Illinois.

I averaged about 220 bluebirds fledged each year, but for every bird fledged an equal number of eggs or nestlings were being lost to predators. A few were lost to wrens, sparrows, and snakes, but the biggest share went to cats and raccoons.

Most of my trail is in farm country. Since scattered trees, powerlines, and grassy areas are the best habitat, farmsteads and cow pastures were the places where most of my boxes were located. These areas also attract cats and raccoons. Nothing bothers me more than to find one of my boxes with nesting material pulled out through the entrance (Fig. 1). Several boxes were robbed as many as three times before they were successful.

I needed some way to put more distance between the predator and the bluebird without changing the basic design of the box. My first attempt at a predator guard was to drill a hole in a six inch long two by four. I placed this over the entrance hole. This put a predator an inch and a half farther from the nest, but didn't really help much due to the shallow depth of the box.

Next I wrapped the front of the box with an eight inch strip of half inch hardware cloth. This worked, but it was awkward to open the front. I then made a 3 1/2 x 5 1/2 x 6 inch deep wire guard. At first I watched until eggs were laid in a nest and then attached the guard (Fig. 2). I found that, after raising one brood, bluebirds returned and reused the boxes with the guards on them, so now when I put a guard on I never take it off.

As to the success rate, it's hard to say. I believe it eliminated nearly 100% of my cat problems. Cats are not as persistent as raccoons. Of the 15 boxes initially equipped with guards, only four were robbed. These were in areas where almost all boxes had been



Fig. 1. Nesting box raided by a raccoon with nesting material pulled out through entrance hole.

unsuccessful. Since that time the predation percentage has probably gotten worse. Once a raccoon robs a nest it never forgets, and it gets better with every try. With dry weather causing a food shortage, I think raccoons have become more dependent on nest boxes as a food source. An extremely persistent raccoon can force its way into the guard's opening. In the worst area, I added a piece of baling wire across the center of the guard. This cuts the opening in half.

I realize this guard isn't the complete answer to predator problems, but it has helped on my trail, and it appears

to have helped other bluebirders. I have heard from many people who have had good results, especially in the northern states and Canada. ■

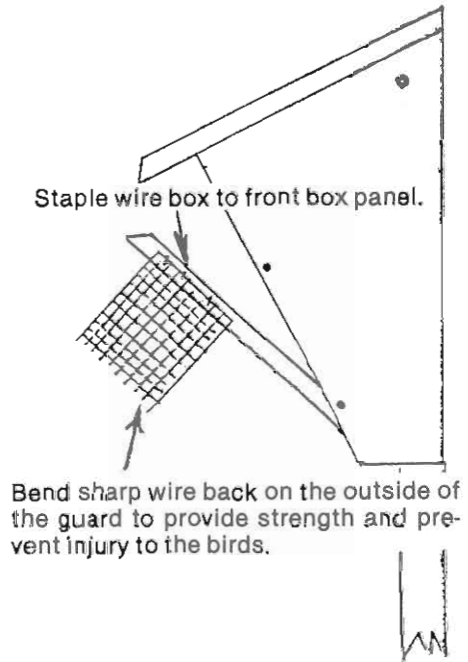
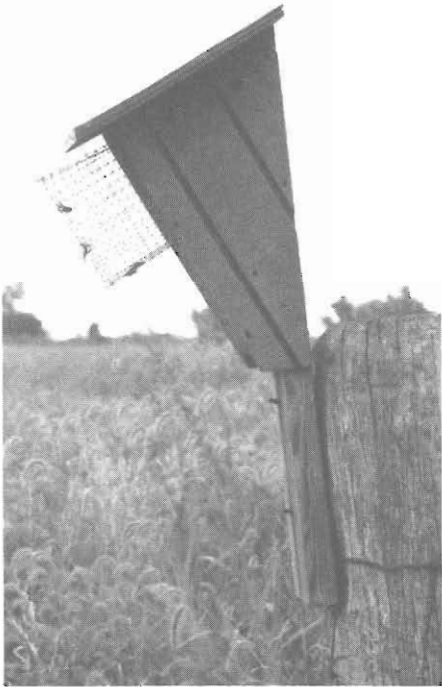
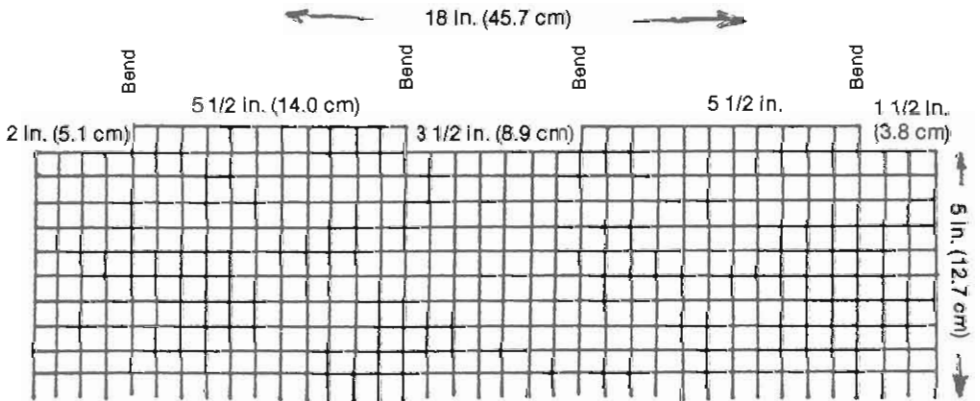


Fig. 2. A Peterson box equipped with Jim Noel's cat and coon guard.



1/2 in. (1.3 cm) wire mesh

When wire mesh is bent, it should form a 3 1/2 in. wide x 5 1/2 in. high box, open at the ends. This guard was designed for use with a Peterson nest box but can be adapted for use with other styles.

Box 173
Ashland, IL 62612

Bluebird Creek

Diane Noll

My name is Bluebird Creek. I was formed by the Wisconsin Glacier 14,000 years ago. I meander along through fields, open pastures, and woodlands. Fox and beaver play along my banks. I empty into the Little Sioux River which runs through a horse ranch in northern Buena Vista County near Linn Grove, Iowa.

Diane Noll lives on this ranch and for 26 years wondered if I had a name. After much research she discovered I was unnamed so she decided that her class of 28 second graders would attempt to name me as an enrichment project. The children studied all the natural inhabitants living near me and decided unanimously to name me after the beautiful bluebirds that bathe in my waters and nest along my banks.

Following ten pages of guidelines, the students began the naming process by writing over 50 letters to federal, state, and local administrative authorities and organizations asking for endorsement of their project. They were interviewed by newspaper reporters; seven newspapers carried their story. The class made posters and distributed petitions which more than 800 people signed. Everyone was very supportive; of course, naming me after the beautiful bluebirds made everyone responsive and enthusiastic.

Finally, the class sent all the necessary letters, clippings, signatures, and pictures to the U.S. Board on Geographic Names in Reston, Virginia, and waited. What excitement when they received a phone call at school stating that their name proposal had been accepted. They had made history! I now had an official name: Bluebird Creek. That name now appears on topographic quadrangle maps.

The class made many friends. Mel Gunville from Storm Lake made each class member a bluebird box individualized with the student's own initials. The Minnesota Bluebird Recovery Program gave each child a bluebird patch. Gilbert James, a lawyer who wrote *Beyond the Hop Rock*, a book about his boyhood along my banks and beyond, gave each student a book. He also donated 700 additional copies. The class sells the book and uses the money to buy nature books and magazines for their school. Gilbert James even came all the way from Arizona to meet the class. An autographing party in his honor was held at the Linn Grove Library.

Before the school year ended, the class held a Bluebird Creek Name Day celebration. Five hundred people filled the Linn Grove gymnasium. Nineteen students gave speeches. Senators, representatives, environmental educators, and wildlife biologists also spoke. The whole student body sang a song about me and the event was televised.

The following October almost all of the class traveled to the state capitol to receive an award from the governor. Class members presented Governor Terry Branstad with a bluebird box inscribed with his initials.

There have been many articles written about my new name. The National Geographic *World* printed a story in their February 1990 issue. They even had a picture of me with the class splashing water on each other. The class is now in the fifth grade; they were featured in an April 1990 article in the Storm Lake *Pilot Tribune*. As for their teacher, Diane Noll, she is kept busy giving speeches about me and promoting the bluebird. ■

RR 1, Box 113
Linn Grove, IA 51033

In early 1988, Mrs. Noll's class asked the North American Bluebird Society for a letter of support for their Bluebird Creek naming project. The requested letter was promptly sent. Later, Melissa French sent NABS a letter on behalf of her class:

"Dear Bluebird Society:

Bluebird Creek is now officially named. The U.S. Board on Geographic Names

accepted our name proposal on April 14, 1988. We are extremely excited! We want to thank you for your support and endorsement of our project."

Ripples from the naming project reached as far as the Library of Congress in Washington, D.C., where the story of the naming of Bluebird Creek was featured in the exhibition "A World of Names," which opened on 6 September 1990. Diane Noll was an honored guest at the opening reception. The exhibit celebrated the centennial of the United States Board of Geographic Names. What began as an imaginative enrichment project for a second grade class became a demonstration of how the democratic process can work.



Ronald Grim (left), curator of the Geography and Maps Division, Library of Congress, and Diane Noll, second grade teacher, Sloux Valley School, Peterson, Iowa, with Bluebird Creek display.

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. Information will be mailed to all members with the Summer Issue of *Sialia* in July. Contact your local travel agent for questions and reservations pertaining to travel to Bermuda. A passport or birth certificate and driver's license is required for entry.

The Bermuda Bluebird Society is the host.

A Bird in the Bush

Karen Blackburn



Recent "Bird in the Bush" columns have addressed the subject of conflicts between Northern Mockingbirds and Eastern Bluebirds. A number of readers reported observing conflicts between these species, often resulting in the abandonment of bluebird nests, eggs, or nestlings. We offered recommendations which may help to reduce mockingbird interference during the breeding season and asked for suggestions from readers as well.

From Stephanie Trolle of Ridgefield, Connecticut came this light-hearted advice: "For those who are having mockingbird/bluebird problems, import a few crows! They'll take care of the mockingbirds for you." According to Ms. Trolle, the mockingbirds in her area "seem to have their hands full just keeping the black crows at bay."

One of our suggestions for protecting nesting bluebirds from mockingbird harassment was to place bluebird nest boxes in secluded areas, such as woods' edge or on the trunk of an isolated tree. All crows aside, Ms. Trolle's placement of her nest box on a maple tree may be another reason that bluebirds have been able to nest successfully in her yard. She notes that the tree is next to an open field, "but perhaps there is something to the thick leaves of the drooping branches hiding the box and making it very secluded." In any case, she has not observed any trouble between mockingbirds and bluebirds.

Earl Boggs of Nicholasville, Kentucky writes, "Since reading your articles about mockingbird harassment of bluebirds, I've been watching interactions between these species. Around my yard, once mockingbirds have established winter feeding territories, they become extremely intolerant of other mockingbirds and any fruit-eat-

ing birds, including bluebirds. I am now pretty much convinced that mockingbird harassment is why I have no bluebirds around my yard in winter. In the back areas of the farm, where there are no mockingbirds, there is a good-sized flock of bluebirds." While Mr. Boggs has observed mockingbird/bluebird conflicts during the winter months, he has not yet noticed such problems during the breeding season.

Those of you whose bluebirds are allowed to "nest in peace" are fortunate indeed. The rest of us can hope to promote successful bluebird nestings by relocating nest boxes to more secluded sites. It's either that or... "import crows"!

IN A NUTSHELL--Concerning the use of plants by bluebirds, this tidbit of information came to us from Gerald Hartley of New Brockton, Alabama: "Bluebirds seem to enjoy going over our pecan hulls looking for bits of meat." Certainly pecan trees provide sustenance for many other creatures as well.

Our thanks to all of you who have taken the time to share your observations with us. We continue to invite reports regarding mockingbird/bluebird interaction. If you have planted for wildlife or have seen wildlife displaying a preference for particular plants in your area, your contribution to this column would also be much appreciated. Please send your reports or comments to Karen Blackburn, 4961 Dogwood Drive, Marianna, FL 32446 ■

HARRY KRUEGER'S SNAKE TRAP

For five years I have been testing a snake trap (Figures 1 and 2). The trap has also been tested by three other co-operators. This trap has been used on more than 500 bluebird nest boxes with over 125 snakes trapped. It has proven to be effective with only two failures. The first failure resulted from the net extending too far down the pole; apparently the snake leaned against the net, crawled up to the nest box, and ate the five eggs. The snake then became enmeshed in the net on the way *down* and was captured. The trap was modified so this would not happen again.

The second failure may not have been a trap failure. This trap was on nest box no. 7; the alternate method trap design (Fig. 2) was used. Southerly winds had flattened the net at the front of the box. The roof edge of this box was only 4 1/2 in. (11.4 cm) from a chain link fence, so that the snake could have crawled over the flattened net or crawled up the chain link fence to enter the nest box.

The trap is not without its disadvantages. When a snake is enmeshed in the trap, parent birds will not enter the nest box. The snake should be removed as soon as possible. Even if the eggs or young are abandoned, if the snake is removed quickly the same birds will come right back, build another nest, and replace their clutch. Nest box no. 37 in 1990 had four nestlings abandoned, but as soon as the dead nestlings, snake, and used nest were removed, the same color-banded pair returned to build their fourth nest and successfully fledge four nestlings.

When I have removed snakes from the net trap, the parent birds have resumed feeding. I feel sure this was because I removed the snake within four to five hours after it had been trapped in the net. If a snake is allowed to stay trapped in the net for too long a time, the resident birds probably will go elsewhere to lay a replacement clutch.

In nest box no. 57 a pair of bluebirds built their third nest while a dead snake was still in the trap. This hap-

pened because the snake had died and was hanging at the rear of the support pole so that it was barely visible. I drove past several times and did not notice the snake until I approached the box to remove the used second nest. I left the dead snake in the net to dry out so it would be easier to remove. The same (banded) pair returned and built their third nest while the dead snake was still drying. This is the exception rather than the rule.

A trapped snake can be removed alive. I use a denim laundry bag with draw strings. Place the bag under the snake and put the tail section in the bag. The snake will only be caught by strands of the net for about 8 to 10 inches (20.3 to 25.4 cm) below the head. Cut net away from the head area and the snake will drop into the bag. Transport the snake to an area away from nest boxes and release it. When trapped, a hot-tempered snake will strike and try to bite, though the pressure of their jaws is so light that only pricks and shallow scratches result. I wear a heavy pair of leather work gloves when removing snakes. Of course, if you have to cut too much net, you will have to replace the whole trap. I always have extra traps to replace those I have had to damage excessively.

There are two designs for this trap: the "ring" type (Fig. 1) and the "alternate" method (Fig. 2). The ring type uses a 16 in. (40.6 cm) diameter wire ring to hold netting away from the pole. This type can only be used where the ring can be lowered over the nest box, the netting then gathered in the middle of the ring and wired to the pole. If nest boxes are mounted on fence posts with barbed wire fencing or on utility poles, the ring type cannot be used. The alternate method is used where the ring cannot be lowered over the nest box. The years of research were based on *both* types. One co-operator caught three snakes in one trap which was mounted on a utility pole. Several reports contain data

(Text continued on page 67)

Figure 1. Ring Type.

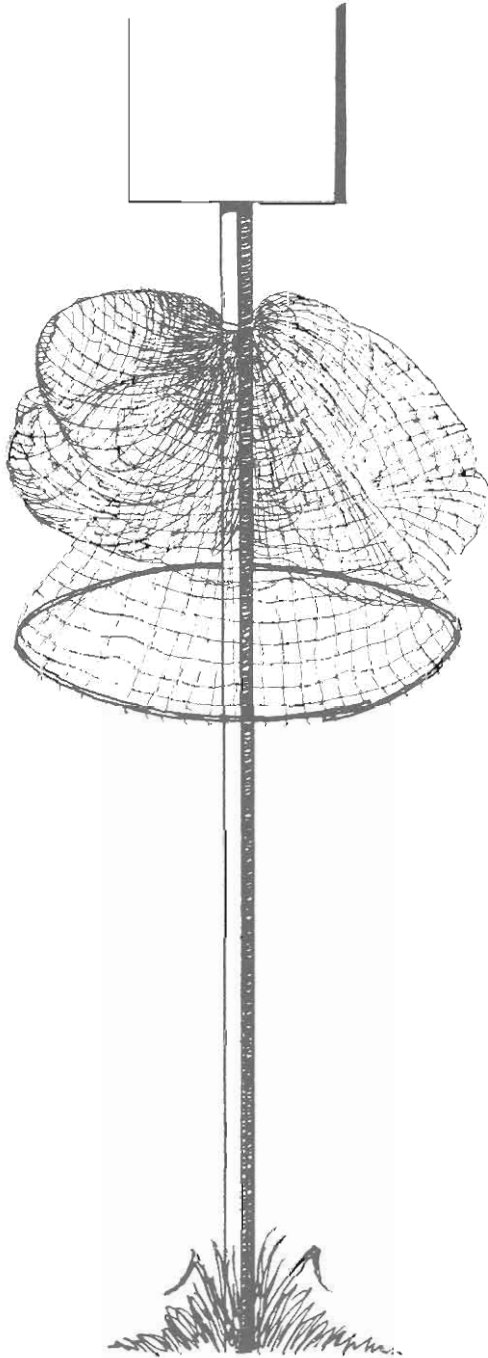
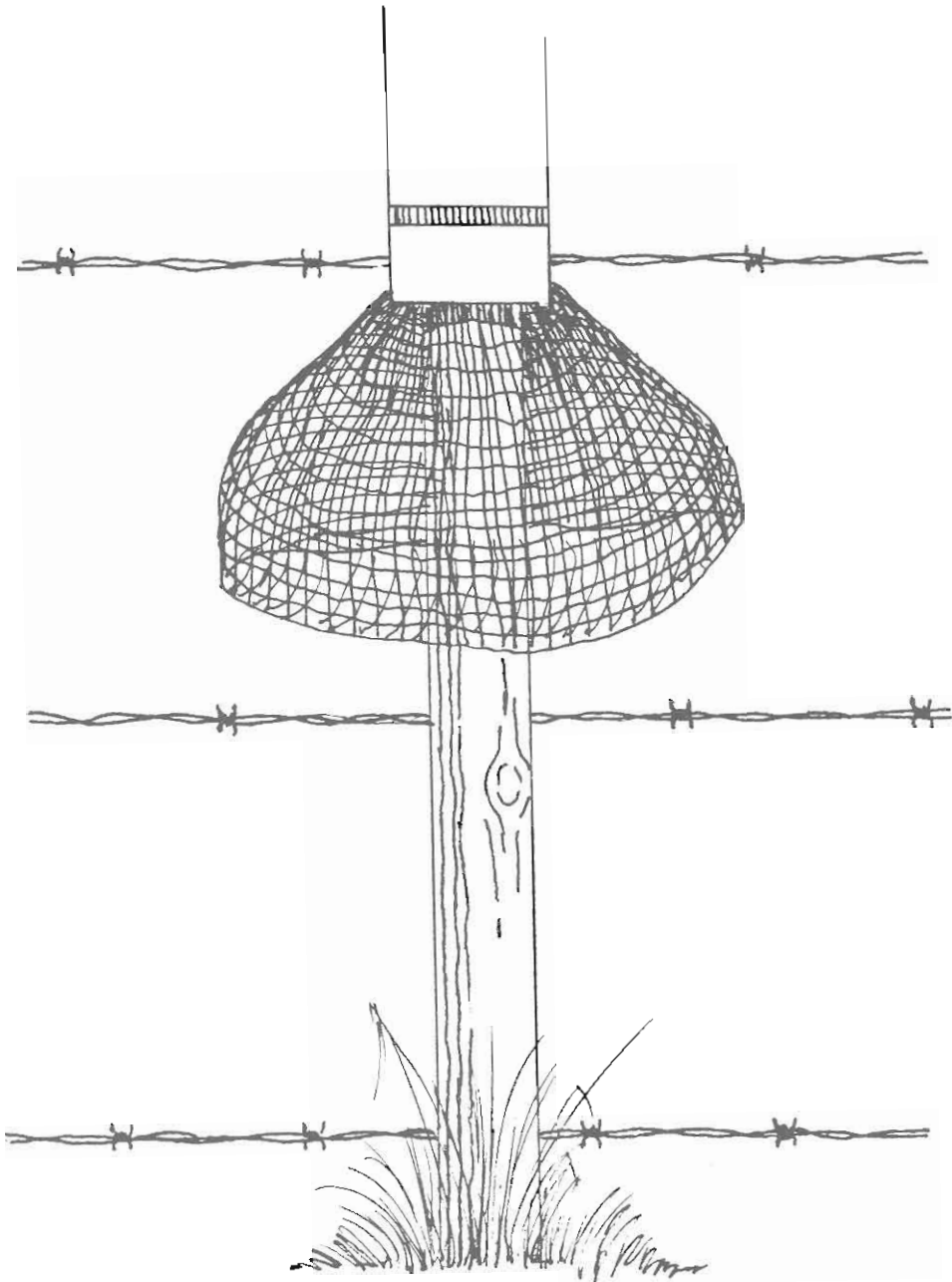
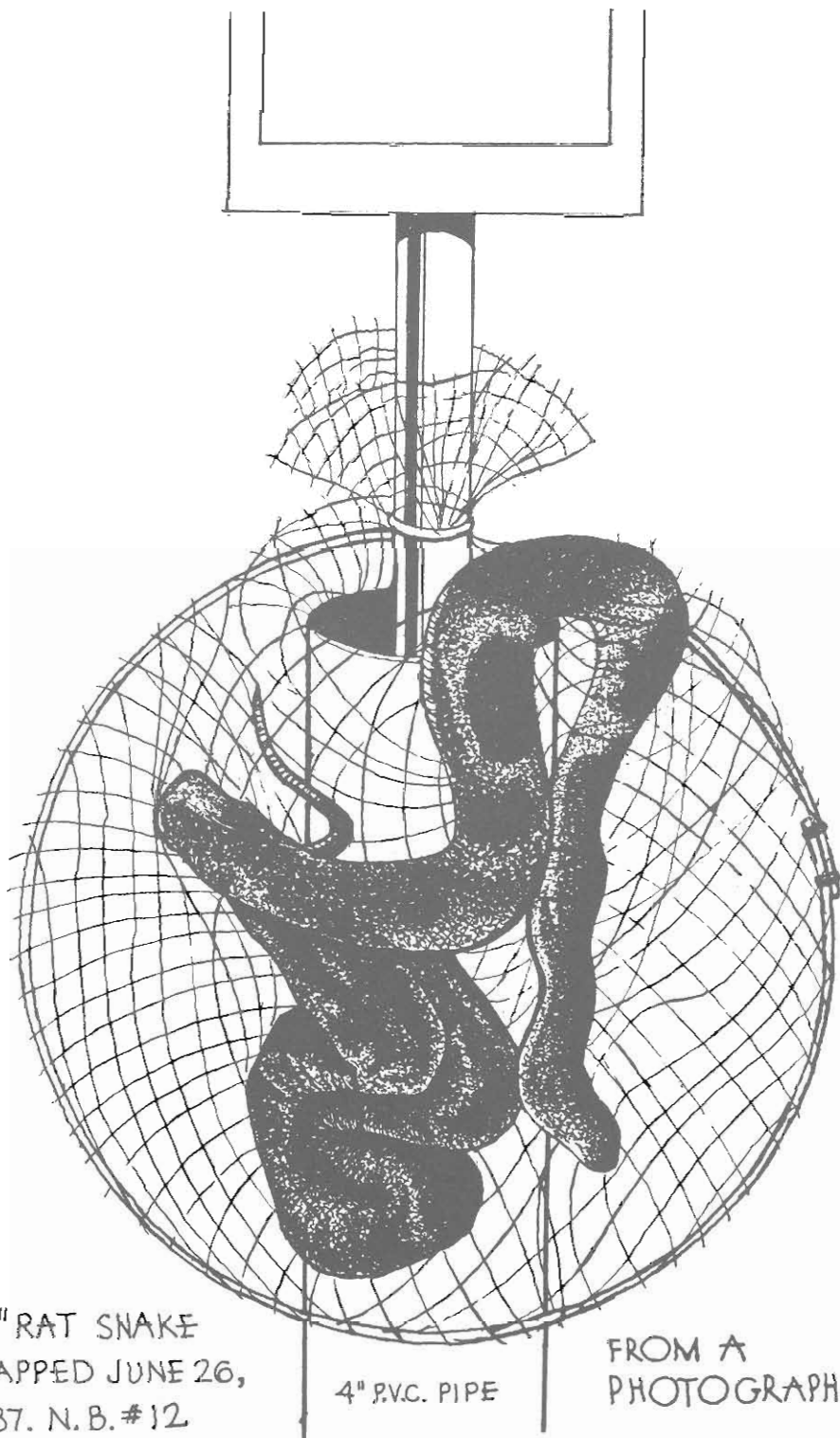


Figure 2. Alternate Method.





56" RAT SNAKE
TRAPPED JUNE 26,
1987. N. B. #12

4" P.V.C. PIPE

FROM A
PHOTOGRAPH

about two snakes being caught in the same trap. In the interest of space, the recorded data will not be presented here. The majority of snakes trapped were Texas rat snakes (*Elaphe obsoleta lindheimeri*), a few eastern coachwhips (*Masticophis flagellum flagellum*), and speckled king snakes (*Lampropeltis getulus holbrooki*). These snakes were trapped in the East Texas area. Other sections of the country may encounter other species.

In 1990, I trapped nine snakes with no failures. Prior to 1985, I had tried plain grease and grease with cayenne pepper. Despite these supposed deterrents, I found evidence of attempted or successful predation at entrance holes and on other parts of nest boxes. Grease will *not* stop snakes. If fire ants are a problem, use grease mixed with turpentine to prevent them from entering a nest box.

As far as using four inch (10.2 cm) PVC pipe for mounting boxes, don't waste your time and money. Snakes can and will climb this diameter pipe.

Conical metal predator guards are effective if made from 26 gauge galvanized metal with a three foot (0.9 m) diameter. They are, however, hard to make, time-consuming to construct, difficult to mount, and costly. I made three of them several years ago and they were successful. One I mounted below a cattle guard. The outside edge was only 27 inches (68.6 cm) from ground level so that a snake was able to extend its body and crawl over the conical guard. Luckily, I had garden netting above the metal cone so that the snake became enmeshed and did not reach the nest box.

The cost to make the netting trap will vary from one area to another. The trap is made from 3/4 in. x 3/4 in. (1.9 cm x 1.9 cm) polypropylene Ross' Garden Net®, which is available in most garden stores. In my area, I can make the ring type of trap for less than one dollar, but this depends on the amount of net that is purchased. The 15 ft. x 45 ft. (4.6 m x 13.7 m) size costs less per trap than the smaller 7 1/2 ft.

x 21 ft. (2.3 m x 6.4 m) length. I have found three kinds of polypropylene netting. I use only the 3/4 in. x 3/4 in. square netting. Ross makes a 1 in. x 1 in. (2.5 cm x 2.5 cm) Gro Net. Don't use this size. Bird-X is 5/8 in. x 3/4 in. (1.6 cm x 1.9 cm), but all the testing was done with the 3/4 in. x 3/4 in. size.

In the interest of conserving space, I have avoided a description of how to make this trap. For construction plans, send a stamped self-addressed business envelope with 2 ounces worth of postage, plus one dollar to cover the cost of reproducing plans to the address below.

After several modifications and five years of testing, this trap style has proven to be effective. These traps are easy to make, inexpensive, and worth the effort to control snake predation. I do realize, however, that somewhere, somehow there might be a snake that can outwit this trap. ■

Rt. 2, Box OR28
Ore City, TX 75683

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 20906-0295.

Guard Foils Predators

Don Hutchings

Snakes, cats, and raccoons are a major problem in the loss of bluebirds and eggs. My losses in 1989 were due mainly to house cats and raccoons. Either one can easily jump on top of a nesting box, reach in the entrance hole, and pull the birds out. House cats have been known to wait patiently nearby and catch the adult bird as it clings to the box.

If nestlings or eggs have disappeared, check the sides and top of the box for scratch marks and hair. Nesting material stringing out the entrance hole is a sure sign of predation. Feathers may be scattered in the nest and sometimes on the ground.

After losing several bluebirds and nestlings to cats, I have designed a predator guard that is working successfully for me.

This guard can be made from a 4 in. (10.1 cm) diameter PVC pipe and a 5 1/2 x 5 1/2 in. (14 x 14 cm) piece of pine lumber or plywood. With a hand-saw cut a section of 4 in. diameter PVC pipe, 4 inches long. Cut a piece of 3/4 in. (1.9 cm) thick plywood 5 1/2 x 5 1/2 in. square and on it draw a 4 in. diameter circle. Saw the circle with a jigsaw or use a drill press with a 4 in. hole saw. Attach the pipe to the inside of the hole with three no. 6 x 1 in. (2.5 cm) wood screws. The guard is then attached to the front of the nesting box with 1 5/8 in. (4.1 cm) drywall screws. Figure 1 will give you a better idea of what it looks like.

The 4 in. pipe allows plenty of room for the bluebirds to go in and out of the entrance hole without any restriction, yet it will not allow cats,

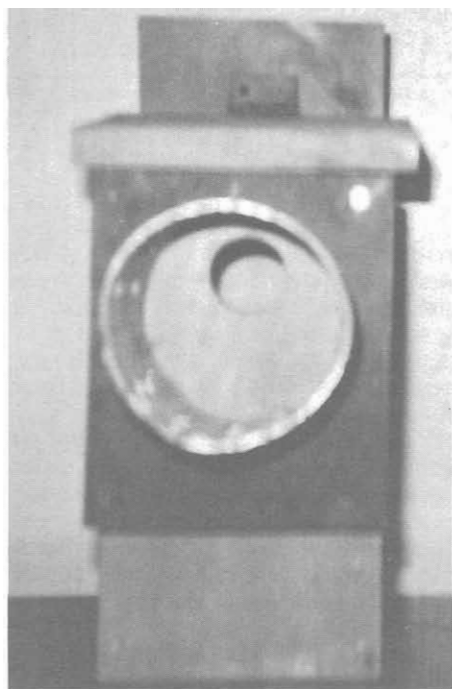


Figure 1. Hutchings' predator guard shown protecting entrance to nesting box.

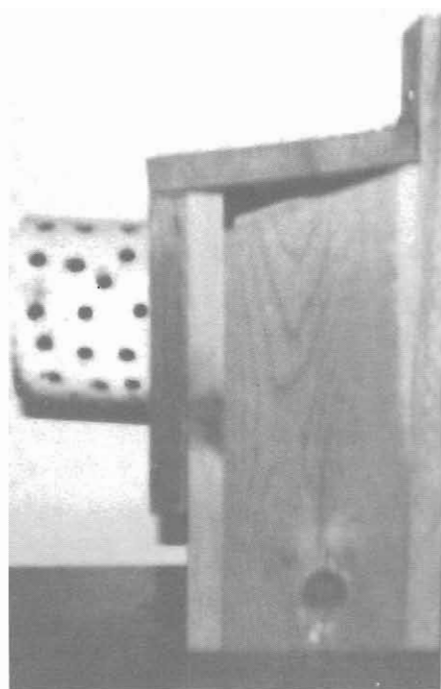


Figure 2. Side view of Hutchings' predator guard. Holes have been drilled in the PVC pipe to admit light.

Photographs by Don Hutchings

raccoons, etc., to reach into the box. The guard should be placed on the box before the nest is started to prevent possible abandonment. Although I did install four of these guards after eggs were laid, I have not had any birds abandon nests.

All of my guards are made with holes drilled in the sides to admit light (Fig. 2). I have guards on six of my boxes and have not lost any bluebirds from these boxes due to climbing predators. These boxes are in areas where I have had problems with house cats.

One of the boxes showed evidence of a cat having tried to reach into the entrance hole. When I checked inside the box, however, all of the bluebirds were O.K.

I would like to see these guards tried by bluebirders in other areas of the country to see if these devices are as successful elsewhere as they have been for me. ■

Adapted from *Bluebird News* 3(6):2.

P.O. Box 184
Winfield, TX 75493

Photographing Birds—Bluebirds, Too!

John Findlay, III

Bird photography is a challenging and rewarding hobby for the avid bird watcher, but it can also be expensive and frustrating. It certainly is a rapidly growing segment of the recent photography explosion. The popularity and availability of a wide selection of lightweight and relatively inexpensive 35mm cameras open up opportunities previously not readily available to the amateur photographer. Zoom or fixed focus telephoto lenses, other attachments, and a choice of color film now allow memorable images to be much more easily obtained. Nature-oriented shutterbugs—those who shoot birds *only* on film—have increased their own interest in birding. Those photographs can also be used to entertain and educate others.

It seems to be a natural progression for those who have been both bird watchers and photographers for years to begin to photograph wild birds. It would seem to be even more true for those who have bluebird trails to engage in photographic record keeping. The next logical step is to use the interest, knowledge, and photographs to become a member of the speakers' bureau of conservation organizations to which one belongs. It opens up a whole new world when photographs are taken for programs, publications, research, and, of course, one's own

satisfaction.

Programs are an excellent way to win new converts to bluebird restoration and other conservation efforts. A good program can always be made better when accompanied by excellent slides. As evidence of this, consider that the recent NABS annual meeting at Gettysburg, Pennsylvania, included the presentation of nine slide programs.

As far as bluebirds are concerned, having a trail (or access to one) or even a backyard box or two can make a big difference in photo opportunities. This is especially true because bluebirders understand the habits and life cycle of the birds they are photographing. Such an understanding and reverence is important for the successful photographer. Assuming that you have a good working knowledge of your photographic equipment, you will need more than an average level of time, patience, dedication, and discipline to do a good job. Being a good bird watcher will help you to be a better photographer of birds; being able to anticipate the moods and moves of a bird will do much to get a better picture. Observing the picture you want to capture on film will help you do better with its composition.

Don't forget that you will need a

large wastebasket! In order to reduce the number of unacceptable bluebird (and other) images that are consigned to the wastebasket, consider the following points:

—Settle on slides instead of prints. They are less expensive once your initial outlay for a projector and screen have been met. Slides are easier to store and retrieve; prints and enlargements can always be made if desired from your better slides.

—Kodachrome ASA 64 at 1/125 shutter speed will give you the best color saturation. In poor light and to stop excessive movement, a faster film such as ASA 200 or 400 might be needed.

—Bracket your shots. Use different f-stops on either side of your meter reading. This will ensure a choice of acceptably exposed pictures. (Each full f-stop lets in twice as much light as the one it precedes.)

—Full frame closeup photographs of birds are the most sought after; however, birds shown in their natural habitat are pleasing and are needed to tell the story.

—Don't forget to vary your pictures: take both verticals and horizontals. Verticals are usually more in demand for magazines, newspapers, and sometimes books.

—Remember the rule of "threes." Don't always try to center the bird. The sky, earth, and subject matter should be divided pleasantly. Try not to split the picture exactly in half with the horizon, and do not obscure portions of the bird itself.

—Focus on the eye of the bird when possible. The sunlight, or fill flash, will give the eye the glint that will "make" the picture.

—Use your telephoto lenses not only to bring the bird up closer, but also to blur the less desirable background features. Stop motion by using a faster shutter speed. The opposite will give you the often desired blurred wing motion of a bird.

—Your vehicle makes an excellent portable blind, especially while you are on the bluebird trail. A bird's "threshold of tolerance" (the point at which it takes flight as you approach) will be

greatly reduced if you are in a blind and are careful not to make any sudden noises or movements.

—A car window mount or a bean bag to steady your long lenses and camera will make for better and more comfortable photographic sessions. This will also allow you to prefocus on the bluebird's box or favorite perch.

—When placing your trail boxes, consider placing them not only in desirable bluebird habitat, but also in locations where photography is relatively easy. Consider light, ease of vehicular approach, and quiet surroundings.

—It has been wisely said that "better is the enemy of good." Don't wait for the perfect shot—you may never get it. Accept the one that is good now; it can always be improved if the opportunity presents itself.

—Remember that the photographer who is ready is the one who usually gets the picture!

—Even with all your preparations, skill, and equipment, luck is often involved in creating a great photograph.

Good luck—and great bluebirding—
—with or without a camera! ■

2749 Millbrook Rd.
Birmingham, AL 35243

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.

IN MEMORIAM



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

In memory of Francis J. Ehlers

Katherine M. Brubeck
Lois Carleton
Martha Chestem
Chuck Dupree
Sam Hall

Mary Janetatos
Marjorie Mountjoy
Patricia J. Pignetti
Joseph Suess

In memory of John Davidson

Benekes
Allen & Barbara Brosius
Comus Inn
Darrell Davidson
M.J. Ford
Dr. & Mrs. Peter C. Luchsinger
Robert & Barbara Marmet
Mrs. Walter Prichard
Charles & Pat Smallwood
Anne Sturm
Tom Winkler

In memory of Lillian Robinson

Shirl Brunell
Jan Ann Gleason
Jay Gleason

1991 NABS RESEARCH AWARDS

The North American Bluebird Society is pleased to announce the presentation of the eighth annual research grant awards. The 1991 recipients are as follows:

BLUEBIRD GRANTS

Mark T. Stanback, Hastings Natural History Reservation.

The Betty H. McIlwain Award.

Topic: Factors Affecting Eastern Bluebird Reproduction Success in the Southeastern United States

Dr. Harry W. Power, Rutgers University

Topic: Male Parental Investment and the Threat of Cuckoldry in Mountain Bluebirds

STUDENT GRANTS

John P. McCarty, Cornell University.

The James L. Williams Award.

Topic: The Interaction of Environmental Conditions and Patterns of Nestling Energetic Requirements in Determining Reproductive Success of the Tree Swallow

Linda A. Whittingham, Queens University.

Topic: How Should Male Parental Care Change with Decreasing Certainty of Paternity?

GENERAL GRANTS:

Dr. Ian G. Warkentin, Smithsonian Institution.

Topic: Winter Ecology of Prothonotary Warblers—Foraging Behavior and Habitat Use

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:

Our biggest problem with our bluebird trail has always been to get material cheap enough to build houses. The Summer 1990 issue of *Sialia* solved our problem for all time. After I read the article on the use of grape crates, I mentioned it to our club executive meeting. I asked if anyone was interested in this project and would be willing to pick up crates from markets or produce stores. If so, I would take them apart. In less than a month I had a pile of crates in my yard. I was away for two weeks in October, and when I returned the pile had doubled. I got them all knocked apart and the nails removed just in time to have a truck load of 150 crates delivered from a nursing home in Rhinebeck.

One member of the Ralph T. Waterman Bird Club has built 40 bluebird houses and we are about to start a joint project and build 100 boxes. This will allow us to replace a good number of boxes on our trail that have been up 20 years and are in bad shape.

Thanks to *Sialia* we have lumber enough from the crates for years to come. The scrap material from the crates will be used for sap wood for our maple syrup making later in the winter.

Florence Germond
RR 2, Box 408 Shunpike
Clinton Corners, NY 12514

Dear Editor:

I had a strange encounter with blue-

birds. Last spring my renters and I were visiting during a break in the field work when I noticed what appeared to be a bluebird in the trees near the machine shed.

As we watched, the bluebird flew directly to the huge tractor that was idling and was about to land on the long exhaust pipe but veered away when it felt the hot exhaust. Not being satisfied, it came back a second time (thinking it would be a good place to nest?)

There were bluebird boxes in the area and one had a bluebird perched on it, but they did not use any.

Delmar Holdgrafer
RR 1, Box 93
Donnelly, MN 56235

Dear Editor:

The following is offered in an attempt to shed a bit of light on the desirability of shavings in the bottom of a nest box mentioned by Vern Johnson in *Sialia* 12:143-147.

After carefully including cedar shavings with every house I sold for several years, I was informed by one of my customers that, upon investigation of a house so prepared, the female bluebird carried one of the shavings to her host's porch rail, dropped her offending burden, and continued to get rid of every fragrant flake, finally beginning her nest building tasks. Though this was my only exposure to such determined rejection of my largess, I felt that it need not be continued.

I wonder if the presence of the vents easily seen around the bottom of the house may satisfy the bird's need for ventilation up through her nest, come hot weather. Covering these holes with shavings might not help her to be content.

On the other hand, fresh aromatic cedar would help keep the parasite infestation at a minimum.

I have nothing to say against the use of cedar shavings. There are good things to say about it. If the bluebird lady can't stand them, let her be the one to throw the whole lot out.

Yours for/against the shavings
Laurance Sawyer
Rt. 1, Bluebird Lane
Ringgold, GA 30736

Dear Editor:

In the Autumn 1990 issue of *Sialia*, there is a diagram on page 142 entitled "Peterson Bluebird House."

The original plans for this house were developed by Dick and Vi Peterson of Brooklyn Center, MN. I quote from their original design: "This superb box design is the result of nearly 20 years of research in the field, and the building of over 5,000 'BLUEBIRD' nest boxes. Dick & Vi Peterson."

I am writing this to you because I think it ought to be cleared up who the "Peterson" is of the bluebird house plans.

Forest V. Strnad
1400 Autumn Dr. #212
Faribault, MN 55021

Dear Editor:

I began to raise mealworms in order to insure protection of the bluebirds from the extremes of weather in north-west Indiana. I have two bluebird feeders.

In winter the bluebirds usually begin the day at the feeder filled with chopped peanuts, raisins, blueberries, and 10-15 mealworms. I am careful to limit the amount of mealworms available as I do not want the birds to become too dependent upon me. One other time during the day I make two or three

worms available to each bluebird. Frequently they seem to be calling me to place these treats on my deck as they whistle and stare from a dead tree close to our home. They land and devour the worms. I have enjoyed capturing them on video tape as well as in still photographs and the worms help me to get some interesting pictures.

I am also finding that the mealworms have come in handy in the summer months when I am frequently called upon by area residents who find bluebirds in unusual and often dangerous situations. Last year, for instance, a group of nestlings was orphaned when a cat destroyed both the parents. I added them to nests with young about the same age and the mealworms helped to insure food for them and their parents. Only two of the original five birds were lost.

By the way, I have tried the Miracle Meal you mentioned and have found that my resident woodpeckers are more interested in it than the bluebirds are. Maybe the mealworms have spoiled them!

Ken Jankowski
70 West 550 North
Valparaiso, IN 46383

Dear Editor:

Enclosed is my check for dues to NABS. From time to time I have presented programs to garden clubs about bluebirds using both the NABS slide program and the kits. I have found that the kit program has aroused more interest and questions during my presentations than the slide program.

Richard W. Griffin
Rt. 3, Box 255 XK
Norwood, NC 28128

P.S. The photograph in the enclosed newspaper article of the Brown-headed Nuthatch was taken outside my kitchen window. This is the sixth straight year they have fledged at this same nesting box. I have seen from 12 to 15 use it for roosting in winter. I have not seen any other of these nuthatches, although White-breasted and Red-breasted Nuthatches use my feeder. ■

Bluebird Tales

Mary D. Janetatos

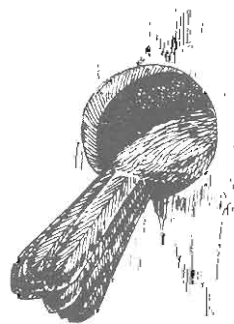
Bluebird "Eleanor" has completed her life, and the reward is ours to reap. Sister Barbara Ann called in January to tell me of Eleanor's final days. She breathed her last in Sister's hand having reached almost six years of age. Readers of the book *Beakless Bluebirds and Featherless Penguins* will remember founding bluebirds Eleanor and Joshua. They had both been rescued from marauding House Sparrows and hand-raised by Sister Barbara Ann and the other sisters at All Saints Episcopal Convent in Catonsville, MD. We reap the rewards because I regard the rescue as providential from two perspectives: first, the two birds survived in the friendly confines of Sister Barbara Ann's Scriptorium (studio), where they produced a number of fertile eggs which were placed in adoptive bluebird nests on the convent grounds; second, they furnished the charming focus around which Sister Barbara Ann wove her marvelous book which will surely enchant readers for many years. Local bluebird numbers were increased, and nature-oriented readers will continue to be inspired.

Inspiration comes in many ways. In Vineland, NJ, Rick Demmy, leader of the Tailwaggers 4-H Club, wrote: "Recently our 4-H club received six bluebird houses from Bayshore State Prison here in South Jersey. We have placed these houses in open fields as per the information supplied to us.

"We understand your society can provide us with more detailed information. Since we are starting bluebird trails in our area, we want to make sure we're doing things the right way. Please send us any information on habitat, migration periods, roosting, diet, and habits of these beautiful birds.

"We are planning on getting more houses from the prison as soon as the club secretary drafts a letter. They are providing these houses free of charge; they are constructed out of recycled wood. We then paint them dull olive-green so they will weather well. Thank you for any and all cooperation on our project."

Inspiring to us is the ability to prevail when handicaps might hamper one's lifestyle. Mrs. Trudy Smith of Noank, CT, described her bluebird talk given at a senior citizen's anniversary party which was well received. Trudy has a total hearing loss which astonished me because, with her



husband's help, she nonetheless manages a bird banding station in West Virginia in addition to her numerous bluebirding activities! Also writing from Connecticut was Frederick J.S. Humphrey of Winsted. A beginning bluebirder, he gave us information on Bruno Cosagini who was given an award in Winsted because he had put out over 3500 nest boxes and is still going strong. Sharon Irwin of Canton, CT, told us about the Cherry Brook Garden Club's successful year "...encouraging bluebirds in our area. We installed 12 nesting boxes and had a total of eight bluebirds hatched. We hope to install six more boxes and have an even better success rate next year. Your magazine is most helpful and interesting to us." Cynthia Spender of Pelham, NH, is leader of the Junior Girl Scout Troop 2002. Last fall the troop sent a donation to NABS and told this story:

"We were working on our wildlife badge and enjoyed an interesting and informative talk from Lillian Lund Files in Tyngsboro, MA, last spring. It was pouring the day we went, but that didn't dampen Ms. Files' enthusiasm. She showed us a bluebird box and a colorful videotape about bluebirds. Then we all put on rain gear and patiently waited in the cemetery near by. After a few minutes, we were rewarded by the sight of a bluebird heading for his box. We enjoyed the talk and appreciate Ms. Files' hospitality.

From Gibraltar Farm in Markham, VA, Jerry Montourl wrote telling of a trip to visit a friend in East Texas. "We walked along the paths of the golf course and the houses. I noticed a few bluebirds and then saw a couple of bluebird houses. In the ten years or so that I lived in East Texas, I never had seen one bluebird. So I wanted to send a Christmas surprise [membership and boxes] to my friend and the birds.

"Our Markham, VA trail of only 8-10 houses has been full since we put them up only last year (with one Tree Swallow tenant in the one close to the stream).

"Thank you for such excellent houses and the fun reading in your magazine."

Rosie Ranck of Downingtown, PA, is the nature teacher at a nursery school. "In January I teach about the birds. I am devoting one week to my favorite, the bluebird. I plan to give each child plans for a bluebird house. Your magazine is great! I do not want to miss any. We have bluebirds, I am happy to say."

Kathleen Brady is director of the Bird-song Nature Center in Thomasville, GA, and wrote: "Thank you so much for the emergency shipment of bluebird brochures! We teachers at our all day program really appreciated them and I feel sure we got the bluebird message across."

Robert Rager of Rockford, OH, has spread the bluebird word through newspaper articles and I'm sure the bluebird population will benefit, as well as NABS' membership! Good work, Bob—and all others out there covering their local scenes for the bluebirds.

Lyle Droge of Dubois, NE, was recently enrolled in NABS by his son **Dale Droge**, who is with the Department of Biological Sciences at South Carolina's Clemson University. Dale told us, "My father has put up over 100 boxes in the last year and continues to give them away. I know he will appreciate the excellent work the NABS does." We appreciate Lyle's work, too!

Helmut G. Quiram of Littleton, CO, reported in January on his trail which stretches for over 75 miles from the Lake City area to Blue Mesa reservoir in Colorado. He fledged 130 bluebirds, 175 Violet-green Swallows, and under a dozen wrens from his 600 boxes. His nice letter also contained a newspaper clipping which his daughter, a flight attendant for United Airlines, had sent him when she stopped over in Bermuda. Yes, dear reader, it was a letter from our indomitable friend, **Tommy Outerbridge**, to the editor of the *Royal Gazette*. Tommy's letter succinctly describes the plight of the bluebird (found in Bermuda, too) and ends with a terse challenge. "I think that you and the *Royal Gazette* should sponsor a trail, Mr. Editor. Show some support." (Plans are still in the works for a NABS Annual Meeting in Bermuda in late 1991.)

Marcia Hoepfner, bluebird lady of Metamora, IL, holds the fort for bluebirds by maintaining a 20 box trail on the Izaak Walton nature area and by giving talks as a member of the NABS speaker's bureau. Recently she wrote, "This check is for **Helen Staines'** membership as a senior citizen. She wants to help out the bluebird and

is looking forward to receiving *Sialia*. I will be giving a bluebird lecture at the community center where she resides. What a blessing and reason for living for these seniors to have a new interest!"

A phone conversation last fall revealed a most fortuitous setup. **Ralph Crafts** of Harper's Ferry, WV, told me he runs a computer business out of his home, and also tends his bluebirds carefully. He said he had provided them with a new bird bath and he wanted to inquire about feeding bluebirds. I promised to send him NABS info on mealworms. He received a call on his business line and closed our conversation with the comment, "I hate it when business interrupts bluebirds."

The most bizarre item received this quarter was a Walton, NY, newspaper photo sent by **Harry S. Smith** of Unadilla, NY, which showed a bluebird house on Caroline Huyck's property. Titled "Hornet Takeover," the photo showed how the hornets had covered the entire nest box and opening with an eerie gray coating and had fashioned a new entrance for themselves. (I can just hear a junior bluebirder saying, "Euw, gross!")

The Hastings Seed Co. of Atlanta, GA, became the latest company (to my knowledge) to highlight the need for effective bluebird conservation. In its spring '91 catalog, the accompanying letter gave good pointers on putting up bluebird nest boxes and on the life cycle of bluebirds. They included NABS' address, saying that "this non-profit organization is educating the public about the plight of the bluebird and helping this beautiful bird's recovery." Many thanks to **Arty Schronce**, corporate horticulturist, for sending the lovely catalog.

Florence Porter, ardent bluebirder recently of the Rossmore Leisure World in Silver Spring, MD, and my dear friend over the years, has been honored by the Leisure World Garden and Environmental Club for her "longtime dedication to protecting birds, particularly bluebirds." Ill health recently forced her to move from her Silver Spring home to her native Colorado. Her contribution to bluebird conservation has been enormous. She is sorely missed at the NABS office where, until recently, she spearheaded the quarterly job of "stuffing *Sialia*." We trust that God will be ever with her.

Our hope for all bluebirders is the wish from Sister Barbara Ann's book that He will be our "end...and aim of all our being" as we pray for peace with justice throughout our world. May the bluebirds' return this spring signify the hope for a peaceful world! ■

Bluebird Box Fledges Robin

Kay E. MacNeil

Bluebird box no. 2, which I monitor on Prestwick Country Club property, had a conventional history until 23 May 1990 when the eggs hatched. About this time things got VERY confused as to the inhabitants.

I took some of the Prestwick Garden Guild members to look at boxes and nests. The nestlings in box no. 2 were very jumpy and I had a hard time keeping them in the box.

Three days later I took my husband back to the box so he could photograph the babies. Our club was going for a state bird award so we needed photographs. He had photographed the eggs in this nest previously, but the film was not developed until after the babies had fledged. Later when I saw the photos of the eggs, I realized that one was slightly larger than the others, although I probably would not have removed it, assuming it was a natural variation.

As we approached the box to photograph the nestlings, a large eye peered out the entrance hole. The babies were really jumpy and the parents were quite agitated. I kept my gloved hand in front of the opening while my husband focused so the babies would not jump out. When we finished and after I had closed the box, I suddenly realized that one nestling was huge and had a spotted breast. Not wishing to further disturb the birds, we left. That evening I consulted a friend who is a knowledgeable birder. We both agreed that there was no way the spotted-breasted baby could possibly be a baby robin because an adult could never fit through the hole in a bluebird box.

My husband, who is not a birder, suggested that in order to be sure what was in the nest we go back, take all the nestlings out of the box, lay them out, and see what we had. That seemed like a good idea.

Sunday, 2 June, was very windy and, of course, there were many golfers on the course. I opened the box and

got my first really good look at an almost full grown American Robin!

He could fly well and immediately flew out of the box onto the golf course, I ran out to stop the golfers (feeling very stupid). By this time the strong wind blew the baby robin back over our heads where the bluebird parents were hovering over him.

Left in the box were three bluebird babies. One also had jumped out of the nest when the robin did, one had been quite stepped on by the robin, and the other seemed to have been only slightly stepped on. I popped the one bluebird back into the box; we left the nest alone for a week. I am confident that all three bluebird nestlings fledged.

When a bluebird box is active, I like to alert the closest homeowners so they watch the box for predators, children, or cats. After releasing the robin, I went to the house closest to this particular bluebird box. When I told them about the unusual circumstances in the box and how the bluebirds had hatched a robin, the homeowner announced, "Oh, I did that." He had found a robin's egg and had slipped it into the bluebirds' nest. At least that solved the mystery. The Prestwick Garden Guild can proudly say they probably have the only bluebird trail in Illinois that ever fledged a robin! ■

689 Golf Club Ln.
Frankport, IL 60423

Bluebird Festival

The Genesee Country Nature Center in Mumford, New York will hold a Bluebird Festival on Saturday, June 1, from 10:00 a.m. to 5:00 p.m. Activities will include guided walks, programs, and displays.

The nature center is located about 20 miles southwest of Rochester on Flint Hill Road in Mumford, New York, adjacent to Genesee Country Village. There is a modest admission charge to the nature center.

For further information, call Scott Adamson at (716) 538-6822.

Index to Volume 12 (1990) of *Sialia*

- Abee, Horace, box-mounting method, 18
- American Black Currant as planting, 140-141
- Antietam Battlefield trail, orphans transported to, 57-59
- Asselin, Daniel, article on pylon-mounted trail, 93-94
- awards: Appreciation Certificate to Tom Barber, 55; research grants, 76, 138
- banding of bluebirds: cooperative project, 135-136; in Quebec, 113
- Barber, Tom A.: appreciation award to, 55; article on 7 nestlings in one box, 110-111
- Bartlett, Bob, letter on Sevin, 68
- behavior of bluebirds: polygamy by Eastern male, 43-45; male feeds and cares for swallows, 67
- Berner, Kevin L., articles on anti-predation devices, 83-87, 123-128
- Bird in Bush column, 17-18, 63-66
- Blackburn, Karen: articles on plantings for wildlife, 20-21, 60-61, 140-141; Bird in Bush column, 17-18, 63-66
- Blanding, Tom, article on Girl Scout trail, 107
- bluebird boxes. *See* nesting boxes
- bluebirders, list of experienced trouble shooters, 30
- Bluebird Express, 36-37, 72-73, 114-115, 156-157
- bluebird houses. *See* nesting boxes
- bluebirds: male cares for Tree Swallows, 67; mockingbird conflicts with, 63-66; orphans hand-raised, 143-147; orphans transported to Antietam boxes, 57-59; polygynous male, 43-45; population changes in recent years, maps, 47-55; at retirement-home site in OR, 106-107; return to KY, 94-95; 7 nestlings in one box, 110-111; 6-year nesting record of one Western male, 88; starling competition for nest site, 9-12; tick-paralysis mortality, 3-4
- Bluebird Tales, 38-39, 74-76, 116-118, 158-159
- bluebird trails. *See* nesting box trails
- Bluebird Trouble Shooters, 31-35, 97
- boxes for bluebirds. *See* nesting boxes
- Boyle, Gordon and Bobbie, memorial boxes, 101
- Brezina, Dennis W., poem, 120
- Brown-headed Nuthatch, feeds bluebird nestlings, 136
- Bruss, Helen, article on sparrow and raccoon predation, 103-104
- Camp Bluebird for cancer patients, 26-28
- Cash, Willard A., article on PVC elbow for boxes, 69
- Concord, MA, Girl Scouts trail, 107
- crickets as bluebird food, 112-113
- Davis, Wayne H., article on KY bluebirds, 94-95
- directory of trails, 31-35, 97
- Dorber, Sadie, Presidential Points, 2, 42, 82, 122
- Dupree, Delos C.: NABS treasurer's report, 40; 1989 nesting box report, 47-55
- Ehlers, Frances J., obituary, 149
- Ellis, Charlie, obituary, 149
- Eltzroth, Elsie K.: article on nesting record of male banded in 1983, 88; note on poem in old notebook, 73
- European Starlings, competition for nest sites, 9-12
- feeding by bluebirds: at security lights, 12; *see also* food for bluebirds; plantings for wildlife
- Findlay, John III, thoroughfare named for, 19
- food for bluebirds: crickets, 112-113; for orphaned birds, 143-147; raisins, 19; *see also* plantings for wildlife
- fowl mites, 4-5
- Gilchrist, Ruth, article on box-builder Lapin, 154-155
- Girl Scouts' Concord, MA trail, 107
- Goodwin, Ruth E., poem, 22
- grants. *See* awards
- grape-crate nesting boxes: Californian, 89-92; Chilean, 129-132
- Green, Connie, article on birds at retirement home, 106-107
- Green, Morris M. Jr., article on sparrow trap, 23-25
- Gurley, Charles and Jewell, letter on wrens, 137
- Hayes, Lynn E., article on tick paralysis, 3-4
- Heartleaf Ampelopsis as planting, 20

- Henderson, Bill, appreciation gift to, 148
- Hickey, John P., article on snake encounter, 102
- House Sparrows: predation by, 103-104; traps for, 23-25, 97-98
- House Wrens: field test of predator deterrents for, 123-128; interference with bluebirds, 137-138
- Huron Fringe appreciation gift, 148
- Hurst, George A., note on feeding behavior, 12
- index to Volume 11 (1989) of *Sialia*, 77-79
- Janetatos, Mary D.: Bluebird Tales reports on NABS activities and members, 38-39, 74-76, 116-118, 158-159; obituary by, 149
- Johnson, Vern, article on orphaned birds and subsequent trail, 143-147
- Johnson, Vicki S., article on bluebirds in own yard, 112-113
- Kentucky, bluebirds return to, 94-95
- Ketchum, Bev, probation officer as bluebirds' friend, 28-29
- Krieger, Sherry, article on raccoon test, 83-87
- Krueger, Harry, article on polygynous bluebird, 43-45
- "lady who gets things done," 28-29
- Lapin, John, box builder and trail operator, 154-155
- letter to NABS from classroom, 105
- letters to the editor, 36-37, 72-73, 114-115, 156-157
- Lilyturf as bluebird food, 17-18
- Literature Review, 46, 134
- Martin, Jerry, wildlife booth at state fair, 109
- Mauldin, Charles A., article on NC school project, 151-153
- Mayer, Eric P., articles on grape-crate boxes, 89-92, 129-132
- McGettigan, Dale, article on raccoon test, 83-97
- McKinney, Robert, article on nest box ventilation, 133, 141
- McMahon, Jeri, photo of nest above picnic table, 67
- mite infestation, 4-5
- mockingbirds. *See* Northern Mockingbirds
- Morgantown, WV students build boxes, 150
- mortality from tick paralysis, 3-4
- Naber, Jim and Carol, article on bluebird caring for swallows, 67
- Neece, Zach, article on fowl mites, 4-5
- nest above picnic table, 67
- nesting: "hostess's" observation on cycle of, 96-97; 6-year record of Western male, 88; starling-bluebird competition, 9-12
- nesting boxes: electric-pylon mounted, 93-94; galvanized hoop and stove-pipe for predator control, 68; grape crates as material for, 89-92, 129-132; Morgantown, WV high school students build, 150; mite infestation in, 4-5; mounting method, 18; NC elementary schools build, 151-153; Peterson design plans, 142; plastic jugs a KA success, 104; PVC plastic elbow attachments for predator control, 69; raccoon deterrents control tested, 83-87; raccoon deterrents field tested, 123-128; 7 nestlings in one box, 110-111; Sevin use near, 68; with sliding side opening, 154-155; with slot-entrance front opening, 13-17; survey box used as, 70-71; titmouse fostered in, 6-7; VA Ruritan Club project, 95; variable ventilation for, 133, 141
- nesting box trails: directory of, state-by-state, 31-35, 97; on electric pylons in Quebec, 93-94; established after caring for orphaned birds, 143-147; Girl Scouts' in Concord, MA, 107; of Huron Fringe minister, 148; as memorial to sons, 101; 1989 report, 47-55; On the Trail column, 62; orphaned birds transported to Antietam trail, 57-59; of retired carpenter Lapin in OH, 154-155
- nestlings: bluebirds fed by nuthatch, 136; 7 in one box, 110-111
- Nichols, Elizabeth, letter on orphans placed in box, 57-59
- North American Bluebird Society: Bluebird Tales reports on activities and members, 38-39, 74-76, 116-118, 158-159; research grants announcement, 138; research grants awards, 76; schoolchildrens' letter to, 105; treasurer's report, 40
- North Carolina Bluebird Society, 100
- Northern Mockingbirds, conflicts with bluebirds, 63-66

nuthatch. See Brown-headed Nuthatch

On the Trail column, 62

orphaned bluebirds: hand raising of 6, 143-147; transported to Antietam boxes, 57-59

parasites: northern fowl mite, 4-5; ticks, 3-4

Pearman, Myrna, obituary by, 149

Peck, Dan T., article on cancer camp, 26-28

Peterson, John A., memories of bluebirds, 108, 118

Pitts, T. David: article on tick paralysis, 3-4; Literature Review, 46, 134

plantings for wildlife: American Black Currant, 140-141; Heartleaf Ampelopsis, 20; Lilyturf, 17-18; Silky Dogwood, 60-61

plastic jugs as nesting boxes, 104

poetry: by Dennis W. Brezina, 120; by Ruth E. Goodwin, 22; by Laurance Sawyer, 119; by Earl Villers, 160; by Edna B. Willis, 160; found in old notebook, 73

polygyny by bluebird, 43-45

population changes in recent years, maps, 47-55

predation: by sparrows and raccoons in backyard, 103-104; testing of raccoon-deterrent devices, 83-87, 123-128

Presidential Points, 2, 42, 82, 122

probation officer as bluebirds' friend, 28-29

Proctor, Beresford, presents 3,000th box, 92

PVC elbow for predator control, 69

Quebec: banded bluebirds, 113; electric-pylon trail, 93-94

Question Corner, 8, 56, 99, 139

Raabe, Mark, letter on transported orphans, 57-59

raccoons: backyard predation by, 103-104; controlled tests of deterrent devices, 83-87; field tests of deterrent devices, 123-128

raisins as bluebird food, 19

Read, William F., article on banding project, 135-136

Research Grants, 76, 138

retirement-home site, bluebirds at, 106-107

Rusnell, Margaret, article on bluebirds in survey box, 70-71

Sahl, Fred, article on club project, 95

Sawyer, Laurance, poem, 119

schoolchildrens' letter to NABS, 105

Sevin use near nesting boxes, 68

Seyler, Wes, article on plastic-jug boxes, 104

Sheldon, Dean E. Jr., articles on grape-crate boxes, 89-92, 129-132

Sialia, index to Volume 11 (1989), 77-79

Silky Dogwood, as planting, 60-61

snake, box monitor's encounter with, 102

sparrows. See House Sparrows

starlings. See European Starlings

state bluebird organizations, 100

swallows. See Tree Swallows

Thoreau, Henry, and Girl Scout trail, 107

tick paralysis mortality, 3-4

titmouse. See Tufted Titmouse

trails. See nesting box trails

traps: for banding adults, 135-136; for House Sparrows, 23-25, 97-98

Tree Swallows: field test of predator-deterrent devices, 123-128; male bluebird feeds and cares for nestlings, 67

trouble shooters, list of experienced bluebirders, 30

Tufted Titmouse, egg fostered in bluebird nest, 6-7

Tuttle, Richard M., article on slot-entrance box, 13-17

Villers, Earl, poem, 160

Weymer, Catheryn M., article on bluebird neighbors, 96-97

WHF Ruritan Club project, 95

Wilcox, Norman B., article on raisins as food, 19

wildlife: habitat booth at TN fair, 109; plantings for, 17-18, 20, 60-61, 140-141

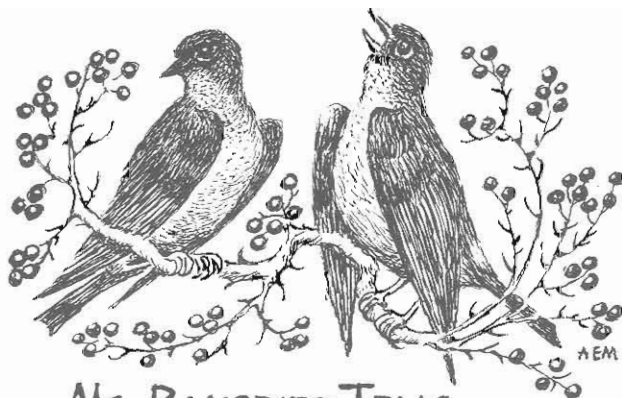
Wilkes County, NC school project, 151-153

Willis, Edna B., poem, 160

wrens. See House Wrens

Wright, Michele, 1989 nesting box report, 47-55

Zeleny, Lawrence: comment on House Wrens, 137-138; Question Corner, 8, 56, 99, 139



MS BLUEBIRD TELLS

" I KNOW HIS SONG IS JUST FOR ME,
BUT I PRETEND I DO NOT HEAR,
PRETENDING, TOO, I DO NOT SEE
THAT HE IS GETTING RATHER NEAR.



I KNOW HE WANTS TO GUIDE MY FATE,
SO, I PRETEND I'M MESMERIZED,
PRETENDING THAT I'D REALLY HATE
TO HAVE MY FUTURE SUPERVISED.



I KNOW HE KNOWS I'M ALL DRETENSE,
PRETENDING TO IGNORE HIS QUEST,
PRETENDING, 'TIL IN RESIDENCE
I SIT UPON A WEDDING NEST."

A.E. METELMAN

Art Credits

Jon E. Boone: 42, 72
Suzanne Pennell: 44, 71, 74
M. Suzanne Probst: 62

BLUEBIRD BOOSTERS

Life Members

Mrs. Irene S. Frantz
Clark W. Hart
Charlotte Jernigan
Katrina Renouf
John H. Rogers

Eastern Bluebird

Sarkis Acopian
Robert E. Ahearn, M.D.
Mrs. Nancy Baron
Dr. James Barr
Gary Black, Jr.
Bluebird Society of Bella Vista
Robert P. Bodine
Ray C. Brubser
Dr. Shirl Brunell
Lylia Bryant
Eclesia J. Cestone
Mrs. Betty L. Conner
Adrienne Ryder Cook
Emerson Cullings
Mrs. Norma Daniels
John G. Davidson
G. Dunn Davis
Mrs. Coleman Donaldson
Francis N. Dubois
Haskell Duncan
Peter & Theresa Elmendorf
Theodore L. Felsentreger
Elizabeth Fenwick
Lillian Lund Files
Mrs. Betty G. Fisher
Pat Givens
Kathy Goldsberry
Gunston Land Co.
T.E. Gurley
Mr. & Mrs. George Harmon
Erna Hassebrock
Miss Georgia Hariton
L. Edward Haws, Jr.
Bryan C. Hebbeler
Dana L. Heisey
Mrs. Robert Holland
Kenneth W. Jacobs, Jr.
Mrs. R.N. Jespersen
Elizabeth A. Jones
Mr. G. Dwight Kahlo
Pauline R. Kasserman
Dr. & Mrs. M. Klavan
William R. Kuhl
Louise Kuerner
Mr. & Mrs. H.R. Lampshire
Joan Lane
Aletha J. Lindstrom
J. Lint
Frank M. Lyon
Mrs. Lois M. Lyon
Judy M. McClellan
Richard McGovern
Richard Matson
Elmer B. Mellen
Kim & Vicky Mello
Maxine & Royal Montgomery

Barbara Moore
Leland M. Moss
Mrs. Craig Muckle
Laura Nielsen
David B. Oliver, II
Patricia W. Paterson
George S. Prentice
Daniel T. Quinn
W.H.F. Ruritan Club
Mrs. A.L. Robinson, Jr.
Dori Selene Rockefeller
Margaret D. Rust
Ernest R. Ruterman
Larry Schraer
James W. Sheilds
Maria A. Shipp
Tom & Norma Smith
Pat Soehnen
South Fork Natural History Society
Joyce M. Stuff
Martha R. Sullivan
Robert J. Thiebaut
Chris Thoma
Richard VanVleck
Jimmie Walker
Diana Wege
Nancy L. Weiss, M.D.
Barbara Whitney
John & Gayle Wix
Mrs. James L. Williams
Dale A. Wolf

Western Bluebirds

Mrs. A.G. Andrews
Stan Blezinski
William & Susan Mitchell
Duncan Mills Restorations
Mr. & Mrs. Fred Schneider
William E. Sefler

Mountain Bluebird

Donna R. Hagerman
Jeanne Leber
Alfred Perry

Fledgling Bluebird

Raymond L. Allison
Donald F. Anderson
John F. Anderson
Arrow Wiring Contractors
The Backyard Naturalist
Mr. & Mrs. Edward A. Bagley
Brenda Baldwin
Judy Bland
Ms. Clara Berchtold
George Boos
Sarah S. Braunwell
J. William Bruner
Mrs. Dwight Collmus
Joyce & Joseph Coyne
Gloria J. Davis
Mrs. Diane T. Desibour
Ann Donaldson
Francis M. Dorer
Benjamin B. Fogler
Suzanne Franklin
Bill Garner
GFWC Berwyn Woman's Club, Inc.
Ruth E. Gillard
Mr. & Mrs. A.F. Hall
Miss Frances Hanes
Jane & George Hausch
Cliff C. Hayman
Charles Huthmacher
Scott A. Kessler
Anne Ledbetter
Mrs. William G. Lehl
Mrs. Edward Leroy
Mrs. Marty V. Leonard
John & Margaret Lester
Mr. & Mrs. Peter G. Loveland
Thomas H. Meyer
Amy R. Mitchell
Kenneth M. Nagler
Mr. & Mrs. George Nalisnik
Dottie Nesmith
Sue Holly Newman
George P. O'Neil
Roger Peloquin
Mark & Jean Raabe
Gayle C. Reddick
Don Rhodes
Rosemary Z. Rittler
Col. W.R. Robertson
Frank B. Schley, Jr., M.D.
Dorene H. Scriven
William E. Sefler
Dean E. Sheldon, Jr.
Glenn H. Sikes
Myra E. Simpson
John W. Skooglund
Mr. & Mrs. G.J. Tankersley
Richard & Linda Taylor
Van Thompson
Cheryl Smith Tolley
Mary Trewartha
Sherry Ullius
Kevin White
Robert D. Williams, M.D.
Michael Owen Willson
Jeanne Wright

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

