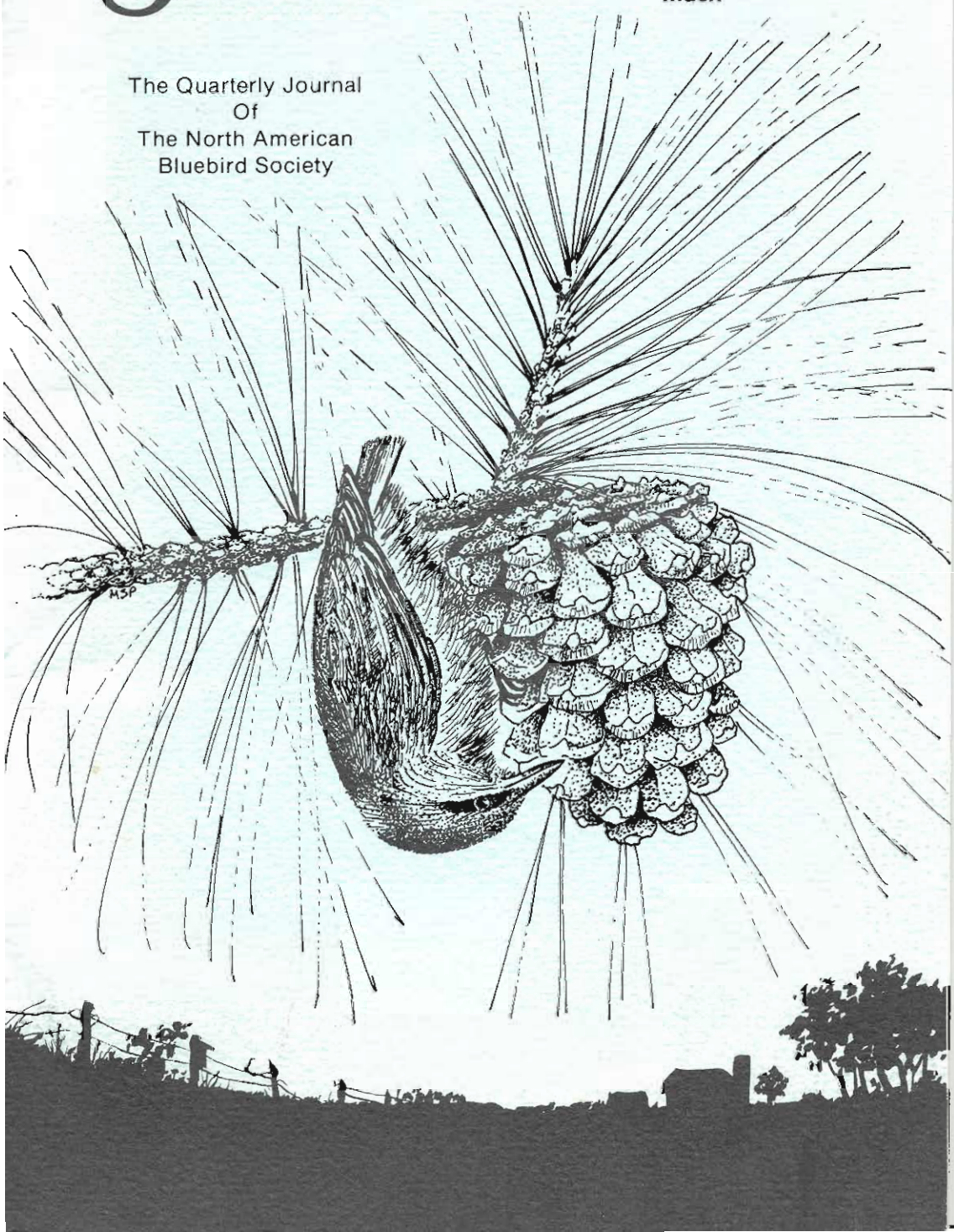


Sialia

Volume 12, Number 2
Spring 1990
Pages 41-80
Index

The Quarterly Journal
Of
The North American
Bluebird Society



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Sialia means bluebirds. Hence the title of this journal. Technically, *sialia* is the Latinized, neuter plural version of the Greek word *sialis*, a noun meaning a "kind of bird." Since the Eastern Bluebird was the first bluebird classified by Carolus Linnaeus (1707-1778), he gave it the species name *sialis*, though he placed it in the genus *Motacilia* which is now reserved for the wagtails. It was William Swainson (1789-1855), who, in 1827, decided that the bluebirds needed a genus of their own within the thrush family (*Turdidae*). He selected the generic name *Sialia* which he simply adapted from the species name *sialis* which Linnaeus had used. Therefore, the scientific name for the Eastern Bluebird is *Sialia sialis* (pronounced see-ahl'-ee-ah see'-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 20906-0295. Subscription price is included in annual membership dues. Single copies: \$2.50. Write for information about bulk quantities. Checks and money orders should be made payable to North American Bluebird Society and should be in United States funds. Issues are dated Winter, Spring, Summer and Autumn and appear approximately on the fifteenth of January, April, July and October respectively. Deadline for submission of material is three months prior to date of publication; dated items only, two months.



Sialia

The Quarterly Journal
About Bluebirds

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COVER

Art Editor M. Suzanne Probst has chosen a Brown-headed Nuthatch as a subject for this issue's cover. It is one of the cavity nesting species mentioned in the 1989 nesting box summary beginning on page 47.

Sialia welcomes original articles and photographs for publication. Although this journal is named for the bluebird, material relating to all native cavity nesting species will be considered. Manuscripts should be typed neatly and double-spaced. All material submitted is subject to editing or rewriting. Submit the original manuscript plus a duplicate copy if you wish to proof the material before publication. If the article has been submitted elsewhere (or previously published) that fact must be stated at the time of submission. All manuscripts will be acknowledged. Black and white glossy photographs are preferred. Print the subject, names of individuals pictured, photographer and return address on the back of each photograph. Art is welcome and should be in black pen and ink. We do not assume responsibility for manuscripts, photographs or art submitted. The editor's address is 10617 Graefloch Road, Laurel, Maryland 20723.

Presidential Points

Sadie Dorber

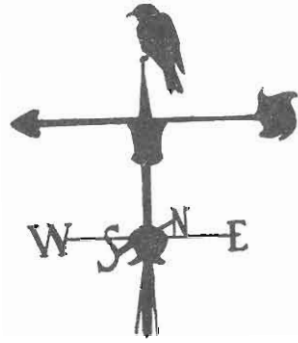
The record-breaking low temperatures of December brought many birds to the feeders. Pine Siskins and Evening Grosbeaks had been sighted on a few occasions but, with the cold, large numbers started visiting each day. Both species had been absent the previous winter due mainly to the large pine cone crop farther north.

Feeders have helped to extend the northern edge of the winter range of a few birds. The Northern Cardinal is one species that has started staying in this area. I've counted 11 at the feeders this winter. They're an exquisite sight against the snow-covered landscape. Tufted Titmice are also becoming more common at our feeders. Bluebird boxes are surely a help to this cavity nester and possibly one of the reasons we're seeing more of them.

The temperatures moderated considerably several days before the date of the annual Christmas bird count. I've done a few counts in subzero weather so was happy for the warming trend. Rain during the night fell on extremely cold surfaces, so we awoke to ice-covered roads. Our planned 6:30 a.m. departure had to be delayed a few hours until sand trucks made the rounds. The morning was frustrating with the rain on the binoculars sometimes making viewing impossible. By afternoon the rain had stopped, but fog prevented good visibility.

By 4:00 p.m. we were about ready to call it a day. Since we hadn't added a Hairy Woodpecker to the species list, we decided to check a couple of feeders on one of the country roads. As we neared the area, all of us were scanning trees for woodpeckers. Suddenly, a flash of blue dropped down to the snow and quickly flew back to a branch. Three bluebirds were feeding on the seeds from a birch tree. While they continued to feed, we just sat and gazed at them, forgetting all about woodpeckers.

Many ask me about feeding bluebirds during the winter. I never recom-



mend or encourage the practice in the birds' northern range. To provide a feeder and attract bluebirds to your lawn is holding them in an unnatural situation. As the population of bluebirds increases in New York, I receive several reports each winter of bluebird sightings. They're usually found in a protected area with an ample supply of natural berries and seeds. The three bluebirds I sighted were near a brushy area containing large supplies of multiflora rose and sumac. A trail was near so nest boxes were available for roosting and the hedgerows had dead snags that would also provide cavities. I'm confident those bluebirds had been in the area during the subzero weather and had obviously survived with no difficulties at all.

When bluebirds return north in the spring, we'll sometimes receive a heavy, wet snow or coating of ice that covers the natural food. The food supply will probably be covered for only a short period of time, but even a day without food will be disastrous for the bluebird. You can best help during these periods by providing mealworms until the natural food is again available. At this time of year, the bluebird will not become dependent on your feeder.

As this article appears in *Sialia*, the bluebirds will have returned and many of us will start gardening again. Prepare to help many of the birds in future winters by planting berry-bearing shrubs. Each issue of *Sialia* features an article entitled "Plantings for Bluebirds and Other Wildlife." These are excellent guides to follow. ■

APPARENT POLYGYNOUS BEHAVIOR OF AN EASTERN BLUEBIRD

Harry Krueger

According to Lack (1968) over nine-tenths of all bird species whose young are reared in the nest are monogamous. Males of a species that is normally monogamous may indulge in extra-pair-copulations or rape to maximize their chances of leaving as many offspring as possible (Trivers 1972). If a sexual imbalance occurs in a species and more females than males are present, polygyny may result. Polygyny is defined as one male being simultaneously mated with two or more females. I will present here evidence that suggests a male Eastern Bluebird (*Sialia sialis*) was polygynous.

My study area is in northeastern Texas. For the past three years I have monitored approximately 65 nest boxes located in old fields, pastures, and forest edges in Marion, Harrison, and Upshur counties. The three nest boxes described in this paper were located at the east end of a cow pasture in Marion County. At each nest the adults are captured for banding and identification. Each adult bluebird is color-banded in addition to the U.S. Fish and Wildlife Service numbered aluminum band. Positive identification is accomplished by use of a telescope or by recapture. In general, my results indicate that bluebirds are monogamous and mate for life. I have one pair that is in its third year at the same nest box, but this is the exception rather than the rule. If an adult that has nested disappears, that adult is never recaptured again. The remaining bird remates with another individual. I assume, since I am dealing with a non-migratory population, that adults that disappear have died.

Figure 1 shows the relative positions of three nest boxes and gives some information about their occupants. Nest box #48 is 733 yds. [66 m] southwest of box #45; nest box #50 is 127.7 yds. [115 m] northeast of box #48; and nest box #45 is 61.1 yrd. [55 m] southeast of box #50. The three banded adult bluebirds listed in Figure 1 were the only bluebirds in this area in May 1989. Male-38 was originally banded 16 April 1987 along with his

female mate, but she disappeared and he acquired a new mate.

Male-38 was captured while feeding young in box #50 on 1 May 1989; he was captured while feeding young at box #45 on 25 May 1989. Female-54 was identified at box #50 on 30 April 1989, and female-50 was identified at box #45 on 25 May 1989. The young in box #50 fledged on approximately 13 May. Possible explanations of these events include the following:

Explanation No. 1: male-38 was simultaneously mated with female-54 at box #50 and female-50 at box #45.

Explanation No. 2: male-38 abandoned female-54 at box #50 and formed a pair bond with female-54 at box #45.

Explanation No. 3: male-38 was paired only with female-54 at box #50, but the attraction of begging nestlings in box #45 stimulated him to feed them although he was not mated to female-50.

Explanation No. 4: male-38 was paired only with female-50 at box #45 but the attraction of nestlings begging for food in box #50 stimulated him to feed them although he was not mated to female-54.

I believe that explanation No. 1 is most likely to be correct. The primary evidence supporting this explanation is the presence of male-38 at both boxes and the absence of any other males at either nest box. This explanation is strengthened by the fact that both male-38 and female-50 had earlier used box #48; whether or not they were

Figure 1. Relative Positions of Three Nest Boxes in Marion County, Texas.

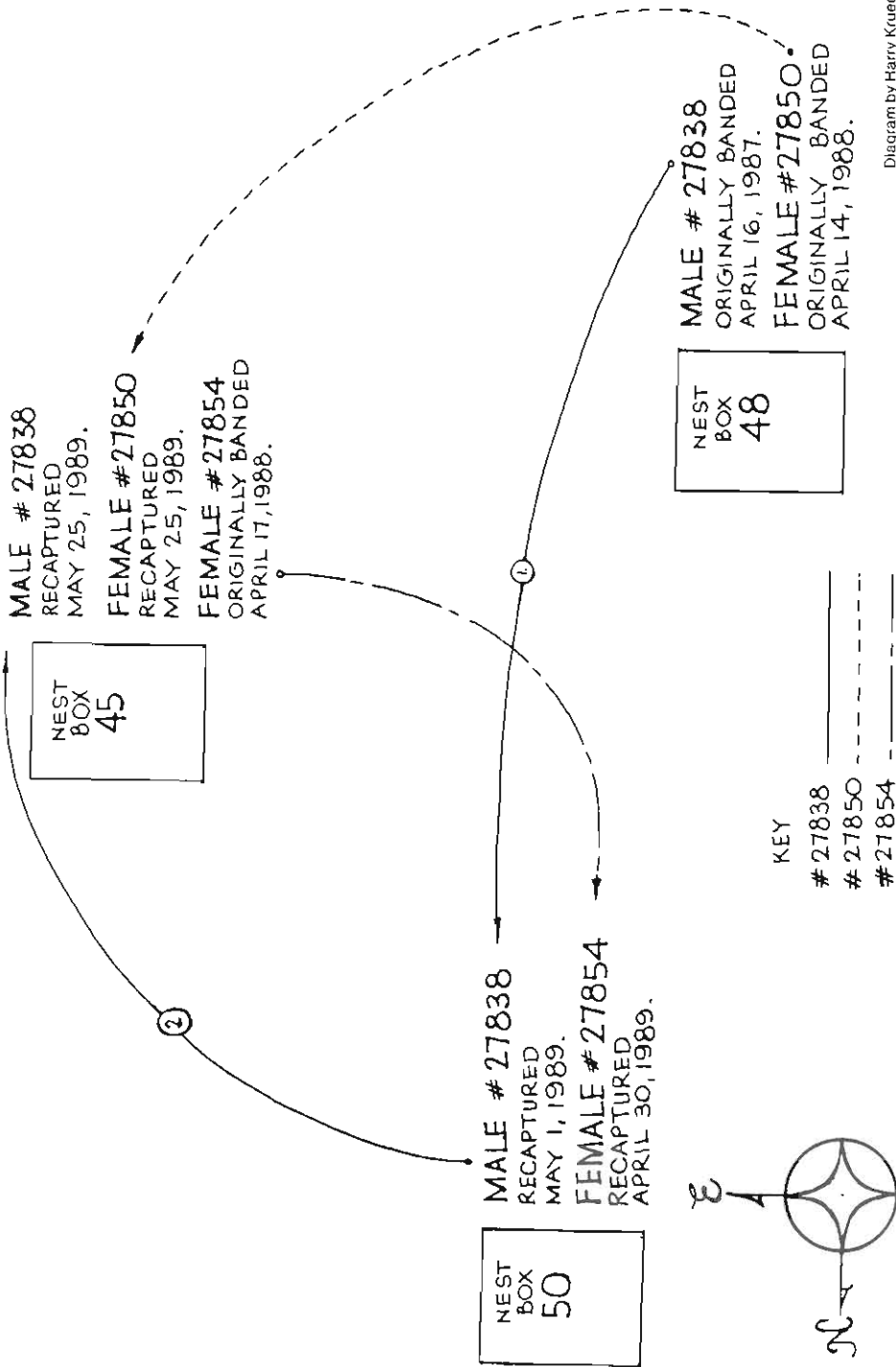


Diagram by Harry Krueger

previously paired is unknown, but they were certainly acquainted with each other because of their proximity. This explanation is also strengthened by the fact that only 61.1 yds. [55 m] separated the two boxes involved.

Explanation No. 2 is weakened by the short time span (24 days) between my identification of male-38 at box #50 and at box #45. Normally this would not be long enough for two unmated bluebirds to come together, form pair bonds, build a nest, and have nestlings. This explanation is further weakened by the fact that adult bluebirds rarely abandon their own young to assist in the care of unrelated young.

Explanations No. 3 and No. 4 seem unlikely, but my evidence does not totally rule them out. The attraction of hungry nestlings to nearby adults is strong. Eastern Bluebirds are known to occasionally "mis-direct" some of their efforts (i.e., adults feed young that are not genetically related) (Plissner and Gowaty 1988). Numerous records exist in the literature of members of one species even being attracted to and feeding the young of another species (Shy 1982). Evidence against explanations No. 3 and No. 4 is the absence of a male other than male-38. It is possible that another male: (1) may have been present but remained undetected, or (2) had been present but died after the nest was under way. Female Eastern Bluebirds do have the ability to rear nestlings without the assistance of males (Gowaty 1983), but a widowed female would probably not interfere with the attempts of a "helpful" male neighbor to feed her young, since normally females defend their territory only against other females (Gowaty 1981).

I believe the evidence presented here, while not totally ruling out other possible explanations, indicates one male Eastern Bluebird was simultaneously paired with two females. This is my first record of such behavior; however, other researchers have noted similar behavior. Verner and Willson (1969) described Eastern Bluebirds as "normally monogamous" and Ford (1983) described the mating system of East-

ern Bluebirds as "opportunistically polygynous." Both of these reviewers pointed out the apparent rarity of polygynous behavior. ■

Acknowledgements

I would like to thank T. David Pilts of the University of Tennessee at Martin for the generous assistance he provided with this manuscript. His kindness was deeply appreciated.

Literature Cited

- Ford, N.L. 1983. Variation in mate fidelity in monogamous birds. *Current Ornithology* 1:329-356.
- Gowaty, P.A. 1981. Aggression of breeding Eastern Bluebirds (*Sialia sialis*) toward their mates and models of intra- and interspecific intruders. *Anim. Behav.* 29: 1013-1027.
- Gowaty, P.A. 1983. Male parental care and apparent monogamy among Eastern Bluebirds (*Sialia sialis*). *American Naturalist* 121:149-157.
- Lack, D. 1968. *Ecological adaptations for breeding in birds*. Methuen and Co., Ltd., London.
- Plissner, J.H., and P.A. Gowaty. 1988. Evidence of reproductive error in adoption of nestling Eastern Bluebirds (*Sialia sialis*). *Auk* 105:575-578.
- Shy, M.M. 1982. Interspecific feeding among birds: a review. *J. Field Ornithology* 53:370-393.
- Trivers, R.L. 1972. Parental investment and sexual selection. pages 136-179 in B. Campbell, (editor) *Sexual selection and the descent of man: 1871-1971*. Aldine, Chicago.
- Verner, J., and M.F. Willson. 1969. Mating systems, sexual dimorphism, and the role of male North American passerine birds in the nesting cycle. *Ornithological Monographs* 9:1-76.

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Literature Review

T. David Pitts

Houston, Mary I., and C. Stuart Houston. 1987. Tree Swallow banding near Saskatoon, Saskatchewan. *North American Bird Bander* 12:103-108.—To the dismay of some people, many nest boxes erected for bluebirds are used by Tree Swallows; likewise, nest boxes placed for Tree Swallows are sometimes used by bluebirds. Some researchers take advantage of such situations and study both species. The authors of this report have regularly inspected (since 1969) about 250 nest boxes erected for bluebirds. Tree Swallow nests far outnumbered bluebird nests. Calculations of mortality rates, distances traveled between hatching sites and nest sites, and distances between subsequent nest sites are presented and discussed. Of more than 8,000 nestling swallows banded, 0.8% are known to have later nested in the boxes. Of 1010 adults banded through 1985, 12.8% were encountered again. A mean annual mortality rate of between 53.9% and 61.2% was calculated for adult females. Nestlings that returned to nest moved an average of 9.5 miles [15.29 km] while adults that nested more than 1 year moved about 2.8-3.7 miles [4.51-5.95 km] between nest sites in different years. Data and calculations are clearly presented in 7 tables. Long-term studies of this type are essential for our understanding of movements, mortality rates, and other features of cavity nesters.

Lumsden, Harry G. 1986. Choice of nest boxes by Tree Swallows, *Tachycineta bicolor*, House Wrens, *Troglodytes aedon*, Eastern Bluebirds, *Sialia sialis*, and European Starlings, *Sturnus vulgaris*. *Canadian Field-Naturalist* 100:343-349.—This study was conducted from 1975-1983 in Ontario. Nest boxes were erected in groups of two or three and one feature was varied in each group. Features considered included: direction facing, entrance size, floor size, depth, and interior color (white or black). Eastern Bluebirds preferred: (1) boxes with 4.4 cm (1.75 Inch)

diameter entrances rather than boxes with 3.5 cm (1.38 inch) diameter entrances; and (2) boxes with a floor size of 10 x 10 cm (3.9 x 3.9 inches) rather than boxes with a floor size of 15.3 x 15.3 cm (6 x 6 inches). Tree Swallows did not show a preference for 3.5 or 4.4 cm diameter entrances but did prefer 15.3 x 15.3 cm floor plans. While some Tree Swallows did use the smaller boxes, the author suggests that larger boxes may be preferred by Tree Swallows because they need room inside the cavity to use their wings to reach the entrance as the feet and legs of swallows are not adapted for hopping. The concluding statement recommends further tests to determine if Tree Swallow and Eastern Bluebird competition can be reduced by erecting boxes with 15.3 x 15.3 cm floors for swallows and boxes with 10 x 10 cm floors for bluebirds.

Reeves, Douglas A., and Rita Efta. 1987. Iowa bluebird nest box program for 1986. *Iowa Bird Life* 57:36-37.—This brief article describes the results of a nest box survey in Iowa. Nearly 2,500 boxes were monitored in the survey; 36 percent were used by Eastern Bluebirds. The low rate of box use is partially attributed to competition from other birds and rodents and the fact that many of the nest box trails were recently established. Seventy-four percent of approximately 5,000 eggs laid in boxes produced fledglings. The authors note in the introduction that, "Although many individuals believe their nest boxes are having an effect, the total impact on the population of bluebirds has not been determined." This observation describes the situation throughout virtually all of the range of Eastern Bluebirds. Hopefully, someone will eventually devise a method to determine the value of nest boxes, especially when the population is spread over a large area but the nest boxes are concentrated in a small part of the range. ■

1989 Nesting Box Report

Delos C. Dupree and Michele Wright

Now that the 1990 breeding season is underway, concern mounts over what effect the record cold December of last year has had on the bluebird population. As early as 1895 and again in 1912, winter storms were responsible for greatly reducing their numbers (Cooke 1929).

The most recent damaging storms occurred in the winter of 1977-78. Using data compiled from the Breeding Bird Survey (BBS) (*Sialia* 1(2): 74-79, 87) the U.S. Fish and Wildlife Service of the Department of the Interior produced the bluebird population density maps (Figures 1 and 2). The map in Figure 1 was plotted from data collected just after the winter of 1977-78, while that in Figure 2 covers the 1985-87 period. The darkest shading indicates the highest population density, while no shading indicates few or no bluebirds found in the area.

Relatively few areas within the breeding range of the Eastern Bluebird were unaffected by the winter storms of 1977-78, but the hardest hit were the upper range limits, from the Ohio River Valley northward. Notice how in a relatively short time the populations have rebounded as shown in Fig. 2.

Weather once again has caused large fluctuations in bluebird populations, some good, some bad. Overall the reports indicate an increase from 57,721 fledglings in 1988 to 59,809 in 1989 (up 2.75%); however, the number of reports jumped from 1,222 to 1,603 (up 31.2%). The bad weather appears to have dominated.

East

Statistics can sometimes be very misleading when a large number of variables are involved: new trails are generally less productive; weather can vary greatly from year to year; and the absence of reports from established large trail monitors or changes in the number of boxes monitored can noticeably change the final results. When all three factors occur in the same year statistics appear erratic, but, in fact, merely reflect the changes.

An increase from 440 to 788 reports received (79% gain) reflects the large number of new trails started plus first time reports. The decrease in the number of boxes monitored from 8,795 to 8,263 (6% drop) was due to the absence of several large trail reports. Boxes used successfully by bluebirds were reduced from 3,953 to 2,936 (26% drop), but the number of fledglings dropped even more from 19,063 to 12,931 (32% drop).

A cold wet spring was blamed for most of the nesting failures. Even though bluebirds can nest two and even three times during the breeding season, early nesting failures are a big

setback. Even though Dean A. Boyer of Leesport, PA had 309 bluebirds and 251 Tree Swallows fledge from 171 boxes, he was disappointed because of early losses during the cold, rainy first nesting period. Elsewhere in Pennsylvania, Robert C. Early of Hummelstown blamed the bad weather for failures when only 40 boxes out of 240 monitored were used successfully by bluebirds. A total of 210 fledglings were recorded.

Reporting for the Schoharie County Bluebird Society, Kevin Berner of Cobleskill, NY tabulated 159 bluebirds and 142 Tree Swallows found dead in the boxes. Only 353 of the 1413 nesting boxes monitored by 309 trail operators had successful bluebird nestings; however, 1476 bluebirds fledged. A total of 1206 Tree Swallows fledged from 315 boxes used successfully.

Even as far south as Virginia, the cold wet spring reduced the total number of successful nestings. J.M. Van Doren of Basye reported a drop of 50% in the number of fledglings during 1989 when only 14 of the 50 boxes were

used and only 53 bluebirds fledged.

Rutherford County, North Carolina must provide ideal habitat for the Brown-Headed Nuthatch. James E. Radford, Leon St. Clair, Christine B. Ammons, Diana Arrowood and R.C. and Mary Flack all reported the nuthatches nesting successfully in their nesting boxes. William R. Hines of Fayetteville and Fran Outhwaite of Burlington were the only ones outside Rutherford County who were as fortunate. To me seeing and hearing the diminutive Brown-headed Nuthatch is pure delight. Their constant chatter while flitting around in the pine trees looking for food is music to the ear. They seem to be perpetual motion machines whether they're exploring the pine cones, hanging upside-down, or probing the bark for insects. Unfortunately, the northern limit of the Brown-headed Nuthatch extends only to the southern part of Maryland.

Various companies that use shipping pallets are often more than willing to get rid of them. George N. Lumsden of Fairfax, VA has taken advantage of this free lumber and has constructed 85 nesting boxes which he has given to friends, relatives, and others in Northern Virginia. Most pallets are made of long-lasting, well-seasoned, weathered oak. George looks for the ones that have 6 in. [15.24 cm] wide boards in order to build summer homes for the bluebirds.

According to Mary W. Ryan of Willsboro, NY birds choose and fight over 8 in. x 8 in. [20.32 cm] cinderblock houses, preferring them over the wooden boxes. A friend of hers has also had the same experience.

Almost all of the 42 nesting boxes on the WHF Ruritan Club of Church Road, VA trail were used successfully by bluebirds. Fred Sahl, the compiler, totalled 492 fledglings with most boxes being used for three nestings. Snakes had always been a problem until trail monitors started using carpet tack strips around the mounting posts. They cost about 75 cents for a three foot section.

Robert E. Furcolow and Robert Daley of Arlington, VA placed boxes

back to back on four of their existing boxes in order to find out if other cavity nesting birds would nest next to the bluebirds. Much to their surprise, two of the double boxes had bluebirds nesting back to back. Has anyone else ever had such an experience?

All of the nesting boxes on the Northwest Connecticut Bluebird Trail are pair-mounted at 15 to 20 feet [4.57 -6.09 m] apart either on metal poles or fenceposts. The 170 nesting box trail theoretically then has 85 available bluebird territories. Compiler Art Gindert of West Cornwall, CT reports 45 boxes used successfully by bluebirds and 67 by Tree Swallows with an additional 6 occupied by House Wrens and 1 by a Black-capped Chickadee. The 204 fledgling bluebirds were about the general average on the trail.

After 13 years of maintaining a bluebird trail, Thomas J. Mulvey of Pine Beach, NJ had 100% bluebird occupancy in his 20 nest boxes. Tom had 43 successful clutches and banded all 162 nestlings, all of which fledged.

A mild winter followed by an early spring in Westfield, NC stimulated early nestings on Mark Oakley's 67 box trail. Mark had 5 bluebirds fledge on 18 April 1989. This marked the beginning of a great year because by the end of the year 329 had fledged.

In spite of bad weather during May, 243 bluebirds fledged from 61 nesting boxes on the 92 box trail of Charles W. Abbey at Tanglewood Park in Clemmons, NC. Blowfly screens used during the year seemed a waste of time according to Charles. Sometimes the birds shove the nesting material down through the screen. This has to be cleaned out or the larvae can crawl right back up into the nest again.

A record breaking 340 bluebirds were fledged from Paul Conklin's trail in the Genesee Valley of New York. Part of Paul's trail is in the state-owned Letchworth Park where House Sparrows are practically non-existent. An amazing 97% of the nestlings in the park fledged, while the overall average was 81% which was also a new record. A total of 154 nesting boxes were used

successfully on the 192 box trail: 70 by bluebirds, 1 by a Black-capped Chickadee, 68 by Tree Swallows and 15 by House Wrens.

A new trail monitored by the Bluebird Rescue Committee in Reamstown, PA, with Christine Schaefer reporting, got off to a flying start (no pun intended). The 96 box trail had 102 bluebird fledglings from 26 boxes used successfully. Black-capped Chickadees used 2, Tree Swallows nested in 48, and another 16 were occupied by House Wrens.

Members of the Alachua Audubon Society grow in enthusiasm and dedication every year according to Cathy Reno of Gainesville, FL. The bluebird population is growing also, 538 being added in 1989. These fledged from 123 of the 173 nesting boxes on the trail.

Central

Ideal weather conditions during the breeding season throughout most of the area resulted in a complete reversal of the disappointments encountered during 1988. Although the number of reports increased by only 5%, from 667 to 700, the number of boxes monitored jumped from 12,825 to 18,921, an increase of 48%. Winter survival rates must have been good because 7416 boxes were used successfully compared with 4,574 in 1988 for an increase of 62%. Fledglings increased by 64% from 20,066 to 32,931 indicating a successful breeding season.

Carrol Henderson, Supervisor of the Minnesota Nongame Wildlife Program, and Mary Ellen Vetter, chairman of the Audubon chapter of the Minneapolis Bluebird Recovery Program, described the 1989 nesting season as "fantastic." A record 15,879 bluebirds were fledged from 11,192 nesting boxes. Unlike the previous year, when the survival rate was low due to the heat and drought, almost ideal weather during the breeding season resulted in a survival rate from egg to fledgling of 77.5%. An item of interest was the 593 white eggs which were laid compared with 19,887 blue eggs.

Roland A. Dagnell of Indian River,

MI is looking for someone to help him and his wife monitor a 217 nesting box trail. Anyone willing to help will be monitoring a trail which produced 615 bluebird fledglings and had 9 nestings of Black-capped Chickadees and 85 nestings of Tree Swallows.

A plan to expand bluebirds nestings into the Birmingham, AL suburbs has met with some success according to John Findlay III. In fact, the Findlays have had bluebirds return to nest in their own back yard for the first time in 17 years. Altogether 528 bluebirds were fledged from their 155 box trail.

Success breeds success. Fort Polk in Louisiana has been noted as a place where the Red-cockaded Woodpecker, an endangered species, is being protected. Beginning in 1989, the Fort Polk Eastern Bluebird Nesting Project was initiated by Girl Scout Troop 101 under the leadership of Barb Manzo with support from Steve Parris, Wildlife Biologist from the Fort Polk Environmental Office. Impetus was given to the project in December 1988 when Senior Girl Scout Andrea Oberthaler chose to restore the rapidly declining bluebird population as her community action project to work toward her Gold Award, the highest honor in Girl Scouting. Members of Troop 101 were delighted when 39 bluebirds fledged the very first year. A complete report was submitted by David P. Oberthaler, Lieutenant Colonel, United States Army, another success story for Fort Polk.

After 10 years of waiting, Ed Swain of Jacksonville, AR finally hit the jackpot. All three of his nesting boxes were used successfully and 21 young were fledged. That's not the end of the story. In late May, Ed visited his Dad in Georgia. As he got out of the car Ed heard a bluebird singing, but couldn't see the bird or find a nesting box. The next morning he built one and mounted it. Much to everyone's surprise, bluebirds were building a nest in the box the very next day. Ed's brother monitored it and reported that there were four fledglings.

Bluebirds seem to do well on golf courses. The Bella Vista Bluebird So-

50 Figure 1. Eastern Bluebird Population Density After the Severe Winter of 1977-78.

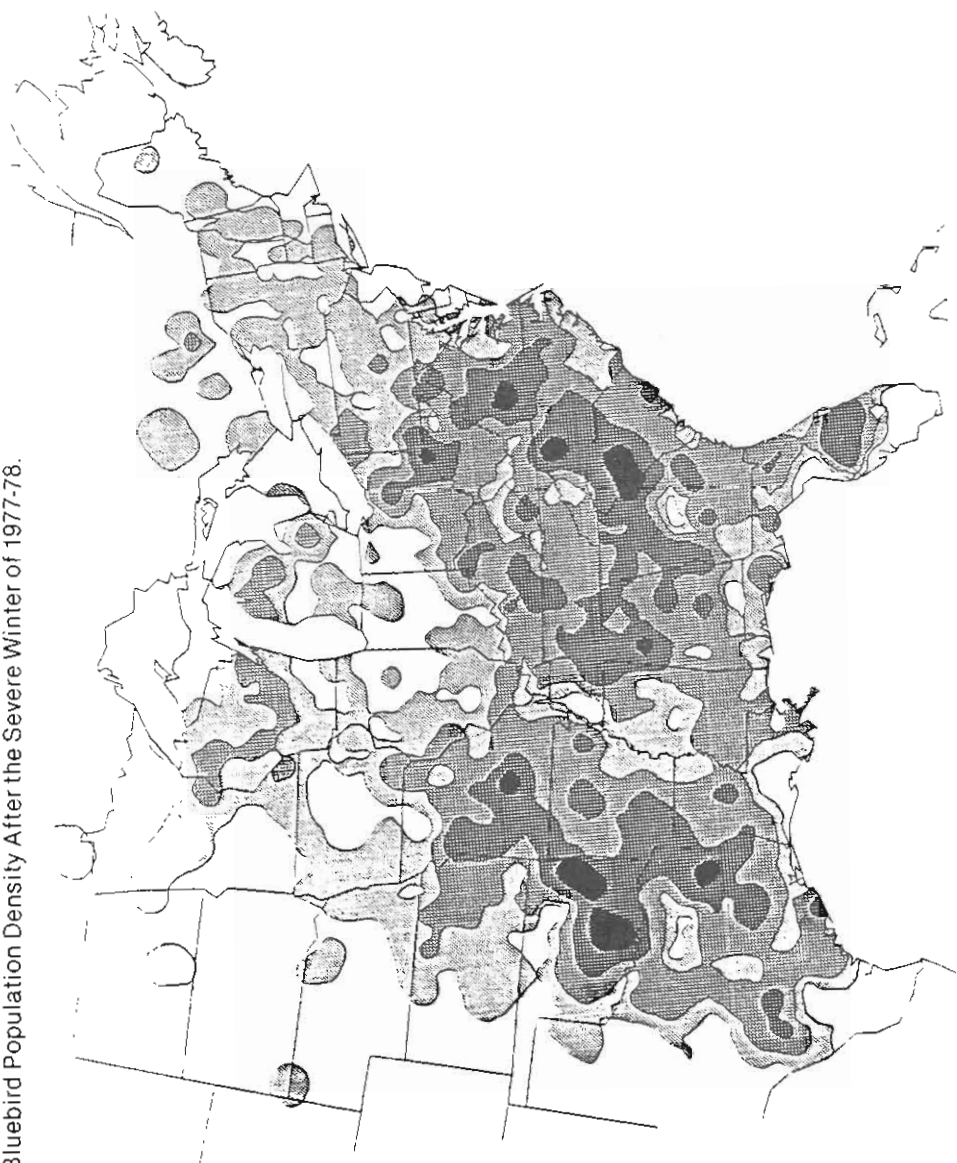
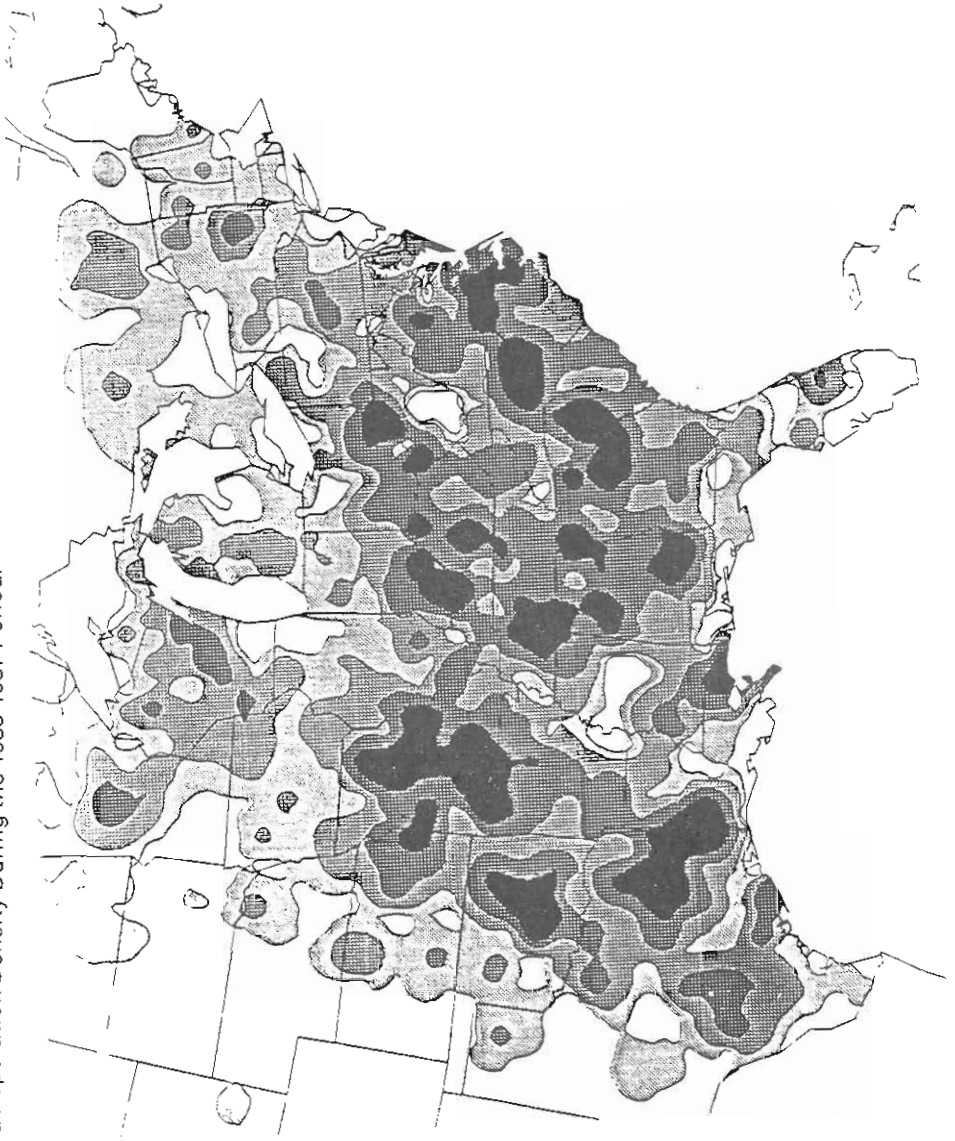


Figure 2. Eastern Bluebird Population Density During the 1985-1987 Period.



U.S. Fish and Wildlife Service, Breeding Bird Survey data.

ciety in Arkansas has 288 nesting boxes placed on seven golf courses. From the 165 boxes used by bluebirds, 906 young were fledged. Of the remaining boxes, 34 were used by chickadees, 1 by a titmouse and 2 by Prothonotary Warblers.

Eddie O. Taylor of Eldorado, AR reports that a pair of bluebirds liked the box hanging from a low limb of a large oak tree in his front yard next to the power line coming into his house. They raised three broods of five successfully. Bluebirds love to perch on power lines in order to hunt for insects on the ground below. Altogether Eddie realized 31 fledglings from 3 of his 5 nesting boxes.

Early nestings in Ohio were hampered by cold wet weather, but several members reported increased fledgling numbers over previous years. Richard A. Tuttle of Delaware, OH attributes the increase to larger clutch sizes during the second nesting. The 345 fledglings from 83 boxes was 15.7% more young than ever before. Dick also had 583 Tree Swallows fledge from 144 boxes. Tom A. Barber of Cambridge, OH had much the same experience fledging 202 bluebirds from 37 boxes. Tom had two nests with seven eggs in them. In one all 7 hatched and fledged and in the other 6 hatched and 5 fledged. Another Ohioan, J.P. Perkins from Conneaut, had his second best year ever. With the help of his friend Roger Redmont, the two octogenarians monitored 59 boxes, 22 of which were used successfully by bluebirds that fledged 144 young. "Perk" (everyone calls him that) noted that Tree Swallow nestings were down by 50%.

Bewick's Wrens were reported nesting in boxes on trails by Mary Beth Frampton of Tulsa, OK, Mrs. J.M. Reeves of Dublin, TX and William W. Hill of Corsicana, TX. This beautiful bird is rapidly disappearing from the eastern portion of its range. Unlike the House Wren, the other wren species do not seem to be as aggressive and special care should be taken not to interfere with their nesting. All non-game bird species are protected by federal law with the exception of the European Starling and the House Sparrow.

Building nesting boxes and sending them to friends in Pennsylvania, Tennessee and Alabama has been the method used by Ray F. Wiley of Opelika, AL to promote bluebird conservation. His niece in Tennessee (sorry Ray didn't give her name) used the theme "The Bluebirds Are Coming Back—With Man's Help" for her fifth grade science exhibit. She won third place and the exhibit was displayed in the library all summer.

Participating in bluebird conservation is one good way to meet your neighbors according to Betty Sue Dilbeck of Jackson, TN. When she moved to Jackson eight years ago, only a few people knew what an Eastern Bluebird looked like. Now people are calling Betty Sue and asking her for box plans and information. They even stop her on the street wanting more information. In 1989 she surely told them about her super bluebirds. One female laid 17 eggs in three nestings in the same box and the pair fledged 16 young.

Another case of bluebirds nesting in a box hung from a tree was reported by Billy C. Brown of Southwest City, MO. Not only do the bluebirds nest in the hanging box every year, but it is their favorite refuge during the winter. Billy also has two Purple Martin houses with a combined total of 42 rooms. Thirty-eight of the compartments were used and 114 Purple Martins fledged.

On 15 April 1989, a Mountain Bluebird was observed by Wilf Yusek in Flamborough, Ontario and photographed by Bill Smith. The information and a photo was sent to Don Cryderman of Beamsville, Ontario, who relayed them to NABS. Eastern Bluebirds are moving West into Montana and now Mountain Bluebirds are invading Ontario.

West

Heavy snowfalls during the early part of the breeding season in some areas caused nesting failures which greatly reduced the total number of fledglings for 1989. The number of reports received remained the same (115), but the results were disappoint-

ing. The number of boxes monitored dropped from 9,092 to 6,904 or 24% fewer than in 1988, but the number of boxes used successfully declined by an even greater percentage, from 4,215 to 2,565 or 39%. Fortunately recovery after a bad spring was evident because there were only 28% fewer fledglings, 13,447 compared to 18,592 in 1988.

Duncan J. Mackintosh of Lethbridge, Alberta, compiler for the Mountain Bluebird Trails, reported that a great nesting season was anticipated when early clutch sizes were the best ever recorded (6, 7, 8 instead of the normal 5, 6, 7). An unseasonable snow on 26 May, which reached depths of 15 inches [38.1 cm] on some trails, dashed all hopes of a record year. According to Duncan, close to 2,000 eggs were abandoned in three days; however, within a week, many pairs used the same nesting box or moved to an unused one and re-nested successfully. Smaller clutches and fewer second broods significantly reduced the total number of fledglings for the year.

Western Bluebirds in Oregon also suffered setbacks from the weather according to Elsie K. Eltzroth of Corvallis, OR. First brood deaths of about 96 nestlings were attributed primarily to weather-related exposure and starvation. E.R. Gillis of Newburg, OR feels that supplemental feeding during bad weather may help bluebirds to survive. Not only did Earl experience heavy losses on his trail during May and June, due to the cool and rainy weather, but the situation was similar during re-nesting in mid-July. He is studying weather charts to determine when feeding becomes necessary.

Farther north in the state of Washington, Lorraine Reckseen of Port Orchard reported a very successful second nesting after the initial failures due to the cold, wet weather. According to Lorraine, who is compiler for the Kitsap Audubon Society Bluebird Trail, the second hatch produced 500% more fledglings than last year.

A Mountain Bluebird female mated with a Western Bluebird male on Donna Hagerman's trail in Reno, NV. Three of the hybrids fledged. In addi-

tion to the 241 Mountain Bluebirds and the 184 Western Bluebirds fledged on Donna's trail, there were successful nestings by Mountain Chickadees, Plain Titmice, White-breasted Nuthatches, House Wrens and Ash-throated Flycatchers. Quite a variety of cavity nesters!

Their bluebird trails have proven to be a valuable source of recreation for Bill and Edith Ryan of Yakima, WA. They find themselves looking forward to each trip into the trail area which is off the beaten path, accessible only by mountain roads. According to Bill, who is also compiler for the Yakima Valley Audubon Society, wildflowers abound in the area. Their weekly visits to monitor nesting boxes have also made it possible to enjoy a much longer season of wildflowers. Something interesting and new usually comes up during each trip. During the 1989 nesting season a pair of White-headed Woodpeckers nested in a stump near one of their nesting boxes; White-breasted Nuthatches nested for the first time on their trail; and six Tree Swallows fledged from one box placed back to back with another box from which six Violet-green Swallows fledged. How could anyone become bored with experiences like that?

In spite of increased House Wren activity, Alfred G. Larson of Boise, ID reported a very successful year with 688 Mountain Bluebirds and 244 Western Bluebirds fledged.

Moving nesting boxes from areas plagued by vandalism and theft to a more remote area solved many problems for Alfred Perry also of Boise, ID. Two full broods of five or six each were fledged from all of the boxes that were relocated. Al was amazed by the results, but the whole year was amazing for him. Only two of his 362 boxes were not used. Mountain Bluebirds nested successfully in 316 boxes, producing 1,780 fledglings. The remaining boxes were used by wrens and swallows and one by a chipmunk.

The highly successful year was attributed to the vast amount of food made available due to an outbreak of web worms attacking the Mountain

Table 1. 1989 Nesting Box Data According to 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	8,092	6,285	325	169	2,284	6,260	2	10,352	319	34,088
Boxes Used by Bluebirds	2,830	2,416	78	105	1,121	2,292	1	3,879	195	12,917
No. of Bluebirds Fledged	12,479	13,251	252	448	4,933	12,214	4	14,747	981	59,309
Boxes Used: Chickadees	174	174	8	5	46	11	0	149	8	575
Boxes Used: Titmice	68	39	3	5	21	2	0	6	0	144
Boxes Used: Nuthatches	17	5	1	0	2	5	0	1	1	32
Boxes Used: Swallows	888	632	48	5	142	969	1	303	9	2,997
Boxes Used: Wrens	526	506	7	4	127	143	0	458	8	1,779
Boxes Used: Flycatchers	1	0	4	1	0	0	0	1	2	9
Total No. Boxes Used	4,504	3,772	149	125	1,459	3,422	2	4,797	223	18,453
% of Boxes Used by All Species	55.7%	60.0%	45.8%	74.0%	63.9%	54.7%	100%	46.3%	70.0%	54.1%
% of Boxes Used by Bluebirds	35.0%	38.4%	24.0%	62.1%	49.1%	36.6%	50%	37.4%	61.1%	37.9%
% of Boxes Used by Others	20.7%	21.6%	21.8%	11.9%	14.8%	18.1%	50%	8.9%	8.9%	16.2%

E—East (788 reports)
 C—Central (700 reports)
 W—West (115 reports)
 Total (1603 reports)

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.

Mahogany. The bluebirds never seemed to eat the worms but feasted on the millers laden with eggs. Bluebirds appeared to prefer the millers over the grasshoppers which is their usual bill of fare.

Summary

Of all the problems facing the bluebirds' struggle for existence, nothing appears to have a more profound effect than the weather. Maps in Figures 1 and 2, for example, illustrate the dramatic population changes which occurred after a severe winter. Weather, of course, affects the food supply for birds in much the same way as the food supply for humans is affected. When famines occur in any part of the world, food is sent there to minimize the effect of the food shortage. Why can't that be done for the bluebirds?

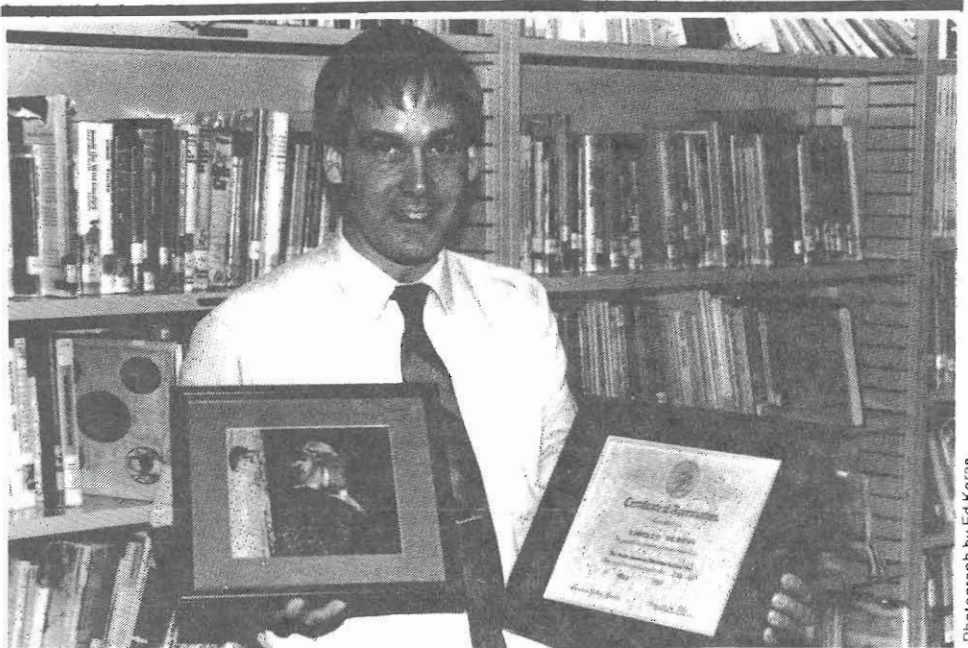
Everyone knows that putting out sunflower seed and millet for seed eating birds during the winter has helped them survive. What about the spring when cold and wet weather often re-

duces the bluebirds' ability to find enough insects to feed their young? Successful first broods are very important to the bluebird, not only because success encourages an early re-nesting, but fledglings frequently help with the raising of subsequent broods, especially when something happens to either adult after the eggs have hatched. Mealworms are easy to raise and provide excellent food for nestlings as well as adults. Nesting failures can and have been reduced by supplemental feedings during the spring. Until such time that more is learned about how to help cope with adverse weather conditions, remember that much has been done and can be done to help the bluebird—you have done your share! ■

Literature Cited

Cooke, M T. 1929. Birds of the Washington, D.C. region (20 mile radius). *Proc. Biol. Soc. Wash.* 42:1-80. p. 66.

6002 Hunt Club Rd., Elkridge, MD 21227 (Dupree); 2926 Woodwick Ct., Ellicott City, MD 21043 (Wright).



Photograph by Ed Karas

Teacher Tom A. Barber, Cambridge, Ohio, holds the Certificate of Appreciation awarded to Liberty School by the North American Bluebird Society for its bluebird activities undertaken at Mr. Barber's direction.

QUESTION CORNER

Lawrence Zeleny



I would like to know if anyone else has seen "pink" bluebird eggs. I have 10 eggs (pink) in two nestings.

**Mark Oakley
Westfield, North Carolina**

Some female bluebirds, probably about one in twenty, lay eggs without blue coloration. These eggs are usually nearly pure white but occasionally appear to be slightly pink, especially when freshly laid. The pink appearance of the eggs is believed to be associated with shells that are somewhat translucent.

My problem is that after the last fledging the bluebirds came back one time, and I have not seen them since. I sprayed the boxes with Raid® after cleaning out the nests. Will the birds come back later; will my spraying the houses keep them away?

**Frances M. Jolin
Macon, Georgia**

It is not possible to say for sure why your bluebirds this year, unlike last year, did not stay close to your home after they had raised their families. Whether or not family groups remain close to "home" after the breeding season depends largely on the food supply. The birds are free to move around at that time and are likely to settle down wherever food to their liking is most abundant—insects in the summer and fall and wild berries or

other fruits in the winter. It is quite likely that your birds will return in the spring to nest in your boxes since they have been successful there for the past two years.

The spraying you did probably did no harm but, in general, unless there is a compelling reason, we do not recommend the use of insecticides in or around nesting boxes since it is always possible that the material used may in some way injure the birds.

My wife has successfully fledged bluebirds in Dinty Moore beef stew cans nailed to pine trees! Is it unusual for bluebirds to nest in cans?

**J. Zacher
Elgin, Illinois**

Bluebirds will often nest in most any kind of small enclosure if it is in reasonably suitable habitat. Metal cans are sometimes accepted if nothing more suitable is available. We do not recommend cans, however, partly because they may become too hot. To avoid overheating they should be located where they are shaded between the hours of 10:00 a.m. and 4:00 p.m. daylight saving time. The cans should have a few small drainage holes in the bottom; care should be taken to eliminate all sharp edges, particularly around the entrance hole. If round cans are used, they should be at least 5 inches in diameter. ■

Orphans at Antietam

Mark Raabe and his wife Jean have had an extensive cavity nester trail at Antietam [MD] National Battlefield Park for many years (Sialia 4(3):91-93). During late June of 1989, Mark's records showed a curious discrepancy in the number of nestling bluebirds in three different boxes. The mystery was finally cleared up when he received the following letter in late September from Elizabeth Nichols. A portion of Mark Raabe's response is also printed.

Dear Mr. Raabe:

Now that we hear only the plaintive little song of our bluebirds signalling the end of summer, I must "fess up" and tell the story of my bluebird orphans who were placed in your care without first asking your permission. No excuses will do, except that many phone calls to friends in both Washington and Frederick counties indicated your trail was best suited in this emergency situation.

First, let me tell you the story with which I hope to vindicate my actions.

On June 22, 1989, I received a phone call from bluebird lovers Mr. and Mrs. Michael Hooten of 10526 Hessons Bridge Road, near Thurmont, Maryland. Mr. and Mrs. Hooten were the close observers of a well-designed and protected bluebird box in their spacious yard. During the incubation period, Mother Bluebird lost her mate. She completed incubation and all alone fed her four hatchlings. On June 22, they observed Mother Bluebird did not return to her faithful job of feeding her young, by that time about a week old. She had been missing over 14 hours. Since the Hootens could not assume the feeding care of the babies, they were anxious to find assistance. I visited their home as a result of their call and we discussed the Care Plan.

Enclosed you will find the picture of the hungry youngsters which was taken before I transported them to my home in Middletown, box and all! The little one on the lower right, by the way, retained the dark mark on its beak all during its stay with me.

My three year old granddaughter assisted in feeding the babies. They gobbled baby cereal, raw hamburger, and cut-up mealworms. They responded to a gentle whistle every feeding time. I used tweezers to remove the fecal sac which the babies would deposit on the upper edge of the nest.

On the 22nd of June (same day I received them), Baby #1 was placed in a nesting box belonging to Mrs. Rose Lechner of Braddock Heights. Mrs. Lechner's three babies were the same age and were being fed by both parents. The foster child was immediately accepted and eventually fledged with its adopted siblings. Mrs. Lechner felt a great sense of loss and even went searching for the family in the nearby woods. She, of course, could hear their song, but only occasionally saw them return to the box for short visits.

With one less mouth to feed, I was able to make the necessary phone calls. Eventually, an executive at Potomac Edison indirectly led me to your trail. In talking with Washington County residents, the mention of your name helped me to recall seeing it in *Sialia*. So, without further hesitation on June 24, I made my pilgrimage to Antietam.

Before actually entering the park, I was spied scaling a stone wall to reach the first box. Mrs. Laura D. Grove of 5500 Sharpsburg Pike caught me red-handed. I signalled an "all's well" and when she approached my car and saw my plight (three open-mouthed babies with no parents) she immediately directed me to your trail. Her bluebird babies were too young to accept an eight-day old. From that point on, it was a piece of cake. I smelled success!

What a beautiful trail! I must return again. I have lived in Middletown 32 years and regret to say have never taken advantage of visiting this tranquil setting. It is fitting, indeed, to see bluebirds sharing a part of our nation's history; they represent a feeling of hope, beauty, and assurance of peace both for the living and the brave men this battlefield honors.

I also enclose pictures of boxes (keep these) where I placed the orphans with siblings of the same age; you will note they are numbered 20 and 24; there is no pic-

ture of Box #26 as I ran out of film. I hope nature was kind to these little ones; I was very attached to them. It took only 3 days for them to win my heart!

This experience taught me a great deal about nestling behavior. It is interesting to read about bluebirds and tend my small trail, but the rewards and knowledge gained in this endeavor were well worth the effort. Also, my granddaughter will relate her experience many times over and perhaps never forget it.

I must express deep pleasure in seeing such a well-tended and obviously well-monitored trail. I was delighted to find Tree Swallows in one box. Their intricately feathered nest is a delight to see! Of course, I was dismayed to find disaster plays no favorites even to the best of trails: a dead male near a box—sparrow and wren dummy nests (which I took the liberty to remove). I was concerned about several adjoining fields which appeared to have been sprayed for weed control and wondered about its damaging effects on the bluebirds.

So now, Mr. Raabe, you have the whole truth about the extra babies on your trail. If you found any dead 10-day olds, I was the culprit! They all appeared in good health when I left them on your doorstep with a plea to Mother Nature for their survival.

I hope someday to have the pleasure of meeting you, but first, I will "test the waters" before getting within earshot in order to avoid a verbal dressing-down for invading your trail.

I speak for all the bluebirds and all the fortunate visitors at Antietam as I send my deepest thanks for your contribution to the happiness of many.

Sincerely,

Elizabeth B. Nichols

Elizabeth B. Nichols

Dear Mrs. Nichols:

The great news is that the three orphans placed individually in nest boxes nos. 20, 24, and 26 all survived and my best information is that they all successfully fledged. I have included a page from my records covering the period June 17 to July 15. You will note that in each of the three boxes a strange thing occurred sometime between the 17th and 25th of June, i.e., each clutch mysteriously increased by one. We never suspected human interference (your acts of the 24th). Rather, I playfully suggested that my wife was incapable of both driving the car and keeping the bluebird records. This was the essence of our conversation on the 25th as in rather rapid succession we had those three boxes with growing families.

It was wonderful to receive your letter clearing up this mystery. It was equally wonderful to see how the three sets of parents took on the added parental responsibilities with no apparent difficulty. The record notation "FNR" indicates a flat nest removed and it is at that point that I make a judgment of whether a successful fledging occurred. In each of the three nests, I observed the young a couple of days before fledge-time and not seeing any evidence of disaster I then assume a successful fledging. The circled number indicates the number of young fledged.

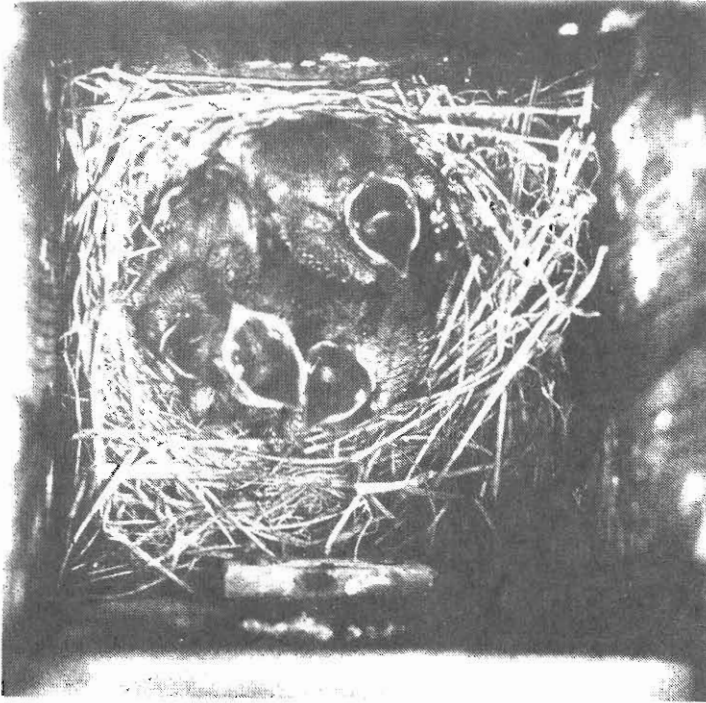
I hope you don't mind that I am sending a copy of your letter to Antietam Superintendent Richard Rambur. I am sure he will enjoy this wonderful story as much as we did.

Thanks very much for your kind words about the bluebird trail. We feel privileged to be able to maintain a nature trail on this hallowed ground and we work hard to make sure it does not detract in any way.

Sincerely,

Mark Raabe

Mark Raabe



Photograph by Michael L. Hooten

The four "Orphans at Antietam" from Mr. and Mrs. Michael Hooten's box near Thurmont, Maryland, prior to being transported to Middletown by Elizabeth Nichols and placed in four different boxes, three of which were part of the trail at Antietam National Battlefield Park.

16	2 BB - 14 days	FNR (1)	BB - 2 eggs	BB - 6 eggs
17	SN mat dead male BB picked	-	-	-
18	GTS - 5 days	GTS - 13 days	TS - Ready to go	FNR - BB in air
19	BB nest	BB - 3 eggs	BB - 3 eggs	3 BB 10 days
20	9 BB - 2 day	4 BB - 10 days	4 BB - 16 days	FNR (4)
21	BB nest Rm meal	0	SN - mat ugly eggs	0
22	BB nest	SN	SN - R - 1	Supp - SN foul
23	3 BB just hatched	4 BB - 7 days	4 BB - 14 days	FNR (4)
23A	0	0	0	mouse
24	3 BB - 2 days	4 BB - 10 days	Ready to Go	FNR (4)
25	FNR (4)	0	0	0
25A	0	0	-	0
26	2 BB - 3 days	3 BB - 9 days	3 BB - 16 days	FNR (3)

A portion of Mark Raabe's Antietam bluebird box records showing discrepancies for boxes 20, 24 and 26. These were the three boxes to which Elizabeth Nichols added "orphans."

PLANTINGS FOR BLUEBIRDS AND OTHER WILDLIFE

Silky Dogwood

Karen Blackburn

Like other dogwood species that have been featured in previous issues of *Sialia*, Silky Dogwood produces fruit which attracts a wide variety of birds. This shrubby dogwood, with its clusters of white flowers, blue fruits, and colorful branches, is also of ornamental value in the landscape, particularly when seen in its natural habitat alongside a pond or stream. Because Silky Dogwood tolerates poorly-drained soil, it should be considered when wildlife plantings are desired for low-lying areas. In addition, it is also useful in controlling erosion along streambanks.

Silky Dogwood *Cornus amomum*

Native Range—Southern Maine to southern Indiana, south to South Carolina and Alabama.

Hardiness—Zone 6

Habitat—Usually found in thickets on low moist sites, particularly near streams, ponds and wetlands.

Habit—A deciduous shrub reaching up to 10 feet (3.05 m) at maturity. Leaves are spaced opposite one another on reddish-brown branches. New growth is silky.

Fruit and Flowers—Small creamy-white flowers occur in flat-topped clusters in early summer. The blue fruits, approximately 1/4 inch (.64 cm) in diameter, are usually produced in abundance in late summer through fall.



Culture—Best in moist, fertile soil in full sun, but may be grown on drier sites. Easily propagated by tip layering. For streambank stabilization, plant seedlings, rooted or unrooted cuttings 2 feet (.61 m) apart.

Landscape Value—Clusters of white flowers followed by blue fruits are of interest in the landscape. Excellent shrub for naturalizing alongside ponds or streams and other locations with ample moisture. Valuable in preventing erosion of streambanks. Growth rate is rapid.

Wildlife Value—Silky Dogwood pro-

vides preferred food for the Wild Turkey, Ruffed Grouse, Northern Bobwhite, Northern Flicker, Downy Woodpecker, Eastern Kingbird, Gray Catbird, Brown Thrasher, American Robin, Wood Thrush, Swainson's Thrush, Eastern Bluebird, Cedar Waxwing and Purple Finch. In addition to raccoons, rabbits and squirrels, many other species of birds, including the Wood Duck, American Woodcock and American Goldfinch, feed on the fruits as well. Silky Dogwood also offers good cover and nest sites for a number of birds. ■

Rt. 3, Box 650
Marianna, FL 32446

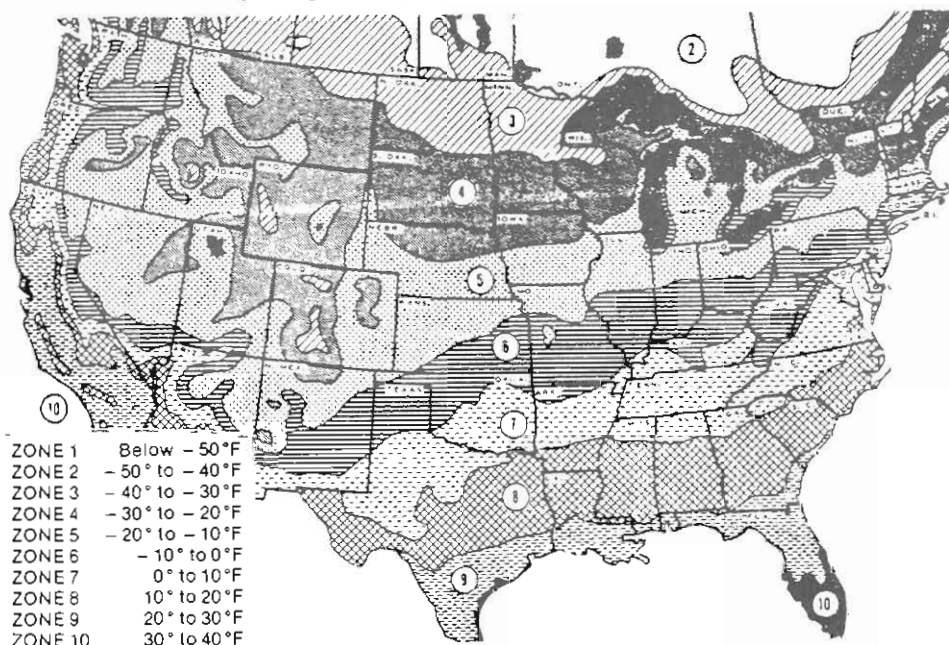
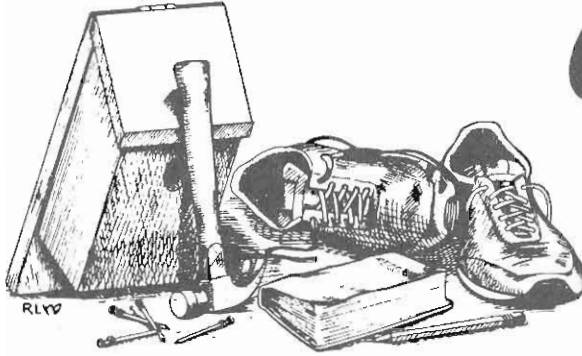


Figure 1. Hardiness Zones for the United States and southern Canada. Temperatures for each zone are the average annual minimum temperatures. When no zones are mentioned with the plant description, plants are hardy anywhere. Factors within zones such as altitude, exposure, soil type, moisture, etc. can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

THIRTEENTH ANNUAL MEETING OF THE NORTH AMERICAN BLUEBIRD SOCIETY

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

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



ON THE TRAIL

"On the Trail" is intended to provide succinct information about bluebird and cavity nester trails. Let us know what is happening on your trail. Send trail reports, unusual observations, publicity efforts, etc., to the editor, 10617 Graeoch Rd., Laurel, MD 20723.

ORION, ILLINOIS—Matthew Litchfield, 14, was awarded the rank of Eagle Scout in a ceremony at Orion United Methodist Church. His Eagle project involved making and placing 110 bluebird boxes.

FREDERICK, MARYLAND—John Davidson, 88, has been a long-time friend of the bluebird. He has built more than 875 boxes and has donated the entire proceeds from their sale to NABS. With each box he provides bluebird material and advice for mounting, siting, and monitoring.

TYNGSBORO, MASSACHUSETTS—Lillian Lund Files noted that during 1989 she had many reports from the entire New England area of six egg clutches and third nestings "which isn't the norm for this region."

NEW YORK STATE—The Department of Environmental Conservation (DEC) has established a hotline for reporting suspected incidents of pesticide poisoning of wildlife, especially as they relate to lawn and turf grass applications. The 24-hour, toll-free Wildlife Poisoning Hotline number is 1-(800)-356-0560. It is operated by DEC's Wildlife Pathology Unit with funding from the Return a Gift to Wildlife Program. Data developed by this unit contributed to the federal Environmental Protection Agency's ban on the use of diazinon on golf courses and sod farms. Research demonstrated that even when applied according to label instructions, diazinon can be fatal to birds that feed on grassy areas. *Bluebird News*, Fall 1988. (Upstate New York Bluebird Society).

HANOVER, PENNSYLVANIA—Although the unstable weather caused great losses of bluebird eggs and nestlings, Karen Lippy says that in 1989 the Codorus State Park Bluebird Trail fledged 177 bluebirds, 228 Tree Swallows, 98 House Wrens, 13 Tufted Titmice, and 4 chickadees. A box used by a flying squirrel as a food storage box was filled to the top with acorns.

ONTARIO—With the spring (April) 1989 newsletter, the Ontario Eastern Bluebird Society (OEBS) marked its first official publication. Their handsome membership card was designed by Juliana Hawks. The totals from nest box monitoring will be stored annually on computers at the Canadian Wildlife Service (CWS) office with the Canada Centre for Inland Waters in Burlington, Ontario. The CWS has provided financial and technical assistance since OEBS' inception. ■

A Bird in the Bush

Karen Blackburn

Shortly after moving to Florida nearly five years ago, we placed several nest boxes on our property in hopes of attracting bluebirds. Each spring bluebirds came to inspect the boxes, and each spring they were "terrorized" by the resident Northern Mockingbirds. It soon became apparent that, while the mockingbirds would allow other cavity nesters such as Carolina Chickadees and Tufted Titmice to nest and raise their young in these boxes, they simply would not tolerate the presence of bluebirds. Though the bluebirds I have observed here over the years were persistent in their efforts to inspect and claim a nest box, they were repeatedly driven off by equally persistent mockingbirds.

The following observations of 4 May 1989 are simply provided as an example of the countless conflicts we have witnessed between these two species during the past five years:

4:50 p.m.—Male bluebird perches on roof of box, then enters box. Female arrives, perches on roof of box. No mockingbirds seen in yard.

4:55 p.m.—Male bluebird still in box. Female still on roof. Mockingbird flies into nearby pine and voices threat calls.

5:00 p.m.—Male bluebird leaves box, drops to ground for insect. Female enters box. Mockingbird attacks male, chases him all around yard. Male attempts many times to seek cover in trees, but mockingbird still pursues. Female bluebird leaves box, perches on roof. Mockingbird chases her from box. Both bluebirds dive at mockingbird. A second mockingbird appears and joins the other in chasing both bluebirds around the yard. The two mockingbirds then return to perch in the pine.

5:07 p.m.—Male bluebird had sought cover in a Sweetgum tree. Now drops to ground for insect and flies to utility wire. Both mockingbirds chase him from wire.



5:10 p.m.—Male bluebird returns to Sweetgum. Again both mockingbirds, sounding threatening calls, chase him around yard.

The above observations during a 20 minute period of time are typical of the pattern of mockingbird harassment seen here. This particular pair of bluebirds attempted for at least four days to claim this nest box, only to be driven off in the end by highly aggressive mockingbirds. In fact, though mockingbirds have a reputation for being territorial, I have never seen them behave so aggressively except toward others of their kind.

These observations prompted me to inquire (*Sialia* 11(4): 142, 135) if others have seen similar conflicts between bluebirds and mockingbirds—if perhaps the presence of mockingbirds discourages bluebirds from nesting in otherwise suitable habitat. I have since received a number of interesting responses.

George Todd of Loris, South Carolina, cites a similar example of mockingbird "terrorism" to which he attributes the abandonment of a bluebird nest and eggs. He writes, "In the summer of 1988, I noticed a pair of mockingbirds behaving in an aggressive manner toward a pair of bluebirds. The mockingbirds had a nest in a holly tree in my yard, and the bluebirds had a nest in one of the six houses I had put up for them. (All six nest boxes are mounted on posts in open areas.) From what I observed, the mockingbirds would harass and fight the bluebirds whenever they saw them. Finally,

the bluebirds gave up and left. They left behind three eggs in their nest."

Bluebirds have nested on Mr. Todd's property for eight years, but mockingbird interference with nesting bluebirds was not evident until 1988. He adds, "Each year, bluebirds, House Wrens, chickadees, titmice, cardinals, Brown Thrashers and other birds nest in my yard. The mockingbirds are the only ones I have noticed giving the bluebirds a rough time."

William Wade of Seymour, Tennessee, has seven nest boxes, all of which are mounted on posts. He wrote to say, "Mockingbirds run the bluebirds off every time they are near my house. They also fight each other. The mockingbirds have been worse this year [1989] than ever before. They have always attacked my bluebirds, but this is the worst year. I am sure that mockingbirds keep the bluebirds from nesting in my houses." Mr. Wade further notes that the local mockingbirds also prevent bluebirds from feeding on the fruits of the trees and shrubs in his yard.

From Ellicott City, Maryland, James Resau reports, "We have had successful nestings of bluebirds in our boxes for the last four years, but not this year [1989] because of mockingbirds. On two occasions, I observed mockingbirds chasing the nesting bluebirds around the yard. They chased them into trees and then attacked them again and again." One of the two nest boxes on Dr. Resau's property is mounted on a post in an open area, while the other is attached to the front of his home. The latter had formerly been the more successful of the two boxes for nesting bluebirds. Dr. Resau states that although mockingbirds had frequently perched on the roof of his home in previous years, they had not bothered the bluebirds that nested in the box attached to his home. In 1989, however, mockingbirds began using this nest box as a perch and were then seen chasing the bluebirds around his yard. Dr. Resau notes that there were two unsuccessful bluebird nestings in this box during the 1989 breeding season. On both occa-

sions he found broken bluebird eggs on the ground below the box and "saw a mockingbird leaving the box." He believes that mockingbirds were responsible for the destruction of both nests.

Brian Miller of Fredericksburg, Virginia, offers the following account: "Bluebirds have nested in our yard for eight years. (He has one nest box mounted on a post in an open area.) They nested this year [1989] from late spring to early summer and there were no problems during the first few days. Then the mockingbird's favorite perch became the bluebird box. The mockingbird would perch on the box even when the female bluebird was inside. After the eggs hatched, I worried that the mockingbird would prevent the bluebirds from feeding their young. The mockingbird would only stay about two minutes at a time, but it almost seemed to enjoy the frustration it caused the bluebirds. At times it would chase the bluebirds from the box only to perch." Mr. Miller notes that although mockingbirds have always been in the vicinity, conflicts between mockingbirds and bluebirds were not observed until two years ago. He seems to feel that, while mockingbirds may be an annoyance to the bluebirds in his yard, the local House Sparrows have posed more of a problem.

Ms. Angela Van Cleve of Alachua, Florida, writes, "Mockingbirds definitely single out bluebirds during the nesting season; they chase both the male and female bluebirds all over the yard. Even when the bluebirds are perched on the power line above their nest box, the mockingbirds try to chase them off. I have also seen the mockingbird perched on the bluebird nest box singing aggressively."

At her home in Cleves, Ohio, Carol Daugherty has observed confrontations between mockingbirds and bluebirds at her bluebird feeding stations during the winter months. She says that although the mockingbirds do not have access to the feeders, they "guard" them nonetheless, and "the chase is on as soon as the bluebirds come within five feet of the feeders." Mrs. Daugh-

rity has not noticed mockingbirds directly interfering with the activities of nesting bluebirds, but she has observed that nesting bluebirds "become quite agitated when mockingbirds come into the yard. They sound an alarm call and carry on until the mockingbird leaves, or until I go out to see what is happening. At first I thought a cat or snake was around, but each time it was a mockingbird." Mrs. Daughrity adds that in her area House Finches are becoming as much of a problem as House Sparrows. She reports that the finches "follow the bluebirds everywhere—landing on their nest boxes, looking inside boxes that contain nestlings, following the bluebirds as they hunt for insects and landing next to them as they catch insects in the grass."

It is apparent from these reports that Eastern Bluebirds are not only faced with competition from House Sparrows and European Starlings for nest boxes and cavities, but, at least in some localities, they are also forced to compete with mockingbirds in territorial disputes. According to the accounts described herein, the reaction of bluebirds to the presence of mockingbirds varies from agitation to the abandonment of nest and eggs, and, in one case, mockingbirds have even been implicated in the destruction of bluebird eggs. It also appears that the presence of mockingbirds may indeed discourage bluebirds from nesting in the area. It is possible that the degree of mockingbird aggression and the extent to which it affects nesting bluebirds is related to the proximity of the mockingbird nest to the bluebird nest box. For example, Mrs. Daughrity, who described only "agitation" as the response of nesting bluebirds to mockingbirds, also mentions that the local mockingbirds "generally remain on the outskirts" of her property during the breeding season. On the other hand, Mr. Todd, who blames mockingbird aggression for the abandonment of a bluebird nest in his yard, notes that mockingbirds were nesting in his yard at the time. Mockingbirds also nest annually in our open front yard, which is

where most of the mockingbird/bluebird conflicts have been observed. Mockingbirds have claimed all of the nest boxes there as perches and, as mentioned earlier, will not tolerate the presence of bluebirds. (Perhaps other, more secretive, cavity nesters such as chickadees and titmice fare better in these boxes because they are not in the habit of perching on them, a habit which, at least for bluebirds, seems to invite attacks from mockingbirds.)

Clashes between mockingbirds and bluebirds may be inevitable since both species share the same general habitat preferences—open areas with access to fruit-bearing plants—and both species also seek out open perches from which to sing and hunt for insect food. However, it appears that, in some instances, human intervention may be required to reduce conflicts between these species and to ensure that bluebirds will be allowed to not only nest, but to nest successfully. Several individuals who sent in reports told of becoming so frustrated with mockingbird harassment of nesting and feeding bluebirds that they resorted to destroying mockingbird nests or live-trapping mockingbirds and releasing them in other areas. As one who has watched the vicious attacks of mockingbirds that have prevented bluebirds from nesting on our property, I sympathize with the frustrations of fellow bluebirders. However, the same laws that serve to protect bluebirds, their nests and eggs from human interference also apply to mockingbirds and other native species. We must, therefore, seek other solutions to this problem. Successful solutions will obviously focus on separating the two species. For those of you who wish to reduce mockingbird/bluebird conflicts, the following suggestions may be of help:

- Attempt to determine the location of mockingbird nests and move nest boxes as far as possible from these sites.
- Observe mockingbird perching preferences (utility wires, fences, rooftops, etc.) on the property. Favorite perches will be within the mockingbird's de-

fended territory. Move nest boxes away from these areas.

• In some cases, it may be necessary to relocate nest boxes from the open areas preferred by both species to more secluded sites. Try placing boxes at the edge of a wooded area. If the property does not include such an area, try attaching boxes to the trunks of isolated trees and provide as much protection from predators as possible. (Note: Observations here indicate that as long as unoccupied nest boxes are available in open areas, bluebirds will continue to attempt to claim them despite mockingbird interference and despite the availability of boxes in more secluded areas. If boxes in the open are occupied by other cavity nesters or are removed, bluebirds will then seek out the less desirable sites at woods' edge where mockingbird interference seems to be less of a problem. Therefore, in areas where mockingbird aggression is a serious threat to nesting bluebirds, it may be necessary to remove all nest boxes from open areas in order to entice bluebirds to nest in the safer sites that they would otherwise find less desirable.)

To conclude on a happy note, I would like to add my own report. In June of 1989, a pair of bluebirds was finally able to nest successfully in our yard. Following a raccoon raid which destroyed an active mockingbird nest, a pair of bluebirds settled into a nest box which had just been placed on a post at the edge of the woods behind our home. Though mockingbirds were still present in our open front yard and perching on the nest boxes there, they showed little interest in the "backyard bluebirds." As far as mockingbirds are concerned, "out of sight, out of mind" may be the key to keeping the peace between bluebirds and mockingbirds.

Many thanks to all of you who took the time to write up your reports and send them in. Your contributions to this column are deeply appreciated. We continue to welcome reports concerning mockingbird/bluebird conflicts as well as any suggestions you may have for reducing such conflicts. As al-

ways, we also invite your reports of observations pertaining to plant use by bluebirds and other wildlife. Please send reports or comments to Karen Blackburn, Rt. 3, Box 650, Marianna, FL 32446. ■

Trail Directory Corrections

Corrections to the Bluebird Trail Directory and Bluebird Trouble Shooters will be published in the next issue of *Sialia*. Any changes desired should reach the editor by 30 May 1990.

Send Bluebird Newsletters

The editor appreciates receiving state and regional bluebird/cavity nester newsletters. Items are sometimes picked up that are of interest to a wider audience. Credit is given to the original publication or organization.



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 Jeanette Coe Gabel

Rodman Gabel

In memory of Myra Swan

Mabel E. Bellew

In memory of Anna F. Noyes

Alfred D. Noyes

Male Bluebird Cares for Swallows

Jim and Carol Naber

1989

April 5—Two bluebirds were seen on one of the paired houses. They did not stay.

Mid-May—We opened one house to Tree Swallows. They nested.

May 27—A male bluebird arrived and fought with the swallows so he could nest in the second house. For three days he built a nest without a female around.

May 31—A female bluebird appeared to help finish the nest.

June 6—The first egg was laid. One egg was laid daily for a total of 6 eggs. The male was attentive to his mate keeping a constant vigil for about 5 days after the last egg was laid.

June 16—The male bluebird became interested in the activity in the swallow house. Within a few days, he took over the care of the three Tree Swallow young. He fed them, cleaned the nest, and fought off the adult swallows

when they attempted to feed their young. The female bluebird continued to incubate and hatch the six eggs with minimal attention from her mate.

June 22—One bluebird hatched.

June 23—Two bluebirds hatched.

June 24—One bluebird hatched. The Tree Swallows fledged.

June 25—Two bluebirds hatched. The male bluebird is in the area but shows minimal attention to his young or mate.

June 27—Four bluebird young are alive.

June 30—The male bluebird begins to show some interest in his young but only occasionally.

July 9—Two bluebirds fledged.

July 10—Two bluebirds fledged. The male bluebird was seen helping the young bluebirds after fledging. ■

16261 Itasca Ave., S.E.
Prior Lake, MN 55372



I photographed this Eastern Bluebird nest on 25 July 1989. It was discovered by Jim Norman of Muskogee, Oklahoma, on 13 July. The nest was built on a small ledge under a wooden canopy covering a picnic table in Hopewell Park, just east of Muskogee. There were three eggs in the nest and the female bluebird was on the nest most of the time (except when I tried to photograph it). The male was nearby.—
Jeri McMahan, Rt. 1, Box 689, Ft. Gibson, OK 74434.

Dear Editor:

I thought I'd drop a line about the insecticide Sevin® causing possible problems to bluebirds and Tree Swallows.

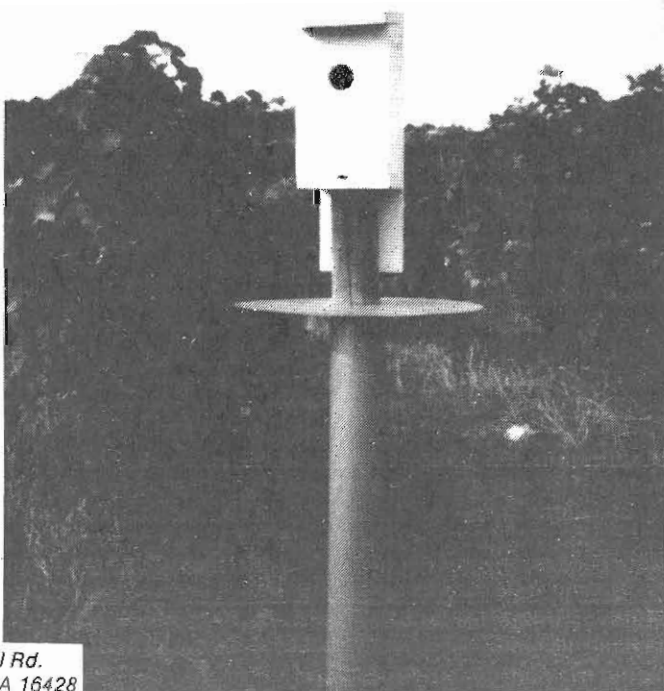
We live in the heart of the Concord grape belt along Lake Erie just outside of Erie, PA, and about 60 of the 215 bluebird houses I have out are located right in the grape vineyards. In the picture I have enclosed you can see grapevines in the background. This particular house has raised several nestings of bluebirds and swallows without problems. We spray the vineyards with 2 1/2 lbs. of Sevin 80S per acre three or four times a season and have had no problem with bluebird young birds or adults dying. To date this year we have 28 pairs nesting already out of 60 houses and have fledged 62 babies. I realize there are several different formulations of Sevin in both spray and dust and I can only say what I have found with spray Sevin 80S.

The house you see is my arrangement. The top opens to the side for cleaning and inspection. I use 1/4 inch wire floors bent on each end so that the floors are elevated about 1/2 inch above the wood floor. I put a sprinkling of 1% Rotonone dust on the wood floor to control parasites, especially blowflies. With the elevated wire floor, the birds themselves do not come in contact with the insecticide but the parasites will.

I use treated posts so they won't rot. The posts are about 5 feet high to the bottom of the house. Under the house I use a heavy gauge galvanized hoop about 18 inches in diameter and under that a 4 inch stovepipe, fit tightly to the post and fastened with roofing nails. With this arrangement predator control is excellent. I have not lost one nest in seven years to raccoons. Before that, they plagued me constantly.

Hope this letter is of some help to someone.

Bob Bartlett



10576 Sidehill Rd.
North East, PA 16428

PVC Plastic Elbow Attachment: A Raccoon, Feral Cat, Flying Squirrel Deterrent

Willard A. Cash

Limited testing of the PVC elbow placed in the entrance hole on bluebird nest boxes has shown promise of better control of four-footed predators. Two successful nestings were observed in 1989 in different boxes in different locations. One box with chute attachment provided protection for a titmouse brood to fledge successfully. This box had been constantly harassed by raccoons. The other box was used successfully by Eastern Bluebirds. The second box had been plagued by one or more feral cats. Two prior nesting females had been killed or frightened to the extent that nest and eggs had been abandoned. These boxes are in areas where tree mounting is the only option available, thereby making it doubly important to find a workable solution to the predation problem.

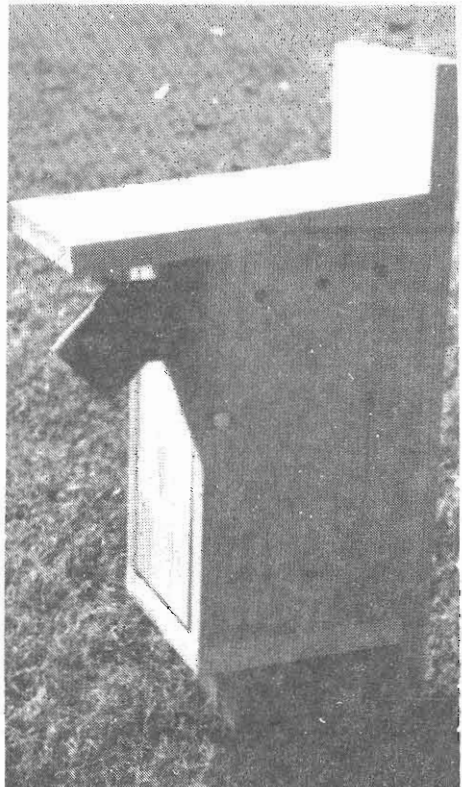
The plastic 45 degree 1 1/4 inch elbow (trade name PVC-schedule 40) requires a 2 inch opening for box installation, the inside diameter is 1 1/2 inches required by the Eastern Bluebird. This material is extremely slick which is a flying squirrel deterrent. Once the animal moves from the box top onto the slick-surfaced elbow, it evidently loses its footing. I have had no evidence of flying squirrel entry in any box with a chute attachment.

As shown, the elbow is used with a front-opening box. Prior to placing the elbow in the entrance, pre-drill the elbow at the box end with a one-sixteenth inch bit for an 18 gauge finishing nail at top and bottom to keep it secured in the box opening. The elbow is scored at one-eighth inch intervals across the interior of the lower side approximately three-quarters of an inch at the entrance end with a hacksaw to provide a gripping surface for the bird as it attempts to enter the opening. This material is extremely tough and durable and can be held in a bench vise to make these alterations. This box attachment in conjunction

with a longer box top makes reaching in by a predator very difficult, if not impossible. Loss of eggs or young to any predator is indeed distressing, but loss of a mature female is tragic.

Bluebirds do not seem to be intimidated by the box addition. Continued testing will be ongoing for the coming season. The PVC elbows are available at any hardware or plumbing supply store at a minimal cost. ■

1906 Carolina Circle
Goldsboro, NC 27530



Photograph by Winkie Lee Goldsboro News Argus

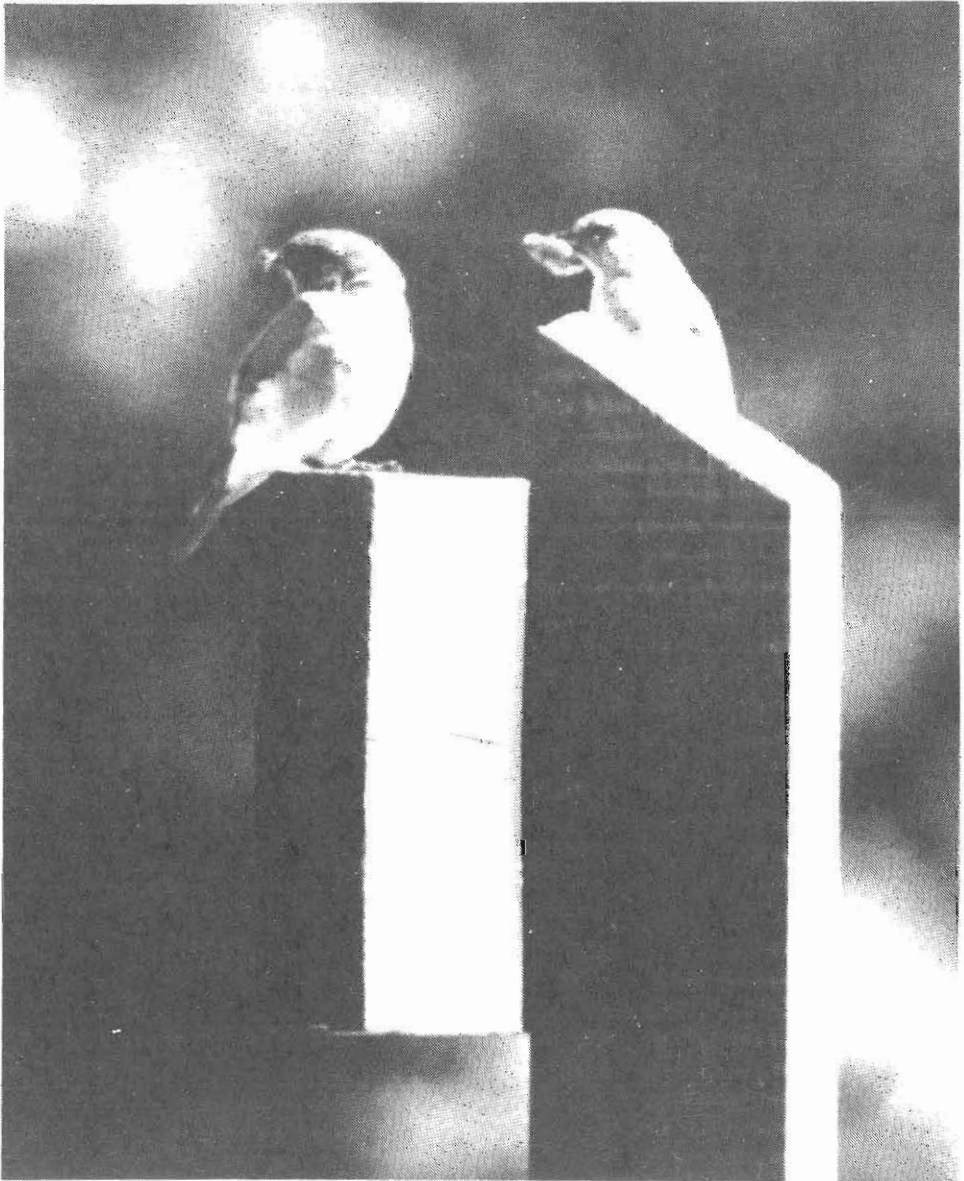
Nesting box with Willard Cash's PVC elbow attachment in the entrance hole for improved predator control.

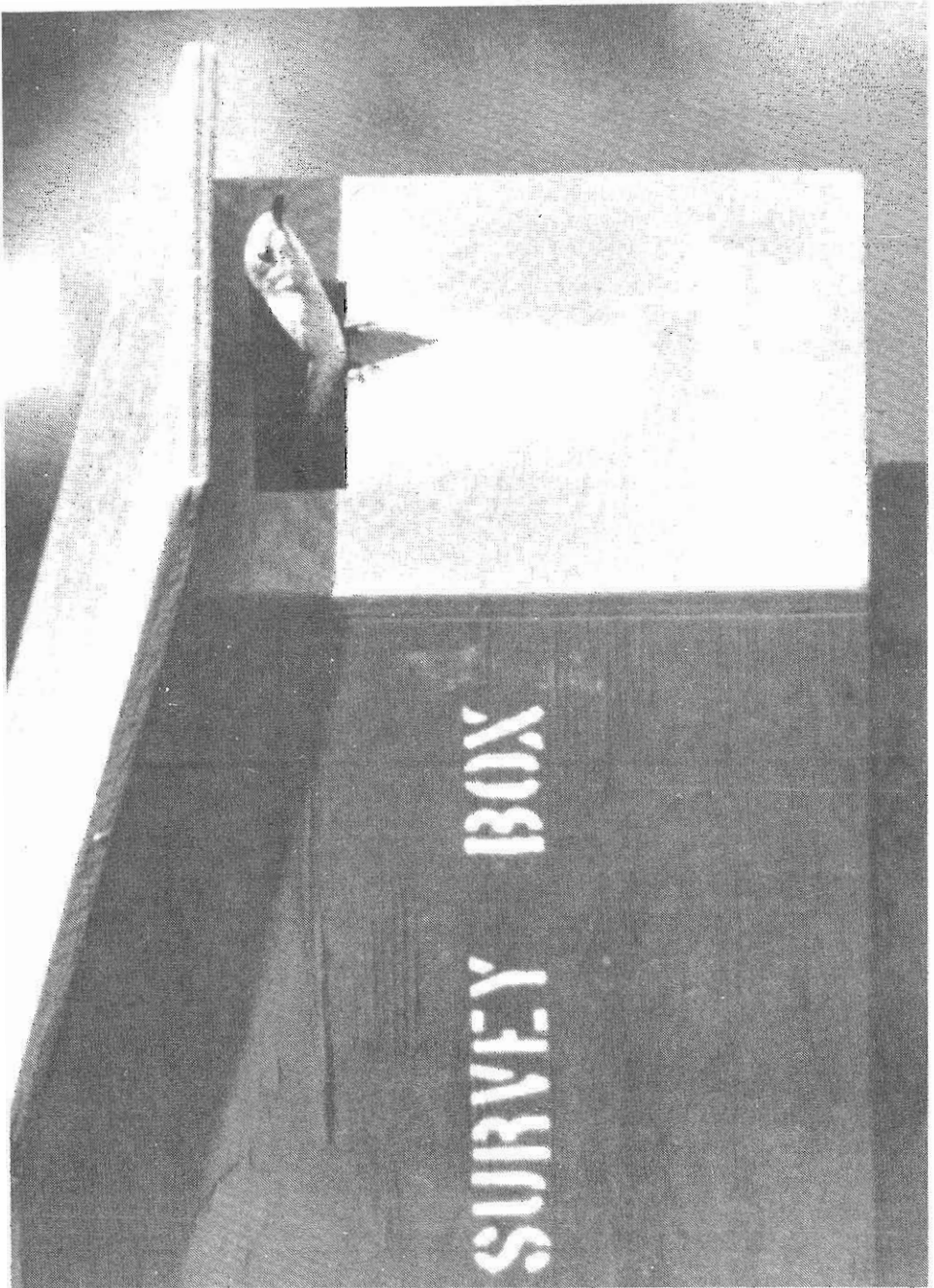
Bluebirds “Do Their Own Thing”

Margaret Rusnell

These two colored photographs [here reproduced in black and white] were taken and developed by our friend David Caple of Schomberg, Ontario, in the area of the Cold Creek Conservation Park across from his residence.

My husband, Art, and I have had a trail of 50 boxes since 1979 in the area of Kleinburg, Ont. Although we are “purists” in our approach and make sure our boxes conform to specifications, it does not always seem to be necessary. Pictured is a survey box where bluebirds were “doing their own thing”—and doing it successfully!





Box 101
Kleinburg, Ontario
Canada LOJ 1C0

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:

Through the fall months I have had a group of four bluebirds frequent my yard. On Dec. 2nd one of the males tried the hulled sunflower seeds on my tray feeder and found them acceptable. Gradually the other three bluebirds began eating them also. Now they come to the feeder several times a day. Now that I have them coming to the feeder I'll start introducing other things for them.

A friend has used this method for discouraging snakes. She winds barbed wire around the mounting pole from the ground to the bottom of the box. She secures the wire at the top and bottom with clamps. She also coats the pole with axle grease.

Betty L. Conner
9416 Firethorn Ct.
Potomac, MD 20854

Dear Editor:

I've been trying bluebird houses of various designs, foiling adversaries with entrance extensions of oak, plastic and metal.

It came as a delightful surprise when I found a nest built in the center of one of the begonia baskets that were hanging from the roof of our front entry. Four days and four eggs later we started using another entrance as much as possible so as not to disturb the incubation process. Fourteen days later all four eggs were hatched and 18 days later they fledged.

We are hoping this family will return next spring. By the way, the bluebird begonia bloomed dramatically more than the other five baskets.

Jeri Collins
P.O. Box 217
Portage, WI 53901

Dear Editor:

When House Sparrows evict bluebirds, be sure to have another house available. The bluebirds will readily move into another box, but won't go back to the one where the sparrows are. Sparrows aren't likely to evict from the second house; they generally won't bother the bluebirds unless they want the house for their nest.

Wayne Davis
University of Kentucky, Dept. of Zoology
Lexington, KY 40506-0225

Dear Editor:

Several months ago I responded to a letter from Christine Ammons who was searching for someone with whom she could exchange ideas and information concerning bluebirds. After a year and a half of correspondence, we finally met in October when I visited Christine in North Carolina.

She showed me what southern hospitality is all about. I saw her bluebird trail which is an on-going project of her 4-H club and talked to her club about our program at Codorus State Park in Pennsylvania.

Next year, I hope Christine will visit

with me here in Pennsylvania so I can return the hospitality she showed me.

Karen Lippy
432 Penn St.
Hanover, PA 17331

Dear Editor:

With reference to 11(3):92 and the problem of flying squirrels at Seymour Johnson Air Force Base, North Carolina.

At various Pennsylvania state parks where I have bluebird boxes, we solved this problem many years ago by placing a 1/8 in. aluminum plate on top of our raccoon guards (which all nesting boxes have). In 18 years we have never seen a flying squirrel even attempt to cut through the metal guard. They are easy to make and have no effect on the bluebirds flying into the nest cavity.

Hal Schaeffer
Wildlife Biologist
White Clay Creek Preserve
Landenberg, PA 19350

Dear Editor:

In response to R. Doiesh's article 11(3):96, we, the Eastern Bluebirds at Oxon Hill Children's Farm, Maryland, want it to be known that we have been nesting and residing inside the Capital Beltway for the past four years. When we raised our first family of seven fledglings in 1985, this noteworthy event was duly reported to the North American Bluebird Society and, subsequently, published in at least one newspaper, *The Prince George's Journal*. It was also recorded by a news release of the National Park Service, U.S. Department of the Interior.

Since then our family has steadily increased. Last year we fledged 13 young, and we hope to do even better in years to come. Needless to say, we are very happy to hear of other bluebirds joining us inside the Beltway and wish them much success.

Dan and Renee Burns
4605 Weldon Drive
Temple Hills, MD 20748

Can You Tell Me?

Did you know Ms. Dorothy I. Fairey? Why do I ask?

On a recent trip to Florida, a friend gave me an old looseleaf Field and Camp Notebook dated May 1924 used by this young lady when she was a student at Peabody College, Nashville, Tennessee. There I found a lovely poem quoted beneath the field notes entered for the bluebird, but I would like to know if Ms. Fairey composed it or if it came from another author.

Interesting, too, are the black and white plates initialed L.A.F. (Louis Agassiz Fuertes), which were to be colored in by students.

*"Winged lute that we call a bluebird,
You blend in a silver strain
The sound of the laughing waters,
The patter of Spring's sweet rain,
The voice of the winds, the sunshine,
The fragrance of blossoming things.
Ah, You are an April poem,
That God has dowered with wings."*

Should Ms. Fairey, or her progeny, see these comments about her sixty-five year old notebook, I would be delighted to return it. Should one of Sialia's readers know the poet's name and title perhaps they would share it with me.

Elsie K. Eltzroth
6980 NW Cardinal Dr.
Corvallis, OR 97330

Bluebird Tales

Mary D. Janetatos

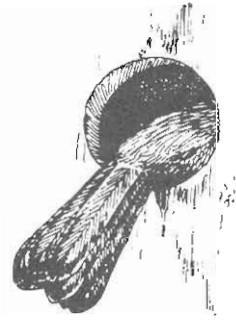
"Ulp!" I gulped as the male bluebird landed on the roof of the backyard nesting box on January 26th. I was involved in a telephone conversation which permitted no interruption, so my good news had to hold until a few minutes later. Then NABS headquarters rang with the news of the first 1990 sighting of a bluebird.

Prince George's County, MD, was ready for the "lurking bluebirds" as in March the Division of Interpretation and Conservation held Bluebird Week March 3-10. Rich **Dolesh**, the division chief, past NABS board member, and a (young) veteran bluebirder and author, enlisted his bluebird co-conspirators **Maureen Blades**, **Carol Beyna** and others to put on the following activities: a bluebird hike, family bluebird day, and bluebird trail discovery tour all on March 3rd and a search for the bluebird on March 10th. Since the Eastern Bluebird is the official avian symbol of Prince George's County, these activities received wide coverage and attention.

In other activities involving a public park system, **Svante Humbla** of Cincinnati, OH, reported on the Rheinstrom Park Bluebird Trail at Indian Hill. "When I walked the trail on December 3, 1989, I thought I would open box No. 11 (where I had earlier seen a flock of seven bluebirds). Great surprise! A brand new bluebird nest had been built. I would be interested to know if this is a common occurrence in order to get a head start, early reservations for winter shelter, or what?"

From parks to prison (not necessarily a usual sequence), **George A. Wagner**, Warden of Berks County Prison, Leesport, PA, wrote, "In early 1986 you provided me with information on bluebird nest boxes and conservation techniques. I have had great success in placing bluebird boxes here on the prison farm and with friends and relatives. . . . A few short weeks ago, I was in the woodlot behind the prison farm when I saw no fewer than 10 bluebirds within 100 feet of me!"

Bird clubs are a "natural" for stimulating interest and action in bluebird conservation. Recently, **Lola Oberman** (author of the entertaining and informative book *The Pleasures of Watching Birds*) used the NABS slide program for her talk given to the Carroll County, MD chapter of the Maryland Ornithological Society. Lola and I go back to the days before NABS when we both worked "for the birds" with the Audubon



Naturalist Society of the Central Atlantic States. I have remained a fascinated reader of her column in the *Naturalist News* and welcome her as a member of NABS Speakers' Bureau.

Again a bird club gets involved. **Patrick M. Dorcus**, Assistant Director of the Audubon Society of Rhode Island wrote that they are developing a program aimed at increasing the Eastern Bluebird in Rhode Island. They hope to obtain permission to erect nesting boxes on the rights-of-way of power companies in the state.

Donna Dunn of Mocksville, NC, editor of *Bluebird Notes*, sounds a warning about the use of chemicals in the January 1990 issue: "When we absolutely can't ignore an insect problem, we do spray some chemicals. There are times that it seems unavoidable, but it always gives me an uneasy feeling. I don't want to live with bugs or lose trees and shrubs to them, but I don't want to do harm to my birds, or even the toads, bees, butterflies that share my yard. I have read a lot lately about research into biological control of pests. It's a shame that more people (myself included) do not become more knowledgeable about avoiding chemical pesticides. Perhaps as bluebird lovers we could share some of our opinions and advice about eradicating the undesirables without damaging our surroundings."

Right on, Donna! As one who has officially declassified my front and back yards from "lawn" to "dandelion/weed meadows," I agree! Maybe my "grass" is not greener from the other side of the fence, but I do end up with the juncos and white-throats in winter and the goldfinches, flickers and BLUEBIRDS in summer.

It's always a pleasure to hear of those who can get the younger generation involved in the wonderful world of nature by way of bluebird conservation. **Mrs. Russell Morris** of Moundsville, WV, wrote asking about how to build a roosting box for bluebirds. "We've had nesting boxes for the bluebirds for several years. This year the

local 4-H clubs built boxes and every child had a family of bluebirds. The supply of birds is getting larger!"

Jessica Nudd, age 8, of Calgary, Alberta, loves bluebirds and writing letters. Any young bluebirder who would like a pen-pal can write to NABS. We will try to put you in touch with her.

Harry Krueger of Ore City, TX, long-standing friend and NABS Speakers' Bureau stalwart, reported last fall after his talk at Hudson PEP Elementary School to grade four, "The best hope for the future of bluebirds is with the young people...it is a special thrill to get to talk with a new generation of future bluebirders."

Julie Clantor of Oakland City, IN, bears this out as she writes, "I would like to know how a 16 year old like myself can help. . . . Young people are usually thought of as the people who are hurting the world by not caring. . . . I'd like to make a difference, after all, the future is the rest of my life."

Members of the Bluebird Restoration Association of Wisconsin in Dodge County, **Don Kopff** and **Jim Kronenberg** constantly promote bluebirding as reported in the *Daily Citizen* newspaper and in a letter from Billy Gaddis's sixth grade class at Washington School in Beaver Dam, WI.

Last fall **Mr. & Mrs. Lurton E. Gesell** of Connersville, IN, caught us up on their latest efforts in spreading the "bluebird word." "We have 100 bluebird/cavity nesting boxes out. The word of our work is spreading faster and farther. We left five of our boxes at an Indiana state park at Turkey Run; we will do the same for any other state parks we visit."

Nick Kovacs, of West Berlin, WI, wrote saying he wanted to become a regular member of NABS and, until recently, had no idea NABS existed. "I am a professional woodworker and, as a sideline when the joints needn't fit exactly and the finish coat doesn't need to be rubbed to a fine sheen, I build bird houses and feeders. Recently, I started building bluebird houses and contacting people in areas where there are golf courses and bike trails to hang these houses on their property. This effort has been successful."

Nelson Taylor of McClellanville, SC, reported that (Hurricane) "Hugo got our possessions and most bluebird boxes I expect." Here's hoping those wounds will all heal, and their possessions as well as the bluebirds are restored!

Mildred Spear of Russell, Manitoba, last fall wrote, "I want to thank you for the cassette 'Bluebird, Fly' in our last order. It

is just beautiful. We had it played at my husband's funeral a month ago. It was so fitting for him. I am ordering more for special friends."

Dorothy Miller of Graterford, PA, described her long wait for bluebirds after attending a workshop in the spring of 1988 by the Philadelphia Electric Co. In 1989 they had one nesting of bluebirds, plugged the hole after cleaning the box so a wren wouldn't nest, and finally had bluebirds return for a second nesting.

A real "natural" for bluebird conservation are historic sites and battlefields. Pioneering this use was **Jeanne Price**, NABS' past president who installed a trail at Gunston Hall in historic Fairfax County, VA, when her husband was curator there. **Mark Raabe**, former recording secretary for NABS, and his wife **Jean** of Alexandria, VA, installed a trail at Antietam National Battlefield in central Maryland. The latest effort along these lines was reported by **Hortense Seedlock** of Falls Church, VA. Mrs. Seedlock said in her note, "**Gen. Seedlock** and I put bluebird houses down at George Washington's Mt. Vernon where there are bluebirds all year round—and nice big fields. **Anne Horstman** is the wife of **Neil**, director for the 'Ladies of Mt. Vernon' and says she will take over checking our houses. We plan to put up four more."

Many of our members are seasoned veterans as is **Christopher Burke** of St. Peter, MN, who recently renewed his membership for FIVE YEARS! He said, "The Eastern Bluebird is my favorite songbird and I am very happy that its numbers are increasing thanks to proper bluebird trail management."

It is vitally important for NABS' membership to increase so that the Society's goals may move forward. To this end we do solicit memberships by the "direct mail" approach. Recently, **Paul Brenn** of Reeders, PA, dropped us a postcard letting us know that he was moving. "As soon as we get settled in our new location, we wish to encourage bluebirds and will be back in touch with you. Filing your ad away for the moment." At another point, word of NABS' existence reached **Paul S. Crowl** of Finksburg, MD. He had a question with regard to winter food for bluebirds. "If you people are still in business...a friend of mine gave me some old *Pennsylvania Game News* magazines. Your address was in the September '85 issue." But the most astounding letter requesting NABS material in 1989 came from **Bill North** of Chelmsford, MA, who wrote, "After reading a back issue of *Parade Magazine* for November 25, 1979, I would

appreciate the specifications for building a bluebird nesting box and any other available information on bluebirds."

As spring refreshes us once again, we hope our membership continues to grow whether by word of mouth, renewal, or by direct mail because our mission is so vital and so rewarding. **Martin Lehman** of Middleburg, IN, put it this way: "It is now five years since I put up my first nest box and became a serious bluebirder. My trail consists of 40 boxes and I have influenced people to put up another 200 of their own that I

made. I read of your annual meetings and dream of some day being there too. I am of the Amish faith. Many people of our faith enjoy nature and try to preserve it. Whereas five years ago seeing a bluebird was very rare, they are now a common bird in Elkhart County, IN."

With this type of result, you can see, dear readers, why we are anxious to welcome more and more NABS members as we say, "Welcome back, Little Bluebirds!" May God bless your efforts with MANY bluebirds! ■

NABS RESEARCH GRANT AWARDS

The North American Bluebird Society is proud to announce the presentation of the seventh annual research grant awards. The 1990 recipients are as follows:

BLUEBIRD GRANTS

Dr. Janis L. Dickinson, Hastings Natural History Reservation.

Topic: Use of DNA fingerprinting to determine paternity in Western Bluebird nests.

Kevin L. Berner, Cobleskill College of Ag & Tech-SUNY.

The Upstate New York Bluebird Society Award.

Topic: Field tests of acceptance by Eastern Bluebirds of nest boxes which deter raccoon predation.

GENERAL GRANTS

Dr. Michael J. DeJong, Dept. of Biology, College of St. Thomas.

Topic: Indirect effects of the larvicide bacillus thuringiensis on Tree Swallow breeding success.

Charlotte C. Cochran, Northwest Ecological Research Institute.

The James L. Williams Memorial Award.

Topic: Reproductive success of Western and Mountain Bluebirds in grasshopper control areas, and potential for using bluebirds to reduce grasshopper densities.

STUDENT GRANTS

Susan Meek, Biology Dept., Queen's University.

The Betty H. McIlwain Award.

Topic: Parental investment and the maintenance of monogamy in Eastern Bluebirds.

Jonathan H. Plissner, Dept. of Biological Sciences, Clemson Univ.

Topic: Does social dominance drive natal dispersal in Eastern Bluebirds?

The North American Bluebird Society annually provides research grants-in-aid for ornithological research directed toward cavity nesting species of North America with an emphasis on the genus *Sialia*. Information and application materials are available from Cathy Blohowiak, Research Committee Chairman, 106 S. Pebble Beach Ct., Slidell, LA 70460.

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Prepared for *Sialia* by Nancy E. MacClintock-Indexes

Good Morning

To the window I am drawn
At the break of every dawn.
What is that which goes tap, tapping
In the quiet of my napping?

"Sialia," my sweet thing
Greets me with a song of spring.
A happy tune, Cher-wee! Cher-wee!
For your mate or meant for me?

At my window, where you preen,
Look! A lovely bluebird queen!

Requiem

No longer will I hear you sing,
For I have found your torn blue wing.
Scattered egg shells on the lawn,
Four baby blues forever gone.

On the fence, there sits your mate.
He's saddened by your gruesome fate.
A precious bird, a bluebird queen,
A casualty I can't redeem.

Kristin Warren

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Founded in 1978, THE NORTH AMERICAN BLUEBIRD SOCIETY is an incorporated non-profit organization determined to increase the populations of the three species of bluebirds on this continent. Inasmuch as the populations of these birds have diminished due to the maladroit actions of human beings, as well as other natural disasters, the primary objective of the SOCIETY is to educate all who will listen about the importance of preserving these singular creatures in their native environment.

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

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

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