

Bluebird

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Look carefully at the entrance hole in this nest box. It is 2.75 inches across, almost twice the size you would expect. Researcher Barry Bermudez has experimented with enlarged entrance holes as a means of discouraging

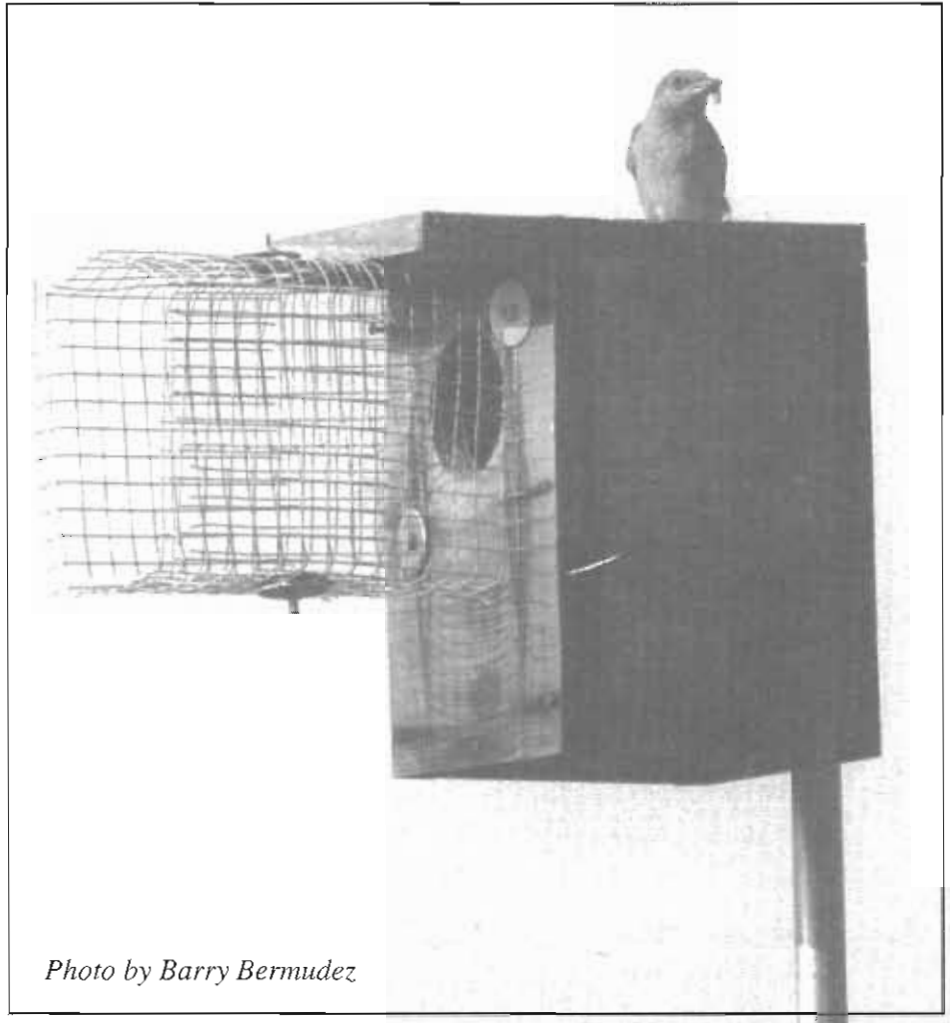


Photo by Barry Bermudez

nest-box use by House Sparrows and European Starlings. His work indicates that larger holes may do just that. His very interesting report begins on page 8.

Also: What happens when birds can choose between successful or clean nest cavities?

This story begins on page 19.



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From the President

Doug LeVasseur

The absolute certainties in our lives are few indeed. That changes will take place is one of them. Mark Twain included death and taxes on his short list.

Change can be minor and cause minor disruptions. We wake up in the morning and discover we are out of coffee. Or it can be monumental, causing a nation to reidentify itself, such as the Sept. 11 terrorist attack. Some changes are planned, as a family wedding or graduation, while others may come unexpectedly, as the sudden death of a loved one or being let go from one's job. We accept and adjust to changes in our lives because the alternative would likely cause something approaching insanity and is quite unacceptable.

Changes are coming to the North American Bluebird Society.

Recent events have caused us to relocate our international headquarters from the great state of Wisconsin to the great state of Ohio. Our new headquarters will be located at the Wilderness Center (WC), a 573-acre non-profit nature preserve and facility in Wilmot, Ohio.

This is a step up and in the right direction for the North American Bluebird Society. Both the WC and NABS are committed to making this a lasting and mutually beneficial relationship. We both have only just begun to explore the potential benefits for both institutions, but it is a classic win/win arrangement. If you want to learn more about the location of our new headquarters, check the the WC web site at www.wildernesscenter.org.

Also, NABS is conducting a nation-wide search for a new execu-

tive director to replace John Ivanco and Lisa Kivirist who stepped down from that position late last year.

John and Lisa performed admirably as co-executive directors for NABS the past four years. We wish to thank them and wish them well with the adventures that lie ahead in their lives.

If there is something I forgot to mention about change, it is that more often than not, change leads to a time of readjustment, reevaluation, and a certain amount of reorganization. Such processes may be difficult for the moment, but invariably turn out to be a healthy, positive, growing process for any organization.

And if there is one thing I haven't forgotten, it is that bluebirders are truly dedicated, committed conservationists. The achievements of the bluebird conservation movement in general and of the North American Bluebird Society in particular, as we celebrate our silver anniversary, are nothing short of monumental. We all have much to be proud of.

It is time now to look ahead with renewed commitment and dedication, to continue with our mission as "a non-profit conservation, education and research organization that promotes the recovery of bluebirds and other native cavity-nesting species."

We all know bluebirds arrive with their own rewards. May they be nesting on your trails and in your hearts at this moment.

See you all in Penticton! You don't want to miss it!

Convention just ahead

Celebration of 25 years of conservation service to bluebirds and other North American cavity-nesting bird species will highlight the 2002 convention of the North American Bluebird Society. The convention will be June 13-16 in Penticton, British Columbia.

Members of the Southern Interior Bluebird Trail Society will host the event.

Penticton is in the Okanagan Valley, long favored as a vacation destination for its beautiful natural settings. The Penticton Lakeside Resort and Conference Centre on the shore of Okanagan Lake will be the convention site.

Field trips will take participants to marsh, desert, and high-country ecosystems. The area has many historic sites, over 30 wineries offering tours and tastings, and several golf courses.

Registration information and forms were available in the Winter 2002 issue of *Bluebird*. If you need materials, call Greg and Terry Tellier at 250/493-4634, e-mail t.tellier@shaw.ca.

NABS award nominations deadline is April 15

Every year at the annual meeting of the North American Bluebird Society, it is the society's pleasure to honor bluebirders who have distinguished records in bluebird conservation and research, and/or an entire local bluebird organization.

Our next annual meeting will be held in Penticton, British Columbia, June 13-16.

The Awards Committee wants to be sure it does not overlook any members or organizations deserving of an award, but committee members simply do not know all of the talented and dedicated bluebird volunteers in North America. We need your help!

Think about your area, your friends and bluebird workers, the person or group about whom you've always said, "We cannot get along without." Please talk it over with your organization, and then provide us with the information we need to help us make a selection.

The deadline for nominations is

April 15, 2002. Please send your nominations to:

David Cook, Chairman
NABS Awards Committee
664 S. 14th St.
San Jose, CA 95112
Or, e-mail

justdave50@earthlink.net

Meeting set for new Illinois bluebird group

A meeting to form the East Central Illinois Bluebird Society will be April 6 at the American Legion Home in Paris, Illinois. Persons interested are invited to attend.

Contact Loren Hughes, 217/463-7175, e-mail suziq@comwares.net, for information.

Two more Zeleny Circle contributors

Charlotte Jernigan and the Ohio Bluebird Society recently have become members of the NABS Lawrence Zeleny Giving Circle.

The Zeleny Circle is a special opportunity for individuals to help support NABS work by making or pledging a charitable contribution of \$5,000 or more to the NABS Endowment Fund.

Bluebird

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Questions should be directed to the NABS headquarters address/telephone numbers shown below. NABS web site offers answers to many questions.

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For advertising information, call Jim Williams, 715/349-5531, e-mail twojays@sirentel.net.

Gilbertson discusses size of nest boxes for Mountain Bluebirds

To the editor,

I would like to respond to comments by Mr. Bob Niebuhr regarding my two nest-box designs.

I do suspect that the 12.56-square-inch floor area of the four-inch PVC box is inadequate for Mountain Bluebirds. Further, I am certain he and I spoke of this on the phone and at the '99 Great Falls (Montana) conference.

Given that, I have difficulty with the premise behind someone seeming to promote a nest box of this small size in Mountain Bluebird habitat.

Regarding the near-15-square-inch floor area of the Gilwood nest box, I presented to Mr. Niebuhr only the *possibility* that it is too small.

This is why I sent him two kits at no charge for research prior to the conference. To my knowledge, they never were assembled or placed on line.

I intended the Gilwood box to be highly versatile — amenable to change. If an increase in floor area seems required, then partially remove the four screws, secure the new 5.25-inch floor, position the front flush with the sides, relocated the pivot points, and you are done.

Floor area is now 18.4 square inches.

I believe a Mountain Bluebird's nest cup is not over 3.5 inches in diameter, and that the female can incubate comfortably in 5.25 inches of cavity length.

Add to this the absence of cooling cross ventilation (no side vents), and a modified Gilwood box may be one of the *best* choices for what the colder, higher altitudes demand.

Perhaps, and only if necessary, the adjustable 1-3/8-inch-diameter entrance hole could be widened to 1.5

inches. I suspect that since European Starlings are not attracted to small-diameter, low-mounted boxes they won't factor in.

Still worried? Then use a 1-9/16-inch entrance. Maintain the usual hole-to-floor distance.

If the Gilwood is the nest box most preferred by Eastern Bluebirds, and it seems to be so, might it also be the design preferred by Mountain Bluebirds as well?

Do I have the answers? Of course not. I don't know much about Mountain Bluebirds. In fact, the only ones I have seen were on Bob's own trail!

Feedback is what is required, feedback by many and unbiased people not prone to irresponsible loyalties to me or anyone else. This, to me, is absolutely the keystone of intelligent research where countless variables and relationships exist. I think instead of fighting over what color cat catches the most mice we should instead focus on how best to protect our crops.

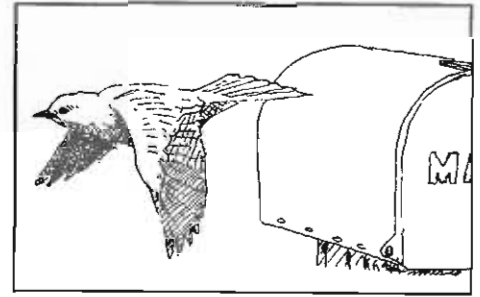
— Steve Gilbertson, Aitkin, Minnesota

Testing for heat in nest boxes

To the editor,

In the Winter 2002 *Bluebird* (page 5), Dorene Scriven wrote, "It doesn't take a degree in physics to realize the difference in heat absorption. And, while the laws of physics are oftentimes suspended in Texas, in other parts of the country radiation intensity is strongest when the sun is directly overhead (noon as in earlier reported tests), not at 6p.m."

Dorene rebuked Keith Kridler for stating (Fall 2001 *Bluebird*, page 9)



that, "The Peterson nest box heat gain was about double at 6 p.m. what it was at noon!" (Heat gain is the increase in temperature inside the box.)

I have always realized that surface color has an important effect on heat absorption by various materials. White reflects most of the sun's heat energy and black absorbs the most heat energy.

But, I did not know by what amount nest-cavity temperatures rose above the temperature of the air outside the box, the ambient temp. I never painted my birdhouses black. However, I did always use dark brown because that color seemed unobtrusive, causing the birdhouse to blend into the surrounding vegetation. During August 1998, I elected to make temperature measurements on both PVC and wooden birdhouses. The birdhouses were oriented with entry holes facing north.

Types monitored:

1. PVC, Gilbertson: One painted white and one painted dark brown.
2. PVC, Navratil Buoy: One painted white and one painted dark brown.
3. Wood, Peterson: One painted white and one painted dark brown.
4. Wood, NABS: One painted white and one painted dark brown.

The details of the tests and the hour by hour graphed data are posted at my Web site: www.concentric.net/~frnavrat.

Well, it was a surprise to me, but my test data supports what Keith

Kridler states. Yes, cavity heat gain is greatest in early morning and late afternoon! Yes, noontime displays the lowest heat gain! And, of course, dark colors do absorb more heat and exaggerate the heat gain. My testing terminated at 4 p.m., but the trend of temperature gain in the birdhouse certainly suggests that 6 p.m. could be the time of largest heat gain.

Birdhouse color is the most influential factor. The Peterson birdhouse that was painted dark brown had greatest heat gain at 4 p.m. when I stopped recording data (+9 degrees F. at the end of the day). The Peterson birdhouse that was painted white had negligible heat gain in my opinion (only +2 degrees F. all day long). I now paint most of my birdhouses white. When the color white is not desirable and heat gain is of importance, then the lightest shade of the color chosen seems the best choice.

I oriented my test birdhouses facing north simply to keep the sun out of the nest cavity. In the field, I try to face the entry north or east because driving summer rains usually come from the south or west.

— *Frank Navratil Sr., North Riverside, Illinois*

4 receive NABS grants

Four persons received research grants from the North American Bluebird Society for 2002. This is the 20th year that NABS has given such awards.

John Citta, University of Montana, Missoula, Ph.D. research title: "Population Dynamics of Mountain Bluebirds."

Scott Schlossberg, University of Illinois, Champaign, Ph.D. research title: "Effects of Livestock Grazing on Bird Populations."

Kathryn Aitken, University of British Columbia, Vancouver, Ph.D. research title: "Untangling the Nest Web: Nest-site Selection, Limitations and Reuse in a Community of Cavity-nesting Birds."

Dr. Caren Cooper, Cornell Laboratory of Ornithology, Ithaca, New York, title: "How Does Geographic Variation in Nest Box Temperature Influence Incubation Schedules?"

Mr. Citta, also a 2000 NABS grant recipient, will describe the survival, reproduction, and dispersal of Mountain Bluebirds over a very large scale in western Montana. He will specifically address the roles of different

habitat types (agricultural, rangeland, salvage-logged burned forest, and unsalvaged burned forest) in sustaining populations of bluebirds.

Ms. Aitken's research will continue work she started for her M.S. degree examining cavity-nesting bird community ecology in interior British Columbia. Her project will focus on nest-site limitation and selection and nest site philopatry (return to same site) among several cavity-nesting species including Mountain Bluebird, Tree Swallow, Northern Flicker, Red-naped Sapsucker, Hairy Woodpecker, Mountain Chickadee, Black-capped Chickadee, Red-breasted Nuthatch, and European Starling. Her research is part of a long-term, on-going study of cavity-nesting communities in the Cariboo-Chilcotin region of British Columbia that has accumulated data on over 1,400 nests of 26 cavity-nesting species since 1995. The data will supplement that which she collects as part of her own field work.

In arid areas of the West, grazing has negatively impacted soils and vegetation, with significant conse-

NABS offers bluebird ideas at trade show

By Steve Garr

NABS board members Dave Magness and I had the privilege of representing NABS at the January "Bird Watch America" trade show in Atlanta. This is the number-one show for manufacturers offering products to the birding industry.

Dave and I presented a seminar to the retailers and manufacturers entitled "Growing your business through Bluebirding." Questions asked us by members of our audience were about much more than proper housing for bluebirds. They wanted input on bluebird feeders, mealworms, and habitat. Both retailers and manufacturers are becoming aware of the benefits of public park

trails and expanding bluebird populations in suburban areas (where many of their customers reside).

Dave did an excellent job of making all the arrangements to enable NABS to be present at this very important show and preparing handouts for the seminar. Many new contacts were made for NABS.

A new corporate level of NABS membership is now available for retail stores and manufacturers. Contact Dave Magness, e-mail jennabirds@aol.com, or Steve Garr, e-mail tnbluebirdtrails@msn.com for more information.

(Mr. Garr is a member of the NABS board of directors and chair of the membership committee.)

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*On display at the NYS Eagle Sanctuary
Mongaup Falls

— research

quences for wildlife. Mr. Schlossberg's research will use a new approach to examine the influence of livestock grazing on birds in pinyon-juniper woodlands.

While previous studies of livestock grazing have simply examined the abundances of birds in grazed and ungrazed locations, his study will go into more detail by comparing food availability and demography of birds in areas of varying range conditions.

This study will take place in southern Utah, focusing on five species, four of which (Ash-throated Flycatcher, Juniper Titmouse, Mountain Bluebird, and Bewick's Wren) are cavity nesters. Results of this research will provide useful information for managers interested in preserving biodiversity on rangelands as well as important new data on the conservation status of a poorly studied group of birds.

Ms. Cooper's study is an extension to an existing citizen science program, The Birdhouse Network, administered by the Cornell Lab of Ornithology. The extension has two components: a detailed study of incubation behavior and of the thermal properties of nest boxes.

The study will utilize small temperature loggers to collect information concerning incubation schedules, nest-box temperatures, and ambient temperatures. One objective is to examine geographic variation in incubation in relation to clutch sizes.

A second objective is to examine geographic variation in nest-box temperatures relative to ambient temperatures in order to examine the relationship between box characteristics and box temperature, and to examine influence of box temperature to reproductive success.

Nest-box insert can aid monitors

Here is a device that can be placed in your nest boxes to help you better see inside nests and to help prevent nest contents from slipping out the bottom when you are performing your monitor duties, should you remove the nest from the box.

It comes to us from Allan Bower of Britton, Michigan, a creative birder who is perhaps best known for his work with Northern Flickers. Mr. Bower has designed a simple and easy-to-make nest-box insert atop which the bird builds its nest.

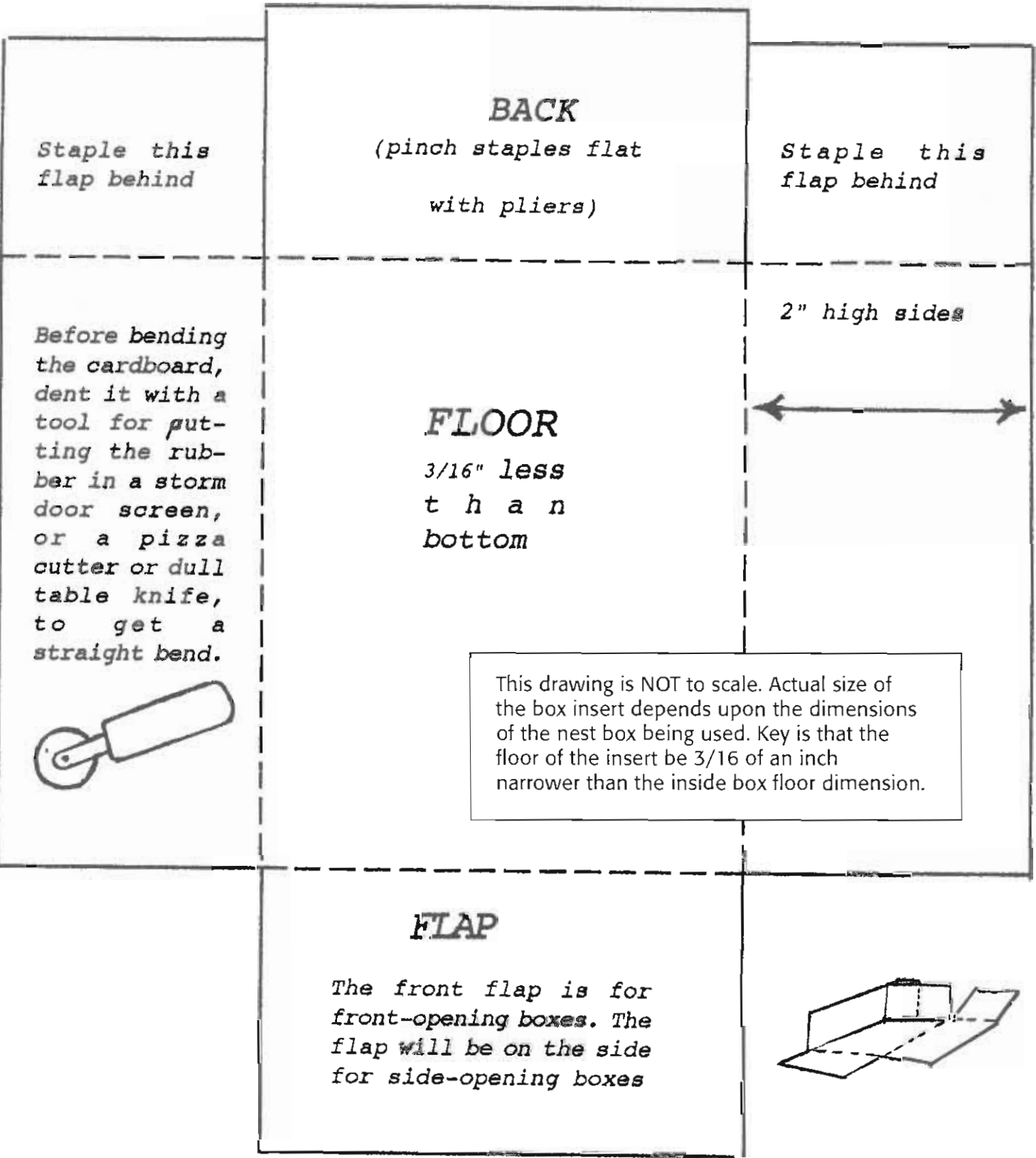
From this pattern, using lightweight cardboard, the insert folds to slip inside the box. The bird is unlikely to know or care that the insert is present. You can slide the insert — with the nest — easily out for viewing and back into the box when you are finished.

The drawing here is reduced from actual size. Key is that the floor of the insert be 3/16 of an inch narrower than the inside box floor dimension. You want the insert to move easily when you withdraw or replace it.

The insert also makes it easier to clean a nest from a box at the end of the nesting season, says Mr. Bower.

For cardboard, Mr. Bower suggests using a cereal box or the backing on a writing tablet. If the cardboard has a finished white side and a dull unfinished side, have the unfinished side visible when the insert is in place. For easy folding once you have drawn the pattern, score the cardboard lightly with a pizza cutter or a table knife.

You score on the dotted lines, cut on the solid lines.



This plan first appeared in the newsletter of the Bluebird Recovery Program of the Audubon Chapter of Minneapolis. It is used with permission of the author and the editor.

Sparrow, starling competition with Eastern Bluebirds: Is the answer *larger* holes?

Research project shows success with entrance 2.75 inches wide

By Barry Bermudez

Since their introduction into North America, House Sparrows have aggressively competed with native North American cavity nesters for suitable nest sites. With the continuing decline in available nest sites, House Sparrow competition became an important factor in the general decline of Eastern Bluebird populations in the mid-1960s through the 1970s.

Though Eastern Bluebird populations in many areas have appeared to increase in the last decade, according to Breeding Bird Survey data, House Sparrows remain a major problem for nest-box managers. House Sparrows are also a major problem in Purple Martin management; House Sparrow nest-site competition has been a factor in local population declines of Purple Martins. While trapping is a viable option and strategy in maintenance of Purple Martin housing located in a small area, trapping is much more difficult to manage for bluebird nest-box trails.

Therefore, it would be extremely advantageous for the managers of trails to have housing that would be unacceptable to House Sparrows yet attractive to bluebirds and other native cavity nesters.

Based upon research done in the management for Wood Ducks by McGilvrey and Uhler (1971) and Heusmann et al. (1977) it was deter-

mined that European Starlings selectively avoided use of nesting structures with large entrance holes.

On the other hand, martins, Great Crested Flycatchers and Tree Swallows readily nested in these structures. Pinkowski (1976) noted a wide range of entrance hole sizes were used by Eastern Bluebirds nesting in natural cavities (1.48 to 5.23 inches in diameter). House Sparrows, however, based upon work done by Munro and Rounds (1985), seemed to prefer nest boxes with entrance holes within a much more narrow range (1.2 to 1.52

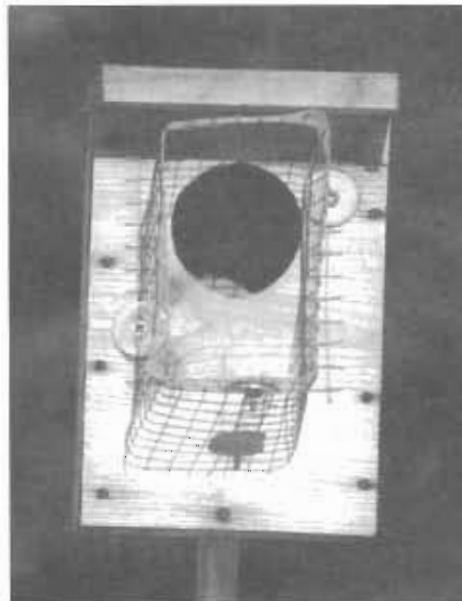
inches in diameter).

Based upon this work, I hypothesized that a nest box with an overly large entrance hole would be readily accepted by bluebirds and other native species, but would be avoided by House Sparrows and starlings. Therefore, I developed a standard-style nest box with a 5x5-inch floor with an inside depth of 8.5 inches, but with an oversized entrance hole of 2.75 inches in diameter. The bottom of the entrance hole is about 4.75 inches above the floor.

For 10 years, this nest box design was tested at six different locations in Western New York to confirm House Sparrow avoidance and native species acceptance.

For these preliminary tests, boxes were located in areas that did not generally support local populations of bluebirds. The experimental nest boxes were used (nests constructed and eggs laid) for 93 nestings. Of this use, 99 percent was by native species. Use was primarily by House Wrens (49 times) and Tree Swallows (40 times). Despite placement generally in areas with low bluebird populations, bluebirds nested successfully three times. In only one case did House Sparrows nest in the experimental box.

Based upon these results, the experimental nest-box design was then tested within an active Eastern Bluebird trail along Nations Road in



The width of the front panel of this bluebird nest box is a fraction over six inches. The entry hole is 2.75 inches in diameter. (Photo, Barry Bermudez.)

Livingston County, south of Rochester, New York. Nations Road is well known in birding circles for having local populations of a number of less-common bird species that favor open, grassland areas. The area includes pasture, scattered, mature oak trees, and patches of mature woodlands. The area surrounding the road is held in trust by the Genesee Valley Conservancy. The purpose of the test was to determine bluebird utilization and nesting success within the experimental boxes.

Fifteen experimental boxes were set up for the 1999 field season on the Nations Road Trail. Boxes were attached to 3/4-inch conduit pipes. Nest box height was generally five to six feet above the ground. Entrance holes generally faced east or occasionally southeast. These boxes replaced standard nest boxes in areas of known prior House Sparrow interference (personal communication by Paul Conklin who originally established the trail), but also were mixed in with other standard boxes in the trail. The number of boxes was increased to 23 in 2000 and 25 for the 2001 field season. To minimize raccoon predation, Noel Guards were placed around the enlarged entrance holes. New boxes were generally set up in late winter (February - March).

Bluebirds began to use the new boxes early in the 1999 field season with nest building underway in three of the boxes in April. Upon their arrival, Tree Swallows also began to use the boxes in late April and early May. House Sparrows were seen throughout the area, but their nesting attempts in the experimental boxes were confined to just two of the boxes, both of which were positioned on the edge of an embankment. In total, there were 12 nestings by bluebirds, six nestings by Tree Swallows and three nestings by House Sparrows in the 1999 season.

The two boxes along embank-

	House Wren	Tree Swallow	Eastern Bluebird	House Sparrow
Total Boxes Used				
93	49	40	3	1
	53%	43%	3%	1%

Table 1. Experimental Nest Box Utilization 1987-1998

	Total Nest Boxes Used	Eastern Bluebird	Tree Swallow	House Sparrow
1999	21	12	6	3
2000	23	15	8	0
2001	27	22	5	0
Total	71	49	19	3
		69%	27%	4%

Table 2. Nations Road Nest Box Use by Species: 1999-2001.

	Total Bluebird Nestings	Successful Bluebird Nestings	Total Eggs	Total Nestlings	Total Fledged
1999	12	12	48	45	45
2000	15	12	54	40	40
2001	22	16	89	63	58
Total	49	40	191	148	141
		82%			

Table 3. Eastern Bluebird Nesting Summary

ment edges that were used by House Sparrows were re-positioned on level ground in the same general area for the 2000 and 2001 seasons. There were no further House Sparrow nesting attempts either year. Bluebird nesting increased to 15 in 2000 and then jumped to 22 in 2001 (Table 2). There were eight tree swallow nestings in 2000 and five in 2001.

For the three-year test period, experimental boxes were used a total of 71 times. Native species utilization was 96 percent (Eastern Bluebirds, 69 percent, and Tree Swallows, 27 percent). House Sparrows had three nesting attempts representing four percent of the boxes used. As in the preliminary test, European Starlings did not utilize any of the boxes.

Over the three-year period, 82

percent of the bluebird nestings resulted in successfully fledging at least one bird. A total of 191 eggs were laid, resulting in 148 nestlings of which 141 fledged. The average number of eggs/nesting for bluebirds in the experimental boxes was 3.89 eggs, and 74 percent of the eggs resulted in a fledged bird (Table 3).

The average clutch size for completed clutches was 4.08, and clutch size ranged from two to six eggs (Table 4). The average number of young fledged per successful nest was 3.525.

As in the case of the preliminary tests, alien species use of the experimental boxes was minimal (less than five percent) and only House Sparrows attempted to use the experimental box. The change in the make-up of

native species utilization was due to habitat and species distribution. Boxes in the Nations Road area were positioned in open pasture areas away from shrubbery, thus eliminating House Wren competition.

As pointed out earlier, the three House Sparrow nesting attempts were confined to two boxes positioned along embankments, and thus the boxes appeared to be or were higher above the immediate foreground than the other boxes. When re-positioned the following year to flat areas within 20 yards of the original location, neither box was subsequently used by House Sparrows.

Preliminary work and some testing

	Total Completed Clutches	Total Eggs	Average Clutch Size
1999	12	48	4
2000	13	51	3.92
2001	20	85	4.25
Total	45	184	4.08

Table 4. Completed Clutch Size for Eastern Bluebirds

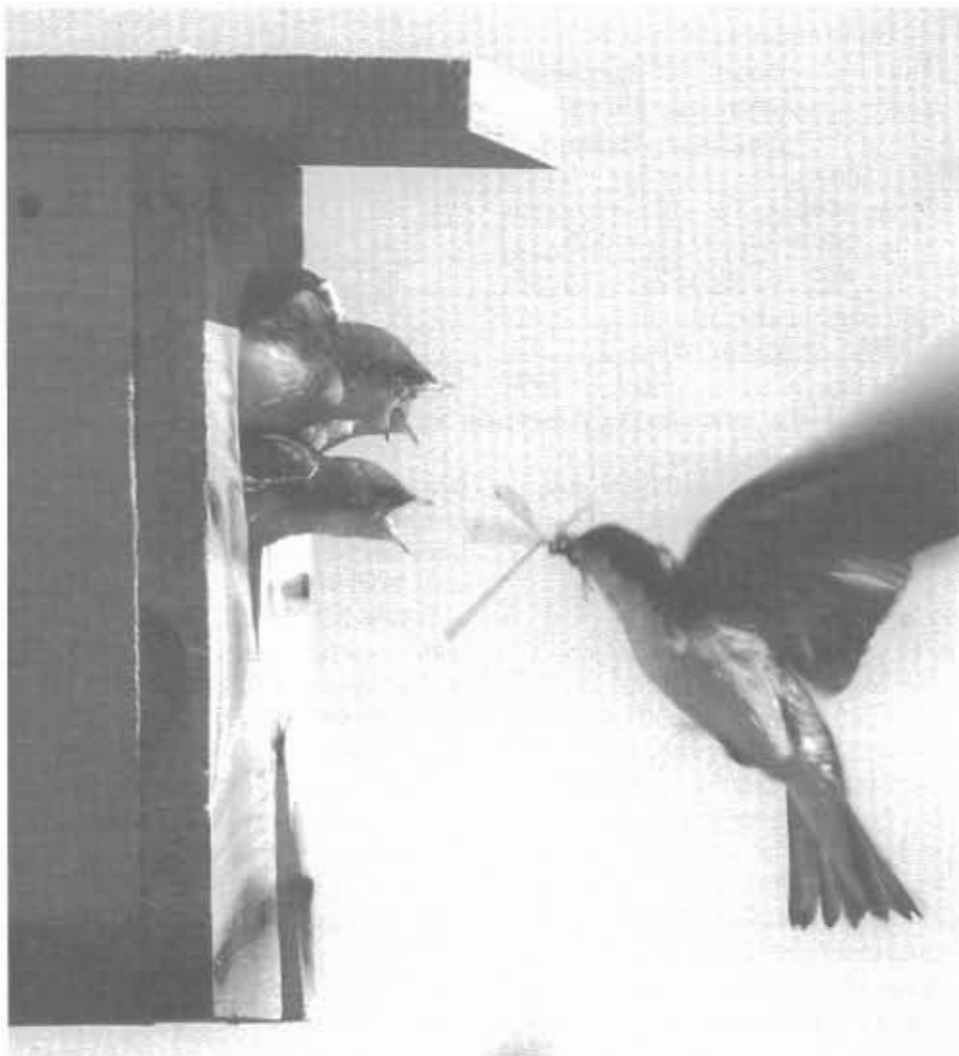
of the experimental design with Purple Martins suggested that the experimental box will become acceptable to House Sparrows at greater heights above the ground. Thus another key part of managing nest boxes for House Sparrow avoid-

ance may be placement of the box at lower heights. House Sparrows were observed nesting in standard boxes along the trail each year.

NABS research director Kevin Berner has noted that bluebirds readily accept and perhaps selectively choose cavities with large entrance holes. The experience on Nations Road also suggests that bluebirds will readily accept nest boxes with large holes. In one instance, a pair of bluebirds perched on a utility wire and watched as a box was set up. Immediately upon my moving away from the box, the pair flew to the box and repeatedly entered the box. The pair subsequently built a nest and successfully fledged young in that particular box.

More important than utilization, however, is nesting success within these boxes. The success rate for nests in the experimental boxes (82 percent with annual variation from 73 percent to 100 percent) compares favorably with Pinkowski's (1979) Michigan study (57.1 percent with annual variation from 31.6 percent to 76 percent). About 73 percent of the eggs laid resulted in fledged birds which compares favorably with Thomas's (1946) work in Arkansas which noted that 63 percent of the eggs resulted in fledged birds.

The average clutch size of 4.1 appears to be slightly below the averages noted in other studies for the species. Pinkowski (1979) noted a mean clutch size of 4.48 for completed clutches and White and



Not one young Tree Swallow but three have their heads outside the Bermudez nest box as they eagerly await delivery of a dragonfly by the parent bird. (Photo by Barry Bermudwz.)



The Noel predator guard in place on this Bermudez box is important given the large size of the entry hole. (Photo by Barry Bermudez.)

Woolfendin (1973) noted a 4.42 mean clutch size in their Florida study. Results from Cornell's Birdhouse Network suggest a mean clutch size of 4.32 for Eastern Bluebirds. Pinkowski (1979) noted that the average number of eggs per nest was 4.04 versus the 3.89 in this study. Pinkowski (1979) reported a mean of 3.75 young birds fledged from a successful nest in his Michigan study versus a mean of 3.525 young birds fledged from a successful nest in this study.

The increased loss of eggs and young in 2000 and 2001 was generally related to occasional Raccoon predation. Raccoons were seen on several occasions during monitoring in the 2001 season. In an attempt to eliminate this problem, Noel guards were extended an additional two inches on all active bluebird nests. There was no further Raccoon predation after this adjustment.

Based upon this study, it appears that bluebirds will utilize standard-sized nest boxes with large entrance holes and successfully fledge young at levels comparable to that experienced in boxes with standard 1.5-inch-diameter entrance holes.

On the other hand, House Sparrows and European Starlings have demonstrated minimal interest in

nesting in boxes with enlarged entrance holes if the boxes are positioned at heights no greater than 5.5 feet above the ground.

Therefore, use of these experimental nest boxes may be a practical Eastern Bluebird management strategy in areas of suitable bluebird habitat that contain local populations of House Sparrows.

Further study is needed to confirm these results in other locations.

Acknowledgments

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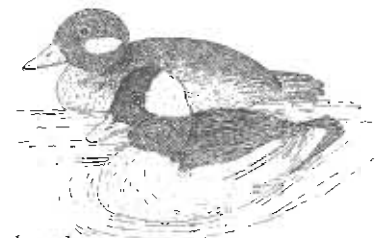
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Tips on working with youngsters

NABS members offer thoughtful advice on taking your bluebird message into the classroom or club meeting

By Steve Eno

After attending many North American Bluebird Society conferences over the years and hearing different points of view regarding working with youth, in particular giving them bluebird boxes or kits, I have learned that opinions on this practice differ. As we all know, most of the time boxes given to kids are never put up — or when they are, the boxes seldom are monitored, the end result obvious.

So, I set out recently to gather information from individuals and bluebird organizations on their past experiences in working with young people in elementary schools, 4-H clubs, scout groups, etc. I asked for information on what has worked and what has not worked, and for comment or recommendation.

Here is a compilation of the responses I received.

Dave Ahlgren, member of Minnesota Bluebird Recovery Program: We work as part of school curriculums, and also with programs involving parents and students one-on-one.

At the Isanti Elementary School, about 30 miles north of Minneapolis, we provide 200 boxes a year. Each student is required to research, build, and then monitor a bluebird nest box. In the research phase the students are provided with a study outline for preparation of a paper on bluebirds. When the papers are complete, Dick Hjort visits the school to make a presentation to each of the classes. Then, parents and students assemble the kits, take them home, and start

monitoring. This is all timed so boxes are put up in late March.

Does it work? We have had outstanding results as measured by the increase of bluebirds in the school district and the awareness of environmental issues. Some boxes probably don't continue to get monitored, but the pluses far out number the negatives. The bluebird trail on the school grounds is a constant reminder to everyone of the success. The number of bluebirds in the area has increased dramatically.

We also do programs in elementary schools as activity programs. The school sponsors a program where parents and students work together to assemble the bluebird house. This is a popular program, and an annual event. Greenleaf Elementary School in Apple Valley, a suburb south of Minneapolis, has been offering this program for 14 years. Each year 160 to 190 kits are assembled. A short program on bluebird basics is presented before the assembly starts.

The number of bluebirds has increased in the area. Bottom line: there are pluses and minuses, but I think the pluses are greater. Most likely there are going to be a few sparrow houses set out, but the total exposure to bluebirds and their plight offsets the minuses. The seed has been planted for the future.

Dave Magness, NABS director from Pennsylvania: My experience with youth and other organizations has been very good, but I am from a different school of thought. When I do programs, it is for educational purposes. The only thing I will sell or

give away is literature and books for reading. I firmly believe that the true newly found bluebirder will continue on his or her own, not just temporarily while on the bluebird high we have just generated.

I did a project this past spring with a fourth grade class (85 kids and four teachers). We did slide programs, habitat evaluations, and installed 10 nesting boxes on the school property. The teachers promised to monitor the nesting boxes and adhere to all that I preached.

If such projects aren't properly monitored, they are more harm than good. It is very rewarding to have these kids come up to me, when we cross paths in the county, and tell me about their experiences in their own backyards. That is the rewarding part.

Scouts are notorious for getting their badge and moving on, leaving behind sparrow trails. This is why I refuse to sell or give away anything but books and literature to these kids. They are too young to do most of it themselves, and a lot of times the parents aren't willing to do what it takes. Seed planting is the name of the game with kids. Sparking the curiosity is what is most important. The only problem with this is that it will take 20 or 30 years to find out whether our efforts will make a difference.

Bob Niebuhr, member of Mountain Bluebird Trails of Montana: I have never actually worked with a youth group in putting up nest boxes, but I have had a Boy Scout who was working on his Eagle Project come to me for advice in the beginning. He

put them up and never followed up after the first year. Now, another scout is doing the same thing by resurrecting the trail; this time, the troop and its leader seem to be more involved, and say they will follow through. In my opinion, though, it is not a good idea unless the *leader* is deeply involved in bluebirding.

Dean Sheldon, member of Ohio Bluebird Society: For me, the matter of distributing bluebird boxes or kits and/or the practice of conducting box-building work shops has not been debatable for the last 18 years. Many of these same people make box-building the focus of their workshop, but go all out with accompanying one-day classroom instruction and handouts to make sure that the boxes are appropriately placed in the field.

Nonsense. Brownies and cubs and scouts *all* need long-term instruction and *mentoring* before they are ready to place boxes in any setting, and so do adults who may want to have bluebirds around their place.

My guess is that the Boy Scouts of America Bird Study merit badge handbook offers, as a requirement, the option of building and placing nest boxes. And, thousands of Eagle badges have been awarded on the basis of overseeing the construction, planning and placement of bluebird nest boxes, all of it without any monitoring requirement or post-installation maintenance on the trail.

In fact, one good place to help stem this would be to secure a copy of that merit badge book and other cub/scout literature so as to work with the authors to revise those sections dealing with nest-box building and workshops and Eagle projects, as well. I've had 20 years of scouting experience at all levels and was a scoutmaster for years. The project is clean in the sense that it has a specific beginning and end, it can involve all unit members, it is easy to manage

“Brownies and Cubs and Scouts *all* need long-term instruction and *mentoring* before they are ready to place boxes in any setting, and so do adults who may want to have bluebirds around their place.”

and to supervise, parents love it, and it is an easy way to meet advancement requirements.

But it does nothing for the bluebirds except increase the threat of competition from alien species. Audubon clubs and nature centers are notorious for this kind of goodie twoshoes activity. It looks good in the newspapers but wreaks havoc on the bluebird trails.

Frankly, I like Darlene Sillick's idea in Columbus, Ohio. She provides the kits from Charlie Zepp's OBS storehouse of boxes. The young people build them and sign their name/unit/school in Magic Marker on the bottom of the box and *then* turn the box over Darlene to distribute to experienced bluebirders or agencies skilled in bluebirding for placement on a trail under the supervision of experienced trail managers. Now that makes sense!

You're giving young people the experience of nest-box building, educating them about wildlife conservation, increasing their interest in songbirds and threatened species. A smart thing to do is to give these box-builders a chance to see their boxes after placement on a trail in the field. The same thing could be done with older people.

Here is a good opportunity for

NABS to work with these groups for the purpose of correcting a bad situation. NABS needs to be the resource agency in persuading these groups to alter the way in which they handle box-building workshops. This will be a *big* job for the board, working through the NABS education committee. Nothing will be accomplished unless we ask to work with these groups in the hope of bringing about change through education.

Erv Davis, president of Mountain Bluebird Trails of Montana: I've had rather good success working with the local shop classes that cut out parts for nest boxes and donated them to MBT. Ronan shop classes have cut and assembled around 2,000 nest boxes. I've worked with several youth groups, but the kids rarely, if ever, continue with bluebirding as they move on into other school activities.

The Cub Scout units I've worked with do well during the season, but as the next year rolls around, the kids are off doing other things. Their leaders don't often remain long — only as long as their own boy belongs, so it doesn't become a regular activity. My experiences indicate that the youth activities are only workable for the current bluebirding season and don't seem to be a long-term thing.

Mel Bolt, member of Ohio Bluebird Society: I am very slow to do box programs with young kids because their interest is very short lived, and the boxes become sparrow factories. I decline using boxes as an incentive for older kids or adults to join OBS or NABS unless it is a program where serious birders are gathered.

There is an exception to every rule. One of my trainee students in bluebirding is an elementary school teacher at a nearby school. She has permission from the school to teach the fifth grade kids about bluebirds as

a part of the science class. The kids get on-site training on bluebird management. In the summer when the kids are out of school, she and a friend near the school monitor the boxes. She often phones me when trouble arises.

I did an 45-minute talk with show-and-tell for them this year. These kids were knowledgeable, listened intently, and asked a lot of very relevant questions. Fifty-five of them wrote me letters expressing thanks and asking more questions. Many of them related their experience about boxes in their own backyard. I feel good about this school program because of the way the kids are involved. Even those students who do not presently have boxes in their yard will have experience with the proper procedures should they get involved in the future.

Jaclyn Hill, President of Bluebirds of Iowa Restoration: I have mixed feelings about giving boxes to kids. Last year at the YMCA camp in Boone, we assembled 160 boxes. I asked for a list of the names and addresses, but never received them. This year I am demanding a list. I want to follow up on these guys. If I do not receive names, I am not going to give out boxes. It is a waste of time. Why raise sparrows?

I have worked with two separate projects for Eagle Scouts, both very successful. They had their trails going for three years each, and then a retired person took over when they went to college. But when I work with fifth and sixth graders, if they do not have a very interested adult, I feel it is a waste for the bluebird.

Elsie Eltzroth, member of Prescott Bluebird Recovery Project of Oregon: It has been all well and good that Boy Scouts, 4-H, Campfire, service clubs, and even garden clubs build nest boxes for cavity nesters, but *should* have included monitoring

and reporting for nest boxes they built and placed.

The same has been true of some schools. I've given complete slide programs with books, posters, nests, eggs, all the trimmings, showing what needed to be done. I've taken nestlings to show the children (I have proper state and federal permits) and we have talked about the need for care and maintenance of boxes.

Some of the children have taken boxes home. I have no idea what birds used them. Some of the boxes have been put in school yards and House Sparrows took over. Those are down now.

The big problem is getting somebody to be in charge who is willing to monitor and report. Teachers seem to be too busy to volunteer. In schools and in scouts, the turnover in scoutmasters and membership foils any continuity, and the Eagle Scout and his project ends when he moves on to greater things. This is the last year I will help with the scouts.

From now on, we will only accept properly constructed boxes for use by Audubon Society of Corvallis. It will

"I feel good about this school program because of the way the kids are involved. Even those students who do not presently have boxes in their yard will have experience with the proper procedures should they get involved in the future."

place and monitor boxes donated to our trail.

Steve Eno, member of Bluebirds Across Nebraska: I've had limited personal experience working with kids, but here is a good example of what can happen when youth groups put up unmonitored trails. Over a period of several years, approximately 200 boxes were put up by various youth groups at Chalco Hills, a wildlife area just west of Omaha. Those boxes were never monitored. They were cleaned out at the end of each season but there was never any evidence of bluebirds having fledged.

Five years ago all of the boxes were taken down and a trail of 12 boxes was relocated in good habitat. The boxes were monitored frequently and many sparrows were trapped. The first year there were 10 bluebirds fledged from the trail. In 2001, there were 43 bluebirds fledged from 11 pairs of boxes.

Sharon Nielsen, member of Bluebirds Across Nebraska: One of my yearly teaching goals is to guide my students toward a better appreciation of the natural world around them. In the spring of 2001, my students studied the Eastern Bluebird. We began with a discussion of appearance, habitat, range, etc. The second step was the construction of the houses. Enlisting the help of dads and moms, we scheduled a day when the houses could be assembled.

Each student was given a small spiral notebook to enter information about the happenings of their box. Daily reporting was a part of our daily school routine. Parents took as active a part as possible. Some monitored a short trail made in the cemetery. One mom made a special trip to the cemetery every day even though she lived a good distance from town. When I complimented her on her dedication, she replied that her daughter was so excited that she was

infected with the bluebird fever, too. We had joyful reports of nests. We had mournful reports of “nothing” and “something happened to my eggs,” or “my nest was taken over by some other bird.”

I firmly believe my students were very faithful and loyal birders. I believe that their houses were monitored as carefully as any of those of a veteran bluebirder.

Dan Brown, Nest Box Coordinator, Prescott Bluebird Recovery Project, Oregon: We have two nest-box building workshops per year. We don't do other building with scout troops, etc., although our education director does give slide show presentations to such groups. Yes, we are very concerned about sparrows and unmonitored boxes. We view our two workshops as highly educational, and they are also significant fund raisers for us as we ask for a \$10 donation per box.

We do several things to address the sparrow issue: All boxes leave with an enclosed sparrow flyer. We discuss sparrows with folks as they build boxes. In the case of children, we discuss this with their parents, also. We ask the folks where they live. If they live in the city or in a development, we suggest they build a chickadee house instead. We have chickadee kits ready to build. Many people are receptive to this.

We know that some of our kits become sparrow houses. We do believe that the educational and public-relations component outweighs this, especially if we keep our workshops controlled and to a minimum.

Thanks also to Arlene Ripley, Maryland; Kevin Bloom, Pennsylvania; Ann Auer, Indiana; Ron Eaton, Nebraska; and Joan Harnet, Illinois. All of them shared similar experiences and voiced support for looking into this issue.

Bringing bluebirds to the public: How to create an effective booth

By Alicia Craig

Those of us who love bluebirds seem to love sharing our knowledge with others. Many times we gather our materials together and give talks to garden clubs, church groups, scouts, or school groups. Given the opportunity, we will arrange for booths at fairs, garden festivals, and other public venues. Putting together a booth is a great way to share bluebirds with folks who might not otherwise learn about bluebirds.

What to put in a bluebird booth

Attracting the attention of the public so people notice your booth is important. Your booth does not need to be an expensive venture. You can create a backyard scene typical of a bluebird habitat or simply use the drapes provided by the organization supplying the booth space. If you have time, constructing a picket fence as a back drop with live flowers and other backyard habitat items can make the booth look inviting.

Usually, a big pretty picture of a bluebird does the trick. Any eye-catching visuals will help welcome people to your booth. Sometimes, playing a videotape of bluebirds or a nature tape with bird songs can help attract the attention of people passing by. Have your organization's brochure or contact information on top of the television set for folks too shy to ask for more information.

Take plenty of brochures or handouts about your local organization and membership brochures for the North American Bluebird Society. Have plenty of the basic fact sheets about bluebirds for people to take home with them. (These can be found on the North American Bluebird web site at www.nabluebirdsociety.org/

facts.htm.) Be sure to print your contact information on all handouts.

Take samples of the basic designs of nest boxes. Have one mounted on a pole at the right height so people can see exactly how the bluebird nest box is supposed to be placed. A concrete base can help provide a sturdy-but-easy-to-transport support for the house and pole. Have an example of a raccoon baffle and snake guard. Have a sample of the tools needed for mounting and opening nesting boxes.

If you have the proper permits you may want to take samples of the different nests that other cavity nesting birds will make in a bluebird nest box. Without the proper permits, you can only have possession of sparrow nests.

Take a poster showing the range of all three bluebird species so people can see exactly where they can be found. The range map can be taken from a variety of bluebird books or the NABS web site. Color the range map, and laminate it.

A sample of books about bluebirds will give people an idea of the various references available as they begin or perfect their bluebird trails. Be sure to put a large label on the front of the books stating that they are sample copies owned by your organization (you don't want people walking off with the books).

Creating habitats and trails for bluebirds is fun and exciting. You have the opportunity to share the wonder and excitement of bluebirds with the public. Go out and create some excitement at your local fair, school, garden or birding festival!

(Ms. Craig, a NABS board member, is senior manager for nature education at Wild Birds Unlimited, Inc., 11711 N. College Ave. #146, Carmel, IN 46032.)

Speakers see positive results from their presentations

By Ron Kingston

In January 2001, 396 questionnaires (Survey of the 2000 Programs) were sent to each member of the NABS Speakers' Bureau. Every year the speakers are asked for a summary of the past year's programs, a few questions about what worked and what didn't, and how NABS could help them. In this review of the past presentations, we hope the information will inspire all bluebirders to communicate to the public about bluebirds and other cavity nesters, and to increase an awareness of bluebird conservation all across North America.

One of the questions asked was: "Have you seen any positive results from your presentations?"

The following are some of the replies (all of our speakers are doing an outstanding job, but not all comments can be printed in this review):

Robert Wilson, Colorado: Two new trails started by people who saw the programs. One Eagle scout candidate worked with me and established an extension of an existing trail.

Jerry Newman, Maryland: With my presentations and newspaper articles, this whole part of Cecil County is bluebird conscious.

Helen Munro, North Carolina: By using puppets and nest boxes in

my programs, I've helped establish a bluebird trail at Robbins Elementary School.

Chuck Martin, Maine: I've had great interest among seventh grade students and their parents to help monitor bluebird trails.

Donna Legare, Florida: From my presentations I estimated that at least one-quarter of all groups actually follow through and place at least one nest box. By discussing plants attractive to bluebirds, many are planted to help feed the bluebirds and other birds.

Mary Janetatos, Virginia: Three nest boxes were placed in suitable habitat and the students were able to observe many aspects of nature: habitat, food sources, i.e. insects and plant material, and the actual bluebirds.

Ray Harris, Alberta, Canada: I know I'm getting positive results by the questions and comments from the audience and offers to help on the nest box trail. It's fun to show my tool box and the contents to the group and how all the tools are used on the trail.

Richard Thoma, Ohio: In my presentations I have the school children ask their teachers to call me about any questions of which I've had many. Some have joined the Ohio Bluebird Society. I've seen much more news coverage on bluebirds.

Jaclyn Hill, Iowa: I'm using my Stokes video and slides to show native plantings from my yard for songbirds. Children in the area are setting boxes in their yard, and adults are hanging more feeders. I think the most important is water and the birdbath heaters for all birds.

Elaine Crossley, New York: From her nine programs in 2000, Elaine says, "I receive calls from people who have placed nest boxes and are thrilled with their results. I also get calls for help and assistance with more trails."

Jim and Ann Auer, Indiana: People learn about the need to help our cavity nesters and some get pretty excited about it. We use posters, boxes, mealworms, and sparrow traps — if it is an adult audience.

Richard and Marlys Hjort, Minnesota: We have had many children come back to us and report to their teachers that "it worked ... just what the bluebird people said." We also see 4-H projects at county fairs with our suggestions on display. We have come up with a new program: "Weather, It's Effect on Our Bluebirds and Swallows". Children like to tell us of their projects and ask questions after the program. We ask them questions as the show goes along. We are always impressed with their knowledge.

Keith and Shawn Kridler, Texas: We've seen positive results from our presentation in a huge increase in correctly placed nest boxes in areas where programs have been given. Over 50 percent of the people attending our programs have bluebirds. Over 90 percent have recently seen a bluebird. Every person attending a

Deadline for Summer 2002 issue is April 30

The deadline for the Summer 2002 issue of *Bluebird* is April 30. Earlier submissions always are appreciated. The editor prefers to receive material by e-mail (no attachments, please) at twojays@sirentel.net. Typed copy should be mailed to Jim Williams, 5239 Cranberry Lane, Webster, WI 54893. Include a self-addressed stamped envelope if you wish return of manuscripts or photographs.

program receives a bluebird nest box. The programs increase the attention people pay to the instructions for attracting and keeping bluebirds.

Kevin McCurdy, Oklahoma:

Through the years, I have seen people begin to build their own trails, and children take an interest in the boxes and nature. People who have seen my picture in the paper come up to me and ask questions concerning bluebirds.

Kathleen Krum, Indiana: The students are very protective of the nesting boxes at schools. They have volunteered during the summer to help monitor boxes. They are always willing to help. Some students have even put up a bluebird nesting box on their property. Students are becoming aware of the importance of taking care of the environment.

Hobart Ellifritt, West Virginia:

Because of the presentations, a lot of adults and children have become interested in bluebirding after I explain to them the need to preserve this beautiful bird.

Bob Niebuhr, Montana: In using the Roberta Lee poster, with nest box plans and brochures from NABS and Mountain Bluebird Trails, I see a more informed public and some new people starting trails.

Donald Johnson, California: My presentations have increased bluebird populations in the Central Santa Monica Mountains. Four Girl Scout Troops along with the Sierra Club have put up 195 nest boxes.

Howard Rasmussen, Wisconsin: In my presentations, I use the Stokes video. I get a lot of questions and conversations about bluebirds along with request for nest boxes. Giving away nest boxes at our golf invitational tournament increases the interest about bluebirds and seems to increase the attendance.

Barbara Chambers, Virginia: Positive results are better understand-

ing of cavity nesters, of nest-box trails, of the damage House Sparrows and European Starlings do, plus new members, new monitors, and new trails.

Jean Rutan, Ohio: More bluebirds nest boxes are going up in our area. A student (granddaughter) is doing her science fair project on bluebirds for the second year, and more people are taking note of the nest boxes and asking about them.

Fred Sahl, Virginia: From all the presentations and nest boxes given away, we have bluebirds galore over all Dinwiddie County. Twelve years ago you would have a problem locating one bluebird.

Joseph Sedlacek, New York: Because of the presentations, people really do listen to conservation efforts more than ever before. By the way, the slide program is great, and I can't wait to see and present the updated 80-slide version.

Roger Siemens, Montana: Because of presentations, I started as the only monitor 15 years ago and now we have over 75 monitors, with 2,000 to 3,000 nest boxes on trails, all with active monitors throughout southwest Montana. It grows every year.

Dick Williams, Illinois: People getting excited. They want to go with me to see a bluebird. Others are starting to build nest boxes and putting them up.

Lloyd Wilson, Illinois: After giving nine presentations last year, people are more aware of the bluebird and very surprised to learn of the habits of the House Sparrow and House Wren.

Paul Wilson, New York: I have talked to people who come back every year excited about "their" bluebirds. We try to tell them how to be up close and personal with their bluebirds. It's fun to excite the hearts of first-time bluebirders. I cannot

think of another way to make friends. A hobby for all ages.

Robert Walshaw, Oklahoma:

The 18 presentations last year have caused increased interest in my area. I have more requests for nest boxes and presentations. By giving out applications for NABS and Oklahoma Bluebird Society, the membership has increased.

Carl Zenger, New York: There are many more nest boxes in the area, and membership in NABS and the New York Bluebird Society has grown. People have called me about bluebird issues after the presentations.

David Heidenreich, New York:

More nest boxes going up in correct bluebird habitat, bluebird numbers going up, more people are seeing them in mid-winter. People are more aware of Route 11 Trail, and lots more people are seeing bluebirds now than they did five to 10 years ago.

The brochures, the Stokes' video, and the new, shortened, 80-slide program are proving to be valuable tools in presenting programs.

Thanks for your help

The following individuals returned their 2000 questionnaires, helping us determine what works and what doesn't. Thanks to all the speakers for taking time to fill out and return the form and also for all they do for bluebird conservation. It is important work, and we all appreciate it.

ALBERTA

Ray Harris

Myrna Pearman

ONTARIO

Elizabeth Kellogg

Jean Lister

CALIFORNIA

Donald Johnson

Jim Olsen

Dick Purvis

Don Yoder

COLORADO

Robert Wilson

CONNECTICUT

Fred Comstock

FLORIDA

Andy & Lorna Beasley

Donna Legare

GEORGIA

Nancy Kay Duncan

Edward Gray

Amy Waite

ILLINOIS

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Kay MacNeil

Lloyd Wilson

Dick Williams

INDIANA

Jim and Ann Auer

Patricia Hunter

Ken Jankowski

Kathleen Krum

IOWA

Jaclyn Hill

Pat Schlarbaum
Lorena Zanker
MAINE
Chuck Martin
Lisa Paige
MARYLAND
Michael Gillis
David Magness
Jerry Newmau
MASSACHUSETTS
Gwen Newton-Denton
Lillian Files
Gail Hansche
Haley Priest
MICHIGAN
Kurt Hagemester
Carolyn Tropp
MINNESOTA
Richard & Marlys Hjort
Dorene Scriven
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Bluebirds prefer successful cavities – if they are clean

By Mark T. Stanback
and Anne A. Ford

In recent decades, a contentious discussion has taken place in the literature as a result of two opposing assumptions about nest-site reuse — that birds either prefer or avoid used cavities.

Birds may prefer to reuse successful cavities either because construction of a new nest may constitute a significant time and energy cost, because successful cavities are more valuable than untested sites, or simply because suitable nest cavities are rare. Indeed, a variety of avian species have been shown to exhibit a preference for soiled nests or at least lack of aversion to them.

Conversely, birds may avoid used nests due to the ectoparasites they contain. Both observational and experimental research has demonstrated that nest ectoparasites can reduce reproductive success. Not surprisingly, some birds have been shown sensitive to costs associated with parasites. Some species have been shown to discriminate between high and low infestation levels in used nests and choose accordingly.

These results suggest that secondary cavity nesters raising more than one brood per season should take steps to minimize parasitism costs associated with being multibrooded. To assess relative importance of nest success versus presence of soiled nests in the nest-site reuse decisions of Eastern Bluebirds, we performed a controlled experiment addressing those two conflicting variables simultaneously.

We manipulated nest box choices in Eastern Bluebirds to assess first

whether the presence of a previously used (and presumably parasite-ridden) nest cavity increases or decreases the likelihood of within-season nest-box reuse. Second, we wanted to determine whether birds prefer previously successful cavities.

One hundred pairs of identical bluebird nest boxes were erected in suitable habitat near Davidson, Mecklenburg County, North Carolina. The box pairs consisted of two Schwegler woodcrete boxes. Woodcrete is a mixture of sawdust and cement. All box pairs were pole-mounted four feet apart, 60 inches above ground level, and both boxes within each pair faced the same direction.

Between breeding seasons every box was cleaned. Consequently, at the beginning of each breeding season, bluebird pairs at a particular location were choosing between two identical clean boxes for their first nesting. We considered a nest box chosen when at least one egg was laid in it and a nesting successful if it fledged at least one chick. We omitted renests following failures from our analyses because bluebirds and other species are more likely to change breeding sites if the previous attempt fails.

After the first nesting, we ran-

*The Zeleny
Giving Circle
helps us help
the bluebirds.*

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domly assigned box pairs containing a successful box to one of two treatments. For half of those box pairs, we removed all old nest material (and presumably most of the active parasites) from the used box within one week of the first brood's fledging. Those experimental boxes are hereafter referred to as cleaned. The clean unused boxes in those experimental pairs are hereafter referred to as unused. For control box pairs, the boxes were visited, but the old nests were not removed. These boxes are hereafter referred to as soiled and the alternative boxes, unused. Subsequent nesting choices in both experimental and control pairs were then recorded.

When adults were forced to choose between a soiled but successful nest box and an unused nest site of equal quality, 71 percent of bluebirds chose to move to the unused box (of 45 bluebird pairs, 32 pairs switched to the unused box; 13 reused the soiled nest).

Thus, given a choice between a soiled and an unused box, bluebirds chose the unused but parasite-free cavity significantly more often.

In the experimental treatment, we investigated whether bluebirds were avoiding the soiled nest or the used box. When presented with a choice between an unused box or a cleaned used box, 75 percent of the pairs re-nested in the latter (32 bluebird pairs; 24 pairs chose the cleaned used box; 8 pairs chose the unused box).

Thus, presented with a cleaned successful box and an identical unused one, bluebirds opted to reuse the former significantly more often. Together, these results suggest three things:

- Bluebirds recognize a cost of within-season nest reuse and are willing to switch nest sites to minimize parasitism.
- Bluebirds prefer successful

“Given a choice between a soiled and an unused box, bluebirds were very willing to switch to an ‘untested’ but parasite-free cavity located in the immediate vicinity. Presented with a cleaned successful box and an identical unused one, bluebirds opted to reuse the former.”

cavities, but only if they are clean.

- In our population, in which cost of nest switching was minimized, the aversion to parasites was stronger than the preference for successful cavities.

Under natural conditions, re-nesting bluebirds have limited options. Alternate cavities may be scarce, distant, defended, suboptimal, of unknown quality, or themselves soiled. If ectoparasitism costs are typically less than the costs of within-season nest-site changes, one might expect nest-site-limited species to reuse successful nest sites, regardless of their cleanliness. Such a rule of thumb is not apparent in our population.

If costs of parasitism typically outweigh costs of nest-site switching, one might expect bluebirds to avoid recently used cavities, regardless of their cleanliness. Again, we find no evidence of such a rule of thumb. Instead, bluebirds made situation-dependent assessments. Given a

choice between a soiled and an unused box, bluebirds were very willing to switch to an “untested”, but parasite-free cavity located in the immediate vicinity. Presented with a cleaned successful box and an identical unused one, bluebirds opted to reuse the former.

Faced with a novel situation, specifically a clean successful cavity, bluebirds responded apparently optimally. However, the generality of our results may be limited to within-season nest-site reuse in secondary cavity nesters. Despite recent interest in effects of parasites, little effort has been made in the literature to distinguish within- versus between-season nest-site reuse. In fact, with the exception of Gowaty and Plissner (1997), most published studies of nest-site reuse focus on between-season patterns. With respect to ectoparasites, those two types of nest reuse are very different.

First, within a season, there is a much greater probability that both members of the pair are present and cognizant of the parasite loads within a particular successful nest cavity. Second, the parasitic species that take advantage of sequential nests within a season often differ from those that overwinter in nest cavities. That may explain why our results differ from those of Davis et al (1994) in which Eastern Bluebirds breeding in Kentucky showed a significant preference for boxes containing successful nests from the prior year.

Perhaps the number and variety of ectoparasites that overwinter in bluebird nests is low enough that the success-signaling function of nests from the previous year outweighs the parasitism costs of their reuse.

By providing all bluebird pairs with an alternative nest site in the immediate vicinity (four feet away), our study controlled for the potentially confounding variables of nest-

site quality and availability. Our results indicate that bluebirds operate under two conflicting rules of thumb ("reuse successful cavities" and "avoid soiled cavities"). These in turn are the basis of the two conflicting hypotheses found in the literature concerning nest-site reuse. In our study, aversion to parasites outweighed preference for successful cavities.

However, it would be inappropriate to conclude that avoidance of parasites will always outweigh the preference for successful cavities. We purposefully minimized costs of nest-site switching by providing two boxes side by side. Gowaty and Plissner's (1997) data clearly demonstrate that by altering the cost of nest-site switching (breeding dispersal), one can alter the nest-site choice eventually made by the birds. Indeed, if the quality of alternate cavities is low enough, one would expect birds to preferentially reuse soiled cavities. Nest-site preferences are thus best considered to be relative rather than absolute.

Among the literature used in preparation of this paper were:

DAVIS, W. H., P. J. KALISZ, AND R. J. WELLS. 1994. Eastern Bluebirds prefer boxes containing old nests. *Journal of Field Ornithology* 65:250-253.

GOWATY, P. A., AND I. H. PLISSNER. 1997. Breeding dispersal of Eastern Bluebirds depends on nesting success but not on removal of old nests: An experimental study. *Journal of Field Ornithology* 68:323-330.

(This article was published in The Auk 118(3): 743-745, 2001. It is used and was slightly revised for use here with permission of the authors. Mark Stanback can be reached by e-mail at mastanback@davidson.edu, and by postal service at Dept. of Biology, P.O. Box 7040, Davidson College, Davidson, NC 28035.

Birding code of ethics

The American Birding Association has developed a code of ethics for its 20,000 members and other persons who enjoy finding and observing birds. It offers many of the same guidelines used by bluebirders as they work with their favorite species.

• • •

American Birding Association Principles of Birding Ethics from the 1999 ABA Member Handbook:

Everyone who enjoys birds and birding must always respect wildlife, its environment, and the rights of others. In any conflict of interest between birds and birders, the welfare of the birds and their environment comes first.

Code of Birding Ethics

1. Promote the welfare of birds and their environment.

1a. Support the protection of important bird habitat.

1b. To avoid stressing birds or exposing them to danger, exercise restraint and caution during observation, photography, sound recording, or filming. Limit the use of recordings and other methods in attracting birds, and never use such methods in heavily birded areas or for attracting any species that is Threatened, Endangered, or of Special Concern, or is rare in your area. Keep well back from news and nesting colonies, roosts, display areas, and important feeding sites. In such sensitive areas, if there is a need for extended observation, photography, filming, or recording, try to use a blind or hide, and take advantage of natural cover. Use artificial light sparingly for filming or photography, especially for close-ups.

1c. Before advertising the presence of a rare bird, evaluate the potential for disturbance of the bird, its surroundings, and other people in the area, and proceed only if access can be controlled, disturbance can be minimized, and permission has been obtained from private-land owners. The sites of rare nesting birds should be divulged only to the proper conservation authorities.

1d. Stay on roads, trails, and paths where they exist; otherwise, keep habitat disturbance to a minimum.

2. Respect the law and the rights of others.

2a. Do not enter private property without the owner's explicit permission.

2b. Follow all laws, rules, and regulations governing use of roads and public areas, both at home and abroad.

2c. Practice common courtesy in contacts with other people. Your exemplary behavior will generate goodwill with birders and nonbirders alike.

3. Ensure that feeders, nest structures, and other artificial bird environments are safe.

3a. Keep dispensers, water, and food clean and free of decay or disease. It is important to feed birds continually during harsh weather.

3b. Maintain and clean nest structures regularly.

3c. If you are attracting birds to an area, ensure the birds are not exposed to predation from cats and other domestic animals, or dangers posed by artificial hazards.

4. Group birding, whether organized or impromptu, requires special care. Each individual in the group, in addition to the obligations spelled out in items number one and two, has responsibilities as a Group Member.

4a. Respect the interest, rights, and skills of fellow birders, as well as those of people participating in other legitimate outdoor activities. Freely share your knowledge and experience, except where code 1c applies. Be especially helpful to beginning birders.

4b. If you witness unethical birding behavior, assess the situation and intervene if you think it prudent. When interceding, inform the person(s) of the inappropriate action and attempt, within reason, to have it stopped. If the behavior continues, document it and notify appropriate individuals or organizations.

4c. Be an exemplary ethical role model for the group. Teach through word and example.

4d. Keep groups to a size that limits impact on the environment and do not interfere with others using the same area.

4e. Ensure everyone in the group knows of and practices this code.

4f. Learn and inform the group of any special circumstances applicable to the areas being visited (e.g., no tape recorders allowed).

4g. Acknowledge that professional tour companies bear a special responsibility to place the welfare of birds and the benefits of public knowledge ahead of the company's commercial interests. Ideally, leaders should keep track of tour sightings, document unusual occurrences, and submit records to appropriate organizations.

Additional copies of the Code of Birding Ethics can be obtained from the ABA (800-850-2473, P.O. Box 6599, Colorado Springs, CO 80934). The ABA Code of Ethics may be reprinted, reproduced, and distributed without restriction. Please acknowledge the role of ABA in developing and promoting this code.

Bluebird News from Shore to Shore

Don Stiles of Calgary Area

Bluebird Trails sends us an annual summary of activities there, always interesting. Banding is one of his report subjects, and long-distance recoveries are of particular interest to banders there. One female Mountain Bluebird was found to have moved 161 miles (260 km) from season 1999 to season 2000. The bird had a failed nest at the first location, then successfully raised four young the next year.

They also had recoveries indicating movement by bluebirds from one season to the next of from 13 to 50 miles (24 to 82 km).

The oldest bluebird recovered in 2001 was at least five years old, banded as an adult in 1997 by George Loades. It was recaptured at the same box in 1998, 2000, and 2001.

One Tree Swallow eight years old and two seven years old also were captured. Another Tree Swallow, banded in 1996 was recaptured in 2001 at a box .3 mile (.5 km) from the '96 nest box. The bird also was recaptured in one of those places or the other in 1997, 1998, and 2000; it was not recaptured in 1999.

Seven bluebirds and one Tree Swallow banded by this group were recovered by members of the public; all of the birds were found dead. Five were found dead along roads; one was known to have been hit by a car; two birds were killed by cats. The Tree Swallow was killed by House Sparrows while in a nesting box.

Recoveries of banded birds suggests that Tree Swallows live longer than Mountain Bluebirds, according to Don. While seven-, eight-, and nine-year-old swallows have been recovered, no bluebird older than six years has been found.

An article in the *El Dorado Hills, California*, newspaper about bluebirds and nest boxes brought the **California Bluebird Recovery Program** nine new members, according to an article in *Bluebirds Fly*, the program's newsletter. **Hatch Graham**, newsletter editor, was helping new members install nesting boxes.

Bluebird hatchlings tethered to their nest by ribbons of plastic raffia also was reported in *Bluebirds Fly*. The raffia is commonly used as filling for Easter baskets. Bands of plastic become entwined with the birds' feet or feathers. The birds are unable to free themselves when fledging time arrives. The article says this also can happen when birds use discarded monofilament fishing line as nesting material. The tethered birds were observed by **Dick Purvis** of **Orange** and **Bob Franz** of **Ventura**. Mr. Franz also found a nest box with a 10-inch piece of cord, one end wound into the nest, the other dangling outside the entry hole. Attached to the outside end was a piece of red rubber balloon.

Bluebirds Across Nebraska has had strong membership success in eastern Nebraska and western Iowa, but has not been able to duplicate that in the western part of the home state. So, BAN members **Steve and Cheryl Eno** and **John and Pat Holm** loaded their vehicles with boxes, poles, and information and headed west, for Scottsbluff. At a craft show one day and a nature center the next, they handed out educational materials and signed up new members. BAN considers members in its western territory critical to the success of its TransNebraska Bluebird Trail, according to the BAN newsletter.

Traveling through Iowa? If you are on Highway 92 near **Carson**, about a half hour east of Council Bluffs, watch for the five-foot-high bluebird alongside the road. It belongs to **Floyd and Marty VanErt**, and welcomes you to come in and talk about bluebirds, according to **Leland Osten**, who wrote about this for the *Bluebirds Across Nebraska* newsletter.

Lois Johnson of **Provost, Alberta**, received the 2001 Blue Feather Award awarded by the **Mountain Bluebird Trails Conservation Society** and the **Ellis Bird Farm, Ltd.** The award is given to a bluebirder who has made an outstanding contribution to bluebird conservation in Alberta. Ms. Johnson began bluebirding in 1970. She maintains a trail of 325 boxes, and over the years has banded more than 10,000 bluebirds.

Travis McCauley, 15-year-old NABS member from **Silver Spring, Maryland**, wrote to tell us about a December visit to his yard by 21 Eastern Bluebirds. He believes the birds have fledged in years past from the nest boxes in the area.

Bluebirders who knew **Al Perry** will be sad to learn of his death last May. He was a member of NABS and **Mountain Bluebird Trails** for over 20 years, for many years maintaining a trail of 350 nest boxes in the Owyhee Mountains in southern Idaho. He also did much public speaking on behalf of bluebirds. He is survived by his wife and bluebird companion, **Deni Perry**, of Spokane, Washington.

North American Bluebird Society Affiliate Organizations

The North American Bluebird Society serves as a clearinghouse for ideas, research, management, and education on behalf of bluebirds and other native cavity-nesting species. NABS invites all state, provincial, and regional bluebird organizations to become NABS affiliates in "a confederation of equals all working together toward a common goal... a partnership in international bluebird conservation." No cost is associated with affiliating with NABS.

Alberta

- Calgary Area Bluebird Trail Monitors
c/o Don Stiles, 20 Lake Wapta Rise SE
Calgary, Alberta T2J 2M9, Canada
- Ellis Burd Farm, Ltd.
Box 5090, LaCombe, Alberta T4L 1W7, Canada
- Mountain Bluebird Trails Conservation Society
P.O. Box 401, Stn. Main, Lethbridge, Alberta
T1J 3Z1, Canada

British Columbia

- Southern Interior Bluebird Trail Society
P.O. Box 494, Oliver, BC V0H 1T0 Canada
t.tellier@shaw.ca
<http://members.shaw.ca/t.tellier/bluebirds/>

Manitoba

- The Friends of the Bluebirds
3011 Park Ave.
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smitha@brandonu.ca

Ontario

- Ontario Eastern Bluebird Society
2-165 Green Valley Drive
Kitchener, Ontario, N2P 1K3 Canada

Arkansas

- Bella Vista Bluebird Society
c/o Jim Janssen
27 Britten Circle, Bella Vista, AR 72714

California

- California Bluebird Recovery Program
2021 Piarmigan Drive, #1
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Colorado

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- Rocky Mountain Blues, c/o David Richmond
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- Illinois Audubon Society
Illinois Bluebird Project
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- Indiana Bluebird Society
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P.O. Box 660, Nashville, IN 47448
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- American Bird Conservation Association,
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- Johnson County Songbird Project, c/o Jim Walters
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- Bluebird Recovery Program of Minnesota
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- New York State Bluebird Society (NYSBS)
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- Schoharie County Bluebird Society
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- Rutherford County Bluebird Club
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- Ohio Bluebird Society, c/o Doug LeVasseur
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- Oklahoma Bluebird Society, c/o Marion Liles
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- Prescott Bluebird Recovery Project, c/o Voice of
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- Audubon Society of Corvallis, c/o Elsie Eltzroth
6980 NW Cardinal Rd., Corvallis, OR 97330

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- Purple Martin Conservation Assoc
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- The Virginia Bluebird Society
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Washington

- Cascade Bluebird and Purple Martin Society
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3015 Squahcum Parkway, Suite 250
Bellingham, WA 98225

Wisconsin

- Bluebird Restoration Association of Wisconsin
Rt 1, Box 137 Akron Ave., Plainfield, WI 54966
- Lafayette County Bluebird Society
14953 Highway 23, Darlington, WI 53530

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Inside this issue ...

President's message	Page 2
Convention coming	Page 3
Award nominations	Page 3
Letters to editor	Page 4
NABS grants	Page 5
Box insert can help	Page 6
Larger nest-box hole	Page 8
Working with kids	Page 13
Speakers report	Page 17
Successful cavities	Page 19
Code of Ethics	Page 21
Shore to Shore	Page 22



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