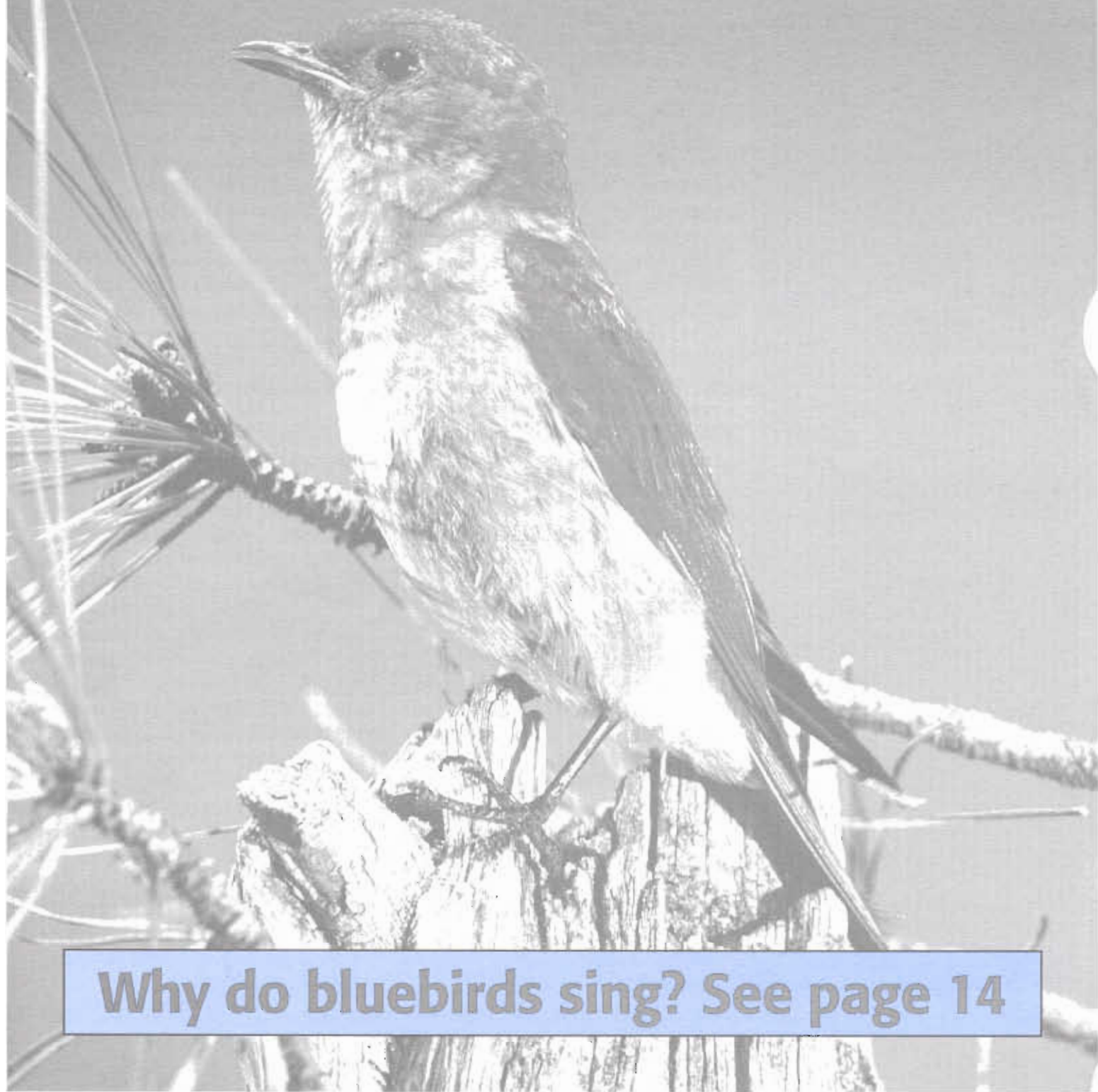


Bluebird

Journal of the North American Bluebird Society

Summer 2003, Vol. 25, No. 3



Why do bluebirds sing? See page 14



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The Hole Thing

Dean Sheldon Jr.

No question about it, those who left the recent NABS convention in Kearney, Nebraska, had a much better idea of the future direction in which NABS will be moving than they did when they arrived on the Platte River to witness the Sandhill Crane migration in late March.

Just so we're all on the same page, you will find here an abbreviated version of some of the thoughts which were proffered at the annual meeting.

• Since 1996, 45 groups from across North America have come in under the NABS "umbrella" as its partners in bluebird conservation. The affiliates have quickly become the backbone of the NABS organizational body. That being the case, NABS intends to keep encouraging the formation of additional groups as affiliates within the NABS community.

• Having accomplished so much in the area of affiliation, we now need to "fine tune" the existing relationship between NABS and its affiliates. Even now, two parallel task forces [one from the board/one from the affiliates] are at work examining the matter of relationships in some detail. All of this activity is under the direction of Steve Garr, NABS new vp for affiliate relationships.

• It is from the outstanding leadership of the affiliate groups, that we expect to secure promising candidates for future NABS boards and for stewardship at all levels. Right now, we would welcome NABS/affiliate members to join with us on all NABS committees.

• It is hoped that we can provide a greater attendance of NABS board members and officers at the annual meetings held by state, provincial, regional and affiliate groups.

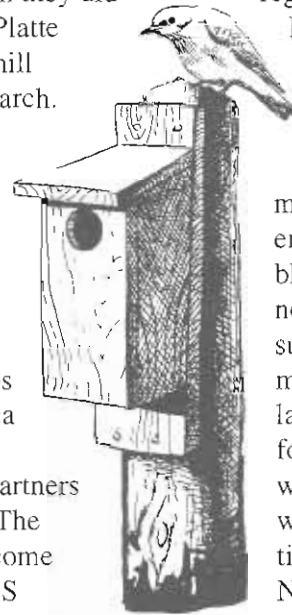
Please contact the office and let us know how we can be of help in accomplishing this goal.

• Canada: We need to do more — much more — to encourage the development of bluebird organizations "up north" and "out west." A suggestion has already been made that we amend the by-laws to create a vice president for Canadian affairs. That would help assure that Canada would always have representation at the highest level in the NABS organization.

• Mexico: Preliminary steps have already been taken (through the auspices of the Texas Bluebird Society and others) to explore opportunities for a NABS relationship with bluebirders "south of the border." How this will be developed and through what groups it will take place is still uncertain. However, be assured that we are working in that direction.

• We ought to continue to pursue ways to improve/expand a NABS relationship with national and international birding conservation groups in this hemisphere. With our extraordinarily successful conservation history, we must be a supportive presence as these groups work to preserve habitat and improve conditions for all neotropical migrant species.

• Communications can always stand to be improved. We intend to work at this with all NABS members,
Continued on page 3



From the Executive Director

Lisa Bulick

The 26th Annual NABS convention, hosted by Bluebirds Across Nebraska (BAN), was held in Kearney, Nebraska, March 20-23, during the peak of the Sandhill Crane migration. Thanks go to the convention chairs, Bill and Sandy Seibert, and all the members of BAN who worked to put together a wonderful convention. They made sure we had warm, sunny days during our visit to Nebraska.

I cannot describe the beauty of the plains between Grand Island and Kearney and the farm fields dotted with clusters of Snow Geese and Sandhill Cranes.

The field trips planned by BAN included several opportunities to wait in crane blinds at sunrise and sunset for the spectacle of cranes rising up out of the water at dawn and dropping down on the river for the night. The Friday morning birding tour included a visit to Prairie Chicken "booming" grounds; Rowe Sanctuary, operated

by the National Audubon Society; and Rainwater Basin to view ducks, geese, and shorebirds. The Prairie Culture Tour consisted of a number of attractions relating to the history and culture of Nebraska, including the Great Platte River Road Monument arching over Interstate 80, the historic Minden Opera House, and the Museum of Nebraska Art, which holds one of America's outstanding collections of the wildlife art of John James Audubon.

Thursday's workshops included Nature Photography, Bluebird-L, Hosting a Convention, and Newsletters. Friday night's entertainment was provided by Al Batt and John Acorn, who is known as "The Nature Nut." Saturday morning, musicians and speakers entertained and educated us. We heard from Paul Tebbel, Al Batt, Kevin Berner, Myrna Pearman, Ron Cisar, Bill Thompson, and Julie Zickefoose. The keynote speaker for Saturday evening's banquet was John Acorn, who amused us with songs, slides, and stories from the field.

The New York State Bluebird Society was represented by President David Smith and many others. Plan to travel to Ithaca, New York, in July 2004 for the 27th Annual NABS Convention.

I have attended two NABS conventions, now, and I find them exciting, rejuvenating, and fulfilling. The convention is an opportunity to make new bluebirding friends and visit with old ones. I am always proud to work for NABS, but never more than when I feel the energy of hundreds of bluebirders coming together at the convention. Plan your vacation around a visit to upstate New York in 2004.

— Hole Thing

Continued from page 2

the affiliates and with an abundance of outstanding birding publications. Nothing is more important to the continued vitality of the organization.

Just a special note: Please take just a moment to highlight on your calendar the 27th annual NABS convention to be held July 7 through 11, 2004, in Ithaca, New York. The program includes activities at the brand new facilities of the Cornell Lab of Ornithology. The convention is being hosted by one of NABS' oldest affiliates, the New York State Bluebird Society (www.nysbs.com/), Stay tuned for further developments.

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*The NABS web site offers
answers to many questions.*

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NABS award winners honored

Awards honoring groups and individuals for contributions to bluebird conservation were presented at the NABS convention in Nebraska in March.

The Group Award was given to the JoDaviess County, Illinois, Bluebird Recovery Program Natural Area Guardians. The Guardians have the largest and most successful nest box program in Illinois. They are extremely active in recruiting and training trail monitors, utilizing hands-on workshops and newsletters. The Guardians are also active in community outreach, sponsoring programs for schools and conservation groups on bluebird conservation. The Guardians hosted the NABS 2000 convention in Galena, Illinois. They have generously used their resources to fund the second printing of NABS Official Pocket Field Guide for Kids, and a Membership Assessment of NABS by a consulting group. The award was accepted by Grace Storch, co-chair of the Natural Area Guardians, and chair of its Bluebird Recovery Program.

Individual awards went to Allen

Bower of Britton, Michigan, Cheryl and Steve Eno of Raymond, Nebraska, and Bill Davis of Ft. Walton, Florida.

Allen Bower is best known as an innovator in nest-box construction. Allen's mind is constantly working on tweaking box design to protect nesting birds from predation and to promote successful fledging. He generously shares his inventions with others. Allen is known as the Flickerman for his work in enticing flickers to use nest boxes, and his success has been noted by the media rather extensively. Allen is a past board member of the Ohio Bluebird Society and a columnist for the American Bird Conservation Association.

Steve and Cheryl Eno, along with 22 others, organized Bluebirds Across Nebraska in 1993 to increase the bluebird population in their state. The results of their efforts have been quite astounding. In 1993, trails were established with 1,975 boxes fledging 1,606 bluebirds. 2002 finds 1,550 BAN members monitoring 8,578 boxes and fledging 26,135 bluebirds. Much of the success is due to the quiet and modest determination of the Enos who have provided leadership and coordination to promote the rapid growth of their state organization. They share in writing a statewide newsletter, and established a volunteer network that coordinates monitoring on a county level and provides educational outreach statewide. Steve and Cheryl's real gift, however, is their ability to pass on to others their love of bluebirds and the real satisfaction that comes from being a part of the birds' world.

The John and Norah Lane Award for Bluebird Conservation went to Bill Davis of Ft. Walton, Florida. He has devoted over 25 years of his life to bluebird conservation. He is a founding member of the Ohio Blue-

bird Society, and developed the county coordinator concept of nest-box trail management that is used by virtually every state and provincial bluebird organization. He has promoted bluebird conservation at malls, schools, nature centers, and festivals all over Ohio. Bill served on the NABS board of directors and also served as its treasurer. He has set up nest box trails and monitored them wherever he has lived. On moving to Florida from Ohio, he has kept up that tradition, working with bluebirders in Florida on the possibility of setting up a statewide organization.

This award is sponsored by the John and Norah Lane Family. John and Norah Lane pioneered bluebird conservation in Canada. With the help of volunteers, this group of trails in Manitoba became the largest contiguous bluebird trail in North America. John and Norah Lane are charter members of NABS.

NABS has 2 new officers, 4 new board members

NABS has two new officers and four new board members. They were named in elections held at the organization's convention in Nebraska in March.

Elected president was Dean Sheldon Jr. of Ohio. Serving with him as vice-president will be Steve Garr of Tennessee. Named to the board of directors were Julie Kutruff of Virginia, Phillip Berry of Florida, Fawzi Emad of Maryland, and Tena Taylor of Mississippi. Their board terms will expire in 2006.

Robert Ewart of Saskatchewan earlier was named to the board to fill an unexpired term.



Bill Davis of Ft. Walton, Florida, as he received his NABS award.



Cheryl and Steve Eno, NABS award winners, flank David Cook, NABS award committee chair, who made the presentations at the March convention in Nebraska. The Enos are active in Bluebirds Across Nebraska. At right is Allen Bower of Britton, Michigan, another bluebirder honored by NABS.



The NABS 2003 convention, held in Kearney, Nebraska, in March, attracted hundreds of bluebirders from all parts of North America. They enjoyed field trips to see not only bluebirds but also the migrant birds that put the Platte River

boldly on the birding map at this time of year. Tens of thousands of Sandhill Cranes and Snow Geese were trip highlights. The group above stood by their tour bus with binoculars and spotting scopes to watch a part of the spectacle.

The pairing article

To the editor,

In the Spring 2003 issue of *Bluebird*, Kevin Berner reports (page 4) the results of his study of Eastern Bluebirds and Tree Swallows at paired nest boxes during a 14-year period (1989-2002) in east central New York. He concluded that pairing nest boxes had no negative impact on the number of nest boxes occupied by bluebirds.

There are two reasons, however, why Mr. Berner's conclusion should be taken with a grain of skepticism. First, Mr. Berner's study did not allow for the direct comparison of the effects of paired nest boxes to any other box placement design. Second, a statistical analysis of Mr. Berner's data indicates that there may be another way to interpret his findings.

All of the nest boxes in Mr. Berner's study were paired. Paired boxes were spaced five to 10 feet apart or attached to opposite sides of utility poles. Because no other box configurations were studied, Mr. Berner's assessment of the effect of paired boxes cannot be made on a scientific basis. His claim that paired nest boxes do not have a detrimental effect on bluebird occupancy would only be supported if the number of bluebird pairs nesting at paired box sites was greater than a control group, for example unpaired (single) boxes.

It's entirely possible that bluebird occupancy would have been greater at single boxes. If so, Tree Swallows would actually have had a negative impact on bluebirds at paired boxes. There was no control group of nest boxes in Mr. Berner's study to make such a comparison.

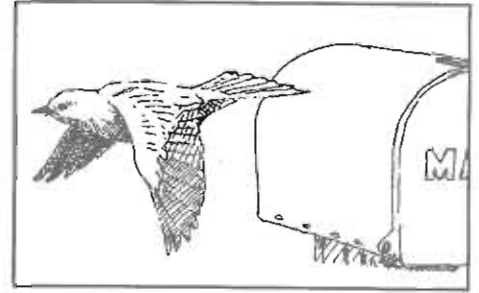
Mr. Berner admits this flaw in his experimental design on page 5 of his article: "In a true test of box pairing, I

would have set up equal numbers of sites with paired or unpaired boxes..." Even this statement is not entirely true, however. In a truly scientific analysis of box pairing, equal numbers of paired AND unpaired sites would have been established (for comparison) during the same year, not one or the other.

Mr. Berner states (page 4) that during the first seven years of his study, he frequently added and removed box pairs, thereby altering the pattern of his box placement design. He freely admits that this introduced a "confounding variable" (page 5). How much of an effect did this potentially have on the results of his study? In an effort to answer this question, I statistically analyzed Mr. Berner's data for the last seven years of his study (1996-2002), the time in which "only minor changes" were made to his experimental (box placement) design.

I first performed a correlation analysis using the number of box pairs as the independent variable (second column in Table 1 of Berner) and the number of box pairs with bluebirds (third column) and the number of box pairs with swallows (seventh column) as the dependent variables. There was a statistically significant positive correlation between the number of box pairs and the number of box pairs with swallows ($r = 0.92$, $P = 0.004$) and a statistically nonsignificant negative correlation between the number of box pairs and the number of box pairs with bluebirds ($r = -0.71$, $P = 0.075$).

Next, I performed a correlation analysis between the number of box pairs with swallows as the independent variable and the number of box pairs with bluebirds as the dependent variable. There was a statistically



nonsignificant negative correlation ($r = -0.63$, $P = 0.133$).

My statistical analysis of Mr. Berner's data for the last seven years of his study (years in which he made only minor changes to his box placement design) indicate two possible trends. First, adding pairs of nest boxes resulted in a significant increase in Tree Swallows but not bluebirds. Second, although not statistically significant, bluebird density tends to decrease as Tree Swallow density increases. Based on these results, it's fair to say that paired nest boxes and Tree Swallows may have a negative impact on bluebirds in east central New York.

I agree with Mr. Berner that Tree Swallows are a valuable component of our native ecosystems, although it is disingenuous to imply that those of us who don't entirely agree with box pairing consider Tree Swallows as the enemy (page 6). On the contrary, I have observed that in northwestern Pennsylvania, bluebirds and Tree Swallows alike benefit most when nest boxes are not paired. I believe the argument should be based on scientific studies that evaluate the best management strategy for both species.

— Mark Ritke, 510 Rice Road,
Titusville, PA 16354, e-mail
WatercressFarm@aol.com.

Mr. Berner responds to Mr. Ritke

I would like to respond to Mr. Ritke's letter to the editor.

The changes that were made on my trails have been relatively minor since the beginning of the 1996

breeding season. During that time I removed between zero and four box pairs per year from my study areas for an average of less than two pairs removed per year. All other box sites remained consistent throughout the entire period.

Mr. Ritke examined the correlations between the number of boxes on my trails and both Tree Swallows and bluebirds. His only statistically significant observation was that there was a positive relationship between the number of box pairs and the numbers of pairs with swallows.

When I had more nest boxes, they were also at higher box densities on individual study areas, and in some cases the boxes were within moderately close proximity to each other. I stated in both my recent article and past articles in *Bluebird* that placing boxes in close proximity to each other definitely favors Tree Swallows due to their tendency to group up with neighbors to harass competitors in their "neighborhood".

The non-significant correlations between box numbers and bluebirds needs no further consideration nor do any other relationships shown to not be statistically significant.

Much of Mr. Ritke's analysis relates to the addition of nest boxes to my trails, something that I have not done in any of the last eight years. I have gradually decreased the number of box pairs on my study areas without seeing any concurrent decrease in bluebird numbers.

I readily admit that my observations do not compare what would have happened if I had simultaneously initiated trails with equal numbers of new sites with paired boxes and single boxes. I suspect that either strategy would have produced acceptable numbers of bluebirds, and I will not speculate here on whether or not paired boxes would have outperformed single boxes. I worked

with the trails that I had, which were designed to compare the preference of various nest box styles side by side in pairs.

Working within those parameters, I was interested in examining whether or not Joe O'Halloran's observations were true on my trails. His contention is that paired box trails over time will be increasingly dominated by Tree Swallows and that bluebird use will diminish. It is quite apparent from the data presented in my recent paper that those predictions were far from true on my study site. My percentages of box occupancy by bluebirds have roughly tripled from the early years of the study to recent years.

Mr. Ritke's interpretation of my data states that it is "fair to say that paired nest boxes and Tree Swallows may have had a detrimental impact on bluebirds". I may need to review my statistics class notes; however, I cannot see too much gloom and doom resulting from continually increasing rates of bluebird occupancy and continually increasing rates of bluebirds fledging on my trails.

If this is what it's like for the sky to be falling, I'd like to continue to see it do so. It's quite obvious to me from looking at my graphs in the last issue of this journal that bluebirds can not only maintain but increase their rates of box use even with Tree Swallows simultaneously being present at the vast majority of nest box pairs.

— Kevin Berner, NABS research committee

Co-chair of NABS research committee comments on the Ritke letter

The issue of nest box pairing continues to be a matter of some interest as seen by the article in the Spring 2003 *Bluebird* by Kevin Berner, and by the subsequent letter of response by Mark Ritke in this

issue. So the topic of pairing is unlikely to go away soon, but I believe it's important that it be kept in proper perspective.

First, the excellent article by Berner details some 13 years of nest box records on a trail that consists entirely of paired nest boxes. On this trail the production of Eastern Bluebirds has increased continuously over the entire period of observation, and the number of Eastern Bluebirds fledged per year essentially equaled that of Tree Swallows in the latter years of the study. Thus, on Berner's trail in east central New York, Eastern Bluebirds do successfully compete with Tree Swallows for paired nest boxes.

Ritke speculates that if the Berner's trail had been configured with single boxes, rather than pairs, the number Eastern Bluebirds would have been higher — that is, the paired boxes were detrimental to Eastern Bluebirds production and they favored Tree Swallows production.

As proof of this claim he notes that a correlation showing that as the number of total box pairs on the trail increased the number of pairs with Tree Swallows also increased. Further, he suggests that number of box pairs with Eastern Bluebirds decreased when the number of total box pairs increased. However, I believe that there are problems with this argument.

Ritke's correlations are based on data from multiple years. So to be completely valid, he must show that the nesting seasons were equivalent (or nearly equivalent) or at least that the different seasons affected both Eastern Bluebird and Tree Swallow production in an identical (or nearly identical) manner over the period he is analyzing.

Second it must be noted that the correlation between the number of box pairs and the number of box pairs

with Eastern Bluebirds is not a statistically significant relationship. Thus, I would suggest that Ritke's analysis is provocative but that it is not conclusive.

Let me conclude with two more points. First, it is unlikely that statistical analysis of existing data will be effective at giving a definitive answer to this question. The answer to whether pairing benefits or inhibits Eastern Bluebirds relative to Tree Swallows will best be answered when a study that directly compares, over the same nesting season(s), the number of Eastern Bluebirds and Tree Swallows that fledge from a set of paired boxes with another group of single boxes, both set up in nearly identical habitat.

Both Berner and Ritke make that very point also. Further, when making the comparison one must keep in mind that 20 box pairs is really 40 individual boxes.

And finally, while the topic of pairing is interesting, it is not, in my opinion, as important as many make it out to be. Keep in mind that the modern bluebirding effort, started over 30 years ago, has truly saved the Eastern Bluebird and is helping to assure the survival of the Western and Mountain species.

Thus, the survival of these wonderful animals will depend more on bluebirders managing nest box trails and less on whether those nest boxes are paired or not. Let's make sure that we do not let rancor interfere with a labor of love.

— *Bernie Daniel, Ph.D., co-director, NABS Research Committee*

(Mr. Berner can be reached at 499 W. Richmondville Road, Richmondville, NY 12149, e-mail bernerkl@cobleskill.edu. Dr. Daniel can be reached at 9211 Solon Drive, Cincinnati, OH 45242, e-mail bdaniel@acninc.net.)

More comment on pairing

To the editor,

In the following comments, I don't dispute any of the data presented in the article "Does nest-box pairing harm bluebirds?" by Kevin Berner, *Bluebird*, Spring 2003. I welcome this discussion of the issues related to improving bluebird production, in general, and relating to the impact of box-pairing, in particular.

Mr. Berner's article provides no data from which the reader can conclude whether paired boxes have lower or higher bluebird production, or have lower or higher bluebird occupancy than singles nest-boxes. That's because the article in question contains paired box data only, and no data whatsoever from singles boxes.

Mr. Berner gives what he appears to believe is a summary of my analysis of the Bluebird Recovery Association of Wisconsin data (page 4, column 2): "His data based on thousands of boxes indicated that paired boxes fledge fewer bluebirds and that pairing reduced occupancy rates by bluebirds as swallows take over trails."

But that is not quite a proper statement of the BRAW findings. BRAW data, based on thousands of boxes, indicate that paired boxes fledged fewer bluebirds per box than singles boxes had, and that paired boxes had lower bluebird occupancy rates compared to singles, on average.

The increase in actual bluebird production and occupancy numbers occurred only as the paired-box trails' box-density was grossly reduced. I believe it is a fair interpretation of the article's data that the upward slopes for bluebird production and occupancy shown in the two charts are more of a reflection of severe box-pair culling, and elimination of House Sparrow and Wren sites, rather

than reflecting a characteristic history of paired-box trails.

Mr. Berner's charts also document the bluebird-production benefit on his trails from eliminating the paired sites (half of all the pre-culling sites) with persistent House Sparrow and Wren problems. Also, the composite bluebird production for Mr. Berner's now finely tuned trail is reported to be 162 bluebirds fledged from 80 boxes (40 pairs) in Year 2001. In my opinion, that is a very respectable bluebird production level. But the core question remains, "What would they have produced as widely spaced singles?"

— *Joe O'Halloran, chair, Bluebird Recovery Association of Wisconsin Data Collection and Analysis Committee. (Mr. O'Halloran can be reached by e-mail at JOEOHALLOR@aol.com.)*

Mr. Berner responds:

I readily accept Mr. O'Halloran's minor correction of my interpretation of the conclusions of the BRAW research data. As I stated in my reply to Mr. Ritke, I have made no claims to have proof that single-box trails have higher or lower productivity levels than paired trails. I only stated that my experience on a paired-box trail is that relatively high levels of bluebird productivity can be achieved and maintained.

In looking at individual sites, I doubt that I could maintain a much higher percentage of bluebird occupancy with single boxes than I have obtained on my trails as they exist now. I look at the simultaneous production of Tree Swallows at most of these sites as an added benefit to my trail due to their insect consumption and aesthetic value.

If I had only single boxes on my trails, even if I had a moderately higher level of bluebird occupancy, I

would look at the reduction in my Tree Swallow production to be a loss. In my county, sites with good quality habitat are more limited than the availability of inexpensive nest boxes, so I have no problem in placing a second box at each site.

The vast majority of the boxes that I have removed were removed because of their close proximity (although over 100 yards apart) to adjacent pairs. These more-crowded boxes appear to greatly favor Tree Swallows while providing no advantage to bluebirds. I have been fortunate in having extremely low levels of House Sparrows and House Wrens even in the early years of my trail. Where they did seem problematic those sites were eliminated.

I don't believe that there is single correct strategy in the pairing controversy. Obviously, BRAW has had great success with single boxes. I feel that I too have had similar bluebird successes with an alternative strategy. As I noted in my article in the Spring 2003 issue of *Bluebird*, BRAW should be commended for its research on pairing as well as on a variety of other issues pertinent to the recovery of bluebirds.

— Kevin Berner, NABS research committee

Louisiana meeting

The Louisiana Bayou Bluebird Society's annual meeting will be Sept. 20 in Monroe, Louisiana. Speaker will be Dr. Shirl Brunell of Texarkana, Arkansas, author of the book *I Hear Bluebirds*. For tickets or more information, send an e-mail note to emcooper@bayou.com or marcot50@bellsouth.net, or call 318/878-3210.

Letter from the editor

The interview with Dr. Patricia Adair Gowaty that appears in this issue of *Bluebird* (page 10) was a particular pleasure for me. We visited for about two hours by phone. It was a delight to talk with someone so knowledgeable about Eastern Bluebirds. Of special interest were her comments on what she calls the culture of bluebirds — how these birds differ from place to place.

She suggests that the Eastern Bluebirds I see on my trail in suburban Minneapolis might well show subtle differences in behavior from bluebirds you see in Pennsylvania or New York or elsewhere. They are different even from those I enjoyed in years past at our home in Wisconsin, not two hours drive from here. Indeed, she has noted differences in bluebird populations at her home in Athens, Georgia, and 60 miles away on the campus of Clemson University.

My mother was full-blooded Norwegian. From her family's culture she took her cooking skills. She is a good cook, but you would not call her adventuresome in the kitchen. Her spice cabinet holds salt and pepper. Catsup was as exciting as our table got when I was growing up.

Imagine my wonder then when I left home and eventually began cooking for myself. I discovered cookbooks, the spice rack at the supermarket, and spaghetti sauce that did not taste like tomato soup. I discovered cultural differences and applied them to the basic rules of cooking my mother had demonstrated.

Our bluebird world fortunately is filled with people who can teach us the basic rules. We are wise to follow them. But think of all of the different nest-box styles from which bluebirds have fledged. Think of the different ways of mounting boxes and the different locations for them.

I remain a novice at bluebirding, six years into this adventure, with much to learn. But as I write this in mid-April, bluebirds just beginning to nest in my boxes, I know already that this year will be different from my bluebird years in Wisconsin. I believe I am going to learn more about cultural differences, this time those described by Dr. Gowaty.

For me, this is a significant part of the fun of bluebirding. It might be as close as I get to science. I establish a scheme. I observe it. I take notes. I study and think about it. I tweak and twiddle to make it better. I do it year after year. With good basics and a willingness to adjust to the differences geography and biology can make, I watch bluebirds hatch and grow and fly away. You do the same.

I read this somewhere, and I believe it: The best bluebird box is the one that works for you. The same philosophy applies to the other aspects of this passion of ours. The style of box, the size of the entry hole, the mounting device, the pattern of box placement — no single idea fits all. We are not cutting cookies. We are dealing with living creatures that respond to their environments each in their own way.

Wouldn't this be boring if there was only one way to do it?

— Jim Williams

Her research explores the culture of Eastern Bluebirds

Dr. Patricia Adair Gowaty

By Jim Williams

Like so many of us, Dr. Patricia Adair Gowaty thinks bluebirds are wonderful. They are her bird species of choice. It is not only their physical beauty she appreciates, however, or the ease with which they can be attracted to nest boxes. She also likes them because they lead such involved and interesting social lives.

"I considered studying a number of bird species before I realized that Eastern Bluebird was at that time the only species of North American perching bird in which monogamy, polygyny, polyandry, and helping had been documented more than once," she said during a recent interview. Eastern Bluebird satisfied her need for a species that offers such variety of behavior.

Monogamy is one male paired with one female. Polygyny is one male with multiple female partners. Polyandry is one female with multiple male partners. Polygamy is non-specific and indicates both polygyny or polyandry.

"I'm an evolutionary biologist. the business of evolutionary biologists is variation. We're always noting variation in traits because without it there is no probability of further evolution. The variation is the substrate of all that we find interesting," she said.

Dr. Gowaty came to the bluebird decision in the 1970s when she was pursuing studies that would lead to a doctorate in zoology and an outstanding research career that has placed her among the most respected authorities on Eastern Bluebirds. She was co-author with Jonathan H. Plissner of the Eastern Bluebird monograph for the Birds of North America series.

Teaching at the University of Georgia in Athens, Dr. Gowaty is most interested in how the pressures of daily survival select the observable traits associated with the social behavior of a species.

"For my theoretical interest Eastern Bluebirds were the species of choice," she said. "I was naive when I began 30 years ago. I didn't realize how easy it was going to be to study them. I discovered that bluebirds spontaneously generate at the site of nest boxes! If I put nest boxes in places that I thought the birds would like, I had tons of birds. These birds turned out to be extraordinarily easy to

study."

She believes bluebirds to be a model species for studies about behavior and biology in general. "I've been funded for a very long time by the National Institute of Health (NIH) for my bluebird studies," she said. "For NIH, one has to justify the applicability of the research to human health concerns. It is obviously a huge stretch to imagine how in the world anything about bluebirds would have to do with human health.

"And the answer for me is that I am studying generalized selection pressures that work on social behavior. One of my assumptions is that these selection pressures are similar to selective pressures that humans also experience, and so, while I'm not learning anything directly about humans, I might be able to export a hypothesis from bluebirds to humans.

"For example," she said, "my work on bluebirds shows that females and males are aggressive and that aggression is induced by ecological and social circumstances. The tendency to be aggressive in these birds is also correlated with threats to their reproductive success.

"So, lessons include that individual birds are not aggressive all the time, that ecological and social circumstances induce aggressive expressions, and the ability to respond aggressively is associated with what is happening in their reproductive lives.

"Extrapolating these ideas to humans suggests that hormonal fluctuations alone should seldom account for aggressiveness in individual humans. Perhaps the ecological and social situations that humans are in induce aggression. This is a testable hypothesis. I am not up on data on aggression in humans; perhaps someone has tested it....

"At a more fundamental level," she adds, "I have watched bluebirds because they are extraordinarily aesthetically pleasing. I study an organism that pleases me every day. Also, I think a certain affection develops in anybody who has intimate and deep knowledge of another organism. I really like bluebirds.

"My grad students make a little bit of fun of me be-

cause I always tell them in the spring, when I see the first hatchlings, that I always am struck by the ‘miracle of development.’ They think that sounds religious, but that’s not what it’s about. It’s really my awe at the phenomena represented by the development of a single cell to a full-blown, multi-cellular nestling. Bluebirds remind me of that bit of not-yet-fully understood biology which I facetiously call the miracle of development.”

“Bluebirds remind me of that bit of not-yet-fully understood biology which I facetiously call the miracle of development.”

Dr. Gowaty published her first bluebird research work in 1980 when she completed her doctoral work. Her thesis included work on how well female bluebirds did when raising families without the help of male birds (“They did just fine, thank you,” she said.) Since then, she has published perhaps a hundred research papers in a variety of journals. Many of them focus on bluebirds, but not all of them. She also has studied and written about flies, mice, Mallards, cockroaches, and a couple of species of fish. Her work centers on the selective pressures favoring the social behavior of these creatures.

“Initially, I really wanted to know why monogamy was so prevalent,” she said. “When I started my work, the idea was that females couldn’t raise the offspring by themselves. I don’t think that is a very good assumption. I don’t think it says much about the individual dynamics among birds. It doesn’t say much about how selection is acting on individual behavior. It doesn’t allow for the obvious ecological variation faced by populations of bluebirds all over eastern North America.

“It is far more interesting biologically that there are some female bluebirds that don’t need male help at all, and some females, yes, that benefit from male help. That really does start to capture a lot of the ecological and biological variation that is represented by these animals.

“That observation alone is worth a lifetime of research about variation in females and their abilities to feed their babies by themselves,” Dr. Gowaty said. “How does that develop, what contributes to that, what are the ecological factors involved — those are really interesting questions. We’ve been working on that for 10 years and we’ll probably add another five years of data before we are finished.”

Dr. Gowaty began her graduate work at the University of Georgia and finished it at Clemson University in Clemson, South Carolina, about 50 miles from her office

in Athens. She spends time in both places, and has noticed differences in the bluebird populations found in each. She talks of cultural differences of among individual bluebird populations, much as you would find cultural differences between people living in, say, Nebraska and people living in South Carolina.

She explained one cultural difference between Clemson and Athens bluebirds, a behavior perhaps exclusive to Eastern Bluebirds in her part of Georgia.

“One day a technician came in and told me that bluebirds were taking

nestlings’ fecal sacs and placing them in rows on telephone lines. I said, I don’t have time for people being silly to me. The next day she appeared with photographs, and that day I went to the field. Indeed, bluebirds in Athens collect fecal sacs and put them on highlines.

“Putting fecal sacs on a high wire — we have not yet observed that in Clemson, so I think this is really good evidence for cultural variation in bluebirds,” she said.

Other differences in demography, reproductive success and behavior are associated with the differences in fire ant colonization at the two places. Fire ants arrived at Clemson only in about 1998; they’ve been in Athens for over a decade. Fire ants eat the same things bluebirds eat. The competition between fireants and bluebirds over food results in direct and indirect effects that result in profound differences between bluebird populations in these two near-by places. Culture? Maybe.

Researchers working with Dr. Gowaty are exploring what happens when new birds join a local population, how long it takes them to assume the characteristics of the local bluebirds, either in terms of physical characteristics or

behavior. At what point, they ask, do the newcomers adopt the characteristics of the local bluebird culture?

Much work remains in progress, research projects yet to be completed and published. Dr. Gowaty

also wants to write a book about bluebirds. “A book is an opportunity to be broadly effective about the joy of these animals,” she said. “We can tell people interested in bluebirds what we’ve learned about social behavior in general and what remains to be discovered.”

Dr. Gowaty is a classroom teacher. She has students in the university’s biology program, in an animal behavior course. She teaches a graduate course in behavioral

“It is far more interesting biologically that there are some female bluebirds that don’t need male help at all, and some females, yes, that benefit from male help.”

“I think the reason that students are attracted are the same reasons lay people are attracted — the birds are easy to find, they are beautiful, and they are easy to manipulate.”

ecology, and another in the women’s studies program at UGA about the biology and politics of reproduction.

Does she use bluebird research in that class? “Yes,” she said. “I always do. One can use work on non-human animals to explain theories or questions about humans. We hold a lot of our biology in common with other creatures. These model organisms, these birds that we can study with social systems similar to humans — they have real potential to tell us something about the possibilities in human social systems.”

She expresses some concern for the future of natural-history based research. It is harder and harder to do that kind of work, she said, because it is more difficult to find students with an interest in natural history. “There are so many kids growing up in urban areas with so little contact with the natural world that you wonder how you are going to teach them to be naturalists,” she said.

“Our undergraduate students these days are so alienated from the natural world. Kids are afraid to go out in their backyards. They are afraid of bugs, they are frightened of spiders. I think there are rational fears for people out in the woods by themselves, but I think those fears have to do with humans,” she said. “I think that the fear of the natural world is one of the great things we teachers of ecology must overcome. It is remarkable that people are so frightened.”

She sees broader attention to the natural world in school curriculums as an answer to the problem. “There are people who say that every single aspect of a K-12 curriculum should be taught in relation to the environment,” Dr. Gowaty said. “They are talking about teaching reading, writing, and arithmetic in relation to natural history. I think this is powerful and important stuff that needs to be done.

“I think people interested in doing that need to be producing a curriculum that makes the natural world available not just to students but to teachers. I think one of the greatest things about natural history, one of the great things about the North American Bluebird Society, for that matter, and all of these people who are running trails, is that it puts them outdoors, making systematic observations.

“There is enormous good in citizen science projects. We should be doing it for all of our species,” she said. “We should be finding ways for every kid in North America to have part of their studies outdoors every day. When we build those connections to the world outside of our homes, the kinds of decisions we’ll make related to the environment will be better for all of us, including squirrels and titmice and chickadees and bluebirds.

“The more I learn about almost any creature, the more I find them interesting,” she said. “It is wonderful to be engaged in discovery. It is the best thing humans ever devised — science and systematic observations and experiments. It’s fabulous. And I mean that. I can’t image a more rewarding life than a life of inquiry and discovery, and to also have the aesthetic pleasure these other creatures offer.”

(Dr. Patricia Adair Gowaty can be reached at the Institute of Ecology, University of Georgia, Athens, Georgia 30602-2602.)

NABS grant recipients

The 2003 recipients of research grants from the North American Bluebird Society have been named. This is the 19th year that NABS has given grants. Recipients are:

- Gregory A. Jones, University of Florida (Gainesville), Ph.D. research title: Releasing Nest Site Limitations for Bluebirds in Organic Agroecosystems: Creating Local Breeding Habitat for Natural Enemies of Arthropod Pests.
- Karen Newlon, Montana State University (Bozeman), M.S. research title: Influences of Livestock Grazing and Landscapes on Populations and Habitats of Lewis’s Woodpecker and other Riparian Landbirds.
- Dr. Eric Linder, Mississippi State University, title: Reproductive Ecology of Prothonotary Warblers in Mississippi.
- Victoria Garcia, University of Arizona, (Tucson), M.S. research title: Effects of Food and Ectoparasites on Timing of Natal Dispersal in Burrowing Owls.

Tree potential

Certain species of trees offer greater potential than others for the creation of cavities used by both birds and mammals for breeding and shelter. Here is a list:

Excellent: White pine, oak, elm, ash, sugar maple, yellow birch, basswood.

Good: Aspen, red pine, tamarack, cedar, red maple, white spruce, black cherry, hickory, box elder, cottonwood, walnut, hackberry.

Fair: White birch, balsam fir, jack pine, black spruce, balm of gilead.

2004 NABS convention July 7-11 in Ithaca, New York, home of Cornell Lab

The 27th annual convention of the North American Bluebird Society will take place July 7 to 11 in Ithaca, New York. You can look forward to meeting some of the New York bluebird experts, including Rich Wells, John Rogers, Kevin Berner, David Heidenreich, and Carl Zenger.

Several other well-known national researchers and writers are tentatively committed to the 2004 program. Entertainment may well include a group made famous on *A Prairie Home Companion*.

The foremost attraction to many will be a visit to the new \$30 million Cornell Laboratory of Ornithology just a mile from the convention hotel.

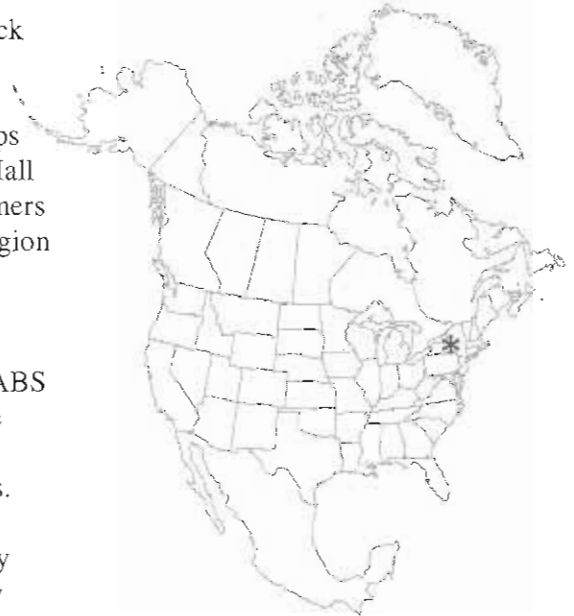
Field trips may include such popular destinations as Montezuma National Wildlife Refuge, the Corn-

ing Museum of Glass, the Frederick Remington Museum, and Finger Lakes National Forest.

Information for self-guided trips will be available to the Baseball Hall of Fame in Cooperstown, the Farmers Museum, the Thousand Islands region of Lake Ontario, the St. Lawrence River, and Adirondack lakes and parks.

Information about the 2004 NABS convention will be found in future issues of *Bluebird* and many state bluebird organization publications.

For more specific information, contact Carl and Phyllis Zenger by email at zenger@localnet.com, by phone at 716/434-7568, or by mail at 5859 Beattie Ave., Lockport, NY 14094.



Ithaca, New York, will be the site of the 2004 NABS convention.

Nominating committee begins work

Mary Ellen Vetter of Brooklyn Park, Minnesota, will lead the NABS nominating committee for the coming year. She has been reappointed to the position by NABS president Dean Sheldon. She can be reached by telephone at 763/561-1761, and by e-mail at mevetter@mninter.net.

Serving with her will be Bernie Daniel of Cincinnati, Ohio (513/891-1631, bdaniel@cinci.rr.com), Steve Eno of Raymond, Nebraska (402/783-3011, cleno@aol.com), Terri Kromel of Mifflintown, Pennsylvania (717/436-9552, tkromel@state.pa.us), and Grace Storch of Elizabeth, Illinois (815/845-2731, gsfeathers@aeroinc.net).

The committee is actively soliciting the names of persons who might have an interest in serving as a NABS officer or board member.

The committee is seeking candidates committed to the mission of the organization and willing to contribute ideas, time, energy and resources to the board. The membership numbers continue to grow each year as more NABS affiliates become established across North America. The current board of directors is operating programs of conservation, education and research that are serving our members. NABS has also been successful in increasing public awareness of the concern for bluebirds and other cavity nesting birds.

You are encouraged to make your thoughts known to the chairman and/or the committee. Election of four board members and officers will take place at the 2004 convention in Ithaca, New York.

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Singing by male Eastern Bluebirds

More than meets the ear

By Gary Ritchison and Bret O. Huntsman

While long assumed to function primarily in mate attraction and territory defense, recent studies have revealed that bird song can also serve other functions. For example, male House Wrens sing to inform females of the presence or absence of predators. Male Common Yellowthroats sing to distract potential predators from nests and mates.

Determining possible functions requires detailed observations of how and when males use song throughout an entire breeding cycle. This is because even subtle changes in singing behavior, such as changes in volume or singing rate, can potentially convey information. How you sing can be as important as what you sing.

Although many aspects of the behavior and ecology of Eastern Bluebirds have been well studied, little is known about their singing behavior. The objective of our study was to try and determine why male Eastern Bluebirds sing.

We would attempt to do this by examining singing rates throughout the breeding cycle and in different situations. We would attempt to determine if and how male bluebirds vary the characteristics of songs to convey different types of information.

We observed male Eastern Bluebirds during two breeding seasons in Madison County, Kentucky. Males and their mates were captured in mist nets and banded with unique combinations of colored plastic bands. We then attempted to follow each male

for at least 45 minutes once every five days. Using a cassette recorder and microphone, we recorded on tape all songs uttered during each observation period.

By closely monitoring these males and their territories, we knew the status of each male. So, for each observation period, we noted whether the male being observed was paired or unpaired. And, if paired, we monitored mates and nests and categorized the various breeding stages as one of the following:

- Pre-laying (from the day a male obtained a mate through the day before the first egg was laid).
- Laying (days when eggs were laid).
- Incubation, nestling (from the day of hatching through the day before young fledged).
- Post-fledging (a 14-day period beginning on the day of fledging).
- Transition (from 14 days after fledging until construction of another nest began).

Understanding function requires knowing how male bluebirds might alter singing behavior in different situations. So, we did our best to determine the location of other bluebirds during each bout of songs. A bout

is a series of songs with no more than a few seconds between each song. Bouts were also categorized as high volume (songs could be heard in adjacent territories), moderate volume (could be heard throughout most of the male's territory but not in adjacent territories), or low volume (could not be heard more than about 130 feet/40m away).

All songs recorded during all observation periods were analyzed using a sonograph, with some examples of bluebird songs generated by the sonograph shown in Figure 1.

Bluebird songs consist of a series of notes. For example, the top song in

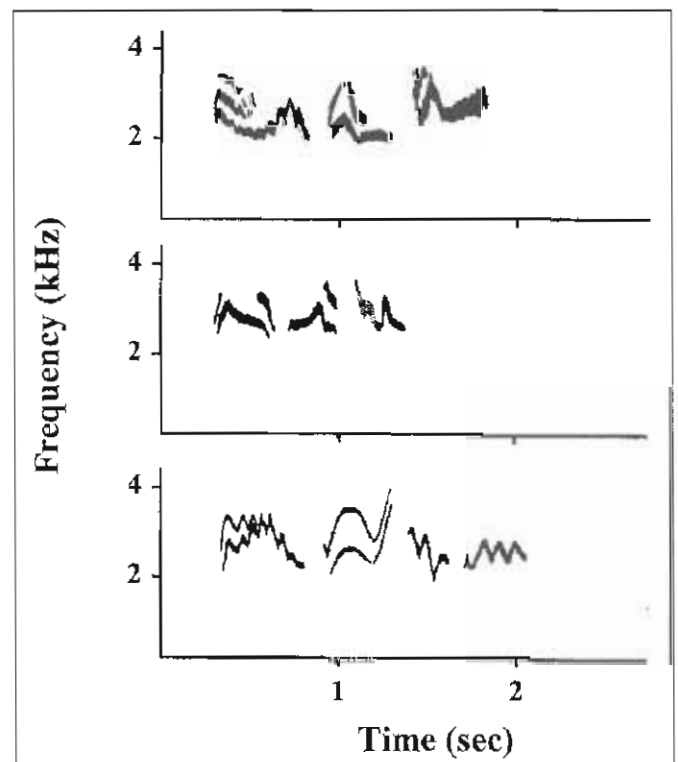


Figure 1. This is a sonograph, a visual representation of a recorded song. Songs of three different male Eastern Bluebirds are shown.

Figure 1 is made up of three notes. Each song that consisted of a unique combination of notes was called a song type (with three different song types shown in Figure 1). We found that almost all song types used by male bluebirds consisted of two to five notes, with three notes the most common.

Because this was true during all nesting stages and in all situations, it appears that bluebirds do not vary song length to communicate different messages.

Some birds, like male Blue Grosbeaks, tend to add more notes to their songs during aggressive interactions. For example, a male Blue Grosbeak trying to defend a territory boundary against an intruder will typically use songs with several more notes than usual. This change in singing behavior informs any nearby male grosbeaks that the singer is more likely to respond aggressively. For bluebirds, song length remains rather consistent, regardless of the situation.

"We found that the number of different song types used by male bluebirds ranged from 40 to 81."

We found that the number of different song types used by male bluebirds ranged from 40 to 81. While even these numbers are higher than reported for most other songbirds, the actual number of song types in each male bluebird's repertoire was undoubtedly much higher. This is because males used new song types every time we observed them (even at the end of the breeding season).

Also, most song types (64 percent) were only used during one observation period. This use of new song types throughout the study along with the infrequent reuse of song types indicate that male Eastern Bluebirds create new song types throughout a breeding season. Only a few other

songbirds, like Northern Mockingbirds and Brown Thrashers, continue to create and use different song types over extended periods.

One possible explanation for such large song repertoires is female preference. Some recent studies of other songbirds indicate that males with larger song repertoires may also be larger, better quality males. If so, males singing lots of different types of songs might be advertising their quality to females. This would make sense when a male is seeking a mate.

For male bluebirds, it might also make sense even after they have a mate. This is because female bluebirds are known to copulate with males other than their mates. As a result, a male bluebird singing lots of different song types, even late in the breeding season, could be advertising his quality to neighboring females.

Male bluebirds in our study sang at the highest rates and highest volumes when unpaired, averaging 400 to 500 songs per hour (Figure 2). After pairing, singing rates and volumes declined (Figure 2).

Similarly, other studies have revealed that male bluebirds may utter up to 20 songs per minute (or up to 1,200 songs per hour!) before pairing, with rates dropping considerably after pairing. Similar declines in singing rates after pairing have been reported in many other species of birds, including Common Yellowthroats, European Starlings, Tufted Titmice, White-throated Sparrows, and House Wrens.

This drop in singing rates after pairing provides evidence that one function of singing by male bluebirds is to attract mates. For unpaired males, combining high singing rates with high volume increases the likelihood that nearby females will hear and, perhaps, be attracted to their territory.

Although singing rates declined

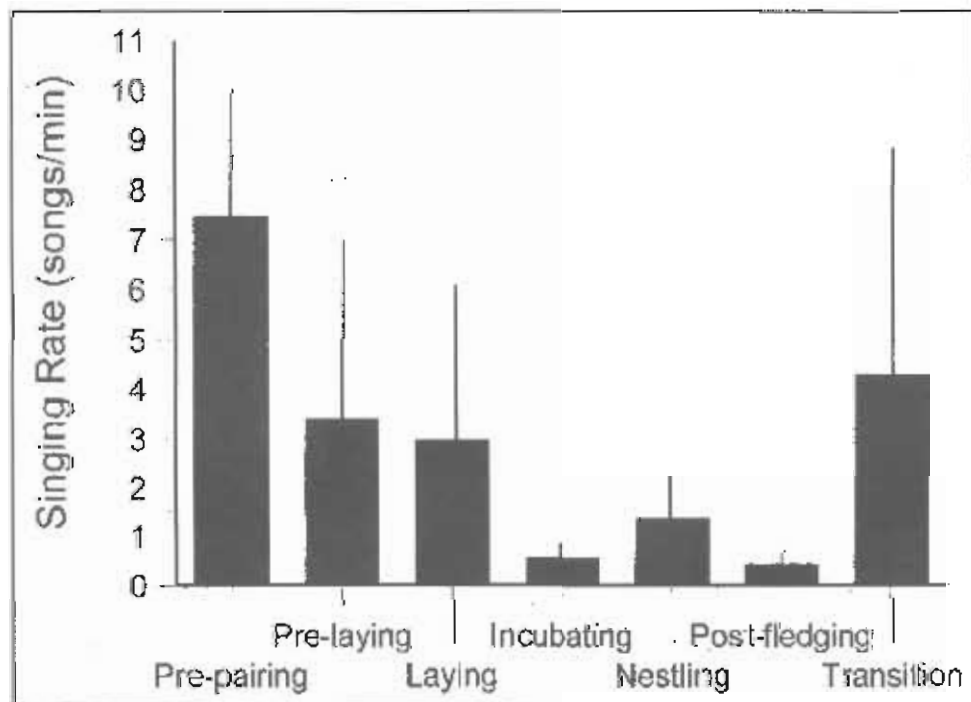


Figure 2. This graph shows the variation in the number of songs sung per minutes by male Eastern Bluebirds at various stages of the nesting process.

after pairing, male bluebirds continued to sing during the pre-laying, laying, and transitional stages, and most of this singing was low volume. This use of low-volume songs suggests that at least some of this singing was directed at mates.

During these stages, female bluebirds are either preparing to nest (or re-nest) or are actually producing a clutch (and would be fertile). Male House Wrens are also known to sing low-volume songs during the late pre-laying and early laying period. Low-volume singing by males could stimulate egg laying by females, and may also be used to advertise a male's willingness to copulate with a mate.

Using low volume songs at this time may be beneficial because it would make it more difficult for an intruding male, intent on copulating with the female, to pinpoint the location of the singing male and his mate.

Extra-pair behavior has been reported in Eastern Bluebirds and, in some populations, may account for as many as one-third of nestlings. So if male bluebirds must sing to stimulate females or to solicit copulation, the use of low volume songs may be a strategy to reduce the likelihood of extra-pair copulations.

Singing rates during the incubation, nestling, and post-fledging stages were much lower than during other nesting stages, and most singing was low volume. During these stages, male bluebirds are foraging and bringing food to the nest (for their mate and young) or to fledged young. As a result, these birds have less time to sing. Similarly low singing rates by males engaged in feeding nestlings have been reported in several other species, including Northern Cardinals, Common Yellowthroats, and Tufted Titmice.

One possible function of singing by male bluebirds during the incubation and nestling stages may be to

coordinate feeding activities at the nest. Males sometimes sang near nest boxes before approaching to feed mates. Singing might prepare a mate or nestlings for the male's visit and reduce the time that a male needs to spend at the nest. Male House Wrens also sing when approaching their nest, perhaps to signal the female that the male is about to come to the nest cavity with food. Such behavior would probably facilitate the rapid transfer of food.

Male bluebirds in our study sometimes sang before approaching the nest box during the nestling stage. This singing also may serve to facilitate the transfer of food. However, this did not always appear to be the case. On several occasions, males flew to within 32 feet (10 meters) of a nest box, uttered several songs, flew to the box entrance without delivering prey, then flew away from the box and uttered more songs before finally delivering the food to the nestlings.

This behavior suggests that another possible function of singing during the nestling period is to teach nestlings to associate singing with food. After the young fledged, families sometime travel long distances from the nest while foraging. Fledglings familiar with the songs of their parents might be better able to stay in contact.

Our observations indicate that

Cover photo

Our cover shows a male Eastern Bluebird about to break into song. His bill is pointed upwards, his throat beginning to expand. Male Eastern Bluebirds sing for many reasons, and have perhaps more than 80 different songs in their repertoire. The photograph was taken north of Brainerd, Minnesota, by Lois Nissen of Sarona, Wisconsin.

singing by male bluebirds also plays a role in establishing and maintaining territories. Male bluebirds often sang during interactions with other males, and male bluebirds also responded to the playback of songs in their territories by singing. However, male bluebirds do not rely entirely on song during encounters with other males. Aggressive interactions between male bluebirds sometimes involve the use of "chuck" or staccato calls or even attacks.

In addition to the possible functions already noted, singing by Eastern Bluebirds also seems to communicate distress. We found that male (and female) bluebirds sometimes sang when we approached and checked nest boxes. Other investigators also have reported predator or alarm songs in the presence of nest predators. Singing in this context may help warn a mate or nestlings that a potential predator is nearby or, as with the flight songs of male Common Yellowthroats, may serve to distract potential predators.

In summary, male Eastern Bluebirds have surprisingly large numbers of songs in their repertoires, and a primary function of these complex repertoires is to attract and stimulate mates. However, male bluebirds also sing during interactions with other male bluebirds, suggesting an aggressive or territorial function. Male bluebirds may also use song to facilitate the transfer of food to incubating or brooding females, nestlings, and fledglings. Singing may also serve to warn a mate, nestlings, or fledglings about the presence of a potential predator or to distract those predators. Clearly, singing by male Eastern Bluebirds, as with males in other species of songbirds, serves multiple functions.

Acknowledgments

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Kentucky University Research Committee for financial support.

(Gary Ritchison and Bret O. Huntsman can be reached at the Department of Biological Sciences, Eastern Kentucky University, Richmond, KY 40475.)

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This Northern Flicker at its nest hole was photographed by Richard B. Fischer of Ithaca, New York. You can see two young flickers extending their heads from the cavity entrance. The birds nested in a cherry tree in his backyard. He took the photo from a blind he built on the bed of his pickup truck. The nest was later destroyed by a raccoon, he reported.

A bluebird obsession

One look is all it took

By Elizabeth Holoman

This all started quite innocently about five years ago. My husband Stuart thought he saw a bluebird in our yard. A few days later the suspicion was confirmed when he spotted a handsome male Eastern Bluebird perched in a poplar tree. An avid photographer, Stuart documented his sighting. After issuing mitigating caveats such as, "This really isn't a very good picture," and muttering something about "grainy, out of focus, not centered," he reluctantly showed me his photograph. Clearly, this was the most beautiful bird in the entire world.

Shortly thereafter, the greeting upon entering our home was not the usual "Hello, honey, I'm home." Instead, it was "Hello, honey, did you see the bluebird?"

If the answer was no, I might insinuate that perhaps, if more time were spent outside, we might catch a glimpse of him. I began to consider playing hooky from work so I would have the chance to scan for bluebirds. Nightly, prayers began to include the standard postscript, "Please, let me see a bluebird tomorrow."

The quest continued. Twice daily there were walks around the neighborhood carrying binoculars I hoped might facilitate a closer look at the bluebirds once I spotted them. These walks attracted attention from neighbors wondering if I might be a real estate agent in search of new listings. Prior to becoming a university professor, I *was* a real estate agent, but that is another story. The bluebirds were elusive.

It was now "Beware! The Ides of March," and Stuart had brought me a gift. A nest box was now planted squarely in the center of our backyard! Soon, every spare moment of the day was spent either at the win-

dow surveying the box, or walking around the neighborhood scanning for bluebird activity.

Feeble attempts at bird bribery were made. Mealworms made their way into my kitchen refrigerator.



The Holomans' bluebirds. Photo by Stuart Holoman

Nestled between maple syrup and Chardonnay, I trusted the cold would effectively contain the worms inside their paper cups until they were parceled out to the birds as appetizers. This mostly worked.

Lack of bluebird sightings made me grumpy. Stuart admonished me to be patient.

The nest box was observed daily. For weeks it remained lonely and untouched. Then one day, while drinking my morning coffee, I saw a pair of bluebirds land on the box! The male perched atop the house, and surveyed the yard. The female bluebird, slightly larger than the male and somewhat muted in color, seemed interested in the box. She poked her head in, then out, then in, then out again. Finally, she squeezed herself through the hole completely. The male followed her into the box. A moment later, both emerged and flew to the treetops nearby.

Daily, I checked the box for evidence of nest building. There was none. I looked to the experts for advice. There were three words of advice: Location, location, location. The ideal bluebird real estate would be at the edge of the woods, near an open space, with a small perch above the box, protected from the elements, with ready water and food nearby. We moved the box from the backyard (too enclosed) to the front yard, facing the street near the end of our driveway.

Less than ten minutes later, the bluebirds found it and began building their nest! The slow-moving mealworms were proffered, and the nest box monitored once a day, usually in the early evening. Beginning on the third day, the eggs appeared. Pale blue, and delicate. Each day the nest accrued one more egg, until there were five.

At this point, the female bluebird began to incubate them. Waiting until

the clutch is complete to begin incubation gives all the babies an equal chance for survival. The female might leave the box for brief periods, then quickly return. The male made frequent trips during the day to feed his mate and keep watch over the box.

During this time, I would sit across the yard, with a pair of binoculars and observe my birds. Never having had much patience before this, I found myself spending hours just watching the box. Neighbors would look at me quizzically, but never asked what I was doing in the front yard with a pair of large binoculars. Maybe they didn't want to know.

My bluebird family behaved in textbook fashion that year. All of the eggs hatched, within hours of the predicted time. The babies developed according to the pictures I had seen in bluebird reference materials. Finally, time came for the babies to fledge. Stuart set up his camera nearby. Father bluebird buzzed him mercifully until the camera was moved. Granted a reprieve from his dive-bombing, we both camped out in the yard and waited for the babies to fledge.

The baby birds peeked out of the nest box hole, looked around, then went back inside. I thought I would have a heart attack from anticipation. Normal bird behavior, according to the experts. Finally, nearing dusk, the babies left the box, quickly and confidently. They knew just what to do. They were ready.

Bluebirds.

Happiness.

And so it began.

(Ms. Holoman can be reached at 2617 Countrywood Road, Raleigh, NC 27615, e-mail eholoman@holocon.net.)

NABS approval marks nest boxes best for birds

Want to buy the best nest boxes for your bluebirds and other cavity nesters? The North American Bluebird Society (NABS) has made that easier for you with its nest-box approval program.

Hundreds of retailers, manufacturers, and distributors have received NABS' approval of the nest boxes they sell or manufacture.

The nest box approval process includes an examination of the design, materials, and dimensions of the boxes to better insure that they help — not hinder — bluebirds. Hole size, thickness of wood, and ventilation are among the factors considered.

Approval recognition comes in the form of a label placed on the nest box. Signs are available to retailers wishing to let customers know that such boxes are available in their stores.

For manufacturers or retailers interested in having their nest boxes reviewed, a sample nest box and/or detailed plans can be sent to Attn.: Steve Eno 2500 West James Dr., Raymond NE 68428 (telephone 402/783-3011).

The process takes about four weeks. The company will be notified regarding the decision and supporting materials will be sent upon approval. There is no cost for the nest box review, but retailers and manufacturers are expected to make a commitment to bluebird education by agreeing to insert the NABS information sheet and brochure inside each nest box.

Unless return postage is included, the submitted materials become the property of NABS.

Bluebird News from Shore to Shore

Nests of cavity-nesting birds are being collected for a study on the distribution and ecology of bird blow flies (Protocalliphora). The study has been expanded to include Louisiana and Arkansas (along with Oklahoma and Texas). If you are interested in participating in this project by collecting nests of cavity-nesting species, expenses for shipping and handling of nests will be covered. This project is part of a collaborative study examining the distribution of Protocalliphora in North America. The federal permit number is MB701276-0. If interested, please contact: Dr. Darrell Pogue, Department of Biology, The University of Texas at Tyler, Tyler, Texas 75799, e-mail dpogue@mail.uttyl.edu.

Kim MacNeil-Gundersen, writing from Warkworth, Ontario, tells us about a different nest box from Germany that has attracted bluebirds in her yard. "Two years ago I put up an odd-looking cement nest box that I had my doubts about," she wrote. "Within an hour the swallows took it over. Last year, much to my surprise, a bluebird appeared. I immediately added two traditional style nest boxes. The bluebird went from box to box checking them out, eventually settling on the cement one which hangs quite close to our house. The bluebirds had two nestings last year. The parents and the three babies from the second nesting stayed around this winter."

Betty Nichols, a NABS speaker's bureau member, recently passed away. She also was a member of the **Bluebird Society of Pennsylvania**. Many birders knew her from Bluebird-L as well.

A reader of romance/mystery

novels has brought to our attention a book entitled *Stonebrook Cottage* by Carla Neggers. The plot involves the murder of a governor of Connecticut, Big Mike Parisi, who happens to run a bluebird nest-box trail. Our source says this is a good read. Hey, any book with bluebirds in it is a good book, right?

The Mid-Coast Audubon Society in Maine has received a grant that will allow it to give to landowners 200 bluebird nest boxes and 10 boxes each designed for Wood Ducks, Saw-whet Owls, and bats. The grant was given by a Maine conservation organization.

The **Texas Bluebird Society** will host the 2006 NABS convention. The site of the event has not yet been determined.

Bluebirds Across Nebraska (BAN), a NABS affiliate, has reported an increase of almost 55 percent in bluebirds fledged from members' nest boxes in 2002, and a 95 percent increase in birds fledged from boxes of its western Iowa members. Birds fledged in Nebraska grew from 16,882 in 2001 to 26,135 in 2002. For Iowa, the number jumped from 786 to 1,642. Part of the reason for the increase is that more members sent in annual reports for last year. Reports are important; success is to be documented.

Also from Nebraska comes news that BAN has erected 10 American Kestrel boxes at rest stops along Interstate 80. One other BAN project found members helping to clear brush on a piece of state land, to improve the habitat for native grassland birds.

From Pennsylvania comes more news of growth in bluebird numbers. The **Middle Creek Bluebird Project**

near Lebanon, Pennsylvania, as reported by **Richard Brown**, monitored 251 boxes in 2002, the same number as the year before. Nesting pairs of Eastern Bluebirds increased from 46 to 51, chicks fledged growing from 240 to 243. The number of chicks per pair of bluebird declined. There were slightly more Tree Swallow nests in 2002 but fewer swallow chicks fledged. Mr. Brown attributed the declines to poor weather.

Prescott nest-box study using GPS data to map sites

Finding the most productive sites for nest boxes is an important part of the bluebird conservation effort. The Prescott (Oregon) Bluebird Recovery Project is using Global Positioning System (GPS) technology to help it identify such sites.

Project members monitor over 1,800 nest boxes in five Oregon counties. This season, volunteers equipped with GPS units will log the exact location of each box. The GPS devices provide longitude and latitude information by communicating electronically with satellites in position above the earth.

The GPS information will be entered into a computer and linked with habitat information and bluebird breeding records. Oregon bluebirders then hope to pinpoint places best for bird survival and nesting success.

This project was discussed in an article in the Prescott Bluebird Recovery Project newsletter.

You can help with nesting study

By William P. Mueller

Across North America, a number of cavity-nesting bird species are in decline. These include the Northern Flicker, Red-headed Woodpecker, and Purple Martin. Several other species have shown increases, but still need human assistance to maintain stable populations. One factor implicated in these declines is interference competition for nest sites by European Starling and House Sparrow.

A new study is underway to learn more about the importance of this factor. Participation by members of NABS is welcome.

The project involves observation of existing natural cavities or nest boxes for any native cavity-nesting species. New nest boxes can be built and monitored, with boxes provided for flickers being especially desirable.

The objective is to assess whether and how often starlings or House Sparrows interfere with nesting or take over cavities. I will provide cooperators with instructions and forms for recording observations during the 2004 nesting season. Cooperators should be willing to collect data for two nesting seasons. For information, write to me at iltlawas@earthlink.net or Cavity-nesting Birds & Competition Study, 1242 S. 45 St., Milwaukee, WI 53214.



Using feathers to trick and trap House Sparrows

I think we have all seen that when you remove a House Sparrow nest from a box, feathers and paper trash blow across the ground, and before you can get back to your car the sparrows are busy saving their precious feathers and flying with them to the nest box.

After all these years it never clicked with me to use this habit of theirs to my advantage until the other day.

Our large bluebird trail is in an urban area completely surrounded by a huge poultry operation that feeds grain. This will bring in the House Sparrows. For two weeks (one day each weekend) I had been trying to trap a pair of sparrows that eluded me all last season at this same box (probably different birds).

I had just trapped a female sparrow in a different nestbox filled with enough feathers to make a good pillow. Many feathers escaped the trash bag and were blowing across the highway when the male came sailing back near the box and was frantically grabbing the feathers until he had so many he could barely see to fly.

He went straight to his box and was trapped with the Floyd Van Ert live trap while I was sitting in the truck about 20 feet away.

I immediately went back down the road and began scattering feathers at every trap box. I trapped 16 sparrows in less than two hours. I trapped both of the trap-wary birds in less than 10 minutes.

Neither of these sparrows could resist the white feathers I scattered on the ground under their nest. Both picked up so many feathers they could not see the trap in the nestbox or they did not care. I believe the trick to using feathers is to place them where they will blow away as this puts them in a panic attack mode. I have found that wedging a handful nearby on a fence or close perch will also make them grab them before they blow away.

— Keith Kridler

July 31 is next deadline for *Bluebird*

The deadline for the Fall 2003 issue of *Bluebird* is July 31, 2003. Earlier submissions always are appreciated. The editor prefers to receive material by e-mail (no attachments, please) at two-jays@att.net. Postal address is Jim Williams, 345 Ferndale Road N, Wayzata, MN 55391. Include a self-addressed stamped envelope if you wish return of manuscripts or photographs. Letters to the editor are welcome. Letters may be edited for length and content.

Pennsylvania bluebird group has new president

Joan Watroba is the new president of the Bluebird Society of Pennsylvania. She can be reached by telephone at 717/766-2102, fax 717/790-0586.

E-mail messages keep bluebirders in touch

An e-mail mailing list has been established for persons interested in bluebirds and other North American cavity nesters. It allows you to communicate with other bluebirders and share your bluebirding experiences. This made possible by the Cornell Laboratory of Ornithology.

To subscribe, send an e-mail message to: listproc@cornell.edu

Type your name in the message area where it says "Put your name here." Leave subject line blank.

A mailing list is composed of a group of people who exchange e-mail messages on a subject that interests them (like bluebirds!). When you join a list, everyone on it receives every message posted to that list, delivered to their electronic mailbox. Bluebird-L can be a very active mailing list,

especially during bluebird nesting season. Be prepared to receive lots of e-mails, some of which may not be of interest to you. You can delete the messages that do not interest you.

Another option is to receive all the posts in one large e-mail sent to you once a day. This is referred to as "Digest Format." For more information about the list and its various offerings, visit this link: <http://birds.cornell.edu/bluebirds/joinbblist.html>.

Very important: Because you are receiving e-mails from many sources, please be sure that you have an up-to-date antivirus program installed on your computer.

For more information visit this link: <http://birds.cornell.edu/bluebirds/joinbblist.html>.

Advertise in *Bluebird*

Advertising space in *Bluebird* is available and welcomed. Our rates are reasonable, our audience receptive to bluebird-related products. Here is the advertising price schedule:

- One-sixth page — \$62.50
- One-third page — \$114
- Two-thirds page — \$194
- Full-page ad — \$245

Advertising scheduled for all four issues in a calendar year earns a 15 percent discount.

For more information and to schedule your advertising, contact Lisa Bulick at NABS headquarters, telephone 330/359-5511 or lisabulick@nabluebirdsociety.org.

Two web sites offer much information on bluebirds

The NABS web site at www.nabluebirdsociety.org offers a world of bluebird information. You can find: NABS committee functions and members.

- State bluebird organizations affiliated with NABS.
- Annual convention information.
- How to contribute to NABS.
- Accomplishments of the organization.
- Bluebird fact sheets.
- Nest-box plans.
- Frequently asked bluebird questions, with answers.
- Joining the Bluebird-L e-mail list.
- A park/recreation bluebird management primer.
- The Transcontinental Bluebird Trail.
- NABS nest-box approval procedure.
- NABS-approved nest-box manufacturers.
- NABS corporate sponsors.
- Speakers Bureau information.
- How to apply for a research grant.
- Our bluebirders' catalog.
- Bluebird Events Calendar.
- *Bluebird* Journal, back issues.

The Bluebird-L Reference Guide is a joint project of The Birdhouse Network and the North American Bluebird Society.

The guide is located on a web site. Go to <http://birds.cornell.edu/birdhouse/> and click on Bluebird-L Reference Guide; check other pages as well.

Links provide you with a wealth of information to broaden your bluebird and nest-box monitoring experiences. Many of its links are particularly good for novice birders and nest-box monitors.

You can find information on these subjects and much more:

- Species accounts, and bird id
- Books and pamphlets
- Fact sheets for beginners
- Feeding bluebirds
- House sparrows and control
- Links to favorite bluebird sites
- NABS affiliate bluebird groups
- Nest box plans, specs, and retailers

BLUEBIRDING SUPPLIES FROM NABS HEADQUARTERS

ITEM #	DESCRIPTION	AUTHOR/SOURCE	COST	QTY	TOTAL
B-1	The Bluebird Monitor's Guide	Griggs, Kridler, Berger	\$14.00		
B-2	Bluebird Trails – A Guide to Success	Dorene Scriven	\$12.00		
B-3	The Bluebird Book	Don & Lillian Stokes	\$12.00		
B-4	Enjoying Bluebirds More	Julie Zickefoose	\$4.00		
B-5	Mountain Bluebird Trail Monitoring Guide	Myrna Pearman	\$4.00		
V-1	Bluebird Basics Video	Don & Lillian Stokes	\$12.00		
EP1	Educational Poster & Pocket Field Guide	NABS	\$7.00		
PFG1	Pocket Field Guide	NABS	\$1.50		
EP2	Education Packet	NABS	\$6.00		
SP1	NABS Bluebird Slide Program	NABS –80 slides & script	\$55.00		
T1	Universal Sparrow Trap	Floyd Van Ert	\$11.00		
TBT1	TBT Trails Signs for Nest Boxes	NABS	\$2.00		
TOTAL ORDER					
OH Residents ONLY add 5% Sales Tax					

Shipping Information

Name				
Address				
City			State	ZIP
Phone			Email	
Card Type	Number			Expiration Date

Make check payable to: North American Bluebird Society. Mail your order and check to: North American Bluebird Society, P.O. Box 244, Wilmot, OH 44689-0244. Credit card orders can be mailed, or faxed to: 330 359-5455. You may also place credit card orders by phone Tues - Fri, 10AM - 5PM, 888 235-1331. Ohio Residents add 5% Sales Tax. **All prices include free shipping. We only ship within the USA.**

OTHER SOURCES OF BLUEBIRD RELATED ITEMS

In order to make bluebird nest boxes and related items available to NABS members at the lowest possible cost, we have listed the names of reliable suppliers who sell quality goods at reasonable prices. Contact these suppliers directly; **do not send these orders to NABS**. These companies do not take credit cards. Visit our website www.nabluebirdsociety.org for photos of items listed here.

Nest Boxes, Nest Box Kits, Bluebird Feeder – from Ahlgren Construction Inc.

PRODUCT	DESCRIPTION	COST	SHIPPING	SHIP EA ADD
Peterson Nest Box – Kit Form	Solid Cedar with Hardiboard Sides	\$10.00	\$8.00	\$2.00
Peterson Nest Box Assembled	Solid Cedar with Hardiboard Sides	\$12.00	\$8.00	\$2.00
NABS Style Box – Kit Form	Solid Cedar, side opening, bottom hinged	\$10.00	\$8.00	\$2.00
NABS Style Box – Assembled	Solid Cedar, side opening, bottom hinged	\$12.00	\$8.00	\$2.00
Noel Predator Guard	Wire Cat/Coon Guard	\$2.00	\$6.00	\$0.25
Noel Guard for Peterson Boxes	Wire Cat/Coon Guard w/ Adaptor	\$3.00	\$6.00	\$0.25
Jail Style Mealworm Feeder	Solid Cedar with Dowels	\$12.00	\$7.00	\$2.00

Send check or money order to: **Ahlgren Construction Inc.**, 12989 Otehipwe Ave. N., Stillwater, MN 55082. Cannot ship to a post office box, must have a street address. Cannot ship outside USA. MN residents add 6.5% sales tax. To receive these special prices, put "NABS DISCOUNT" on your order.

Gilbertson PVC and Gilwood Boxes

PRODUCT	DESCRIPTION	COST	SHIPPING	SHIP EA ADD
Gilbertson PVC Nest Box	PVC Box, Cedar Roof	\$12.00	\$7.00	\$3.00
Gilwood Nest Box - Assembled	Cedar, sealed w/ caulk	\$12.00	\$8.00	\$3.00

Send check or money order to: **Steve Gilbertson**, 35900 Dove St., Aitken, MN 56431. Cannot ship to a post office box, must have a street address. Cannot ship outside USA. MN residents - add 6.5% sales tax. To receive these special prices, put "NABS DISCOUNT" on your order.

Cedar Valley Ground Sparrow Trap

PRODUCT	DESCRIPTION	COST	SHIPPING
Repeating Sparrow Trap	Large Wood and Wire Trap	\$45.00	\$10.00

Send check or money order to: **Afton Cedar Works**, 3364 Pennington Ave. S., Afton, MN 55001. Cannot ship to a post office box. Orders must include phone number –required by Fed Ex. Cannot ship outside USA. MN residents - add 6.5% sales tax. To receive this special price, put "NABS DISCOUNT" on your order.

