

# Bluebird

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Winter 2002, Vol.24, No.1



**Mountain Bluebird study: See page 10**



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# From the President

Doug LeVasseur

Who among us will not remember how and where news of the terrorist attack of September 11, 2001, reached our eyes and ears. It has been said that earthquakes are especially frightening because something that we assume is unshakable, the earth, moves beneath our feet. The events of September 11 were to me like an earthquake in my soul. They shook something deep down inside me that I assumed was unshakable. We will never see ourselves, other nations or the world in quite the same way again.

Will something resembling normalcy return to our lives? Yes, without a doubt. Not only because the human spirit leads us there but because there are absolute untouchable parts of our souls having to do with nature that we will build on.

In mid-October I returned to Ohio from Boston and, terrorist or no, the fall colors were as beautiful as ever in the mountains of New York and Pennsylvania. The sunrise across the bottom this morning was spectacular. And, I assure you, terrorists will not deter the bluebirds from returning to our nestboxes next spring.

There were times in recent weeks when I questioned all I have done for bluebird conservation. Have terrorists somehow diminished my work? Are there not more pressing problems in our countries and the world? The answer to the second question is, yes, without a doubt, but I am powerless to make the kinds of changes that would affect us all. The rich, famous, and powerful have a better chance of doing so.

But, I do know that something special happens when people meet

bluebirds. And, as most of you know, it is a profoundly positive experience that brings out the best in people. Introducing people to bluebirds is something I can do and will continue to do. Our work may not change the world, but it will make a difference.

The events of September 11 provided a chance for the people of North America to demonstrate their generosity. And they did so until the Red Cross said, enough. Wow! If there is a negative side to this it is that the needs of many very worthy charitable causes are being temporarily neglected. A program that has provided meals to the elderly of Lower Manhattan for years did not receive a single donation during the two weeks after the attack on the World Trade Center, while millions of dollars poured into the Red Cross and other disaster relief funds. So, especially now, remember to support your favorite charities and causes whatever they might be. Their work goes on, as does ours.

If you choose to support NABS and want to have a barrel of fun doing so, please seriously consider attending the 25th NABS annual convention to be hosted by the Southern Interior Bluebird Trail in Penticton, B.C., this next June. In recent years these meetings have turned into phenomenal events. There is beautiful new country to see, so much to learn, so many bluebirders from all corners of this great continent who will walk the walk and talk the talk of bluebirds with you.

Bluebirding is filled with so many uplifting positive experiences. This is one you just don't want to keep

*Continued on page 3*

# NABS 25th anniversary convention

The Blue Turns Silver June 13-16 in Penticton, British Columbia. NABS members will convene there to celebrate 25 years of bluebird conservation, our silver anniversary. Our hosts will be members of the Southern Interior Bluebird Trail Society. All of the information you need to make plans to attend can be found on the insert in the center of this issue of *Bluebird*. **Pull it out and register now.**

## Wanted: Your participation in FeederWatcher program

Last winter, many people in the northeastern United States and Canada expressed concern about low numbers of Black-capped Chickadees, American Tree Sparrows, and other feeder birds. But had feeder bird populations really declined?

Participants in Cornell Lab's FeederWatcher program helped lab researchers learn that numbers of Black-capped Chickadees and American Tree Sparrows were indeed lower in parts of the Northeast, particularly in November and December, but later returned to more normal levels.

Join the lab's network of citizen scientists. FeederWatchers count the numbers and kinds of birds that visit

their feeders every other week throughout the winter. The \$15 participation fee helps cover the cost of data analysis and the research kit (which includes a full-color feeder bird poster, calendar, and the FeederWatcher's Handbook), online reports and results, and the lab's quarterly newsletter, *Birdscope*.

People of all ages and skill levels are encouraged to participate. Makes a great gift! Call to sign up: 800/843-2473. Visit FeederWatch on the Web at <http://birds.cornell.edu/pfw>.

## — President

*Continued from page 2*

passing up. I feel absolutely confident in promising you four unforgettable days in Penticton this June, and more if you want to stay for a longer visit. Penticton in Native American Salish language translates to "a place to stay forever." Hospitality extended by your fellow bluebirders escapes description. Defy those who would rather see you on the sidelines. Celebrate with your fellow bluebirders on this our 25th birthday: "Join us as the Blue turns Silver."

## Cover photo

*This male Mountain Bluebird was photographed by Michael K. Schwartz. The bird was found in Montana on one of the locations John Citta is using for his study of that species. See his article beginning on page 10.*

## Bluebird

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# A year of progress for NABS

By Lisa Kivirist and John Ivanko

Since joining NABS in 1997, we have not found another organization with members as dedicated to their cause and as committed to the well-being of bluebirds and other native bird species. NABS has been, and hopefully always will be, the unifying force for bluebird conservation.

The bluebirds have reason to warble, indeed. The NABS bluebird nest box approval process, the launch of the Transcontinental Bluebird Trail (TBT), and revision or creation of a host of new educational resources have come about in a short time due to the dedication, enthusiasm, and support of active directors and committee members, and because members like you do what you can for NABS and the bluebirds in your community.

To support programs, educational materials, and outreach initiatives, generous financial contributions have been provided by corporate (Wild Birds Unlimited), non-profit (Natural Area Guardians Jo Daviess County, Illinois, Mountain Bluebird Trails, and Saskatchewan Bluebirders), and NABS members themselves, the latter through donations and generous contributions to the Lawrence Zeleny Giving Circle and NABS Endowment Fund in the form of bequests, and memorial donations.

As a result, the year 2001 has been another exceptional year of accomplishments for NABS, with many new firsts.

- We expanded use of and contribution to the NABS Trail Management and Data Collection web site, now representing over 19,000 nest boxes and 6,000 summary reports.

- We published our first research brief using data submitted by NABS members, this reflecting activity

during the 2000 nesting season.

- We saw development and execution of a new partnership with the National Wildlife Federation (NWF) Certified Schoolyard Habitat Program materials, released to 1,400 school classrooms across North America. The NWF is among the world's largest conservation organizations.

- We successfully launched the Transcontinental Bluebird Trail, with recognition by the White House Millennium Council as a "Community Millennium Trail." Since its launch on May 20, 2000, the TBT has funneled over \$3,000 to NABS-affiliated organizations managing



special Adopt-A-Box trails, garnered widespread media coverage promoting bluebird conservation, and offered an up-to-date Bluebird Trail Directory for the continent.

- We held an exceptional annual NABS convention in Columbus, Ohio, hosted by the Ohio Bluebird Society, which included the first-ever affiliate workshops to further the effectiveness of the bluebirding movement by supporting the enthusiastic network of NABS-affiliated organizations.

- We added six new NABS-affiliated organizations, and made start-up grants to Bluebirds of Iowa Restoration and the Kentucky Blue-

bird Society. NABS is very proud of its 43 affiliates.

- NABS was among several CERES Coalition members to sponsor the CERES Conference 2001, placing NABS among the leaders in the conservation community.

- We produced numerous new educational materials, including a TBT and bluebird conservation poster, and made revisions to the popular Pocket Field Guide for Kids.

- NABS was the co-sponsor and reviewer of the new *The Bluebird Monitor's Guide* (Harper Collins Publishers) by Jack Griggs, Cynthia Berger, and Keith Kridler.

- We developed and launched the new NABS on-line catalog that will permit NABS to accept on-line memberships and product orders through a secure server.

- Through NABS' efforts, there are now in excess of 1,000 manufacturers, retailers, or distributors stocking, selling or building bluebird nest boxes which bear the NABS Bluebird Nest Box Approval sticker or identification (and many boxes include the NABS "Getting Started with Bluebirds" fact sheet). About 150 nest box vendors have received approval for the nest boxes they manufacture.

As NABS celebrates its 25th Year Anniversary in 2002, it deserves reflection on our accomplishments. With your continued support, financial contributions, and dedicated grassroots conservation work, we will usher in another 25 years of effective bluebird conservation, education, and research efforts by this — your — society.

Thank you for all the important work you do.

# How much heat in Peterson box?

## To the editor:

Keith Kridler has been a critic of Peterson nest boxes for many years, ever since he put Peterson fronts on a large nest box and got starlings to use the boxes. However, his recent letter to *Bluebird* (Vol. 23, No.4, Fall 2001) prompts a comment.

He refers to the heat tests his mentor, Harry Krueger, did many years ago and published in *Nature Society News*. What Keith failed to mention was that, according to that article and the accompanying picture submitted by Harry Krueger, he used dark asbestos shingles on those "Peterson" boxes.

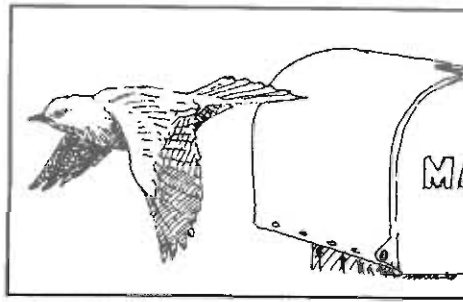
I protested to the change at the time and will continue to when the Peterson box is critiqued but NOT made according to plans.

It doesn't take a degree in physics to realize the difference in heat absorption. And, while the laws of physics are oft times 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 6 p.m.

Keith ignored the fact that the Peterson back — or any nest box — has to be attached to something. While the Bluebird Recovery Program recommends sturdy smooth pipe as the best mount, many boxes are still on fence posts, or on utility poles or even trees (unfortunately, as they are prone to predation there), large mounts which cover a portion of the 2x4-inch backside (of the box).

Keith says an entire side can heat up also, yet there is a large overhang from the 9x12-inch roof over the sides as well as the front.

We have several BBRP members in Texas who use Peterson's or a combination of Peterson and



Gilbertson PVC, and have reordered both from the respective companies who supply them. There are probably over 85,000 Peterson boxes in use around the country, north and south. Do we think everyone should use a Peterson box? *Not at all*. People should use the box they prefer and that works successfully. The 400 to 500 reports we receive each fall reflect all kinds. But when we critique another box, let's be fair and honest.

— Dorene Scriven, *Bluebird Recovery Program of Minnesota*

## It's a matter of geography

### To the editor:

I agree with Barbara Chambers from Virginia when she says Kevin Berner's article "A Comparison of Nest Boxes" (*Bluebird*, Summer 2001) can be very confusing for bluebirders, but for a different reason. I know Kevin Berner teaches at the State University of New York at Cobleskill, N.Y., and his research is done in that area with *Eastern Bluebirds*, which makes it totally irrelevant to people building trails for *Mountain Bluebirds*, but he seldom states this in his articles.

People in Mountain Bluebird country find it very amusing that people in the east are so fascinated by such articles. Many new bluebirders are so confused when they order nest boxes from the NABS catalog that they order one of each style. Articles

like these make good press, but you wonder sometimes how much good they really do the average bluebirder.

I know Art Aylesworth from Montana and Duncan MacIntosh from Alberta argued with Larry Zeleny for years about the box and hole size for Mountain Bluebirds needing to larger. Until his dying day, Zeleny would never accept this fact. Over one-third of the bluebirds fledglings reported to NABS in the 1990s came from the Province of Alberta and the state of Montana (99 percent of the nest boxes used were the NABS style and had a 1-9/16-inch round hole and a 5 1/2-inch square bottom).

Most people in Montana to whom I show the Gilbertson PVC box think it's the cutest wren house they have ever seen. Steve Gilbertson told me in June 1999 his Gilwood Box was too small for Mountain Bluebirds. Steve needs to learn to say, "Eastern Bluebird," too.

The thing that really made the names Zeleny, Aylesworth, and MacIntosh famous throughout North America was not the nest box style or size they used, but their ability to inspire people to join and promote the bluebird conservation movement.

Go back and read pages 8-9 of the summer 2001 *Bluebird* again. The articles to get excited about are the ones written by Greg Tellier and Allison McCormick. That's the essence of bluebirding.

— Bob Niebuhr, *Great Falls, Montana*

## Starling egg in bluebird box

### Dear editor,

I enjoyed reading another NABS magazine, Fall 2001. I might be able to put some light on how and why Larry Coulter of Tennessee found a  
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## — letters

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European Starling egg among bluebird eggs in a slot-entrance bluebird box (page 20).

May 8, 2000, I was observing the behavior of Northern Flickers at my flicker nest box number 2. I saw a starling fly into my starling nest box trap number 2, 20 feet from the flicker box. The trap malfunctioned, and soon the starling flew out with an egg in its beak. I believe the starling flew into the starling trap to lay (dump) an egg in another starling's nest. With no nest in the trap, the starling carried the egg out in search of a nest in which to dump the egg.

In observing my trap, I have seen starlings take minutes before entering it. Other starlings fly in the trap with no hesitation. These birds want to dump an egg and get out before they are caught.

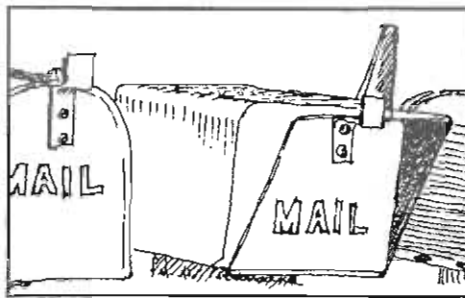
Information from the Internet says that even starlings that can't locate and retain a nest site are able to reproduce. In the absence of her own nest, a female floater may slip her egg into another starling's nest. The unknowing adoptive parents will hatch and raise the chick as their own.

Rutgers University researchers discovered that a third of all starling nests contain at least one dumped egg.

Larry Coulter's bluebird box (most likely) got that starling egg from a female starling floater that did not have its own nest cavity.

In 2000, I trapped 126 European Starlings, and still I never caught enough. Starlings killed four baby Northern Flickers in one of my boxes and carried five eggs from another. The flickers re-nested after I trapped the starlings.

In 2001, I had fewer starlings (the United States Department of Agriculture poisoned thousands of these



birds on a farm 20 miles from here last winter). With four traps, two more than the year before, I caught 63 starlings. With starlings under better control, my flickers fledged 15 young from two nest boxes, seven birds in one box, eight in the other.

— Allen Bower, Britton, Michigan

## Yellowjackets fed on flesh of dead nestlings

Dear editor,

I had a very unusual occurrence this past nesting season, and I am wondering if anyone else has experienced this problem, namely, yellowjackets preying on a nest, presumably killing, but definitely feeding on the flesh of the dead nestlings.

This is what happened. On August 21, 2001, while banding nestlings, I came upon a nest of dead bluebirds that were being devoured by yellowjackets. When I opened the nest box, there were at least 10 yellowjackets in the box, and the dead nestlings were in various stages of being consumed. The innards of one had already been consumed and all the others showed signs that raw pink flesh was being eaten.

The landowners were concerned and mystified. They had checked the nest two days earlier and everything seemed in order. The young were healthy and taking food which was

being furnished by both parents.

Three days later I received a phone call from another bluebird landlord. This second location was perhaps a quarter of a mile from the first nest, as the bluebird flies. He reported that he had checked his nest box in the morning before he left for work and the nestlings were fine, gaping for food and being fed by two males and a female.

When he returned in the evening, he noticed that the adult bluebirds would not enter the nest box, so he checked the box again, and, to his horror, discovered all the nestlings dead, and their bodies being devoured by numerous yellowjackets. He feels certain that the yellowjackets stung the nestlings to death, and then feasted on the carcasses. Since the nestlings were healthy and well fed, this seems like the only logical conclusion.

Has anyone else ever encountered this situation? It is certainly a first for us in over 20 years of monitoring.

— Pat Johnson, 7717 SW 50th Ave., Portland, OR 97219

**(Editor's note:** A search of various web sites produced this information on the feeding habits of yellowjackets: In late summer and fall, when colonies are at their peak, these insects become pestiferous. In their search for protein and carbohydrate sources, they are attracted to garbage cans, dumpsters, lunch counters, and playgrounds, where they scavenge for food. Worker yellowjackets progressively feed larvae a diet of masticated flesh of adult and immature insects, other arthropods, and fresh carrion. It also should be noted that yellowjackets will attack threats or intrusions vigorously. Having no barbs on their stingers, a single insect can sting multiple times.)

# Non-traditional nest-box holes: Disaster or opportunity for bluebirders?

By Kevin L. Berner

For the last 13 years I have been testing traditional bluebird boxes as well as other boxes made in a variety of shapes and sizes using controlled methods to minimize bias or inaccurate conclusions. These tests have helped me identify which types of boxes cavity-nesting birds prefer. It also has allowed me to see if these same boxes exposed nesting birds to threats from predators, weathers, or competition from exotic species.

The tests described in this article were all done within Schoharie County, in east central New York. For many years this county has consistently documented some of the highest bluebird fledging levels of the state. The study areas have been described in depth in previous articles (Berner 1990, 1995, Berner and Pleines 1993).

All of my test boxes were in pairs at approximately five to 10 feet apart. In each pair, one box was a NABS-shaped box with an oval hole. Half of these boxes were paired with a Gilwood box and the others were paired with Troyer boxes. The NABS oval boxes had been the most successful design for many years and, as a result, were selected as the control box.

Bluebirds very strongly preferred Gilwood boxes in both 2001 and 2000 (Table 1). They were used more than four times as often as the NABS box with oval holes that they were paired with. Swallows used more NABS boxes, but this may in part have been because bluebirds occupied the Gilwood boxes before swallows initiated nesting.

Troyer boxes were selected by

bluebirds at approximately the same rate in 2001 as NABS oval-holed boxes, whereas in 2000 Troyer boxes were used about half as often as NABS boxes (Table 2). Swallows showed no preference between Troyer or NABS boxes in 2000, but used twice as many NABS boxes as Troyer in 2001. Wren and House Sparrow use was minimal in all boxes both years.

## Discussion

A recent letter to the editor printed in *Bluebird* raised concerns about my



Photo by Hubert A. Brandenburg

use of nest boxes with holes larger than the standard 1.5-inch round hole promoted by Zeleny and others. My research over the last 12 years has showed that bluebirds show a consistent and significant preference for larger holes such as the oval-holed boxes commonly used in Peterson boxes and the large round holes more

recently designed for the Gilwood box. Dr. W. H. Davis also found that bluebirds preferred oval holes over slot boxes. Previously McComb et al had documented that bluebirds chose slot boxes over the standard round hole.

For years, some traditionalists have frowned upon the oval holes of Peterson boxes, stating that European Starlings can enter these boxes. The (Minnesota) Bluebird Recovery Program consistently fledges one of the highest numbers of Eastern Bluebirds of any state in the country, and the vast majority of their boxes are Peterson boxes. Their nest box reports show use by starlings of these boxes to be exceeding rare in spite of the fact that thousands of them exist across the state.

I have used Peterson boxes successfully for many years, monitoring a cumulative total of 241 boxes, and never once had a starling nest in any of them. I have had anecdotal reports of a limited number of starlings nesting in Peterson boxes in our area; however, in general, starlings will avoid such a small box. I have never heard a report of starlings killing bluebirds to take over a Peterson box as House Sparrows frequently do in any style of nest box.

There is absolutely no doubt in my mind that Eastern Bluebirds in my area prefer Peterson boxes over standard boxes with round holes. I have observed no disadvantage to this box design whatsoever relative to the welfare of bluebirds. The downward sloping front reduces the probability of rain entering these nest boxes, reducing the chances for the young

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# — nest boxes

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getting chilled, which in my area leads to a far higher mortality rate than starlings would ever create in a Peterson box.

Through years of testing, I determined that the key to the success of the Peterson box is the oval hole more than the shape of the box. Davis also observed this in his controlled tests. Bluebirds on my trails have preferred NABS style boxes with oval holes over Peterson style boxes, so I have shifted more of my boxes to this style.

Over six years, I have had the cumulative total of 202 of these boxes in the field. In this time, I have fledged hundreds of bluebirds from them while only once finding a starling nest. When I opened that box the starling could hardly move in it, and was readily captured and destroyed. I never have had another incidence of a starling nesting in these boxes although starlings are ubiquitous on my trails. I do not feel that one freak nesting in 202 opportunities is a problem worth worrying about.

For the last two years, bluebirds have used Gilwood boxes at an even higher rate than the NABS oval-holed boxes. No starlings have used any of these 42 small-cavity boxes during this period. The internal dimensions of these boxes are so small that a starling probably could not build a nest within them. The same would be true for Troyer boxes. I never had a starling attempt to nest in a Troyer box.

As I have stated in many previous articles, I haven't taken lightly the potential for starlings to enter these boxes. My students and I published results of tests designed to determine the starling's ability to pass through a variety of hole sizes commonly used

Box style	Number of boxes	Number of nesting attempts*			
		Bluebirds	Swallows	Wren	Sparrow
NABS oval	20 (41)	7 (11)	13 (29)	0 (0)	1 (1)
Gilwood	20 (41)	22 (47)	6 (13)	1 (1)	0 (0)

\* A nesting attempt is defined as a pair building a nest and laying at least one egg.

**Table 1.** Numbers of nesting attempts in NABS oval and Gilwood nest boxes in 2001, with two-year totals in parenthesis.

Box style	Number of boxes	Number of nesting attempts			
		Bluebirds	Swallows	Wren	Sparrow
NABS oval	20 (41)	12 (29)	14 (26)	1 (1)	0 (1)
Troyer	20 (41)	11 (19)	7 (18)	3 (3)	0 (0)

**Table 2.** Numbers of nesting attempts in NABS oval and Troyer nest boxes in 2001 with two year totals in parenthesis.

on bluebird boxes.

These tests show undoubtedly that starlings can pass through the traditional size oval holes found in Peterson boxes as well as the Gilwood boxes. What my field tests of these boxes show, however, is that although starlings could pass through Peterson or Gilwood box holes, they strongly avoid nesting in these small boxes. I am certain that if I put Peterson or Gilwood style holes on boxes meant for Wood Ducks or flickers, starlings probably would nest in nearly every one of them. They do not seem to want to nest in the smaller boxes in my tests.

Contrary to the suggestion in the recent letter to the editor concerning my work, starlings are competitors, not predators, of bluebirds. There is a significant difference.

The letter writers also compared bluebird preference of large-holed boxes to the preference of children playing in streets. While children are certainly risking their lives as they place themselves in the path of traffic, I have observed no risk of a bluebird nesting in the non-traditional holed boxes.

As long as I find far higher box

use by bluebirds, while observing no detrimental effects, I will continue to test and use these new designs.

Bluebirds probably know their own nesting requirements far better than people do. They expend considerable amounts of energy seeking out and defending potential nest sites. I believe they know what characteristics they need to seek in order to successfully fledge young. It is presumptuous for humans to ignore the strong preferences that bluebirds display, feeling that humans know better what the birds need. Individual bluebirds making poor decisions are quickly eliminated from the gene pool. Their box preferences certainly include some understanding of what risks, if any, a particular cavity poses.

Those expressing their concern in the letter to the editor also expressed their view that NABS founder Larry Zeleny would never have tolerated the boxes that I have described. Zeleny years ago felt that no holes larger than 1.5 inches should be used in any bluebird boxes.

He actively fought against the use of 1 9/16-inch boxes for Mountain Bluebirds in the West. For years Duncan MacIntosh (Alberta) and Art



Aylesworth (Montana) argued for the need for 1 9/16-inch hole for that species. They both noticed that the adult Mountain Bluebirds feeding young would have badly ruffled feathers after removing their heads from nest boxes while feeding. Enlarging the holes on their nest boxes to 1 9/16 inches immediately eliminated that problem. They also noted that Mountain Bluebirds were cramped in 4-inch x 4-inch boxes. Using boxes with 5-inch or 5.5-inch square floors and 1 9/16-inch holes lead to immediately radically higher nest box occupancy.

It is now widely accepted that the 1 9/16-inch hole is more desirable for Mountain Bluebirds.

Some of Zeleny's conclusions were probably based on heavy starling use of large-holed natural cavities and unusually large nest boxes. Since his death in 1995, advances have been made in knowledge about bluebirds and nest boxes. I suspect that, had he observed the data collected in recent years, he would have had an open mind about the new alternatives that are available for bluebirds.

Centuries ago many of the world's greatest scientists warned that sailors venturing too far into the ocean would fall off the edge of the Earth. Columbus and others following him accepted this risk when they left Europe, and then found that the Earth really was not flat. As knowledge of geography has advanced, so will that related to bluebirds.

The final answer to many bluebird questions are not all found in books published 25 years ago. While the letter writers said it was "obvious that these (Gilwood and Troyer) boxes will raise starlings," I have never heard of a case of that happening. If anyone could convince me that this is a problem, I too would recommend that the use of these

boxes be discontinued. If that sort of evidence can't be developed and these boxes are preferred over traditional NABS boxes, they should increasingly be used.

I believe the more important issue relative to starlings is not the size of the hole, but the size of the box. I trapped 57 starlings in my yard this summer. A short distance away bluebirds nested successfully twice in a NABS oval-holed boxes and twice more in a Gilwood box just outside my yard. In 2000, I trapped numerous starlings while bluebirds nested undisturbed in a Troyer box less than 40 yards away. I have seen no evidence that starlings have negatively impacted bluebirds in any of my boxes even as huge flocks of them are found throughout our county.

I base my conclusions about which nest boxes are desirable on my personal controlled research over many years and on the large data sets available from other state groups. Bluebirds Across Nebraska has found that the Troyer box is among their most successful box with no evidence of starling problems. Troyer boxes have a 1 3/16-inch slot, a size shown by McComb et al to exclude starlings.

I feel that as Gilwood boxes have similar exposure, they will be found to be highly attractive to Eastern Bluebirds while seldom if ever being used by starlings.

Variation over box preferences will exist throughout North America. Some boxes that are successful in one area may be less successful in other areas. Individuals with an open mind should conduct additional tests throughout the continent. There is no justification whatsoever at this time for avoiding the use of Gilwood or Troyer boxes based on threats from starlings.

*(Kevin Berner is NABS research chairman and State University of New York, Cobleskill, Associate Professor, Fisheries and Wildlife Technology.)*

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# *Dynamics of Mountain Bluebird populations being studied with help from a NABS grant*

By John J. Citta

Sitting 75 yards from a nest box, I was watching through a spotting scope, waiting for a male bluebird to enter the box and spring my trap. Once I caught him, I would band him, the small aluminum strip with its unique number identifying this bird for the rest of its life. I would also mark the bird with a unique combination of color leg bands to would allow identification of the bird without having to capture it again. By examining the tail and wing feathers, I also would determine the bird's age.

Just then a car pulled up on the road. A woman rolled down her window and said, "You know, they don't always nest in boxes."

Seeing my opportunity to explain what I was doing, I replied, "Yes, many birders believe Mountain Bluebirds prefer to nest in burned forest."

"What are they doing there?" she responded. "I was thinking about *farm equipment*. On our farm the bluebirds once nested in an abandoned tractor."

I spend much time talking to people along my bluebird trails. While everyone is excited to see bluebirds, most are not aware of their natural history or why there are so many bluebird boxes along backroads. As most bluebirders know, populations of Mountain Bluebirds had declined from historic levels. Data from the Breeding Bird Survey (BBS) indicate that abundance of these birds dropped by about six percent yearly across western North America.

Birders responded by creating artificial nest structures (i.e., nest boxes). In my area (Montana), it was

Art Aylesworth and Ervin Davis who spearheaded the recovery effort. They created Mountain Bluebird Trails, Inc., and its members erected a staggering number of boxes. In the 1980s and 1990s, they placed over 60,000 bluebird boxes across Montana. This box program was highly successful. BBS data now show that bluebird populations have rebounded since box programs became common in the 1980s.

While we know that Mountain Bluebirds like to nest in boxes, we don't really understand why these birds declined in the first place. Many ornithologists believe that Mountain Bluebirds are more depen-

dent on forest practices than either Western or Eastern Bluebirds. In fact, data for the northern Rocky Mountains indicate that Mountain Bluebirds are most common in post-fire forests that experienced stand-replacing fire. Stand-replacing fires are those giant forest fires that kill all trees within a stand (or group) of trees. This is the most common type of forest fire in the northern Rocky Mountains.

Why are Mountain Bluebirds so common in burned forests? Two main habitat requirements of Mountain Bluebirds are cavities for nesting and bare ground for feeding. After a large forest fire, bark and wood-boring

## **About the Mountain Bluebird study**

Here is additional information on the study described by Mr. Citta in his article.

Dr. Mark Lindberg, University of Montana Wildlife Biology Program, School of Forestry, recruited Mr. Citta, a Ph.D. student with a Master's Degree in wildlife biology, to do pilot field work during the summer of 2000, including construction and placement of nestboxes in forest sites and continuing leg-banding of Mountain Bluebirds. John has a strong record of publication and dissemination (three peer-reviewed papers and talks at professional conferences).

Banding expertise is being provided by NABS board member Ervin Davis, along with two other sub-permittees who monitor bluebird trails within the designated study area.

Bluebirds were sampled in all patches of forested, burns and clearcut areas this past summer, with work to continue the summers of 2002 and 2003. Annual reports will include preliminary analysis, with final analysis and writing to be completed by May, 2004.

Major funding has been provided by a \$61,839 grant from McIntire-Stennis Research Program. The North American Bluebird Society awarded \$1,000 to the project. Additional assistance has been provided by the U.S. Fish and Wildlife Service in the form of housing at the Ninepipe National Wildlife Refuge at an estimated value of \$300 per month, for 3.5 months in each of the four project years, at a cost-sharing of \$4,200. Funding proposals to other agencies are anticipated.

beetles converge on dead trees that cannot repel the insect invaders with sap and so provide an easy meal.

The beetles eat the wood and lay eggs. Woodpecker species then colonize the area, because they like to eat beetle larvae. These woodpeckers create cavities that they generally use only once and, therefore, are later available for Mountain Bluebirds. Hence, within these burned forests, many cavities are available for the bluebirds. These forest fires also provide ample bare ground. The bluebirds are ground feeders, preferring sparsely vegetated ground for feeding, as this is where they can easily see and capture insects.

It appears that forest fires create habitat that is ideal for Mountain Bluebirds — habitat with many nesting cavities and lots of bare ground.

However, we still don't know why Mountain Bluebirds declined. There are a number of possibilities. It is possible that declines are due to a loss in the amount of burned forest. Since the 1930s, the U.S. Forest Service has been very successful at reducing the amount of wildfire and burned forest. Fire suppression may have resulted in less nesting habitat.

A further complication is forest succession. After a forest burns, it immediately begins to grow back. First, forbs and grasses return, then shrubs and saplings. After five to 10 years, most of the old dead trees fall over and the new young forest takes their place. As the dead trees topple, nest sites for bluebirds disappear. As the ground becomes covered with new trees and shrubs, foraging habitat disappears. A burned forest only provides habitat for a short period of time. Because of forest succession, there must always be new fires to create new habitat.

Fortunately, for cavity nesting birds, we cannot stop all wildfire.

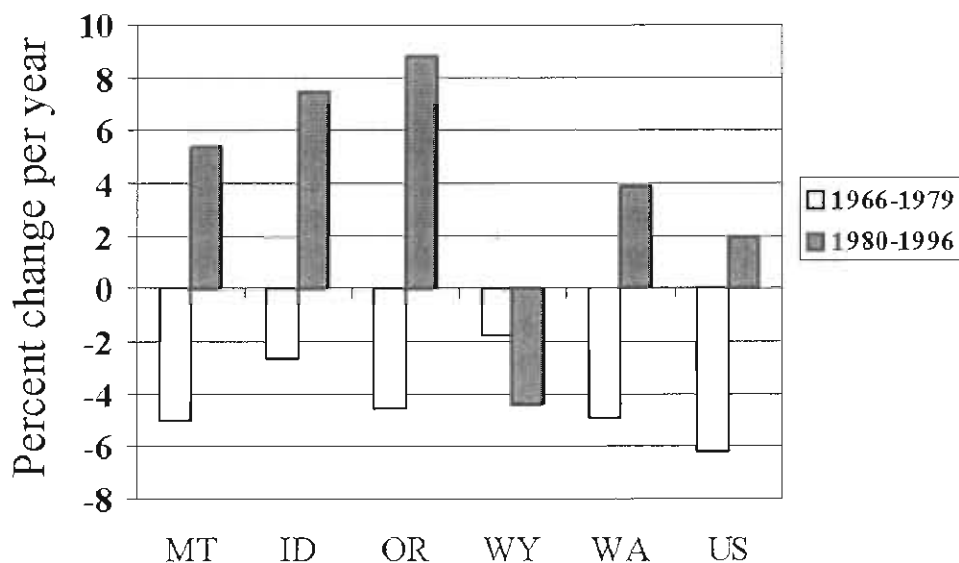


Figure 1. This graph shows historical trends of Mountain Bluebirds based upon Breeding Bird Survey data for four western states and a national average. Bars extending above the baseline represent increasing trends and bars below the baseline represent declining trends. The data are taken from: Sauer, J. R., J. E. Hines, I. Thomas, J. Fallon, and G. Gough. 1999. *The North American Breeding Bird Survey, Results and Analysis 1966-1998. Version 98.1*, USGS Patuxent Wildlife Research Center, Laurel, MD.

Large wildfires burned in the Northern Rockies in 1988, 2000, and again in 2001. These fires should have created new habitat for Mountain Bluebirds and other cavity nesting species, but the suitability of these habitats also depends on how we manage forests after they burn.

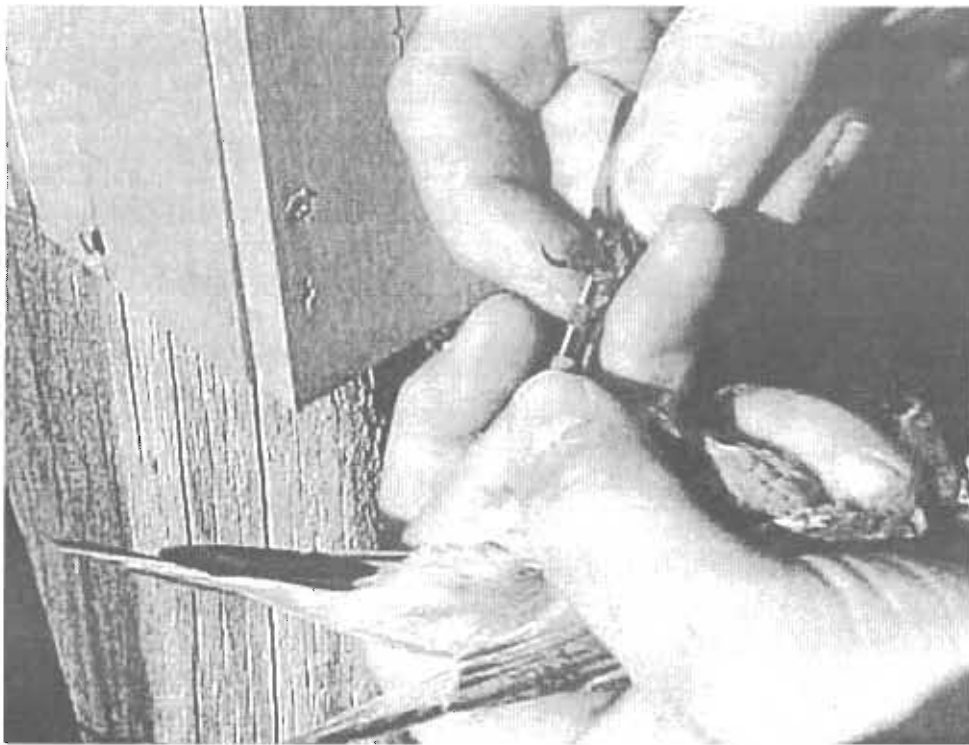
In general, green forests are perceived as a good thing; they are 'healthy' and economically viable. In contrast to this, burned forests often are viewed as being 'destroyed' and are considered an economic loss. Hence, land managers (with public support) often 'salvage' burned forest. Salvage, the logging of burned forest, is the removal of dead trees for lumber. While we do not yet understand the all effects of salvage logging, what information is available indicates that salvage logging negatively affects cavity-nesting birds.

Because cavity-nesting birds directly depend upon dead trees for nesting sites, salvage logging reduces

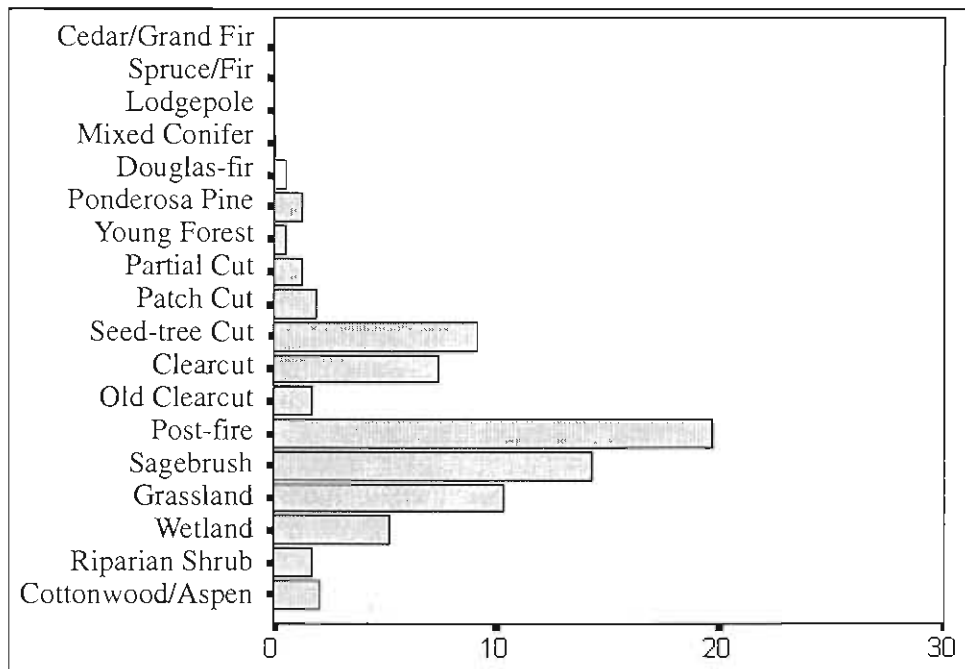
the amount of available habitat. However, salvage logging also may affect how well bluebirds (and other cavity nesting birds) and their nests survive. Because salvage logging alters the climate and structure of a burned forest, there also may be changes in food availability, the predator community, and what species compete for nest sites.

For example, Black-backed Woodpeckers are believed to nest only in burned forest, but they abandon sites that are salvaged logged. From my own work, I am finding that House Wrens may be 10 times as common in salvage logged forest. House Wrens are known to compete with bluebirds for nest sites and to destroy bluebird nests. Other effects may be more subtle.

It is also possible, however, that the declines of Mountain Bluebirds have nothing to do with how we manage land or wildfire. We know that many different things affect



*This female Mountain Bluebird is being banded with color-coded plastic bands so she can be identified as work progresses on the study.*



*Here we chart the occurrence of Mountain Bluebirds on 17,234 point counts in the Northern Region of the USDA Forest Service. High occurrence of birds in agricultural and rangeland habitats is likely due to the erection of artificial nest boxes as there are few natural cavities. Data are taken from: Hutto, Richard L.; Young, Jock S. 1999. Habitat relationships of landbirds in the Northern Region, USDA Forest Service. General Technical Report. RMRS-GTR-32. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 72 p.*

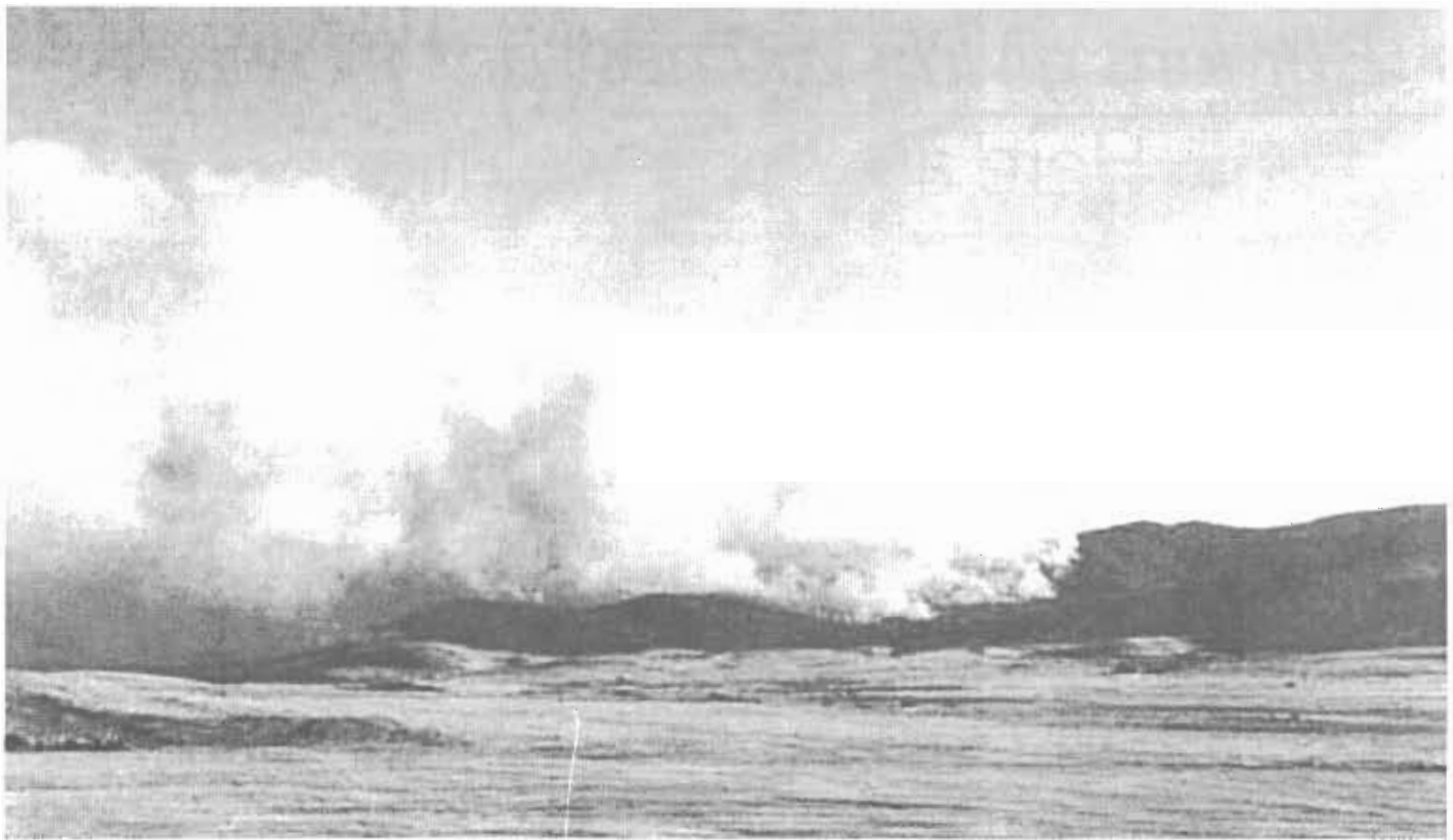
populations of this species. For example, spring snowfalls can kill entire cohorts of nestlings. Furthermore, the bluebirds are migrants (they don't spend the winter in Montana), so the number of birds we see here may have more to do with what is happening on the wintering grounds. In short, nobody really understands what habitats are best for Mountain Bluebirds or what factors determine how their populations grow or decline.

This is where I come in. I am a Ph.D. student at the University of Montana, in Missoula, Montana. I am studying the habitats where Mountain Bluebirds nest and how well they survive, reproduce, and disperse in those habitats.

With the help of dedicated volunteers from Mountain Bluebird Trails, Inc., I am monitoring over 1,000 bluebird boxes in an area over 600 square miles. Within this area, bluebirds nest in habitats that include rangelands (grass and sagebrush), croplands, and burned forests that are salvaged and unsalvaged.

By banding birds and monitoring nests, we collect data on where birds decide to nest, how well they reproduce, and how well they (and their offspring) survive. We also collect data on other attributes associated with individual birds, such as the weather patterns during the nesting season, elevation of the nest site, vegetation characteristics around the nest site, and the nesting history of the bird.

This study will provide information about what factors cause bluebird populations to fluctuate and how our land management practices affect bluebird populations. I am only in the second year of a four-year study, so findings from this project are not yet available. However, as this study progresses, you will hear from me again.



*Forest fires are an important means of creating new habitat for cavity-nesting birds like Mountain Bluebirds.*

I would like to give special thanks to the North American Bluebird Society for providing a research grant. This project would not be possible without the hard work and dedication of Mountain Bluebird Trails, Inc., especially Ervin Davis, Rod Whamsely, and Sid and Carol Titema.

Other agencies and people who have made this project possible include: Burgess Miller Ranch (especially Cliff Gentry), Mort Neiman, United States Department of Agriculture (USDA) MacIntyre-Stennis Research Program, Salish and Kootenai Confederated Tribes, USDA Forest Service and the Lolo National Forest, National Bison Range (U.S. Fish and Wildlife Service), Montana Cooperative Wildlife Research Unit (USFWS), NASA Ph.D. Fellowship Program, and the University of Montana Wildlife Biology Program. Thank-you, all.

*This article is dedicated to Bryan Valett, a naturalist, bluebirder, and friend.*

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# Humans giving you nest-box problems?

## Here are some solutions

By **Jim Williams**

Nest-box predators come in all shapes and sizes. Some wear feathers, some fur, some jeans and a jacket. A recent discussion on the e-mail listserv Bluebird-L offered some solutions for nest-box problems caused by humans.

A network member had written of his nest boxes on a local golf course. "On a tour yesterday afternoon, I discovered several boxes that had been opened, the retaining nails thrown away, some with pine cones in them, etc. I have never had to face this before. With a proposed 10-fold increase in boxes planned for next nesting season, I am just plain worried."

The most frequent answer was to secure the boxes with screws manipulated by not a conventional slot or Phillips configuration but with a recessed square shape in the screw head. Screwdrivers designed for these fasteners are readily available.

Dotty Rogers of the Acton (Massachusetts) Bloobie Group, described her use of these devices.

"Our lock-down screws measure an inch-and-six-eighths," she wrote. "The spinner-opener consists of a 3.5-inch piece of half-inch dowel drilled at midpoint to receive the glued-in chuck-end of the square bit that fits the screws. We paint the handle Day-Glo orange; makes it easier to spot if we drop it.

"We usually use nails in their original holes on our front/bottom-opening NABS boxes in winter for wasp/rodent patrol, but in very early spring, we lock everything up (with the screws). We want folks to get the idea that during breeding season, they

can't get boxes open, period.

"There's a horizontal hole below the nail hole for the lock-up screw. The screws are spun in until the heads are recessed (sit below the wood-surface). When first installing, we Ivory-soap the threads to make things easier in wet weather (swollen wood).

"To open the boxes, we back out the screw head, pinch head/bit with left thumb/forefinger, then spin handle with right forefinger. Zip. Battery-powered drills or screwdrivers work equally well.

"On one previously twice-vandalized box in a recreational park, we installed four of these screws, and next spring, will change three over to fake screws (chopped to 3/4 inch length).

"To discourage folks from yanking up the pole-with-box, we make our pole-hole by pounding a three-foot-long piece of similar pipe into the ground as far as it'll go. Pull that up carefully, and drop in the box-pole. We then hammer a series of foot-long sticks into the ground around the pipe, snug to it. (Break any excess off at ground level). When the pipe can

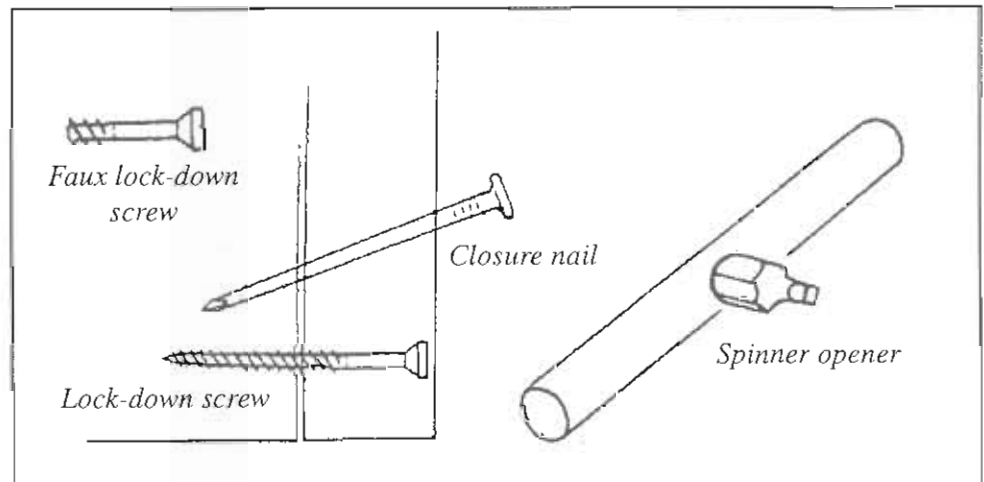
no longer be turned in the ground by hand, we know it's held in place pretty tightly.

"We finish up by painting the poles flat black to give them a nice professional look. We've found really inexpensive spray enamel at K-Mart."

Ms. Rogers and other members of her group also put small signs on their boxes. "The signs are discreet and box-gray; you don't notice them until you're at the box," she wrote. "We didn't want obvious signs that would pull people to the boxes just to read them. The signs are printed on heavy stock, then laminated. We leave a plastic edge and staple there rather than on the sign itself. That keeps moisture away from the paper."

The signs, 2.25-inches square, say: "DO NOT DISTURB. This box is monitored. Bluebird Recovery Program, Acton Natural Resources." A telephone number is included.

"Hanging boxes will keep them out of reach of most human predation," wrote Linda Violet of Yorba Linda, California. "Hanging boxes will enable you to keep the boxes above strong sprinkler systems and



errant golf balls. Hanging boxes under the canopy of trees will keep them cooler in hot climates, and will keep them more visually protected. Tree cover also will provide more split-second protection from diving hawks," she wrote.

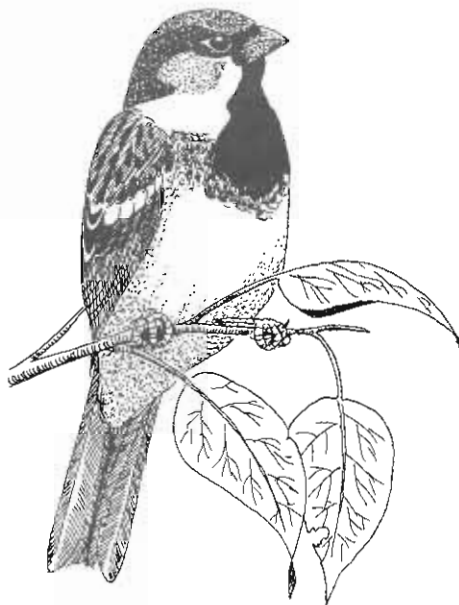
She also suggested that painting hanging boxes in swirl patterns using camouflage colors and splotches of sky blue make the boxes "virtually invisible.

"Out of sight, out of mind," Ms. Violet said.

"The only nest boxes I presently monitor with retaining nails are those in my own yard," wrote Ann Wick of Black Earth, Wisconsin, a NABS board member. "Almost all of my 180 Peterson nest boxes are located along country roads or in county parks. I have secured them for years with a simple hex-head screw. Few people just happen to be carrying a hex-head screw driver with them when they golf/walk. This approach has eliminated human predation on my trails."

Tom Heintzelman of Milton, Florida, suggested well-designed, professional-looking posters placed at two or three strategic locations, like the pro shop, locker room, bar, and luncheon area to present the idea that the nest boxes are part of the total golf club.

He also uses on his boxes copper tags (approx. 1/2 inch by 2-1/4 inch) that say, "Bluebird nest box tampering violates federal law."



## Male House Sparrows love ... *their house!*

**T**here is a quirk in the behavior of male House Sparrows that helps this species compete so successfully with native birds.

House Sparrows have a weak pairbond, meaning they don't form significant attachments to their mates. The bond that seems to be stronger is the male bird's attachment to a chosen nesting site. The male sparrow falls in love with his house, not his favorite girl.

Understand this concept and you realize that the commonly recommended means of sparrow control (removing the nest and eggs) will not deter the male. The lack of success in using this method often frustrates people who are trying to attract bluebirds and other cavity-nesting species.

This bonding behavior is not typical of native bird species. If a bluebird or a chickadee nest containing eggs is disturbed or vandalized, the pair usually leaves the area. The same seems to be true for Tree Swallows and other cavity-nesting species.

The male House Sparrow, however, will continue to stay in the area even after the female has left following the destruction of her nest and eggs. The male sparrow must be removed from the area if the problem is to be solved.

*(This information was adapted for use here from an article published in the North Dakota Game and Fish Department publication Watchable Wildlife Notes.)*

**A** sense of place, to me, is being in touch with the natural world, finding health and balance and renewal in nature and the seasons. If we are in a place that we love, where we are comfortable, where we have invested ourselves, so much the better.

— Jo Northrop, *Country Matters*

# Mites are common in bird nests; affect being studied

By Dr. Robin Whitekiller

Birds serve as hosts to a variety of ectoparasites including lice, mites, flies and fleas. Diverse effects of ectoparasites on host reproductive success have been documented. Some studies have shown no effect of ectoparasites on nestling growth and survival. However, other research indicates that ectoparasites have a negative impact on the quality and quantity of offspring produced.

In a study I conducted on House Sparrows in 1997, I found that mites negatively affected nestling mass and tarsus length. Although chicks fledged equally well from nests with and without ectoparasites, the effects on mass seem likely to influence offspring overwinter survival. Ringsby et al found that juvenile survival of House Sparrow nestlings is positively related to fledgling mass.

Since I began studying Eastern Bluebirds this summer, I have documented mite infestations at two of the three sites I census. A sample of mites has been sent off for identification.

Since finding mites, I have started wearing white gloves in hopes of reducing transmission of these ectoparasites between nests. They allow me to see the mites easier. I check my gloves and anything that has come into contact with the nest box or nest materials for mites after checking each nest. Although these mites are very small, I will see them moving on my gloves. I make sure that I wipe all mites off my gloves, mirror, screwdriver, paint brush, etc., before proceeding to the next box. I also check my arms when I find large numbers of them on the gloves. I purchased some of my gloves at Walmart and others at CVS for about

\$3. They wash well.

These mites become more numerous as the season progresses, so they are more noticeable in June and July. We do not know yet if they can survive in empty nest boxes over winter. I will attempt to find out. I do know that mites in nests placed in Ziploc bags and refrigerated at 4 degrees Celsius can survive for at least two months.

These mites are most likely transmitted by adults and other birds that visit the boxes. They are a normal part of their lives; however, we should do our part to prevent human transmission from box to box.

Once I have accumulated all my data from this summer, I will begin statistical analyses to determine if these mites have any short- or long-term effects on Eastern Bluebird reproductive success.

*(Robin Whitekiller, Ph.D., is Clare Boothe Luce Assistant Professor of Biology at Marymount University Arlington, VA 22207, e-mail robin.whitekiller@marymount.edu. This article first appeared in the October 2001 issue of The Bird Box, newsletter of the Virginia Bluebird Society. It is used with permission of the author and VBS.)*

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## Two web sites on cavity-nesters

Here are two web site with information relating to snags and cavity-dependent bird species.

- [http://www.na.fs.fed.us/spfo/pubs/wildlife/nesting\\_birds/](http://www.na.fs.fed.us/spfo/pubs/wildlife/nesting_birds/).

This contains a Forest Service publication that is out of print. The title is "Cavity Nesting Birds of North American Forests."

- <http://www.fsl.orst.edu/cfer/snags/bibliography.html>.

This is "Habitat Use by Snag-Associated Species: A Bibliography for Species Occurring in Oregon and Washington," an interactive bibliography that allows you to search and print specific citations. You can also print the entire bibliography as a hard copy reference (over 200 pages). Though created for Oregon and Washington (April 2001), it has citations for other states, including California.



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# Tree Swallow pair raises Mountain Bluebird chick in BC

By Kathryn Aitken

As part of my Master of Science research on cavity-nesting bird communities at the University of British Columbia, I monitor cavities and nest boxes near Riske Creek, in interior BC. My research is part of Dr. Kathy Martin's Nest Web Project, which has recorded nearly 1,500 natural cavity nests for 26 species.

This past summer, I observed an interesting case of misdirected incubation and parental care in which a pair of Tree Swallows raised a Mountain Bluebird chick along with their own brood.

A pair of bluebirds began nesting in a box on a fence line in grassland habitat around July 16, 2001 and laid one egg. By July 21, the bluebirds had abandoned or been evicted from the nest, and a pair of Tree Swallows was building a nest beside the bluebird egg.

On July 4, four swallow eggs and the bluebird egg were being incubated. All five eggs had hatched by

July 29, and the four swallow chicks (one smaller than the others) and one bluebird chick were about 10-12 days old.

On August 6, three swallow chicks remained in the box, while the bluebird chick had disappeared. By August 16, one dead swallow chick remained. Based on nestling period estimates for Mountain Bluebirds and Tree Swallows, it is possible that two swallow chicks and the bluebird fledged successfully.

Interspecific chick rearing behavior is rare in this region. Of 114 Mountain Bluebird and 157 Tree Swallow nests monitored since 1995, this is our only observation of misdirected parental care. Because nest boxes are larger than most natural cavities, it is possible that this type of event may occur primarily in boxes.

*(Ms. Aitken is studying at the Centre for Applied Conservation Research, Faculty of Forestry, University of British Columbia, Vancouver, BC, Canada.)*

## New affiliates

By Joan Harmet

NABS welcomes two new affiliates, the Texas Bluebird Society and the American Bird Conservation Association based in Indiana.

The Texas group, under the leadership of Pauline Tom, soon will be making its first statewide membership appeal. Check the society's web site at [www.texasbluebirdsociety.org](http://www.texasbluebirdsociety.org).

The American Bird Conservation Association promotes actively improving the environment, promoting and providing better housing and habitat for native birds, especially bluebirds and the Purple Martin. The ABCA joins two other affiliates in Indiana.

New affiliates are offered the opportunity to receive a NABS start-up loan. Last year NABS was pleased to help the Kentucky Bluebird Society and Bluebirds of Iowa Restoration. This is one place where your dues go to work on a local level.

Jaclyn Hill in Iowa used her funds to purchase a traveling display board easily used around the state. The board is a picture gallery of blue birds (jays, buntings, and bluebirds), photos of workshop and conference activities, and pictures illustrating the five steps of a bluebird trail: habitat, monitoring, predators and guards, record keeping, and reporting.

Bob and Peggy Ivy (Kentucky) bought general office materials that they needed for mailing and membership information. It obviously helped, for their year-old group now has a membership of 283 members in 40 counties. Their web site carries current information. Check out their Classroom Enrichment Program, designed to bring bluebird and schools together in bluebird conservation. Go to [www.bioogy.eku.edu/kybluebirds.htm](http://www.bioogy.eku.edu/kybluebirds.htm).

## Award nominations sought

The North American Bluebird Society annually makes awards for outstanding contributions to bluebird conservation. If you wish to nominate an individual, a group, or someone involved in research for an award, please contact NABS board member David Cook for complete information. You can write him at 831 Gale Drive, No. 21, Campbell, CA 95008, send e-mail to [justdave50@earthlink.net](mailto:justdave50@earthlink.net), or call 408/871-9552.

## Deadline for Spring 2002 issue is Jan. 31

The deadline for the Spring 2002 issue of *Bluebird* is Jan. 31. Earlier submissions always are appreciated. The editor prefers to receive material by e-mail (no attachments, please) at [twojays@sirentel.net](mailto: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.

# NABS is partnering with NWF program

By Stacy Carr

Teaching students about wildlife habitat is a goal shared by the North American Bluebird Society (NABS) and the National Wildlife Federation (NWF). So it seemed only natural that we work together! Beginning this past fall, NABS is partnering with NWF's Schoolyard Habitats program to provide youth and educators across North America with materials to support bluebird conservation.

More than 1,500 schools and other education organizations across the country have made the commitment to help wildlife by creating and restoring essential wildlife habitat. In becoming National Wildlife Federation (NWF) certified Schoolyard Habitats sites, these schools provide local and migratory wildlife with habitat essentials: food, water, cover, and places to raise young. Additionally, these certified habitat projects utilize these hands-on, outdoor classrooms as opportunities to teach, reaching students, educators and community members alike.

After creating a site, participants can then use it to monitor the wildlife they have attracted. With this in mind, NABS developed materials to help students monitor the bluebirds that visit an individual nest box or a bluebird trail on their site. The students can then take the scientific data they collect and share it with NABS and other sites across North America. Funding for the poster included in the bluebird materials for schools was provided by Wild Birds Unlimited.

NWF has encouraged individuals and communities to create and conserve wildlife habitat since 1973,



NATIONAL  
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[www.nwf.org](http://www.nwf.org)™

when the Backyard Wildlife Habitat™ program began. The mission of the National Wildlife Federation is to educate, inspire and assist individuals and organizations of diverse cultures to conserve wildlife and other natural resources and to protect the earth's environment in order to achieve a peaceful, equitable, and sustainable future.

To learn more about NWF education programs and to become a certified Schoolyard Habitats site visit our web site: [www.nwf.org](http://www.nwf.org)

*(Stacy Carr is National Wildlife Federation Schoolyard Habitats program coordinator.)*

## Supplemental feeding may help first and last broods

By Sandy Thixton and Elsie Eltzroth

Western Bluebirds are not unusual near my home (Thixton) south of Philomath, Oregon, one site of many on the Audubon Society of Corvallis Bluebird Trail in the Willamette Valley. Every year there has been at least one pair nesting in boxes on our four acres surrounded by open pasture.

What was unusual was the behavior of the pair that raised three broods during the 2001 nesting season, fledging 17 young. Also noteworthy, this pair had access to supplemental feeding during its first nesting.

I put up more than two dozen nest boxes the first of March, giving bluebirds an opportunity to choose a nest box before the migratory Tree and Violet-green swallows arrived. Twelve of these boxes make up a small village on posts on the fence enclosing a small rectangular garden, a feeder stocked with mealworms and currants, and a birdbath.

A bluebird pair immediately began investigating three or four of the nest boxes located on the fence. The male had been banded in 2000 as a nestling about a quarter of a mile away and sported a Dark Blue (DB) plastic auxiliary band that allowed identification. By the middle of April, the female had built a nest, laid six eggs; he began feeding hatchlings the first of May.

When banding these nestlings, we noticed the male defending another nest box approximately 20 feet away. Looking inside, we saw the start of a

nest. While the female busied herself with this new nest, the male took over full feeding responsibilities for the first set of chicks during the week before they fledged. The male continued to support the six fledglings.

Within the week the female had laid six eggs in the new nest. The banded male eventually brought the group back to the enclosure to investigate the mealworms and currants. They fed there until the second clutch of six eggs hatched.

Again, the pair fed the six nestlings until the week before fledging. The male took over the job while the female started building a new nest in the box first used, which had been cleaned earlier. By the time the second clutch fledged, during the last week of June, the female had once again laid six eggs. The male bird nurtured the fledglings until the third clutch (six eggs, six hatchlings, five survivors) hatched.

The female fed the babies until the week before fledging at which time the marked male shared responsibility for feeding. The family group of seven was observed traveling together in and around the garden throughout the month of August. By the middle of September, more than 15 bluebirds were seen here.

Only a few nest sites on the ASC Trail have been provisioned with mealworms in special feeders. Twenty-five years of data collected (1977–2001) indicate that the success rates of both the first broods and the last broods of each year are enhanced by supplemental feeding for the first brood. This energy supplement has especially helped early breeders to nest successfully during cold or wet weather.

Data show that with early supplemental feeding, second and third broods are common in a given season. Though variable factors (health of adults, weather, competition, predation,

## Electronic bluebirds

NABS now offers *Bluebird* magazine in an electronic form on the NABS website at [www.nabluebirdsociety.org](http://www.nabluebirdsociety.org).

To access *Bluebird*, sign on to the Trail Management and Data Collection web site. Review the issue by clicking on the link “Miscellaneous” in the Trail Management menu.

If you read *Bluebird* on-line you reduce our printing and postage costs, and allow NABS to direct funds into other programs to help the bluebirds. If you wish the electronic version only, send an e-mail to [info@nabluebirdsociety.org](mailto:info@nabluebirdsociety.org) and include your NABS ID number (printed on the mailing label of *Bluebird*). We then will take your name from the postal mailing list.

\*\*\*\*\*

The *Bluebird-L* Reference Guide, a compilation of the best internet resources dealing with bluebirds and nest-box monitoring, has a new look and feel.

Originally created by Haleya Priest and Barry Whitney nearly three years ago, the web site features information on bird identification, predators, House Sparrows, feeding bluebirds, nest box monitoring supplies and suppliers, submitting your nest box data and much more. There is also a “Best of *Bluebird-L*” link, created by Jim McLochlin, where visitors can peruse three years worth of messages, by subject, about bluebirds and monitoring.

Members of both NABS and the Cornell Lab Ornithology’s Bird-nouse Network (TBN) are excited about the new site. It allows TBN and NABS to share information with members of both groups.

Go to <http://birds.cornell.edu>.

\*\*\*\*\*

If you’re searching for the world’s most complete collection of birding books, gifts, and other educational materials, visit the NABS online merchandise catalog, offering a secure storefront where you can order items by credit card. Shop with NABS and build a stronger future for the bluebirds. Follow the link “NABS Online Store” on the left-hand-side of the NABS home page ([www.nabluebirdsociety.org](http://www.nabluebirdsociety.org)).

tion, etc.) may affect results, we could assume that when provided with additional food and sufficient nest boxes from which to choose, a bluebird pair might produce more than one brood.

*(Sandy Thixton, 25258 SW Airport Ave., Philomath, OR 97333. Assisting Ms. Thixton with this article was Elsie Eltzroth, 6980 NW Cardinal, Corvallis, OR 97330.*

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

# Bluebird News from Shore to Shore

Bluebirders at the **Beaver Dam (Wisconsin) Senior Center** late this summer helped local school children erect 14 bluebird nest boxes on the school grounds. The group also furnishes free nest boxes and mounting pipes to local scout troops and church groups for use on bluebird trails in the area.

**Charlie Vaughn** of Lewistown, Montana, turned four old mailboxes into nest boxes by replacing the fronts with wooden panels containing a hole of the proper size. He did this because he thought the metal boxes would be deter predators, according to an article in **Bluebird Trails**, newsletter of the **Mountain Bluebird Trails** organization. Three pairs of bluebirds successfully raised young in his boxes last season.

**Ron Erpelding** of Willmar, Minnesota, reported a first for his trail — a third brood from one nest box. His 25-year count for fledglings passed the 1,000 mark this season. The total is 1,006, according to an item in the newsletter of the **Bluebird Recovery Program (BBRP)**, **Audubon Chapter of Minneapolis**.

From the same journal comes another impressive number: 2,993 House Sparrows trapped over the years by **Eileen Menke** of St. Cloud, Minnesota, has been a member of the **BBRP**.

Back-to-back nest boxes are mounted in that fashion on a single post. Bluebirders have noted this is successful for Eastern Bluebirds and Tree Swallows. A question about this recently appeared on **Bluebird-I**, the e-mail resource network. The response said the back-to-back configuration had the greatest success with bluebirds and Tree Swallows of

various pairing methods studied. If lawn maintenance is a consideration in the area where nest boxes are placed, back-to-backs also lessened maintenance needs.

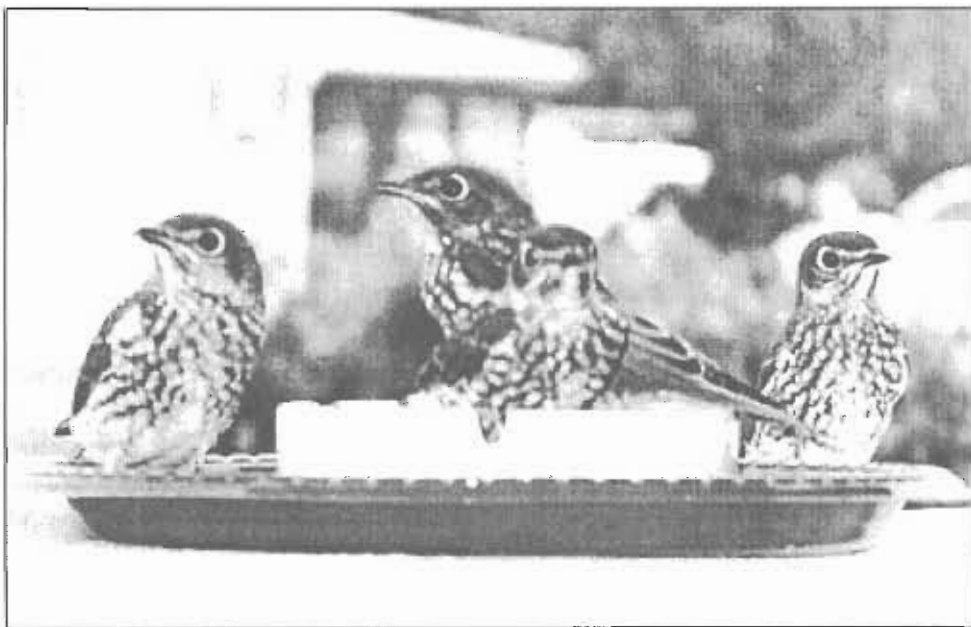
Egg capping happens in bird nests when one or both of the eggshell halves slips over an unhatched egg, preventing the unhatched bird from exit. The bird suffocates or is unable to pip through the double shell. This happens in about five percent of Purple Martin nests. The issue was discussed in a recent issue of the **Purple Martin News**, and recounted in the **BBRP** newsletter. Even though bluebirds are known to remove eggshells, nest-box monitors should check to see that shells are gone and that no egg has been capped. Check also for tiny holes that would be evidence of wren damage. Any egg, it

added, capped or not, should be removed from the nest after the hatchlings are a week old. Broken infertile eggs can foul the nest.

**Dave Richmond**, of Clayton, Idaho, wrote us of big problems with bears. His 22-box trail is in the mountains of central Idaho. His NABS-type boxes are mostly erected on electrical conduit.

“About seven years ago,” he wrote, “I had a black bear break open and consume the contents of one of my boxes of Mountain Bluebirds.” Then, for six years, his only predation problems came from an occasional snake. Now we get to this past summer.

“Just when my blues were getting close to fledging, a young black bear showed up,” Dave wrote. “I actually watched him doing his thing on two



*Sandee and Max Jones of Milton, Delaware, were two bluebirders with ring-side seats last summer. A nest box in their yard produced bluebirds in 2001 for the second year. The bluebird pair soon learned to fetch mealworms from a dish the Joneses set on their porch railing. And then the recently fledged young figured out where the cookie jar was. Ms. Jones caught four of them in the act.*

occasions. He seemed to know just which boxes had plenty of protein in them (birds about to fledge). He would grab the electrical conduit, bend it to the ground, rip apart the wooden box and consume the nestlings.

“At first, I figured it would be an isolated phenomenon, given my previous experience. However, this bear must have been pretty hungry (he was rather thin), because he ended up destroying eight boxes and consuming the little birds I had such great hopes for. And all of the boxes he attacked had poles which I had coated with grease. In all, this bear killed and ate at least 42 young and probably a couple of adults. About half were Mountain Blues and the rest were Mountain Chickadees.

“I’m looking for suggestions to prevent this from happening again. Certainly, next year I won’t be using grease as a predator precaution — it seemed to attract the bear (it smells).”

If you have ideas to share with Dave, call him at 208/838-2431 or e-mail [ssprings@salmoncountry.net](mailto:ssprings@salmoncountry.net).



*Tennessee Bluebird Trails (TNBT) members and officers from across the state met at Audubon Acres bird sanctuary in Chattanooga in August to donate and install a NABS-approved nest box for its trail. One TNBT's goals is to educate people throughout the state about bluebird recovery, assisting members in establishing trails in and around state and city parks. It is TNBT's hope everyone in Tennessee eventually will have the opportunity to see bluebirds on a daily basis, regardless of where they reside in the state. Shown from the left, back row, are TNBT members Troy Ettel, Pat Martin, Jenny Whitehead, Bill Gould, and Regina Garr; front row, Bill Wheeler, Margie Smith, Steve Garr, and Dan McCue. TNBT's web pages are at the site of its corporate sponsor: [www.garrsrentalandfeed.com](http://www.garrsrentalandfeed.com); click TNBluebirdTrail TNBT pages.*

*Nebraska bluebirders Vicki and Jim Christo did not have to open a nest box to check on progress of this bluebird family last summer. The Eastern Bluebirds conveniently built a nest outside a window above a patio door in their home. The nest was easily watched from inches away. The nest was completed atop another nest started by either an American Robin or a Barn Swallow. Five eggs were hatched in early July, and five young fledged. Ms. Christo is hoping for a repeat performance this spring. (Photo by Leland Osten.)*



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