Bluebird

Fall 2004
Vol. 26, No. 4

On the Cover: A Violet-green Swallow near its nesting cavity in the Rocky Mountains at Estes Park, Colorado. Story and more photos on pages 10 and 11.

From the President

Steve Garr

The NABS 27th Convention has come and gone. The convention always gives me a chance to visit with bluebirders from California to Maine, Florida to Canada, and many places between. Many folks meet at the convention once each year to share their bluebirding victories, triumphs, and challenges.

The New York Bluebird Society was a wonderful host. I would again like to thank all of the volunteers for the tremendous job they did. I know each of them put in hundreds of volunteer hours to make this another memorable convention.

At the NABS annual meeting, during the convention, I briefly talked about the direction NABS is taking by working more closely with its affiliates. I believe this commitment is seen each year to a greater extent at the conventions. I was so pleased to see how well the New York, North Carolina, and Texas societies were working together, sharing information and ideas about the upcoming conventions. NABS is the connection between thousands of bluebirders, and as a whole, NABS and the affiliates are as strong or stronger then ever before.

We need to take every opportunity to let others know about NABS and bluebirds. During the NABS board of directors meeting at this year's convention, we discussed how to expand the availability of information on bluebirds. NABS has a very well established "Speakers Bureau" and most of the board are members.

I challenged the board members to all write articles for their local newspapers or magazines to revive the enthusiasm we have fostered for bluebird conservation. Likewise, I also challenge all NABS members and the affiliates to send articles to local newspapers to keep the momentum growing. I ask only that you include the NABS name, address, and web site in your article so those reading it have a contact source for more information.

As always, I thank each of the NABS members for all they do to care for and promote bluebirds.

Give the gift of NABS membership this holiday season!

This holiday season, NABS is offering a Family Holiday Gift Membership Package. With each $30 Family Membership Gift, we'll send (gift wrapped): Stokes "Bluebird Basics" Video (value $10), and the *Bird Watcher's Digest* booklet "Enjoying Bluebirds More" (value $4)

Send to us the contact information for each recipient (name, address, phone, and email). Include a $30 check or money order for each gift. If you include a gift card for your recipient, we'll forward it on in their package. Please include your name and address as well.

Mail to: NABS Holiday Membership Offer, P.O. Box 244, Wilmot OH 44689-0244.

If you prefer to holiday shop online, visit the membership section at www.nabluebirdsociety.org and use the PayPal on-line payment option.

Garr is NABS president; four named to board

Steve Garr of Mexico, Missouri, has been elected president of NABS. The election took place at this summer's annual convention, held in Ithaca, New York. Garr had led NABS in his position as vice-president since the resignation of former president Dean Sheldon,

Elected to serve as first vice-president was Julie Kutruff of Lorton, Virginia. Gary Springer of Carnesville, Georgia, will serve as treasurer. The position of secretary is open.

The officers serve on the NABS board of directors.

Four directors also were elected. Serving three-year terms, they are JoAnn Albert of Allison Park, Pennsylvania, Robert Benson of Stoughton, Massachusetts, Bernard Daniel of Cincinnati, Ohio, and Pauline Tom of Mountain City, Texas.

Mary Ellen Vetter, Minnesota bluebirder who served as chair of the nominations committee said, "We thank our new board members for their willingness to serve in leadership positions for the organization."

The NABS 2005 Nominating Committee will now begin a search for candidates leading to the elections on May, 21, 2005 in Asheville North Carolina. Persons interested in serving can contact Lisa Bulick, NABS executive director, by writing her at P.O. Box 244, Wilmot, OH 44689, or by e-mail at lisabulick@nabluebirdsociety.org.

Berner, Kenney, Heidenreich, Schoharie Society honored

Kevin Berner, former chair of the NABS research committee who served in that post for several years, has received the North American Bluebird Society's John and Nora Lane Award for Outstanding Contribution to the Field of Bluebird Conservation. The award was presented to Mr. Berner at this summer's NABS convention in Ithaca, New York.

Also honored were John Kenney of Greencastle Pennsylvania, David Heidenreich of Colton, New York, and the Schoharie County (New York) Bluebird Society.

Mr. Berner teaches at the State University of New York, Cobleskill. He is a member of the NABS Bluebird Advisory and Transcontinental Bluebird Trail committees. He is very active in the New York State Bluebird Society (NYSBS). He is research chair of that group, serves on the board of directors, was on the organizing committee for the NABS 2004 convention. He is an honorary life member of the NYSBS.

Mr. Berner is past president and current vice president of the Schoharie County Bluebird Society. He has a research trail of around 90 nest hoxes.

Mr. Kenney also received a NABS Bluebird Conservation Award. He is known throughout Pennsylvania and the Bluebird Society of Pennsylvania for his dedication in helping bring back the bluebird. A loyal bluebirder for 25

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For advertising information, contact the executive director.

— awards

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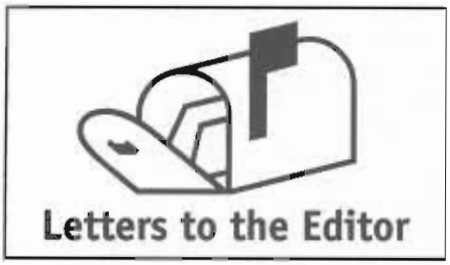
years, he builds nest boxes and includes information on bluebirds and how to care for them. Mr. Kenney presents bluebird programs to help involve more people in bluebird conservation.

Mr. Heidenreich, a member of NYSBS, is president of that organization. Since he became a director of NYSBS, membership in northern New York has tripled, members report. He has been the driving force behind this climb, working to attend meetings and offer clinics, among other activities. He developed the idea of the nest box trail on U.S. Highway 11, through New York from the Vermont border to Pennsylvania. The route contains over 1,000 boxes.

Mr. Heidenreich secures monitors prior to installing nest boxes on this route, stays in touch with the monitors, and finds monitor replacements as the are needed. He collects data from this route after each season. He is involved in other conservation activities as well.

The NABS 2004 Bluebird Conservation Group Award was presented to the Schoharie County Bluebird Society. At the beginning, this organization was driven by the fact that Eastern Bluebirds were on the New York State Department of Conservation "Special Concern" list. Today, there are 4,000 to 5,000 nest boxes in Schoharie County, and within the last 17 years they have documented fledging over 21,000 bluebirds. Groups like the Schoharie County Bluebird Society are responsible for the recovery the three bluebird species have made.

Kevin Berner was honored by NABS for his work in bluebird research and for his many contributions to bluebirding in New York state. He received the society's John and Nora Lane Award for Outstanding Contribution to the Field of Bluebird Conservation.



Letters to the Editor

Reader disagrees with comment on use of trap

To the editor,

Steve Eno's comment (*Bluebird*, Vol. 26, No. 3) on the use of the Van Ert starling traps in kestrel nest boxes does himself and his reputation an injustice. His conclusion that the traps are safe is based on his very limited experience with those particular traps and with American Kestrels, while the opinion of John A. Smallwood — that the traps could easily injure kestrels — is based on a life's work with kestrels and must be considered seriously.

To emphasize, John A. Smallwood holds a Ph.D in zoology. His thesis work for his master's degree, and his dissertation research earning him his Ph.D., were studies of free-ranging kestrels. After earning that degree he established a large-scale (600+ nest boxes) kestrel research and conservation program while research manager at the Department of Wildlife and Range Services, University of Florida.

Currently he is a faculty member at Montclair University in New Jersey, and maintains 250 or so kestrel nest boxes in the northwestern part of that state. He also is author of numerous published articles pertaining to kestrels, and co-author of the American Kestrel volume in Birds of North America (Vol. No. 602, 2002. A. Poole and F. Gill, eds.). His opinion is sufficient to say that the traps, as they are, are unsafe to use in conjunction with kestrel nesting.

I believe that it would have been better if Mr. Eno, rather than endorse the use of the traps through publication, had directed his comments and questions to Dr. Smallwood, who, after examining one of the traps, expressed strong reserve about the use of such traps due to their excessive spring tension and the fragility of kestrels.

Further, Mr. Eno's conclusion that the trap is safe is based on a comparison of the starling trap (tension = 5 or 6 springs) to the related sparrow trap (tension = 1 spring), and to a use in conjunction with Wood Ducks (body mass = 700+ g) being comparable to a use with kestrels (body mass = 86-165 g). Such a conclusion is without merit.

I must say also that in the preparation of the article that was referred to by Mr. Eno (*Bluebird*, Vol. 26, No. 1), I reviewed all personal communication that I had regarding the starling traps — communication with Mr. Eno, with Van Ert Enterprises, and with John A. Smallwood — and feel that I acted appropriately and responsibly by including the statement about the traps.

— John R. Hickerson, 15 Slate Pencil Hill Road, Newton, N.J. 07860

Use of trap has support here

To the editor,

I would like to respond to Dr. A. Smallwood's comments about not using the Van Ert in-the-box starling trip (*Bluebird*, Winter 2004, Building an American Kestrel Box). He said that use of such traps could easily injure kestrels.

Three seasons ago, I developed the Bower starting trap mechanism for my starling nest-box traps. It has the strength of four (pieces of) one-inch measuring tape. It flips out and up like the Van Ert trap. I trap over 100 European Starlings a year with this trap, and have had no injured starlings.

The Van Ert sparrow trap (with one coil spring) is one of the in-the-box sparrow traps that I use. It has not injured a single House Sparrow of over 40 caught.

The Van Ert starling trap designed for kestrel boxes, for a three-inch entrance, has three coil springs. The Van Ert starling trap for Wood Duck boxes, for a 3x4—inch oval entrance, has four coil springs. The extra springs are necessary to keep the strong starling from opening the trap and escaping the nest box after being caught.

I own all three of these Van Ert traps. I screwed these traps to a 2x8 15-inch board so the traps were solid. I repeatedly set the traps off against my hand. I even moved my hand back so when I set off the trap it would have momentum before hitting my hand. I don't believe the Van Ert starling traps are strong enough to harm a 3.5 to four-ounce kestrel if it was hit in the rump by the trap.

If a starling takes over a nest box, normally the friendly bird does not often get back in that box. That's when we humans have to use the Van Ert traps, especially in towns, where firearms can't be used.

I believe these traps are safe without worry of them harming kestrels, other friendly birds, or starlings when those birds are caught.

— Allen Bower, 213 N. Main St., Britton, MI 49229

Dr. Smallwood comments on the trap issue: See page 7.

Ornithologist comments on spring-loaded traps

Dr. John A. Smallwood is mentioned in a letter to the editor on page 5 (and in earlier issues) as a critic of the use of in-box traps in nesting boxes for American Kestrels. Dr. Smallwood is considered an expert on the kestrel. He is co-author with Dr. David M. Bird of the American Kestrel monograph (No. 602) in the Birds of North America series. He was invited by the editor to comment directly on spring-loaded traps. Here are his remarks.

By Dr. John Smallwood

Last year I received a Van Ert starling trap as a gift from John Hickerson. The trap attaches to the inside of a kestrel nest box and functions much like a mousetrap; three torsion springs accelerate a rectangular flap through nearly 180 degrees until it snaps against the inside wall, blocking the entrance hole.

My first impression was that the trap, although well constructed, was greatly (and unnecessarily) overpowered, and could seriously injure a kestrel. I expressed this reservation to Mr. Hickerson, and he incorporated it into a letter published last winter in Bluebird.

That letter apparently sparked considerable interest. As I have not previously written anything about a Van Ert trap, I thank Jim Williams, editor of Bluebird, for inviting me to do so now. Here I report what I have found upon close examination of the Van Ert starling trap.

I mounted the trap inside a typical kestrel nest box — 1x10-inch lumber; interior dimensions: floor 7.75x9.5 inches (19.5x23.8 cm), entrance hole 8 inches (20.6 cm) above floor. The trip bar, not quite horizontal when the trap was armed, was just over 4 inches (11 cm) above the floor and extended just over 4.5 inches (11.7 cm) into the box.

As the trip bar covered slightly less than 10 percent of the floor space, there was ample room for a kestrel to enter the box and miss the bar. There was 4.75 inches (12.1 cm) between the bar and the back, continuous with 3.8 to 1.4 inches (9.8 to 3.6 cm) of space between the bar and the side or door.

Once in the nest box, a kestrel could easily trip the bar while attempting to exit, and very likely would be struck by the flap with great force.

I measured the speed of flap rotation with a video camera (30 frames/sec); flap rotation occurred over a mean of 67 milliseconds (four tests; the flap always closed in less than 0.10 sec). I measured the amount of force near the end of flap rotation by laying the nest box on its back and suspending a 5.9-gram glass marble in the middle of the entrance hole with a thread sling. It was positioned so that the marble would be struck by the flap during the final fraction of an inch (3.5 mm) of its rotation. The marble was propelled upward a mean of 1.88 m (1.76—1.98 m, n = 5). Thus, the amount of energy imparted by the closing flap was 0.11 joules, or a force of 31.02 newtons.

While these values should satisfy the physicists reading Bluebird, for those who don't typically think in newtons or joules (including me), I also broke some objects with the trap to investigate its strength. These included some toothpicks, a clarinet reed, and a 3-inch (7.5-cm) length of balsa wood (roughly a quarter-inch, 7x6 mm, cross section) which I judged was stronger than a kestrel humerus (the largest bone in a bird's wing).

I believe the trap may be capable of breaking the tip of my little finger, but I am not willing to test that hypothesis.

Two aspects of the Van Ert trap design warrant discussion. First, it has an automatic trigger (which cannot differentiate target and nontarget species), so the operator cannot control its release.

Second, and more importantly, the spring mechanism far exceeds that necessary to close a flap over an entrance hole in an acceptably short period of time. This could be mitigated by using fewer and/or weaker springs, and by reducing the mass of the flap.

For example, the small mammal "Sherman" traps I use have lightweight aluminum doors under far less spring tension. Alternatively, one might consider an entirely different design, such as a dowel or flap that drops into place by gravity, blocking the entrance hole when a restraining clip is unlatched manually by pulling an attached thread.

The worst scenario I imagined was if the trap were used in an attempt to capture a female kestrel after the eggs hatched, when she frequently enters the box to deliver food. Upon arrival, adult females typically land on the front of the box and peek through the entrance hole, which in turn stimulates the nestlings to beg. If their motion trips the trigger, easily within reach, the flap would strike the female's face, causing severe (and no doubt fatal) injury.

Obviously, the trap should not be used on active kestrel boxes. While there were no specific operating instructions or safety warnings with the trap I received, I assume that Van Ert Enterprises does ship a comprehensive list with their products.

As with any field technique, I encourage ornithologists — and bluebirders — to carefully consider all potential risks by evaluating the probability and severity of unwanted consequences against the value of the information gained, and whether less risky alternative methods would be as effective.

— John Smallwood, Department of Biology and Molecular Biology, Montclair State University, Montclair, NJ 07043.

A dozen bluebirding myths

By E.A. (Bet) Zimmerman

MYTH: You can put up a nest box and forget about it.

REALITY: Bluebird boxes should be monitored at least weekly to check on progress and control house sparrows, blowflies, paper wasps, and to remove unhatched eggs, etc. Boxes need to be cleaned out after nesting (see next myth). At least annually, you should also replace any split, rotten, or broken pieces on boxes that could let rain in and chill nestlings.

MYTH: Bluebirds will remove old nests from a nest box.

REALITY: Bluebirds will not typically clean out old nests by themselves. They may build a nest on top of another nest, but this promotes disease and parasite infestation, and may increase the likelihood that a predator will be able to reach in and nab eggs/nestlings that are closer to the entrance hole. You should remove nests as soon as the young fledge (birds in the North begin another clutch an average of 17 days later, in the South 26 days), or if nesting fails (since they may try again in one to seven days), to encourage another brood. Put nests in the trash to avoid attracting predators. If mice nest in the boxes over the winter, clean the box out before bluebird nesting season starts.

MYTH: If you open the bluebird box, or touch the nest or babies, the parents will abandon the nest.

REALITY: Don't worry that monitoring will make the parents desert the nest. Most songbirds have a poor sense of smell. Bluebirds are very tolerant of human presence. Touching the nest or birds will not make the birds leave — your mother just told you that to keep you from harassing them.

MYTH: House Sparrows won't bother bluebirds or their nests.

REALITY: House Sparrows are probably the number-one enemy of bluebirds. Unlike European Starlings, House Sparrows are capable of entering the 1.5-inch round hole of a nest box. You might think they're cute (some bluebirders refer to them as "rats with wings"), but they will attack and kill adult bluebirds (sometimes trapping them in the nest box), and destroy eggs and nestlings. House Sparrows are non-native invasive pests not protected by law. House Sparrow nests, eggs, young, and adults may be legally removed or destroyed. It is better to have no box at all than to allow House Sparrows to reproduce in one.

MYTH: If you don't have problems with predators on the trail the first year, you never will.

REALITY: It may take time for raccoons, cats, and other predators to discover nesting areas. Unless you don't mind finding broken eggs, abandoned/dead babies, or a pile of blue feathers, install guards to keep predators from raiding nests (e.g., a two-foot-long, eight-inch-diameter capped stovepipe or PVC pipe sleeve on the pole, mounted loosely just under the box).

MYTH: If you don't get bluebirds in your nest box/trail the first year, you never will.

REALITY: It may take several years for bluebirds to find your nest boxes and choose to use them. Don't get discouraged if bluebirds don't nest in your boxes the first year. In the meantime, your nest box can provide a home for other delightful, cavity-nesting native birds, such as Tree Swallows, chickadees, and Tufted Titmice.

MYTH: It's too late in the year to install a nest box because bluebirds have already started laying eggs.

REALITY: It's never too late to install a nest box. In some areas, bluebirds will raise two to three broods. If a nesting attempt fails, they may move to another box. Bluebirds and other birds like Downy Woodpeckers may also roost in nest boxes during the winter.

MYTH: Bluebirds prefer to nest in boxes mounted at eye-level.

REALITY: Eye-level is convenient placement for human monitors. Bluebirds will nest in, and may even prefer, boxes that are eight to 20 feet off the ground. However, it is perfectly fine to mount a box at eye level (as long as you use a predator guard) — it won't deter bluebirds, and will facilitate routine monitoring.

MYTH: You should collect earthworms and put them in a feeder for bluebirds.

REALITY: Bluebirds love mealworms, but should not be fed earthworms. The baby birds' undeveloped stomachs

If you look closely, you can see the tail of this Eastern Bluebird female as she broods a second clutch. Her box is just under five feet off the ground.

apparently can't handle earthworms because of the dirt castings in the worms' gut. Eating earthworms (sometimes used as a source of food by bluebird parents during bad weather, when nothing else is available) can cause severe diarrhea, which can result in dehydration and starvation. Also, bluebirds rarely eat bird seed — 68 percent of their diet is made up of insects: grasshoppers, crickets, beetles, spiders, and caterpillars. They also like fruit from plants like flowering dogwood, holly, mulberry, wild grape, Virginia creeper, pokeweed, and viburnum.

MYTH: Plexiglas roofs/holes in the roof/extra light in boxes will keep House Sparrows out of boxes.

REALITY: Unfortunately, this is not so. A change may deter House Sparrows temporarily, but they will nest in these boxes, and in gourds suspended on wires, evergreens, barn rafters, etc. An open-topped box (Bauldry) is no longer recommended due to concerns about wet nests and hypothermia.

MYTH: Bluebirds were on the brink of extinction, but now they are back and don't need your help anymore.

REALITY: Bluebird populations declined by an estimated 90 percent from 1920-1970, threatened by competition from introduced species (House Sparrows and starlings), loss of open space and nesting cavities (bluebirds can't excavate their own holes), increased pesticide use, and climatic events. While Eastern Bluebird populations are now increasing due to conservation efforts, Western Bluebird populations are not. And none of the issues that caused the decline has really gone away. Without assistance from people like you, bluebirds will continue to have difficulty surviving and thriving.

MYTH: Bluebirds behave the same way, all the time, everywhere.

REALITY: Eastern, Mountain, and Western bluebirds in different areas behave differently and show different preferences. The same birds may behave differently as they age; seasons, climate, and conditions change from one year to the next. Some people who aren't following any of the "rules" still successfully fledge amazing numbers of bluebirds year after year. So do whatever works in your area!

Note: Special thanks to the members of the Bluebird-L for their help in compiling this list.

E. A. (Bet) Zimmerman maintains a small bluebird trail in Woodstock, Connecticut, and a bluebird website at http://www.sialis.org. She is a member of NABS and the Massachusetts Bluebird Association. She can be contacted by e-mail at ezdz@charter.net or elizabeth.flores.for.90@aya.yale.edu.

Violet-green Swallow nest in Colorado

Violet-green Swallows are a species of the west closely related to the Tree Swallows common in the eastern half of the North American continent. Adults show a beautiful emerald green color on their backs and a slightly different facial pattern than Tree Swallows, with white seen above the eyes. These birds also have a white saddle visible when they are in flight.

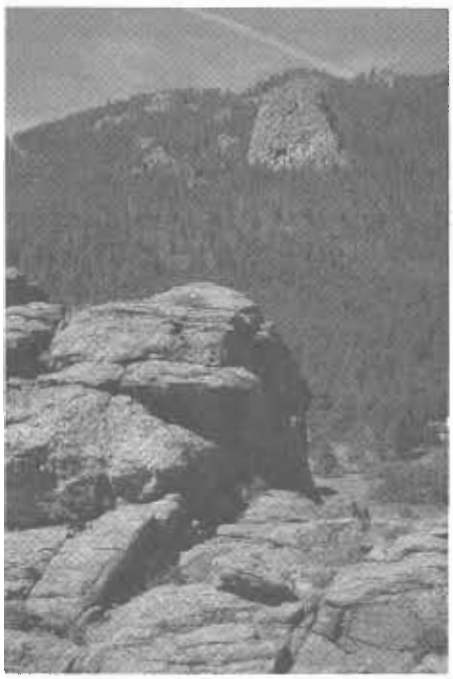
Like Tree Swallows, Violet-green Swallows nest in cavities. They will use nest boxes. And, like all cavity nesters, they will use natural cavities when they are available. They will nest in woodpecker holes, other tree cavities, old Bank or Cliff swallow nests, cracks or crevices in buildings, and in holes in cliffs or crevices in rock outcroppings.

It was in the latter that I discovered a pair of nesting Violet-green Swallows near Estes Park, Colorado, in July. These photos offer a look at the nesting site these birds chose. Violet-green Swallows usually lay four or five eggs, hatching occuring after 13 to 15 days of incubation. They are single-brooded. They are believed to feed exclusively on flying insects.

Interestingly, in spite of being widely distributed in the west from Alaska south in Central America, where they winter, less is known about this species than any other North American swallow species. This statement comes from the *Birds of North America* monograph (No. 14, 1992) by C. R. Brown, A. M. Knott, and E. J. Damrose.

The monograph says there is no information available on historical distribution, fossil history, control of migration, nutrition requirements, food selection and storage, nonvocal sounds, cooperative breeding, brood parasitism, immature stage, life span and survivorship, current population status, and need for species management.

— Jim Williams



LEFT TOP: One of the adult Violet-green Swallows lingers just outside the nesting cavity before entering to feed the young within.
RIGHT TOP: The swallow flies away to search for more food.
LEFT BOTTOM: The rocky outcropping in which the nesting crevice was located.
RIGHT BOTTOM: One of the swallows flexes its wings atop the nesting outcrop. The elevation here was just over 9,000 feet, the location on the outskirts of Estes Park, on the eastern edge of Rocky Mountain National Park in Colorado. (Photos by Jim Williams)

Box color is found to have some impact on box temperatures: Upainted or lighter is better

By Rebecca A. Beale

There are various points of view about whether bluebird nest boxes should be left unpainted or which colors are most desirable. Boxes painted with light colors will reflect sunlight and the interior should remain relatively cool. It is suggested that painting the outside of nest boxes with dark colors will cause lethal temperatures and lead to the destruction of eggs or young bluebirds.

However, there is not much data available to support that dark boxes, especially those painted black, actually reach temperatures that cause overheating.

In a recent study, nine bluebird nest boxes were mounted on metal fence posts exposed to sunlight. The boxes were all created by a local Audubon society, closely following a design proposed by the North American Bluebird Society (NABS). The side-opening boxes were made of western cedar.

Ambient temperature was measured by mounting a temperature probe to the back of each nest box. Internal temperature was measured by placing a temperature probe approximately one inch above the center of the floor in each nest box. Hardware cloth was placed over the entrance hole to prevent birds from occupying the boxes during the study period. Temperature was recorded to at least the nearest .001° Celsius every half-hour for 24-hour intervals. (Editor's note: Temperatures have been converted to Fahrenheit.)

The data was collected from March 9 to July 18, 2004, about once per week and divided into six equal intervals. These TI-T6 intervals, described here as time (T) intervals one to six, along with corresponding times, are as follows:

TI: 6 a.m. to 9:30 a.m.
T2: 10 a.m. to 1:30 p.m.
T3: 2 p.m. to 5: 30 p.m.
T4: 6 p.m. to 9:30 p.m.
T5: 10 p.m. to 1:30 a.m.
T6: 2 a.m. to 5:30 a.m.

The boxes were numbered 1 to 9 and erected in groups of three at a height of three feet, 10 inches from the ground. The distance between individual boxes in each group was five feet. The distance between groups of boxes was 45 feet. In each group, the order of boxes was black, white, and natural wood color. Boxes 1, 4, and 7 were painted black; boxes 2, 5, and 8 were painted white; boxes 3, 6, and 9 were left unpainted. Exterior latex paint was used on the black and white boxes.

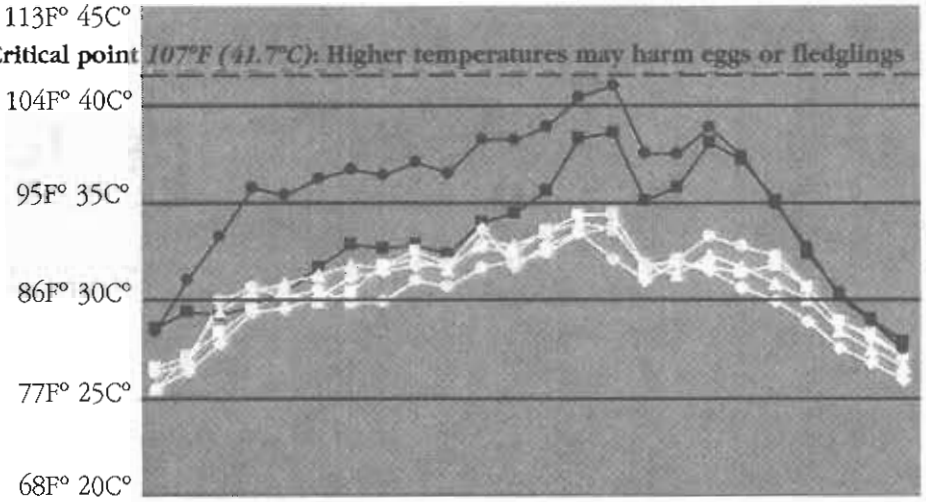
The northeast-facing nest boxes were mounted in Warsaw, Virginia, a rural area located on the Northern Neck. The exact location in Richmond County is N 37° 58.431, W 76° 51.390.

A statistical program was used to perform a computer analysis of temperature variation in the boxes. Nest-box color was found to be not statistically significant in this study. Due to the fact that there were only three boxes of each color used in this study, the power of this statistical test is low. Though not statistically significant, the black boxes did seem to show greater increases in temperature than white or natural colors, especially during the second (10 a.m. to 1:30 p.m.) and third timing periods (2 p.m. to 5:30 p.m.) intervals.

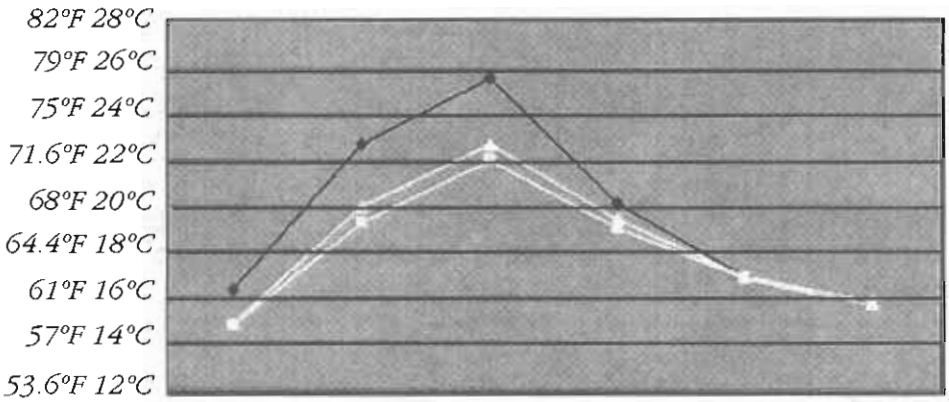
The scientific literature on Eastern Bluebirds, beginning with Dr. Larry Zeleny in 1968, states that temperatures above 107F (41.7C), may cause harm to eggs or nestlings due to overheating. None of the boxes in my study ever reached that maximum critical temperature.

The hottest day of data collection was July 9, 2004. Figure 2 shows temperatures of Boxes 1 to 6 during a 12-hour interval on this day. Some data was not included in order to make a more simplified version of the graph. As the graph shows, Black Box 2 reached temperatures close to the critical temperature during the mid-afternoon hours.

Since the internal temperature of a nest box is a determinant of nesting success, it is worthwhile to examine the optimal thermal characteristics of such structures. In this study, the exterior color of the boxes did seem to have



Data collection on July 9, 2004, 9 a.m. to 9 p.m. The two top lines (black) represent the temperatures measured inside black boxes 1 and 2. The other lines represent temps inside two white and two natural boxes. You can see that the temperatures in the black boxes reached higher points than did temperatures in the other boxes. None of the boxes reached the critical temperature of 107 degrees Fahrenheit, the point at which eggs or nestlings are subject to loss. But one of the black boxes came close. The peak temperature was reached at approximately 4 p.m.



Average internal temperature of the boxes being studied is shown on this graph. The top, black, line represents the black boxes. The middle line represents the unpainted boxes. The bottom line represents the boxes painted white. The average temperature of the black boxes peaked at about 77F° (just below 26°C) during the 2 p.m. to 5:30 p.m. measurement period.

an influence on the internal temperature of the boxes during time intervals in which the boxes were exposed to direct sunlight; however, the statistical tests showed no significant difference between colors.

It can be suggested that black boxes are likely to get too hot, especially during summer months, to be tolerated by eggs or young nestlings. It also should be noted that these data may underestimate actual incubation and brooding temperatures since occupied boxes would likely have higher temperatures than the unoccupied boxes used in this study.

It was expected that white boxes would be found to be the coolest; however, there was not much difference between white and natural wood colored boxes during each time interval. Since white boxes are more easily perceived and may be targets for vandalism, perhaps it is best to leave boxes unpainted. On the other hand, painted boxes are advantageous in that they offer more durability.

Readers who would like to see the scientific paper from which this article was drawn can find it on the Internet. The site contains all of the charts and graphs prepared to accompany the text. The address is http://www.math.vcu.edu/NSF_Grad_Teaching_Fellows/fellowsprojects.htm.

This project was done by Ms. Beale to fulfill a Masters degree requirement through Virginia Commonwealth University in collaboration with the University of Virginia. Ms. Beale has been involved in a fellowship program in which funding was supplied by the National Science Foundation.

Acknowledgements: Special thanks to Randy Bell and Steve Thornton at UVa., Dave MacEwen at UMW, Aimee Ellington at VCU, and Norman Howe at RCC for advice and assistance with this investigation.

Use of rebar and conduit for box mounting poles credited for tripling production on Wisconsin trail

By Pat Ready

When I took over the bluebird trail at Lake Kegonsa State Park (Wisconsin) last spring, all the houses were mounted on wooden posts. Predation from raccoons, cats, chipmunks and the like was prevalent despite the wire guards mounted on the front of each box.

I decided to mount all of the existing houses on conduit as well as any new boxes I added to the trail.

The conversion to conduit was easy. First, I attached a 2x2-inch of wood on the back of the box, near the top. The bottom of the block has a 3/4" hole drilled part way into it.

Next, 1 pounded a four-foot piece of rebar into the ground about half way. I slide a five-foot length of half-inch electrical conduct over the rebar.

I hang the nest box on the conduit, making sure that the conduit fits into the hole drilled in the block of wood. I secure the box to the pole using a clamp (that fits over the conduit and screws to the wooden box).

By the end of summer, I had 28 nest boxes in the park (thanks to a Girl Scout Troop that donated 10 new ones). Five pair of bluebirds nested twice through the summer.

The total number of bluebirds fledged was 34 compared to nine the year before. Nine eggs were lost from two nest boxes early on before I converted them to conduit. I also converted 12 nest boxes to conduit for Dorothy Haines who monitors the trail at Lake Farms Co. Park near Madison.

I definitely recommend conduit for a mounting post. It stopped most of the predation that plagued my trail.

(Thanks to Don Bragg, editor of Wisconsin Bluebird, newsletter of the Bluebird Restoration Association of Wisconsin, for permission to use this article.)

These photos were taken of a different nest box employing the same pole mounting system that Mr. Ready describes. You can see how the electrical conduit slips over the rebar to ground level and is secured with a conduit clamp. The top of the conduit slips into a hole drilled into a piece of wood secured to the back of the box. In this case, the box is a Gilbertson PVC model. Conduit mounting also is highly recommended by the designer of this box, Steve Gilbertson of Aitkin, Minnesota. (Photos by Jim Williams)

Study identifies nest-cavity predators

Woodpecker nests in British Columbia are examined

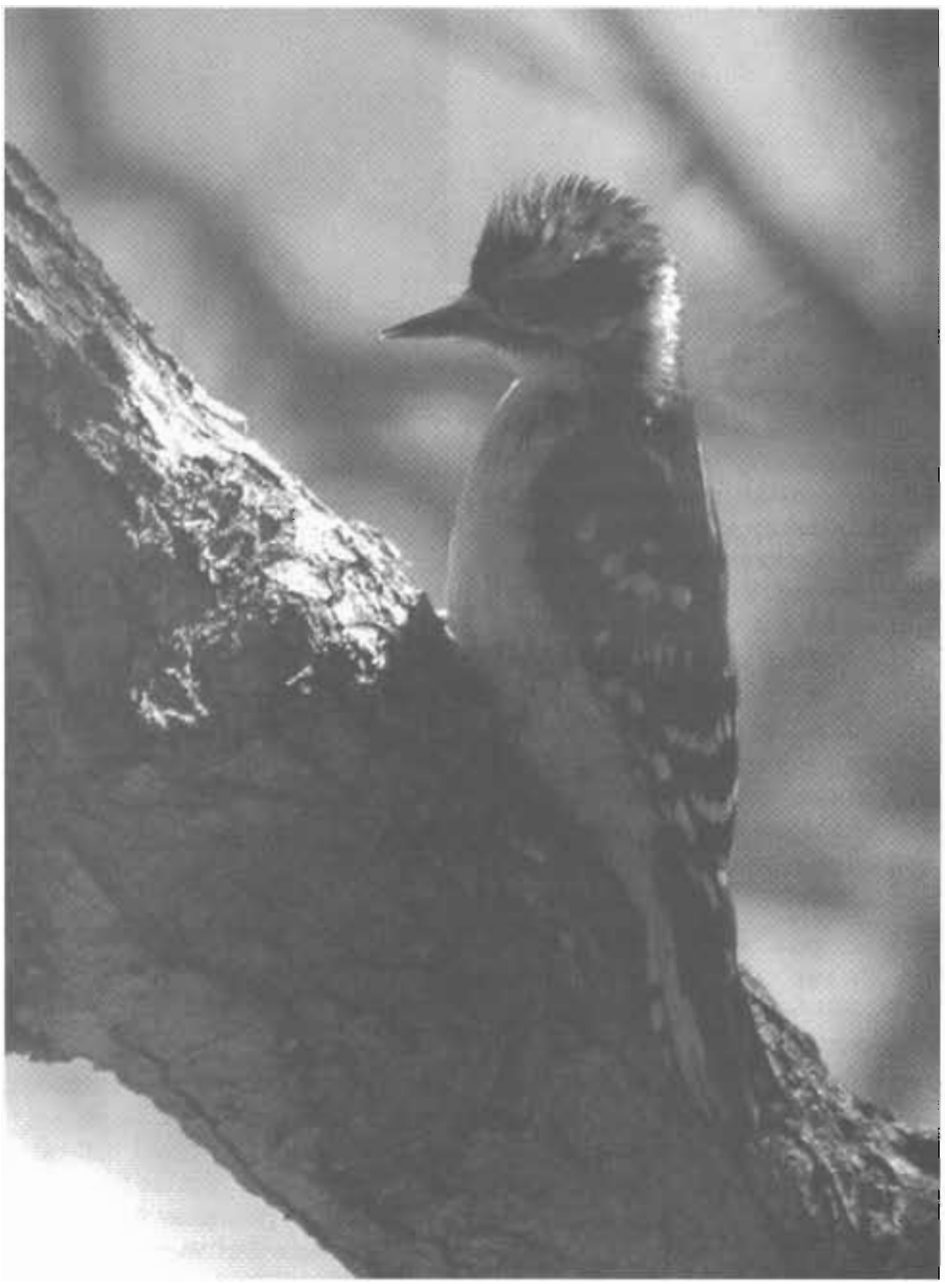
By Eric L. Walters

Why have cavity-nesting species evolved the habit of nesting in tree holes? Many observers have suggested that cavities in trees afford the inhabitant a refuge from predators.

Cavity-nesting birds come in many shapes and sizes, ranging from Wood Ducks and Pileated Woodpeckers to Pygmy Nuthatches and Carolina Chickadees. To investigate one element of the effectiveness of a cavity-nesting lifestyle, Ted Miller and I conducted a five-year study of the effect of predation on six species of woodpeckers at Hat Creek in south-central British Columbia. The birds chosen for the study were Downy Woodpecker, Hairy Woodpecker, Red-naped Sapsucker, Williamson's Sapsucker, Pileated Woodpecker and Northern Flicker.

All of these species are either primary or facultative excavators that nest within cavities. Primary cavity nesters create their own cavity by excavating a hole in a tree while facultative excavators may excavate a cavity or they may simply use a pre-existing cavity. By contrast, secondary cavity nesters do not excavate but, instead, rely on other species to do the work for them. The species chosen for this study also all vary in the entrance diameter of their cavities.

The Downy Woodpecker, Hairy Woodpecker, Red-naped Sapsucker, Williamson's Sapsucker, and Pileated



A freshly fledged Downy Woodpecker: This bird survived the predators that hunted near its Minnesota nesting cavity. Note the incomplete head feathers.

Woodpecker excavated their cavities in living quaking aspen trees. There was a propensity for Northern Flickers, a weak cavity excavator, to build their nests in softer trees (i.e., those that were dead or heavily infected with heart rot) or to enlarge cavities made by smaller woodpeckers in previous years.

We discovered that several types of predators were responsible for nest losses in Red-naped Sapsuckers, Northern Flickers, Hairy Woodpeckers, and Williamson's Sapsuckers. From a total of 239 nests monitored during the study, we found 23 cases of nest predation. Determining the predator responsible was relatively easy in some cases (some of the predation events were directly observed) and extremely difficult in others.

For example, we observed four nests where a black bear had clearly depredated the nest and eight others where the attempt was unsuccessful. Associated with this type of predation were bear claw marks on the trunk as the bear climbed up to the nest and claw and teeth marks around the hole as the bear attempted to rip open the cavity. In fact, about 40 percent of nest trees in the study area yielded older bear claw marks on the trunk where bears had climbed up to the nest entrance, compared with only four percent of trees without cavities. Clearly, bears are able to detect which trees harbor nest cavities, even nests higher than 48 feet (15 meters).

We observed a Deer Mouse in a Northern Flicker nest. The mouse had climbed to the cavity and had smashed and eaten the contents of six eggs. We suspected similar predation in two other nests. As far as I am aware, Deer Mice have been recorded from only one other cavity-nesting species — Prothonotary Warblers — and never from woodpecker nests. House Wrens were observed usurping Red-naped Sapsucker nests by throwing the eggs to the ground or filling the cavity with sticks while the sapsucker chicks were still in the cavity. We found a dead adult sapsucker in a Cooper's Hawk nest.

This Red-naped Sapsucker was photographed in Glacier National Park in early May, as nest sites were being chosen and pairs formed.

(Photographs by Jim Williams)

Not all of our predation events were easily attributed to a specific predator. In 12 cases, we observed half-eaten adults or chicks in or at the base of the cavity. These predation events took place at night and were discovered early the next morning. In some cases, small hairs were found at the cavity entrance; no tooth marks ever were present.

We attribute these nest losses to weasels. Hairs found at the entrances seem consistent with a weasel, based upon our examination of museum specimens. The predator must be formidable in order to attack and kill adult male (the sex that roosts with eggs or chicks) woodpeckers in cavities at night. Cavity entrances to sapsucker nests are only about 1.5 inches (4 cm) wide so the predator would have to be small to gain access.

Furthermore, we found that nest trees where we found predation that we attribute to weasels tended to be in two distinct parts of our study area, and similar predation events in those areas were observed from year to year. Research by others has shown that members of the weasel family can learn the location of nest sites and tend to visit those sites from year to year.

Other likely predation candidates include red squirrels or northern flying squirrels. However, we had several nest trees where squirrels and sapsuckers lived in different cavities on the same tree without predation.

Secondary cavity nesters face an even greater predator challenge because cavities they choose usually have larger cavity openings. Many of these secondary cavity nesters (e.g. Great Crested Flycatchers) will flush from the cavity if a predator approaches, even at night. Conversely, many of the primary cavity nesters tend to hunker down in the cavity or use their bill to attack predators attempting to enter the nest. Weak cavity nesters like Northern Flickers also tend to flush easily. It has been my experience that the larger the cavity opening, the more likely it is that the occupant will flee.

Through the use of recent technological advancements, remote cameras can now be placed at nest entrances to record predation events. Using this technology, it may then finally be possible to conclusively determine the culprits of predation events where little evidence is left, especially for those predators that attack at night.

(Eric L. Walters can be reached at the Department of Biological Science, Florida State University, Tallahassee, FL 2306-1100, ewalters@bio.fsu.edu. More details on this study can be found in Walters, E.L. and E.H. Miller. 2001. Predation on nesting woodpeckers in British Columbia. Canadian Field-Naturalist 115(3):413-419.)

2005 convention site: Asheville, North Carolina

NABS 2005 convention will be in Asheville, North Carolina. The dates are May 19 to 22. The host hotel is the Great Smokies Holiday Inn SunSpree Resort (One Holiday Inn Drive, Asheville, NC 28806, 800/733-3211).

This hotel is undergoing a complete renovation and its name will change to the Crowne Plaza in April, 2005. Reservations can be made at a discounted rate of $89 by mentioning NABS 2005.

The host organization, the North Carolina Bluebird Society, is working hard to make this a convention of great speakers, good workshops, and a chance to be active during your stay.

The Biltmore Estate is the major attraction of Asheville. This house is advertised as the largest home in the United States and has been featured in several movies. It is surrounded by gardens, park area and farmlands. Its bluebird trail has been maintained for at least 15 years.

One Biltmore tour will include the North Carolina Arboretum with five theme gardens of Southern Appalachian heritage. A second tour will visit the Biltmore and the Folk Art Center featuring locally made items.

The third tour, North Carolina Mountains, will take in some of the magic of the mountains and the "cradle of forestry". It was George Vanderbilt who initiated the work that became the U.S. Forest Service.

Views of the mountains can be enjoyed from almost everywhere in the Asheville area. Two interstate highways bring you here from north, south, east or west. The city has an airport 20 minutes away. Charlotte, N.C., is within two hours driving time, Greenville, S.C., within one hour.

The people of Asheville are actively preserving their downtown area. A Trolley Tour shows you some of the historic sites of Asheville.

Information concerning NABS 2005 along with a registration form can be found on www.nabluebirdsociety.org and www.ncbluebird.com. The latter links to www.exploreasheville.com.

Inquiries for additional information should be directed to Helen Munro (hsmunro@ac.net, 910/673-6936), Chuck Bliss (cbliss@triad.rr.com, 336/625-5423) or Bill Abbey (336/766-5857; 3626 Tanglebrook Trail, Clemmons, NC 27012).

Oct. 31 is next deadline for Bluebird

The deadline for the Winter 2005 issue of *Bluebird* will be Oct. 31, 2004. 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.

Bluebird News from Shore to Shore

"Last fall I decided to try a back to back box, not knowing if it would work or not, but thought it worth a try. So I built one," writes **Loren Hughes**, president of the **East Central Bluebird Society** of Illinois. Mr. Hughes mounted his boxes at the local golf course. He first found a Tree Sparrow nesting on one side of the pair of boxes, then an Eastern Bluebird in the other. The swallow laid six eggs, the bluebird five, all within about four inches of each other. Mr. Hughes used his own modification of the slot box, The design can be found at web site http://audubon-omaha.org/bbbox/nestbox/hughes.htm. The design has NABS approval, Mr. Hughes writes. His e-mail address is suziq@comwares.net.

From **Minnesota** comes this story, posted to an e-mail birding list by **Paul Gunderson** of Elk River: "Yesterday afternoon I was looking out my kitchen window when a male Eastern Bluebird landed in our front yard with a small (four to five-inch) Red-bellied Snake dangling from its bill. He had the snake by the head and it appeared to be dead. The bluebird smacked the snake against the ground a couple of times and took off toward an open area beyond our small orchard. I went outside but was unable to relocate the bird to observe whether or not (or how) the snake was actually eaten. The Red-bellied Snake is quite common in our area of Big Lake Township in Sherburne County. I have seen it taken by American Kestrels and Red-shouldered Hawks but never by bluebirds or other small songbirds."

A NABS member has been named Volunteer of Year by the Downers Grove Park District in Illinois. **Richard Hospers** monitors bluebird nest boxes and works as a natural Areas Volunteers there, beginning his work in 2000. He holds a master's degree from Northern Illinois University, has earned both the ornithology and the naturalist certificates from Morton Arboretum, and is a member of the DuPage Birding Club. Richard, an Elmhurst resident, was a high school biology teacher at Proviso West High School for more than 25 years and also spent time as a paratrooper with the 101st Airborne.

Eastern Bluebirds in the north lay more eggs per clutch than their kin in the south, according to a recent study by the **Cornell Lab of Ornithology**. Using information gathered by its Birdhouse Network members, Lab scientists report that the number of eggs produced per clutch varies with latitude. But while birds in the south lay fewer eggs per clutch, on average, a longer breeding season can allow them to nest more often. The research showed that the number of nesting attempts per box was 26 percent higher in the south.

Want to build a nest box attractive to House Sparrows (a question asked with tongue in cheek)? In an article in **The Bluebird Monitor**, newsletter of the Ohio Bluebird Society, **Dr. Wayne Davis** of the University of Kentucky, described the perfect box for sparrows as "anything deep, either vertical or horizontal, or something with a protective tunnel entrance. The all-time favorite for sparrows is a round hole with the wooden predator guard, and six inches or more deep," he said. Dr. Davis offered these comments as he remarked on a recent box design by Terry Glanzman of Ohio. Mr. Glanzman worked from plans developed by Dr. Davis for a shallower box. Glanzman has named his box the K (for Kentucky) box. The K-box, by the way, is mounted on electric conduit over rebar (see page 14). Dr. Davis, in his remarks, called the Gilbertson PVC box "almost sparrow-proof." The Gilbertson box he tested was modified to create a 2.5x1.25-inch slot entrance four inches above the floor and mounted no more than five feet off the ground.

There is a contest in **Montana** to see who spots the first returning Mountain Bluebird. **John Denton** had the early report in 2002, finding two birds in his yard on Feb. 1. **Bev Stiger** was first in 2003, her sighting coming on Jan. 30. This year, the early date was Jan. 24, a sighting by **Kent Rice**. The sightings keep coming earlier and earlier.

When you cook with eggs, save the shells for the birds. So says **Grace Storch**, chair of the **Bluebird Recovery Program of the JoDaviess County Natural Area Guardians** in northern Illinois. Dry the shells for a day or two, then bake them in a low-temp oven (avoid scorching), to thoroughly dry them and kill possible salmonella. Then, crush the shells very finely. A rolling pin works well. Scatter the shell bits on bare ground where the birds can see them. The calcium is important to female birds as they prepare to lay eggs.

John W. Thompson of **Hutchinson, Minnesota**, is the first recipient of the Dick E. Peterson award for outstanding contributions to the **Bluebird Recovery Program** (BBRP) in Minnesota. The award is given by the BBRP. It is named for the designer of the famed Peterson nest box.

The **BBRP** at its convention in May also agreed to encourage use of metal

For the last three years a pair of White-breasted Nuthatches has nested and raised chicks in a nest box on Bob Niebuhr's bluebird trail south of Stanford, Montana. This year, the birds moved into the nest box next door and laid five eggs. When Dee Wendt and Bob monitored the trail in early June, the first egg was just hatching. Later, Pam Schmidt and Bob visited the box to get a picture of the nestlings for the Montana Bluebird Trails newsletter. When they opened the box there was only one nestling, and to their amazement it was an albino. Albinism occurs infrequently in most bird species. Partial albinism — in which only some features of the bird are white, in either a splotchy or symmetrical pattern — is more common. The feathers of totally albino birds are uniformly and completely white. Albinism is most often due to the emergence of a recessive gene. It can be transmitted parent to offspring. Albinism also can appear in individuals hatched with normal genes, occurring as a malfunction of body chemistry. Albinism is most often recorded in waterfowl, raptors, quail and pheasants, crows, thrushes, swallows, blackbirds, and certain species of finches. Thanks to Bob Niebuhr for sending us the photo.

mounting poles for nest boxes. At its next convention, in April 2005, every nest box sold will be accompanied by a smooth metal mounting pole offered at half price. The BBRP will pay the other half of the cost. (*See article on page 14.*)

Do you offer **mealworms** to your bluebirds or other birds coming to your yard? Studies show that insects — and mealworms are the larvae of insects — contain 13 times more protein and have 1.5 times more energy per unit mass than fruits.

Heat problems in your nest boxes? **Temporary shade** can be created with an old umbrella, with a leafy branch fastened to the nest box pole, with aluminum foil fastened to the roof, or with zipper plastic bags filled with water and frozen, then laid atop the box. Better yet is an extra large roof with overhang spaced above the box roof. These ideas come from the BBRP newsletter. The ice idea came from **Kathy Steward** of **Pennsylvania**.

A new bluebird society has been formed in **Maryland**. Its first meeting was in March. For information, contact **Fawzi Emad**, 20900 Sunnyacres Road, Laytonsville MD 20882, e-mail femad@comcast.net.

The **Indiana Bluebird Society** is now offering its newsletter, *Bluebird Flyer*, electronically. It will be available by e-mail or as a PDF download from the IBS web site.

In **Wisconsin**, tinsel wands used as party favors, help keep House Sparrows away from bluebird nest boxes. The wands are taped to the box post, above the box, after egg laying begins. The tinsel flutters in the wind, and seems to offer protection from sparrow predation. The idea comes from **Rose Bragg** of Ladysmith. Thanks to the **Bluebird Restoration Society of Wisconsin** for sharing this idea.

Grant Eastman, 16, of **Kearsarge, New Hampshire**, son of Steve and Sarah Eastman, and nephew of NABS member **Dave Eastman**, has been working on a nest-box project for the past two years as a member of Boy Scout Troop 150 of North Conway. Subscribing to the idea that we all must think globally and act locally, Grant and fellow Scouts have put 20 boxes in place for Eastern Bluebirds and Tree Swallows. Grant has adopted the project as part of the requirements he must meet to earn Eagle Scout status.

Bluebirds are among those species that must move or starve when winter food becomes scarce

Food supply is critical for all bird species that spend the winter where the weather can turn cold and foul at short notice. Bluebirds are among those birds vulnerable to the vagaries of changing weather. Birder Bob Fisher of Independence, Missouri, recently offered these observations on the e-mail network Birdchat.

• • •

The idea that any bird can make it through a winter if there is enough food has its limitations. "Enough food" may involve copious amounts of a very specialized diet. According to (one authority), the Eurasian Goldcrest (a bird of Europe and Asia) must find an insect on average once every two seconds to make it through the day. Likewise, the North American Golden-crowned Kinglet survives by gleaning large numbers of dormant insect larvae from spruce needles. These birds seem to know how to find copious amounts of their particular target food by constant activity in the right places. The insect larvae they need evidently are usually present throughout the winter in their preferred northern habitats.

Other more opportunistic species may discover an adequate food source in a particular location and die when it runs out. Or the supply may suddenly become insufficient to sustain them when a severe cold snap occurs. Or, as is probably the case with some of the hummingbirds that linger around feeders, a food source that will get them through the day cannot get them through the night.

In Missouri, where I live, we usually have lots of Eastern Bluebirds (our state bird) around during warm winters. But they are "half hardy" species. When it gets very cold, most of them disappear. Perhaps they migrate south just before the cold front arrives, but there is evidence that many may perish.

Sometimes sizeable groups are found dead huddled together in a bluebird house when the temperature suddenly gets below zero for a week or two. Others may die and not be found. In either case, a sufficient food source may suddenly have become insufficient.

In those years, Eastern Bluebirds that were genetically predisposed to migrate south in the fall make it through the winter, while those who were tempted to stay by a lingering food source may not survive.

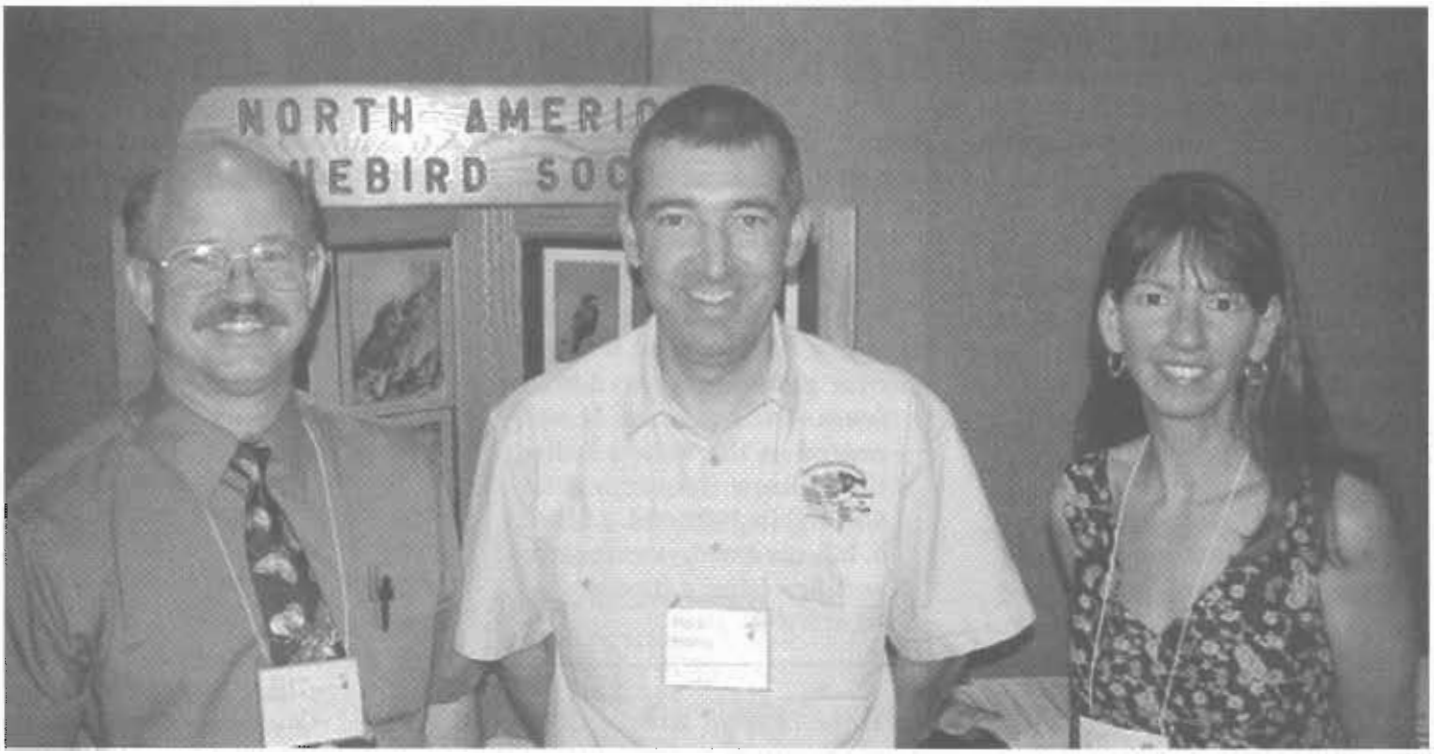
(Mr. Fisher can be reached by e-mail at bobgfisher@comcast.net.)

Eastern Bluebirds can survive wintery weather as long as an adequate food supply is available.

(Drawing from the Mountain Bluebird Trail Monitoring Guide. Used with permission of Red Deer River Naturalists.)

Michigan Bluebird Society Fall event set for October 2

The Michigan Bluebird Society's annual Fall event will be Oct. 2 at Fenner Nature Center in Lansing, Michigan, from noon to 3 p.m.. The center is at the corner of Mt. Hope Avenue and Aurelius Road. Dean Sheldon, former NABS president and long-time bluebird activist in Ohio, will be the speaker. For information call 517/750-4085 or e-mail mibluebird@excite.com.



The gift of an informative bluebird display from Partners in Flight (PIF) was accepted on behalf of NABS by President Steve Garr left, and Executive Director Lisa Bulick. In the center is Steve Eberly, who made the gift presentation for PIF.

Partners in Flight presents traveling display to NABS

By Robert Miltner

If you were at the NABS Convention in Ithaca in July, you probably recall seeing the impressive display by Partners in Flight placed near the NABS display table. You'll be seeing a lot more of that display because Chris Eberly of Partners in Flight generously donated the display package to NABS at the conclusion of the meeting.

Partners in Flight was launched in 1990 as a cooperative effort involving federal, state, and local agencies as well foundations, industry, conservation groups and individuals who were concerned about declining populations of many landbird species. The organization is one of the program sponsors for International Migratory Bird Day.

The display, which includes expandable metal frame sections, mounting panels, spotlights, and a display table, comes with storage and shipping containers. Because the display is adaptable, it can be used at trade shows, conventions, and educational programs.

Stop by and see the new display at the next annual NABS Convention in Asheville, North Carolina in May 2005.

For more information about PIF, visit its website at www.partnersinflight.org.

NABS convention photos available on CD, video

A CD containing photos and a short video clip from this summer's NABS convention in New York is available. The New York State Bluebird Society, host of the 2004 meeting, is making this available. For information, and to make a purchase, visit the NYSBS web site at www.nysbs.com.

You also can order by phone by calling toll-free 877/809-1659. Use this reference number: nysbsnabs2004, product number 12238473.

1902 — nest-box troubles never change

By Frank Bruen

Some things never change. This charming account of the seemingly eternal battle between bluebirds, House (or English) Sparrows, and House Wrens was written over 100 years ago by a man from Connecticut. It appeared in the Wilson Bulletin (Wilson Ornithological Society) in 1902, Vol. 14, No. 4. It is used with permission, and has been edited somewhat for length.

The writer saw a statement some where, that bluebirds would build in a swinging box, but the English Sparrow would not. Thinking this statement important, if true, and wishing to see the bluebirds more plentiful about town, he determined to test the matter by putting up a swinging box in his back yard.

A box of ordinary boards was made (some eight inches cube) and suspended from an arm nailed to the clothes pole. The hole, an inch and a half in diameter, was placed well towards the top, and a wire nail below the hole made a good perch.

A pair of Bluebirds found the box in a day or two. They were in no hurry to begin active operations, but inspected the box very often and stayed nearby for perhaps a week, before begining to build. Then, the English Sparrows began to be interested in the box and would carry in stuff when the bluebirds were out of sight. The bluebirds worked some now and drove the sparrows away whenever they saw them. The sparrows were very persevering, however, and worked every chance they had.

This exploded the idea that the sparrows were afraid of the swinging motion. Knowing the bluebirds would be worried into leaving in time, I placed a trigger over the hole and carried a string to the house and waited for a sparrow to go in. This happened very soon and a sharp pull made him a prisoner. In taking the box down to dispose of the pest, I accidently hit the trigger and the sparrow was out in a second. The sparrow is a wise bird, and one lesson was enough for him. I had no chance to catch another.

I cleaned out the box, but fear it was a mistake, for the nest foundation was most of it the work of the bluebirds.

The male bluebird saw me catch the sparrow, (and) was in the box two minutes after I hung it up again. At this time my neighbor put up a nice little fixed box and the fickle bluebirds left my homely box and took possession of his.

But the sparrows who had just been deprived of a fine bird box near by, came in force and my neighbor laid for them with an air gun and succeeded in killing one, after which the bluebirds became firmly installed.

May 15 the parent birds began feeding the young and May 31 took out their brood of five. A very few moments after the birds left, the sparrows were fighting for the box, and my neighbor made a trap of it and caught and killed seven cock sparrows all belonging to a band of freebooters who seemed to have no family ties.

June 3 the bluebirds were back for a time with four of the young, and about this time a pair of House Wrens that had been nesting near by came along and wanted the box. She or he or both in turn began "firing" the old nest material out in a very vigorous manner, but left when the bluebirds appeared.

The bluebirds did not go in, but evidently wanted the box. My neighbor then cleaned the box out and the bluebirds were in possession very soon, while the wrens took another box which my neighbor put up in a white oak on his place.

The bluebirds — the female being the only one in evidence most of the time — finished the nest, laid a second set of eggs, and they were nearly incubated when the female abandoned the nest and after a few days disappeared. My neighbor took the box down soon afterwards and found no eggs.

Here was a mystery, for he knew the bird had been incubating a set of eggs and knew they could not yet have hatched. Of course, we declared at once that the "British" (sparrows) had done it and declared war. The mystery was cleared up by a similar case, however. My bird chum had put up boxes in his large yard and one was occupied by a family of wrens. We went to that box and found the other eggs under it, almost fully incubated (and) pierced. My friend put a set of sparrow eggs in the nest and the next day they were gone. This rather nonplussed us, but another set was put in, and the wren was caught in the act of disposing of them.

This was a hard blow to us, with whom Jenny had always been a favorite, and who had occupied our boxes from year to year. It was remembered then that the bluebird had come out to drive away the wren who had stolen up to the box several times. A search at my neighbor's box also revealed the pierced eggs near by.

To conclude: It is my opinion that House Wrens and bluebirds should not be accommodated with homes very near each other; that bluebirds need help to become established; that a box may be "hoodooed" for sparrows by keeping one a prisoner, a short time, in it.

Affiliates of the North American Bluebird Society

The North American Bluebird Society serves as a clearinghouse for ideas, research, management, and education on behalf of all bluebirds and other native cavity-nesting species. NABS invites all state, provincial, and regional bluebird organizations to become NABS affiliates in "A confederation of equals all working together toward a common goal - a further partnership in international bluebird conservation." No cost is associated with affiliating with NABS. Your affiliated organization will be recognized and listed on the NABS web site. If your organization has a newsletter, please forward a copy to our headquarters. To find out more about becoming a NABS affiliate, read our Affiliate Letter Notice. If you are listed below, please check listing to see if it is current. If not, please contact webmaster@nabluebirdsociety.org with the correct information.

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Mountain Bluebird Trails Cons. Society
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UNITED STATES

Arkansas

Bella Vista Bluebird Society
c/o Jim Janssen, 27 Britten Circle
Bella Vista, AR 72714 479-855-7277

California

California Bluebird Recovery Program
2021 Ptarmigan Drive #1
Walnut Creek CA 94595
925-937-5974, fax. 925-935-4480
cbrp@value.net

Colorado

Colorado Bluebird Project
c/o Bob Priester, 6060 N. Broadway
Denver CO 80216 303-291-7253
bluebird.project@state.co.us

Georgia

Bluebirds Over Georgia
c/o Frances G. Sawyer
5858 Silver Ridge Dr.
Stone Mountain GA 30087
fgsawyer@bellsouth.net
770-469-6672

Idaho

Our Bluebird Ranch
152 N 200 E , Blackfoot ID 83221
208-782-9676 pjbarnes@micron.net

Rocky Mountain Blues
c/o David Richmond
HC67 Box 680, Clayton ID 83227
208-838-2431, fax 208-838-2685
fowest@salmoncountry.net

Illinois

JoDaviess County BBRP
c/o Grace Storch
431 Stadel Road, Elizabeth, IL 61028
bluebird@naturalareaguardians.org

East Central Illinois Bluebird Society
c/o Loren Hughes
1234 Tucker Beach Road, Paris, IL 61944
217-463-7175 suziq@comwares.net

Indiana

Indiana Bluebird Society
P.O. Box 356, Leesburg IN 46538
219-858-9050 bluebird@maplenet.net

The Brown County Bluebird Society
c/o Dan Sparks
P.O. Box 660, Nashville, IN 47448
812-988-1876, fax 812-342-3820
b4bluebirds@yahoo.com

American Bird Conservation Association
c/o Merlin Lehman
59980 C.R. 35, Middlebury, IN 46540

Iowa

Johnson County Songbird Project
c/o Jim Walters
1033 E. Washington, Iowa City IA 52240
319-466-1134 james-walters@uiowa.edu

Bluebirds of Iowa Restoration
c/o Jaclyn Hill
2946 Ubben Ave , Ellsworth, IA 50075-7554
515-836-4579. hillhome@netins.net

Iowa Bluebird Conservationists
c/o Jerad Getter, P.O. Box 302
Griswold, IA 51535 712-624-9433
jgetter@hotmail.com

Kentucky

Kentucky Bluebird Society
c/o Bob Ivy
P.O. Box 3425, Paducah, KY 42002
270-898-6688 or 731-688-0031
bobivy@centurytel.net
www.biology.eku.edu/kybluebird.html

Louisiana

Louisiana Bayou Bluebird Society
c/o Evelyn Cooper
1222 Cook Road, Delhi, LA 71232
emcooper@bayou.com
www.labayoubluebirdsociety.org

Massachusetts

Massachusetts Bluebird Association
Contact: Haleya Priest
89 Pulpit Hill Rd , Amherst, MA 01002
413-549-3937, fax 413-549-2901
MaBLue@gis.net
www.massbluebird.org

Minnesota

Bluebird Recovery Program
(Audubon Chapter of Minneapolis)
c/o Mary Ellen Vetter
P.O. Box 3801, Minneapolis MN 55403
mevetter@mninter.net

Mississippi

Mississippi Bluebirds
c/o Tena Taylor
192 CR 457, Calhoun City MS 38916
662-628-1625, fax. 662-628-6300
ccbluebirder@tycom.net

Montana

Mountain Bluebird Trails, Inc.
c/o Bob Niebuhr
Box 794, Ronan, MT 59864
406-676-0300 ayleswor@roman.net
blubrdbob@prodigy.net
www.blackfoot.net/~bluebirds

Nebraska

Bluebirds Across Nebraska
c/o Derry Wolford
705 9th Ave., Shenandoah, IA 51601
E-mail: derrywolford@hotmail.com

New Hampshire

New Hampshire Bluebird Conspiracy
c/o Bruce Burdett
P.O. Box 103, Sunapee NH 03782
bluebird@tds.net 603-763-5705

New York

New York State Bluebird Society
c/o Kevin Berner
499 West Richmondville Rd.
Richmondville NY 12149
518-294-7196 bernerkl@cobleskill.edu

Schoharie County Bluebird Society
c/o Kevin Berner
499 West Richmondville Rd.
Richmondville NY 12149
518-294-7196 bernerkl@cobleskill.edu

North Carolina

North Carolina Bluebird Society
c/o Dempsey Essick
PO Box 1149, Welcome, NC 27374
336-731-3499, fax 336-732-3444
essickart@lexcominc.net

Rutherford County Bluebird Club
P.O. Box 247, Ellenboro, NC 28040
Contact: Christopher Greene

Ohio

Ohio Bluebird Society
c/o Bernie Daniel, 9211 Solon Dr.
Cincinnati, OH 45242
bdaniel@cinci.rr.com

Oklahoma

Oklahoma Bluebird Society
Mark Weathers, PO Box 269
Tulsa, OK 74101-0269
918-241-2473, fax 918-699-3358
sialia@worldnet.att.net

Oregon

Prescott Bluebird Recovery Project
c/o Voice of Prescott
P.O. Box 1469, Sherwood OR 97140
503-245-8449. email@prescottbluebird.com

Audubon Society of Corvallis
Elsie Eltzroth, 6980 NW Cardinal Rd.
Corvallis OR 97330 541-745-7806
eltzroth@peak.org

Pennsylvania

Bluebird Society of Pennsylvania
P.O. Box 267, Enola PA 17025-0267
c/o Joan Watroba
717-766-2102, fax 717-790-0568
rputt@ezonline.net. www.thebsp.org

Purple Martin Conservation Assoc.
Edinboro University of Pennsylvania
Edinboro PA 16444
814-734-4420 (Louise Chambers)
Fax 814-734-5803
info@purplemartin.org

Tennessee

Benton County Bluebird Society of Tennessee, Inc.
Dan McCue, President
108 Bland Street, Camden, TN 38320
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Tennessee Bluebird Trails
c/o Steve Garr
P.O. Box 190, Mt. Juliet, TN 37121
615-612-4546
tnbluebirdtrails@msn.com
www.tennesseebluebirds.com

Texas

Texas Bluebird Society
c/o Pauline Tom
P.O. Box 40868, Austin, TX 78704
info@texasbluebirdsociety.org
www.texasbluebirdsociety.org

Virginia

The Virginia Bluebird Society
Barbara Chambers, 8911 Moreland Lane
Annandale, VA 22003
703-978-6609, bj.chambers@verizon.net
www.virginiabluebirds.org

Washington

Cascadia Bluebird & Purple Martin Society
c/o Dr. Michael Pietro
3015 Squalicum Pkwy # 250
Bellingham, WA 98225

Wisconsin

Bluebird Restoration Assoc. of Wis.
Rt. 1, Box 137 Akron Ave.
Plainfield WI 54966

Lafayette County Bluebird Society
14953 Hwy 23, Darlington WI 53530

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