

# Bluebird

Journal of the North American Bluebird Society

Summer 2002, Vol. 24, No. 3



Photo of female Eastern Bluebird by Hubert A. Brandenburg, Hagerstown, Maryland



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# From the President

Doug LeVasseur

I know winter has lost its icy grip on southeastern Ohio when in early March I hear the first peep, peep, peep of the Spring Peepers. Their first peeps are not something you open the kitchen door and listen for. They always seem to sneak up on you unannounced. This year, I was on my way to close the door to the chicken coop late one evening when I heard that first little peep. I smiled and thought that blooming daffodils can't be far off, and before you know it the bluebirds will be nesting.

Well, "before you know it" has arrived, and the bluebirds are singing and nesting up and down the valley. How I do enjoy springtime.

Some of my personal bluebird activities this spring have taken me far from Possum Valley. In March, I kept a promise to Grace Storch and returned to Galena, Illinois, to speak to the Jo Daviess County Natural Area Guardians. Those of you who attended the 23rd NABS convention in Galena will remember the wonderful hospitality of the Natural Area Guardians. I can assure you they have lost none of it the past two years. What a dedicated group of bluebirders. If you ever feel the need to have your bluebird enthusiasm pump primed, there is no substitute for attending a gathering of such bluebirders. We had a great time.

Also in March, I gave a program to the fifth grade class of my dear friend Tom Barber. Tom mentioned to me that this was the 19th consecutive year I have come to Liberty Elementary School to talk to his class about bluebirds. I mention this not to boast but only because I know it will elicit comments from many of you who

have far surpassed my efforts.

Later this month, I have the honor of speaking to members of Mountain Bluebird Trails in Montana. In order to pave the way for staying a few extra days to fish some of those beautiful Montana rivers, I mentioned to MBT president Bob Neibuhr that I considered myself a "low impact" guest, and was in the habit of making my own bed and doing the dishes. Bob informed me that "low impact" guests visiting Montana also take out the garbage and cut the grass! I have never met a bluebirder without a wonderful sense of humor and a riding lawnmower.

We have organizational NABS news worthy of note, too. By the time we all read this the 25th NABS annual convention in Pentictin, BC, will be part of the recent past. I don't believe I will be going very far out on a limb to predict that our 25th convention will be another memorable event. The success of our conventions is due in most part to the hosting organization, in this case Southern Interior Bluebird Trails. Thanks so much to all of its members and supporters, especially Sherry Linn and Greg and Terry Teillier.

At our annual get-together there always is a changing of the guard. I wish to acknowledge and thank outgoing board members Elsie Eltzroth, Bob Ewart, Ann Wick, and Christine Hill and Treasurer Bob Martin for their contributions to our society. I want to welcome oncoming board members Teresa Kromel, Kimberly Williams, Dr. Stephen Pelikan, and James McLochlin.

I wish to also extend an official  
*Continued on page 3*

## Lisa Bulick in Wilmot, Ohio

# New executive director

A new executive director has been hired by the North American Bluebird Society. She is Lisa Bulick, birder, businesswoman, and certified beekeeper who lives in Winesburg, Ohio.

Ms. Bulick will work from the new NABS office at The Wilderness Center, a 960-acre nature center in Wilmot, Ohio. Her e-mail address is [lisabulick@nabluebirdsociety.org](mailto:lisabulick@nabluebirdsociety.org). The postal address is NABS, c/o The Wilderness Center, P.O. Box 244, Wilmot, OH 44689. The telephone number is 330/359-5511. Ms. Bulick will be in the office from 10 a.m. to 5 p.m. Tuesday, Thursday, and Friday.

Ms. Bulick, a graduate of Kent State University, brings a business background and a love of nature to her NABS position. She has tended nest boxes on a 10-acre hobby farm in

Ohio (nesting Eastern Bluebirds and Tree Swallows), maintained bird feeders, planted for wildlife, and welcomed bats and frogs to her land.

She is a certified beekeeper in Ohio and has been designated a Midwest Master Beekeeper by the University of Nebraska. She has served as secretary/treasurer for the Carroll County (Ohio) Bee Club.

The Wilderness Center, located north of Wilmot, has 960 acres of land — woods, meadows, and ponds. Bluebird nest boxes are maintained there. NABS soon will have a bluebird display in the center. For more information about NABS new home, visit its web site at [www.wildernesscenter.org](http://www.wildernesscenter.org).

## — president

*Continued from page 2*

welcome to our new executive director, Lisa Bulick. Lisa has been hard at work in our office at the Wilderness Center in Wilmot, Ohio, since mid-April. Lisa is a very competent and capable young woman who is quickly learning and meeting the needs of our society. Please join me in making Lisa feel at home.

If you have recently renewed your NABS membership, you may have noticed a slight increase in the dues for some membership categories. The increase is modest, and the first time NABS dues have risen since our founding. Your dues not only bring you *Bluebird* quarterly but support our educational, research, and outreach programs. We value your membership and appreciate your support

## 2003 convention: Nebraska in March

Bluebirds will not be the only bird species of particular note when NABS members gather in Nebraska next March for their 26th annual convention. The meeting will coincide with the migration through central Nebraska of tens of thousands of Sandhill Cranes and hundreds of thousands of geese, one of North America's true birding spectacles.

NABS members will gather in Kearney, Nebraska, March 20 to 23, with workshops and a field trip scheduled for the first day. Classes will be offered on nature photography, the listserv Bluebird-L, hosting a conference, and newsletter editing and production. Other field trips will be offered.

Registration information will be provided in future issues of *Bluebird*.

# Bluebird

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to the NABS headquarters  
address/telephone number  
shown above.*

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

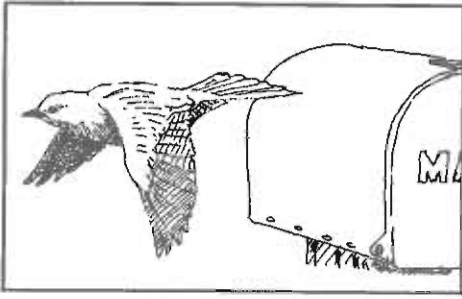
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For advertising information, contact the executive director.

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## Is the large hole or the short box the factor here?

To the editor,

The article by Barry Bermudez on larger hole sizes was extremely interesting. One question raised by his article is whether it is the larger hole size that the sparrows dislike or is it just the relatively short box that they find less attractive.

Steve Gilbertson has argued for some time that his PVC box and the Gilwood box were less attractive to sparrows because of the controlled 4.5-inch spacing between the bottom on the entrance hole and the floor of the box.

Sparrows like a lot of room to pile up all their junk. I noted that in Mr. Bermudez's boxes this dimension was 4.75 inches.

Is it the larger hole size, or just the shorter box?

*Randy Downing, Galena, Illinois*

## House Sparrows

Dear editor,

For some six years I have had a bluebird trail here which in the last several years has been built up to more than 80 boxes. This trail was accepted in May 1999 as part of the Transcontinental Bluebird Trail, and last year fledged nearly 300 bluebirds and a lot of Carolina Chickadees and Tufted Titmice. Until this year House Sparrows have been a problem, but

# Nominations are sought for 2003 NABS election

As NABS membership grows, we have an excellent opportunity to find great candidates willing to serve on the board of directors. We are now seeking nominations for

- President (one-year term, limit three terms).
- Vice President for Affiliates (one-year term, no limit).
- Four directors (three-year term, limit one term).

The slate of candidates will be elected at the Kearney, Nebraska, convention March 20-23, 2003.

All NABS members are eligible for nomination. You are welcome to

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with some diligent trapping they have been cleared out after the first several weeks of the bluebird nesting season.

This year the House Sparrow situation has become so much worse that even with trapping all through the season the sparrows have kept moving in. This is a rural area with farms and pastures, but the House Sparrows here are adopting the same feeding and area habits as the bluebirds. With the same number of boxes the line will fledge only about half as many bluebirds as last year, and because of the extra time required to trap and eliminate House Sparrows I am having to reduce the number of boxes on the line significantly.

In our bluebird talks in this area we are asking people not to put up bluebird houses unless they are willing to monitor them closely and are capable of trapping and eliminating House Sparrows. Otherwise, they are putting up death traps for bluebirds and other small cavity nesters.

— *Bob Walshaw, Coweta, Oklahoma*

nominate yourself or to encourage someone you know to be a nominee. The enthusiasm, dedication and knowledge gained while working with bluebirds will provide valuable support to the board.

Here are some guidelines for recruiting board members. Areas of experience are not requirements, but are welcome as helpful to specific board operations.

Expectations: Attend orientation March 20, 2003; attend minimum of four of six meetings during three-year term; accept a committee and/or project task.

Experience: Service on another board; birding industry; communications/media background; education; financial planning; fund raising; law; science (methodology/statistics).

NABS has a reimbursement policy to assist with travel expenses.

Resumes for nominees should be received by Sept. 30, 2002. Send them to:

**NABS Nominating Committee**  
**P O Box 244**  
**Wilmot, OH 44689-0244**

For more information, contact Mary Ellen Vetter at 763/561-1761). She is the nominating committee chair.

## Louisiana meeting

The Louisiana Bayou Bluebird Society will meet Sept. 21 at Waddill Refuge, 4142 N. Flannery Road, Baton Rouge, from 2 to 5 p.m. Guest speaker will be Tena Taylor of Mississippi Bluebirds, a member of the NABS Speaker's Bureau. There will be door prizes. If you plan to attend, contact Evelyn Cooper, emcooper@bayou.com, 318/878-3210.

# Review

**The Bluebird Monitor's Guide to Bluebirds and Other Small Cavity-nesters.** Co-authored by Keith Dridler, Gynthia Berger, and Jack Griggs. A Cornell Bird Library Guide. Sponsored by the Cornell Lab of Ornithology and the North American Bluebird Society. Published by HarperCollins. Soft cover. 8.25 x 10.75 inches. List price: \$14.95

## By Hatch Graham

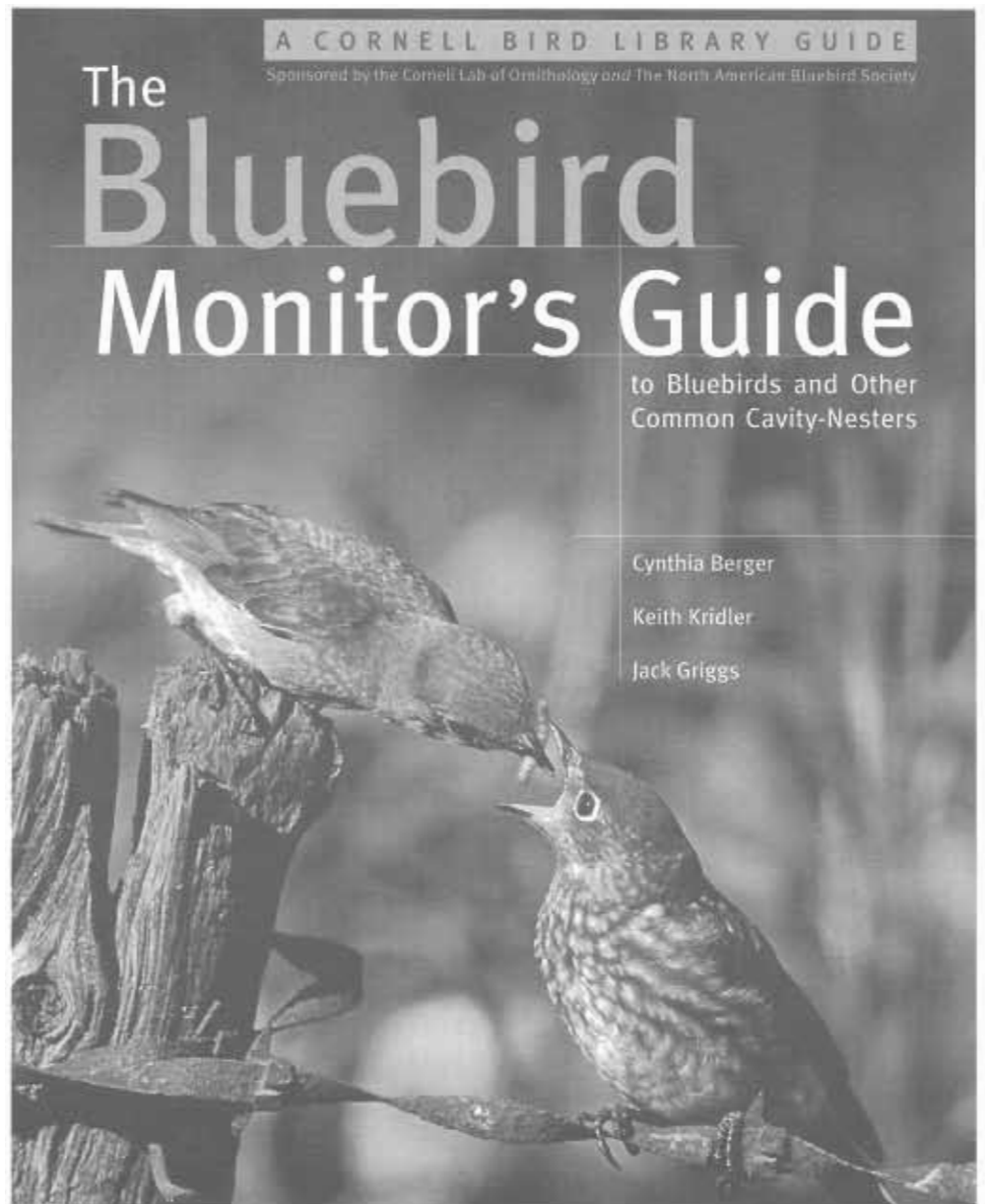
This new, slick, 128-page guide with beautiful colored photographs on nearly every page is a must for anyone devoted to bluebirds and other small cavity nesters.

Covering the entire North American continent, the book provides information on nearly every aspect of nest-box monitoring. Especially helpful are the close-up photographs of various species' nests and eggs, and the 16-photo series showing the egg-laying, pipping, and growth of bluebird nestlings up to their final day before fledging.

Many experts and innovators from across the country are quoted or featured in the guide, including well-known NABS members Kevin Berner, Erv Davis, Elsie Eltzroth, Steve Gilbertson, Doug LeVasseur, Tina Phillips, Haleya Priest, Dick Purvis, Arlene Ripley, Dorene Scriven, Dean Sheldon, Darlene Sillick, Dick Tuttle, Jim Walters, Ann Wick, and Don Yoder.

Divided into five sections, the book covers attracting bluebirds, monitoring backyard bluebirds, trails for bluebirds, an advice section (feeding, legal concerns, problems with House Sparrows, blow flies, and tools for monitors), and homes and hardware.

With 128 pages, it is advisable to thumb through the entire book to



become familiar with its organization. While it has a fairly thorough index, its scope is so great that you may have some difficulty finding what you want to know.

I heartily recommend this new guide. Sponsored by the Cornell Lab of Ornithology and the North American Bluebird Society, it will be a welcome addition to anyone's library. Put it on your wish list for your next birthday or anniversary.

*(Hatch Graham is editor of Bluebirds Fly, newsletter of the California Bluebird Recovery Program, and author of that*

*organization's 32-page booklet entitled Monitoring Your Bluebird Trail in California.)*

## Buying this book

*The Bluebird Monitor's Guide* can be ordered from NABS through its catalog (Spring 2002 issue of Bluebird) by writing P.O. Box 425, Whiteford, MD 21160, or by calling 800/634-1558. Price is \$13 for members, plus \$5 for shipping.

# Pennsylvania bluebird project studies several pairing choices

By Dick Brown

The Middle Creek Bluebird Project (MCBP) initiated in 1998 was undertaken to maximize the reproductive success of the Eastern Bluebird on the lands of the Middle Creek Wildlife Management Area near Kleinfeltersville, Pennsylvania. Over the past four years the focus of the research has been the relationship between the Eastern Bluebird and its chief nest-box competitor, the Tree Swallow.

At the start, it was decided to position nest boxes in various paired and clustered arrangements to determine how the birds would react to the box configurations. Each year, the bird boxes have been monitored from April 1 to August 1. Two-hundred and fifty-one bird boxes were monitored in 2001.

## Configurations used

These are the configurations used in the box pairing experiment being conducted at Middle Creek Wildlife Management Area in Pennsylvania.

**Side-by-Side paired boxes:** Both boxes face in the same direction, have the same dimensions and are at the same height above the ground. There were 48 side-by-side sites monitored during the 2001 nesting season. The inter-box distances between the two boxes at these sites ranged from one-foot to 25 feet.

Eastern Bluebirds made 29 nesting attempts at 21 of the 48 side-by-side sites. Twenty attempts were successful. Bluebirds dominated (no swallow activity) five sites.

Tree Swallows made 58 nesting attempts at 40 of the 48 side-by-side locations. There were 35 successful nesting attempts. Tree Swallows did

not attempt to nest in both boxes simultaneously at any of the 48 side-by-side sites during 2001. At four different sites after the chicks fledged, the swallows made a second nesting attempt, with two of them being successful. Tree Swallows dominated (no bluebird activity) 25 different side-by-side sites.

**Back-to-Back paired boxes:** The two boxes were placed on a steel post at the same height, facing in opposite directions. The boxes were identical with the same size hole and inside dimensions. There were 46 sites with

back-to-back bird boxes in 2001.

Eastern Bluebirds attempted to nest at 26 of the 46 back-to-back sites. They were successful 16 times at 13 of these sites. Bluebirds dominated five sites.

Tree Swallows attempted to nest at 38 of the 46 back-to-back sites. They had 29 successful attempts at 26 different sites. The swallows attempted to nest in both boxes at only one back-to-back location. At this site both pair of Tree Swallows fledged chicks, but there was about a two-week lag time between the start of the



*The back-to-back configuration. All photos by Dick Brown.*

two nesting attempts. At three different locations the swallows began a second nesting after having chicks successfully fledged. They succeeded at two of the sites and failed at the other. Tree swallows dominated (no bluebird activity) 24 different back-to-back locations.

Eastern Bluebirds and Tree Swallows both had nesting attempts at 13 of the 46 back-to-back locations. At five sites, bluebirds and swallows nested at the same time, and at all five of those locations both species successfully fledged chicks. The second box at 26 of the 44 back-to-back sites used by at least one species remained empty. At two back-to-back locations both boxes remained empty.

**Stacked pair:** One box directly above the other with both facing the same direction. There were nine such sites.

Bluebirds dominated two sites (no swallow activity). Tree Swallows dominated three sites. The two species shared three stacked locations. At one site, bluebirds and swallows nested successfully at the same time.

**Opposite Direction Pair:** Two boxes located beside each other with their holes facing in opposite directions and inter-box distances ranging from one to 15 feet. There were eight such sites.

Bluebirds dominated two sites. Tree Swallows dominated four sites. The swallows did not attempt to nest in both boxes at any of these sites. Bluebirds and swallows coexisted at two of the eight sites, but only one location produced fledglings for both species.

Single boxes separated by at least 300 feet to reflect bluebird territorial needs. There were 10 such sites.

Bluebirds dominated six of the 10 sites. Tree Swallows dominated two of the sites. Two of the boxes re-



*The stacked configuration.*

mained empty (one was used by a mouse).

**Loose Clusters:** Single boxes placed at various distances from 15 to 80 feet apart and scattered over a distance of about 300 feet. There were 11 such sites.

One pair of bluebirds made two attempts to nest in the cluster, with one being successful. Tree Swallows attempted to nest at 10 of the 11 sites, but only three were successful. These boxes were not protected with predator guards, and it appears raccoons destroyed most of the nests. At one site the swallows started a second

nesting after the young had fledged from the box, but this second attempt was not successful. One box remained empty during the entire nesting season.

**SPDHOD pair:** Two boxes on the same post at different heights and facing in opposite directions. There were two such sites. One site had House Sparrows, Eastern Bluebirds and Tree Swallows attempting to nest. Only the bluebirds were successful. The other site was dominated by bluebirds but all attempts failed.

## *Discussion of the pairing project results*

By Dick Brown

During the four years of the Middle Creek Bluebird Project the number of bluebird pair and their fledglings has steadily increased. The adult pairs have increased from 25 in 1998 to 46 in 2001. The number of fledglings increased from 97 in 1998 to 240 in 2001. This increase is due to a number of factors.

- The House Sparrow has been eliminated as a threat to adult Eastern Bluebirds as well as their chicks. Only one site had House Sparrow activity in 2001.

- Paired boxes provide more sites for both bluebirds and swallows, and minimize friction between the two species.

- Since swallows will usually keep the second box at paired sites empty, the bluebirds have a box available for their second nesting attempt if they need it.

- Positioning the sites at least 300 feet apart limits the number of potential swallow nesting locations and maximizes the number of sites

available to bluebirds.

- In 2001, the Noel predator guard played a significant role in bluebird as well as swallow success.

- The biggest variable in the survivability of bluebirds is the weather. In 1998 a large number of bluebird chicks died during a 12-day rainy period in May. During the past three years the winters have been relatively mild and the nesting seasons have been warm and dry so more chicks have fledged and more adults have survived.

At the end of the nesting season in 1998, the ratio of Eastern Bluebirds (adults plus young) to Tree Swallows (adults plus young) was 1:3 (147 to 430). With a significant increase in the number of bluebirds, the ratio has improved to 1:1.76 (330 to 581). This result indicates that efforts to increase the number of Eastern Bluebirds at Middle Creek are working.

In 2000, four-inch-diameter PVC pipes were placed as predator guards on posts at four locations. At two of the locations raccoons were able to climb the 30-inch-long pipes with ease and eat the young swallows in the boxes.

For the 2001 nesting season the Noel predator guard was installed on about 60 boxes. The Noel Predator Guard is a 6x24-inch piece of quarter-inch hardware cloth of rectangular shape, a little smaller than the front of a bluebird box. One edge is cut and bent back to provide an area for screwing this device to the front of the bird box. It was designed by Jim Noel to keep raccoons out of bird boxes.

Except for one area where a large raccoon had enough weight to smash down the guard, this device worked very well. This year, Noel guards will be put on more of the nest boxes.

At 10 side-by-side sites, the Noel predator guard was placed on only one of the boxes. We wanted to see

what would happen when Eastern Bluebirds and Tree Swallows had to deal with this contraption on the front of the bird box for the first time. At eight sites used by the swallows, the bird chose the box without the guard. When the guard was switched to the box chosen by the swallows, about one-half of the swallows adapted to the change but the others abandoned their nests and moved to the empty, guardless box.

At two locations, swallows abandoned the box even though they had built their nest and laid eggs. When the guard was placed on both boxes at these sites, the swallows had to choose between totally abandoning the site or adapting. In all instances, the swallows adapted to the guards rather than abandon the site altogether.

Once the swallows grew accustomed to the size of the guard they were able to fly directly to the hole of the box without touching the metal of the guard. When they exited the box,

the swallows were able to launch themselves in such a way as to get beyond the edges of the guard before unfurling their wings.

At side-by-side sites where one box had a predator guard and one did not, bluebirds chose the box with the guard at three sites and the box without the guard at one site.

In May of 2000, I placed a Noel predator guard on a bluebird box in which adults were feeding. After attaching the guard I sat back to watch what would happen. The male bluebird landed on the box, hopped down onto the screen of the guard, flew out and hovered a couple of times and landed on the base of the guard. He sat there for several seconds and then flew to the hole. The time elapsed was five minutes. In all cases, the bluebirds adapted to the guard and did not abandon their nest or eggs after the guard was attached.

#### **Multiple nestings**

Bluebirds at Middle Creek have successfully nested three times in a



*Side-by-side pair of nest boxes at the Middle Creek Wildlife Management Area.*



nesting season in only one of the four years of our study. That was in 1999 when we had a warm spring followed by a very hot and dry summer. In that year, three pair of bluebirds had three successful nesting attempts. We still had bluebird chicks in the box in late August and early September.

### Species interaction

The interactions between Tree Swallows and Eastern Bluebirds as they are competing for nesting sites always involves aggressive behavior from both species. In the four years of this study, swallow and bluebird aggressive behavior was directed at other birds as well as human monitors. In the four years of observations there is no evidence that the Tree Swallows have actually killed a competitor for a nesting site.

However in 1998 a male Eastern Bluebird apparently killed a swallow which had invaded its nest box. The female bluebird subsequently wove the carcass of this bird into her nest and laid four eggs on it. A second swallow was killed in this same box after the chicks fledged. This was before a second clutch was begun. This incident has not been repeated, and clearly was an exception to normal bluebird behavior.

### Sparrows and wrens

House Sparrows have become less of a problem over the course of the four years. During the first year, boxes that had been frequently used by sparrows were removed. In addition, adult sparrows were trapped and nests were destroyed as they appeared during monitoring.

House Wrens continue to disrupt the nesting activities of bluebirds and swallows at locations near wooded or brushy areas. Most boxes used by wrens have been removed. Wrens disrupt the nesting of other birds by removing their eggs, young and nesting material. Newly hatched



chicks are the most vulnerable to wren predation. Once the young gain some size, the wrens are less likely to bother them.

### Second nestings

Tree Swallows usually make a second nesting attempt if their first attempt fails. In 2001 swallows at eight different locations started a second attempt after their first nesting was successful. Four of these pair of swallows had a successful second nesting, chicks fledging on or about the first of August.

Because the swallows at Middle Creek are not banded or easily distinguished from each other, it's not possible to tell if a pair nested twice or if one pair nested after the other. From pure observation I believe most of these incidents involved one pair nesting twice, but I have no idea why they did it this year and not in the past.

### Conclusions

- Eastern Bluebirds and Tree Swallows can nest successfully as close to each other as one foot in side-by-side boxes.

- Tree Swallows may nest in both boxes at a side-by-side site if the distance between boxes is 10 feet or more. But, Tree Swallows will not nest in both boxes at a side-by-side site if the distance between boxes is nine feet or less.

- Eastern Bluebirds and Tree Swallows may nest at the same time at a back-to-back site.

- Tree swallows may nest in both boxes at a back-to-back site, but not

synchronously.

- Tree swallows will nest in both boxes at a site with a distance between boxes of seven feet if the box openings face in opposite directions.

- The year-to-year coexistence of bluebirds and swallows suggests that Eastern Bluebirds and Tree Swallows can learn to tolerate each other at paired sites.

- Coexistence at paired sites occurs with the least amount of friction if there is about a two-week gap between the start of the two nests, so while one pair is preoccupied with raising young the other pair can build a nest.

- Eastern Bluebirds can maintain control over their nest box for the entire nesting season.

- The empty boxes at paired sites have provided bluebirds with a box for their second nesting attempt and have contributed to their increased success over the four years.

- The sites with empty boxes provide an alternate nesting site for Tree Swallows that have had their nests destroyed by predators or disrupted by other species of birds such as House Sparrows or House Wrens.

- Using PVC pipe as a predator guard will not stop a determined raccoon.

- The Noel predator guard is simple, easy to make, and, best of all, it works. If the Noel predator guard is used on boxes at paired sites it should be placed on both houses so Tree Swallows won't have a choice — they either adapt to the guard or nest somewhere else.

The project continues this year.

*(Mr. Brown is project coordinator for the Middle Creek Bluebird Project. He can be reached at Middle Creek Wildlife Management Area, P.O. Box 110 Kleinfeltersville, PA 17039, gretnabrowns@paonline.com, telephone 717/964-3006 or 717/873-7680.)*

# Bluebird News from Shore to Shore

**Kathy Hansen of Powder Springs, Georgia**, is enjoying her second year with a bluebird trail. She reports that, "Our first year was a big success: 11 of our 24 nest boxes were chosen by either Eastern Blue birds or chickadees. Sixty bluebirds and 13 chickadees fledged. Early nesting the third week of March this year is indicative of a much greater number of babies. We added two boxes for a total of 26, and 16 of these currently have babies/eggs.

"An observation made on chickadees this year," she said, "is that virtually every nest has six eggs versus four or five last year."

The nest boxes are along the Silver Comet Trail, a multi-use paved trail running 38 miles along an old rail bed, with plans for 20 miles more to be built. Ms. Hansen said that thousands of people riding and walking on the trail see the boxes. All of the boxes are NABS-style, mounted on half-inch electric conduit. Home Depot donated the building materials, she said.

**Barbara Chambers** recently received special recognition from the Fairfax (Virginia) County Park Authority. She was given the Elly Doyle Park Service Award for her work on establishment of bluebird trails and monitoring protocol. Ms. Chamber is vice president/education of the **Virginia Bluebird Society**.

Nest box success stories are prominent in affiliate newsletters once yearly totals are summed. The **Southern Interior Bluebird Trail Society** reported 2,876 boxes available in 2001, 2,225 used, and 3,149 Mountain Bluebirds, 1,504 Western Bluebirds, and 3,315 Tree Swallows fledged. Other species using the

boxes were House Wren, Violet-green Swallow, Black-capped and Mountain chickadee, Red-breasted, White-breasted, and Pygmy nuthatch, plus three species of squirrels and some mice.

In **Nebraska**, the number of reported bluebirds fledged climbed to 16,882, and when Iowa members of **Bluebirds Across Nebraska** add their birds to the total it reached 17,722 for year 2001. The total reported for the organization's first year in 1989 was 1,136.

Members of the **Ohio Bluebird Society** sending in box reports fledged 6,859 Eastern Bluebirds, 4,389 Tree Swallows, and birds of nine other species. The OBS tracked fledgling success based on the number of boxes per trail, producing some interesting numbers. Eastern Bluebirds fared best on smaller trails (one to five boxes, six to 10, or 11 to 20), with three out of four eggs producing a fledged bird. For trails of from 21 to 100 boxes, the ratio was 67 percent, that number dropping to 64 percent on trails of over 100 boxes. Tree Swallows did best on trails of from six to 10 boxes (82 percent fledge rate), while House Wrens did best on smaller trails, one to five boxes.

OBS will be at the Ohio State Fair this summer, working at the Ohio Division of Wildlife nest-box display. The Nebraska group, **Bluebirds Across Nebraska**, also has a state fair booth, and reports that it brings in new members every year.

**Irv Tiessen** in **Alameda County, California**, maintains nine nest-box trails. He had eight different species of birds nesting in his boxes last year.

Overall, participants in the **Cali-**

**fornia Bluebird Recovery Program** fledged young of 17 different bird species. The CBRP newsletter, **Bluebirds Fly**, offered these insights from editor Hatch Graham on increasing use of nest boxes by more species:

- Place nest boxes at distances close enough to create intraspecific territoriality (territory defended by a pair of birds overlaps with other boxes):

- Locate the nest boxes in habitat favored by other species;

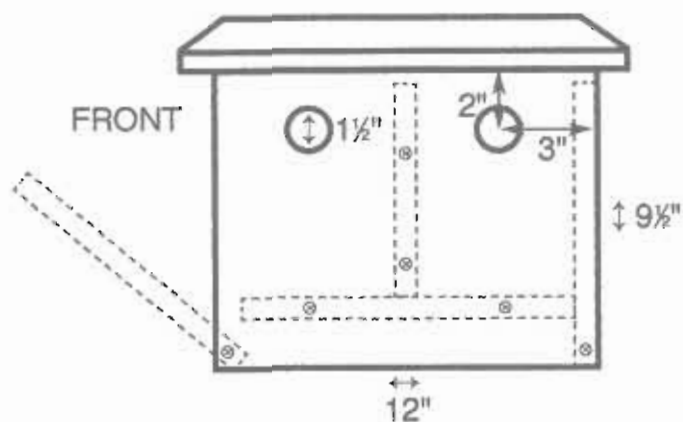
- Place nest boxes in higher locations, in trees, for instance (nuthatches prefer cavities over 15 feet above the ground).

A banding demonstration at the annual conference of the **Bluebird Society of Pennsylvania** in March was a bit out of the ordinary. The bluebird banded, part of a demonstration by **Dan Brauning** of the Pennsylvania Game Commission, was about five feet high and weighed as much as an adult human. Actually, the bird was an adult human, wearing the costume of the BSP mascot, Bluebelle. Inside the costume was **Joanne Slavinski** of Wormleysburg, Pennsylvania, BSP treasurer and creator of the costume.

**Emory Brooks** in **Jackson County, Georgia**, had 40 Eastern Bluebirds fledge in 2001 from six nest boxes he monitors on a farm there. One pair of birds fledged three broods. Mr. Brooks said that factors contributing to this success were a ready supply of water and cleaning of nest boxes as soon as possible after a brood had fledged. This item first appeared in **The Georgia Blue Line**, newsletter of **Bluebirds Over Georgia, Inc.**



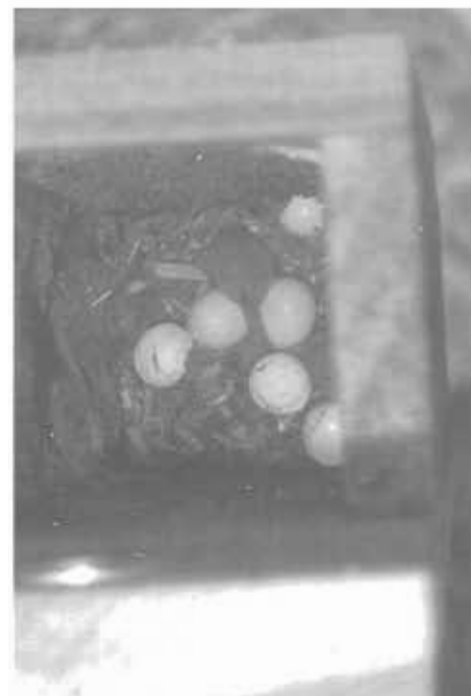
Two nesting sites have been provided in one larger box designed by Dan Savin of Big Bend, Wisconsin. The two nesting cavities share a common center wall. Mr. Savin designed the box last year, placing four of them on a trail he maintains in a 50-acre nature preserve in Waukesha County. He says the design offers bluebirds the option of moving to a clean nesting site for a second brood, beginning a second nest before the first brood of young have fledged, or allowing a male to mate with females nesting in adjoining boxes. In 2001, the four boxes produced 21 bluebird fledglings from 26 eggs. Two pairs of Eastern Bluebirds nested twice each. Two nesting sites were used by Tree Swallows, with six young fledging. Mr. Savin planned to place more of his boxes on the trail for the 2002 season. He can be reached by e-mail at [pubstu@earthlink.net](mailto:pubstu@earthlink.net) or by phone at 262/547-5171.



Red-headed Woodpeckers nested in a box set out by William T. Parker of Enterprise, Alabama. Mr. Parker was surprised to see the much larger birds in a box he had prepared for use by Brown-headed Nuthatches. The woodpeckers noticed the size difference, too, and carefully enlarged the cavity by chipping away at the interior walls of the box to add almost an inch front to back and side to side. The birds also enlarged the 1.25-inch entry hole, creating an oval two inches deep and 1.75 inches wide. The hole in the cedar box had been protected with fiberglass to prevent enlargement. The birds raised two broods of four young each in the box.

### Deadline for Fall 2002 issue is July 31

The deadline for the Fall 2002 issue of *Bluebird* is July 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.



# House Sparrows usurp swallow nests

## CLIFF SWALLOWS LOSE BATTLE FOR NESTING SITES THEY BUILT

By Gregory J. Davis and Jennifer H. Davis

It is early August 2001 here at the University of Wisconsin in Green Bay, and we are witnessing an exceptionally productive year for the Cliff Swallow. Hundreds of adults and recently fledged swallows are circling overhead in search of insects. This is a dramatic change from what we had witnessed just five summers ago in 1997.

During July of that year, a large number of Cliff Swallow nestlings were found on the cement below the nests (most had died on impact from the fall). Although swallow nestlings may periodically fall from nests, we counted 72 downed nestlings, a degree of nestling loss not observed in the past on campus. Continued observations revealed House Sparrows usurping active Cliff Swallow nests and ousting the nestlings.

Cliff Swallows nest on several of the campus buildings at the University of Wisconsin-Green Bay. House Sparrows, which overwinter in the Cliff Swallow nests, begin nesting in March and raise their first broods before the Cliff Swallows return from South America in early May. Because House Sparrows are multiple brooders, they also nest in Cliff Swallow nests during the swallow breeding

season (mid-May to late July).

For the past five years, we have closely monitored the Cliff Swallow colony at the University of Wisconsin-Green Bay upon their return in early May until mid-August when the Cliff Swallows migrate south. We made daily observations on the number and location of nests (noting new nests being built), occupancy of the nests (by Cliff Swallow or House Sparrow), and number and species of nestlings and eggs found on the ground under the nests.

Active Cliff Swallows nests usurped by House Sparrows often involve the destruction of swallow eggs, young, and juveniles. This is not just a problem at our study colony. In some areas where House Sparrows and Cliff Swallows intersect, colonies have been adversely affected, even totally destroyed.

Several studies regarding the negative impact of House Sparrows on Cliff Swallows involve management of the House Sparrows via trapping and shooting. In these studies, the swallow colonies failed to thrive without the direct management of the House Sparrows. Such management is not possible at a public university. Krapu noted, however, that the impact of House Sparrows on the



*Nestling Cliff Swallow dead on the ground. A House Sparrow removed the bird from the swallow nest.*



*House Sparrow at the entrance to a Cliff Swallow nest. The nest structure is built of small pieces of mud.*

swallows is greatest when the swallow colony is small.

House Sparrows are an aggressive species and are the enemy of many cavity-nesting birds including Tree Swallows, Purple Martins, and, of course, Eastern Bluebirds. They have been known to usurp the nests of Eastern Bluebirds and attack bluebird adults and nestlings. But House Sparrows don't just oust the young of other species. Infanticide, the killing of young of their own species, also has been documented in House Sparrow populations. The male House Sparrows oust the eggs and young of another male, then breed with the females whose young they have killed. A female House Sparrow with eggs or nestlings is still fertile and can breed again.

We witnessed adult male House Sparrows stopping at one Cliff Swallow nest after another nearly every day. Active nests of both House Sparrows (in Cliff Swallow nests) and Cliff Swallows are located near each other on the campus buildings. Because both Cliff Swallow and House Sparrow eggs and young were ousted, we conjecture that the sparrows, in their desire for mating rights, ousted any nestlings or eggs that were in a nest. Perhaps they do not realize which nests contain which species!

The House Finch also has played a role in the dynamics of the Cliff Swallow colony. During the summers of 1998, 1999, and 2000, a pair of House Finches successfully raised young in a partially broken Cliff Swallow nest. In each case, the successful nesting followed a battle with House Sparrows for occupation of the nest.

Competition between House Finches and House Sparrows is well documented. In urban settings, the House Finch usually wins. While House Finches typically have not nested in the Cliff Swallow nests, they have built many of their nests near the Cliff Swallows.

On one of the campus buildings, wire screening had been attached to prevent Cliff Swallows from nesting on the building. Over the years, gaps in the screening developed and House Finches now have more than two-dozen active nests in a very protected location. House Finches also nest in many other locations on the buildings. Many of the nests are used for second broods, and the on campus House Finch population has increased significantly in the past few years.

For this article, we have summarized a portion of our study data in three figures. Figure 1 indicates the number of Cliff Swallow and House Sparrow hatchlings for each year of the study. Figure 2 indicates the number of dead young Cliff Swallows and House Sparrows that we collected on the ground below the nests. Finally, Figure 3 indicates the Cliff Swallow and House Sparrow nestling mortality rate.

We believe there are two reasons the House Sparrow

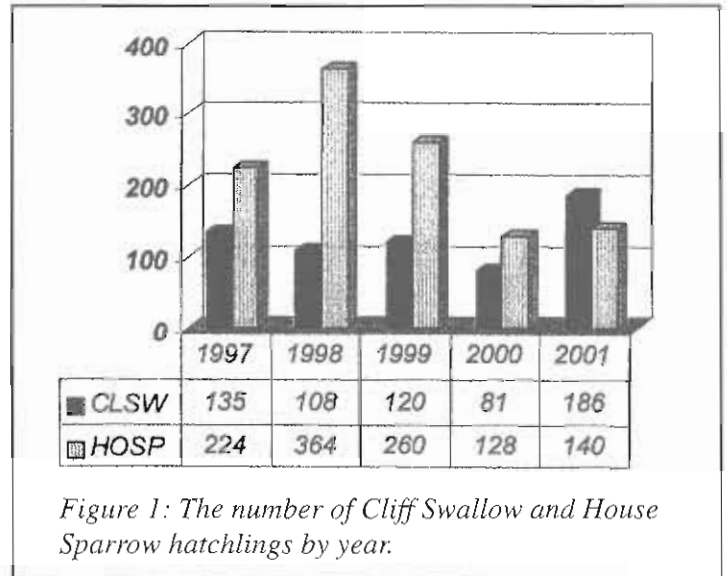


Figure 1: The number of Cliff Swallow and House Sparrow hatchlings by year.

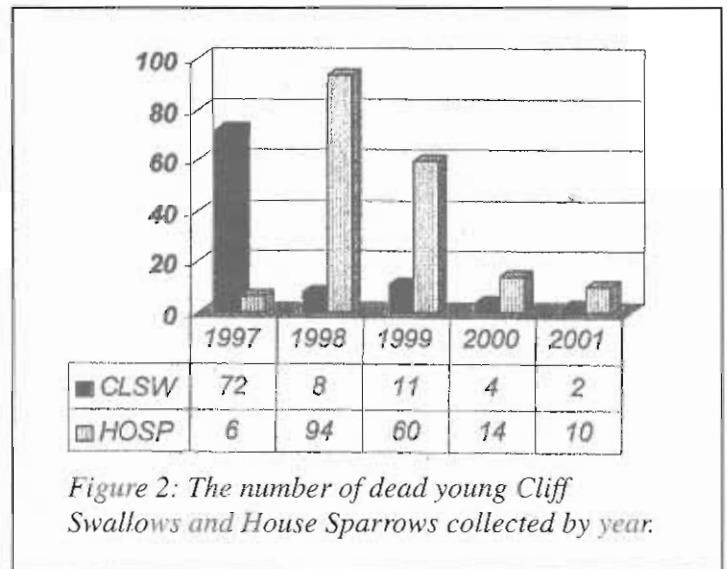


Figure 2: The number of dead young Cliff Swallows and House Sparrows collected by year.

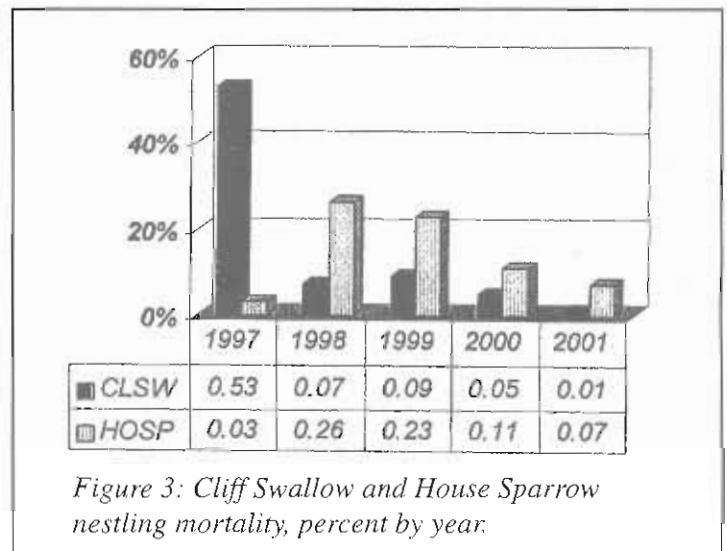
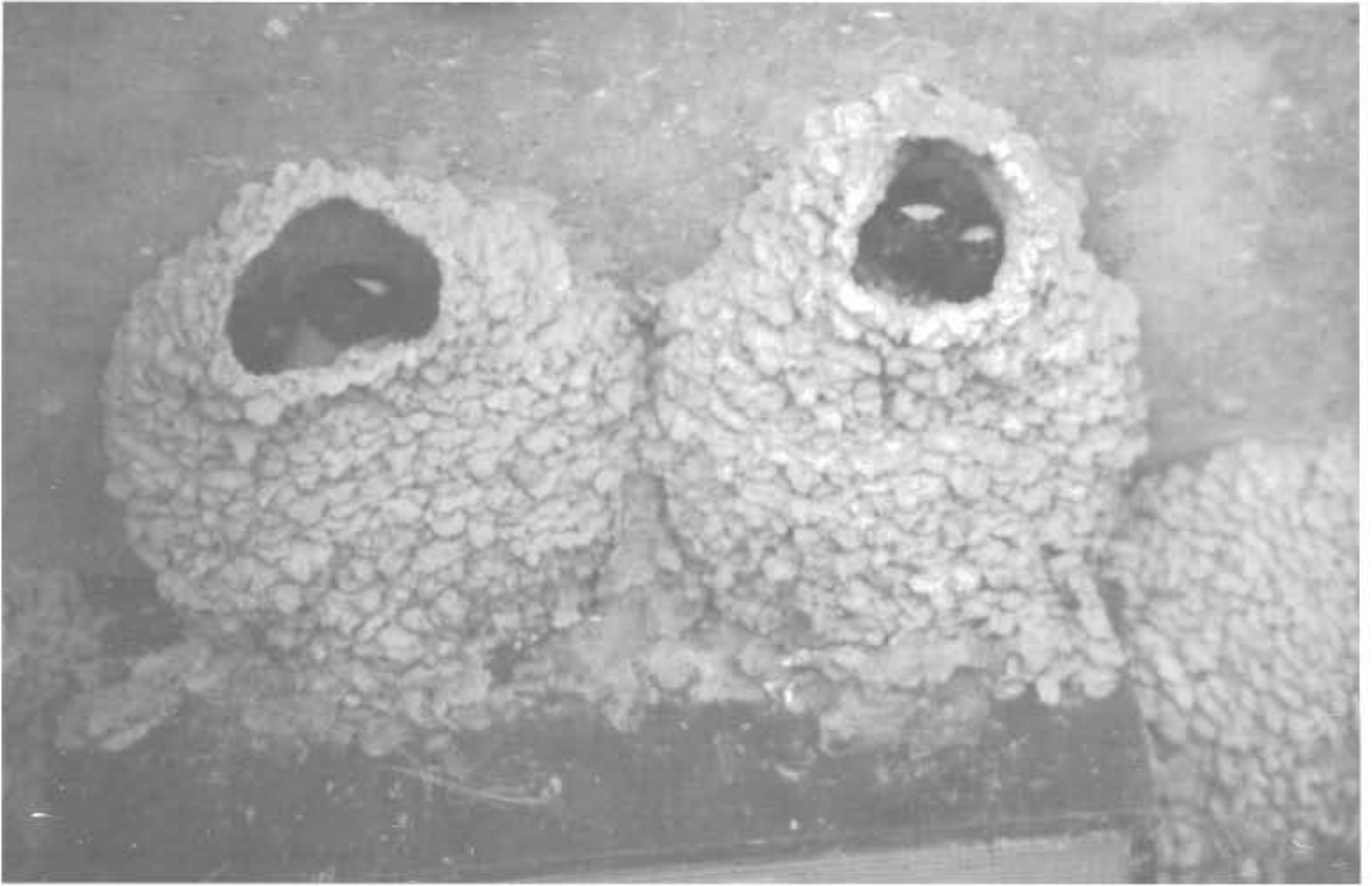


Figure 3: Cliff Swallow and House Sparrow nestling mortality, percent by year.



*Cliff Swallows use dabs of mud to construct nesting cavities that often are attached to the outer walls of buildings.*

population declined in 2000 and 2001: competition from House Finches, and the House Sparrows ousting so many of their own young in 1998 and 1999. In the years 2000 and 2001, both House Sparrows and Cliff Swallows experienced a significant reduction in number of young ousted. Obviously, one reason fewer oustings took place was the reduced House Sparrow population, but there may be other unknown reasons as well.

What is promising is that this year the number of Cliff Swallow fledglings increased and the Cliff Swallow's future at the University of Wisconsin-Green Bay looks encouraging.

We will continue to assess the long-term impact of the House Sparrow population on the Cliff Swallow population as well as to understand how the population dynamics of the Cliff Swallow is influenced by the presence of the House Sparrow and the House Finch.

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# Nest-box mice make lively television

## *How not to demonstrate spring-cleaning chores*

By Sharon Koval Stiteler



I do bi-weekly bird segments on the local portion of the Today Show broadcast in the Minneapolis/St. Paul on television station KARE. In March, I decided to do a presentation on cleaning winter squatters from nest boxes. I had a chickadee box that a mouse had moved into.

Saturday afternoon, I opened the box and poked at the bedding to see if anything would come out. I took the box from the tree to which it was attached and shook it, knocked on it, and even poked in the bedding a little more. Nothing came out.

In the studio Monday morning, cameras running, I opened the box and showed the nest. I put on a pair of gloves and started to pull at the nest material. Suddenly, a pair of black eyes appeared and out popped a Deer Mouse. I believe my exact quote was, "Eeeeeeeeee, ohmygod it's a mouse!"

Brad Woodard (one of the show's hosts) uttered something similar. Apparently, the other host, Roxanne Battle, was screaming in the sound booth. Then another mouse appeared, and another. They were everywhere.

And then they jumped off the counter. The camera people were scattering, trying to catch the mice.

I started making lame jokes about wishing I had come on with a Raptor Center bird, and Brad was nervously assuring the audience that, first, he didn't scream like a girl because he was scared of a mouse, but because my scream startled him and, second, no harm would come to the mice.

I tried to focus and keep talking about nest-box maintenance since we still had another three minutes to go in the segment, but mice were scurrying everywhere. I was also distracted by two producers and a cameraman who were crawling on the floor in front of us, trying to catch the mice without being seen on camera.

After what seemed like three hours, the segment ended, and Roxanne came in screaming that all the mice better be caught before she went on again. It was a lost cause at this point. One of the mice had even crawled up inside one of the robotic cameras. I was in utter disbelief.

Crew members came by, patting me on the back, thanking me for the

most interesting television they'd seen in months. The producer came out to shake my hand and ask if I knew the mice were in there and if it was a stunt. I was mortified, assuring her that they were not planted (although I guess I should have said yes). I apologized over and over, but she assured me that they will want me on future programs.

I walked back to the bathroom to wash my hands, when suddenly I heard the sound of my own voice screeching. In the nearest office, technicians were playing a tape of my adventure. I heard comments like, "Look at her face! This is going to be perfect for the blooper segment in December!" Another voice said, "Oh, we're sending this to every blooper show in the country." And finally, "I'm going to see if I can set this up on the web site."

The next day at work (All Seasons Wild Bird Store in Minnetonka, Minnesota) customers called me the "mouse lady."

Ah, the joys of educating the public about birds.

# Black flies can kill bluebird, swallow nestlings

## Methods of prevention are discussed

By Gary Gaard

In 2001 the ornithophilic black fly (*Cnephia taeniatifrons*) caused June-July nest box mortality of nestling Eastern Bluebirds and Tree Swallows. In Wisconsin, nestling losses from this species were in a corridor 15 miles on either side of the Mississippi, Wisconsin, St. Croix, and Chippewa rivers. Other black fly species, those for example that hatch from smaller rivers, also likely caused nest box mortality. Methods to prevent nest box mortality are discussed in this article.

For the bluebird nesting season 2001, the Bluebird Restoration Association of Wisconsin (BRAW) membership collaborated in testing the hypothesis that black flies are responsible for late June nest mortality. Data from and reports by BRAW members are compelling: the black fly does kill five-day-old and older nestling Eastern Bluebirds and Tree Swallows. Nestlings 10 days old are found dead in the nest more often than other ages. Nestlings younger than five days are not affected, probably because the black fly does not detect them as a blood meal.

Black flies were observed taking a blood meal from nestlings. The evidence is that all young in the nest die overnight, and all have black/red/purple bite welts on bare skin (not covered by feathers) areas.

We can monitor black fly populations and predict when and where nest mortality will occur. There are areas where nest mortality does not occur. Additionally, there was one incident of mature, exotic fowl with no feathers on the head and neck

killed by black flies in Wisconsin this summer.

Terry Glanzman of Mondovi, Wisconsin, is a long-time, original observer of the black fly/nestling problem. Monitoring 360 nest boxes, he has data back to the 1983 season. Last year, he lost 105 nestlings at attempts, most between June 15 and August 15. In 1993 he lost all nestlings present between mid-June and mid-August. According to Terry, 1993 and 2001 springs were cold and wet, and both were banner years for black flies. On the other hand, spring 1988 was hot and dry, and he lost only eight nests all year.

### Black fly biology

Local or popular names for the black fly include black fly, black-fly, buffalo gnat (hump on back in profile), sand fly, and turkey gnat.

Certain elements of the natural history of the black fly are pertinent to bluebird nesting. For reproduction, the female black fly must have a blood meal. Black fly eggs hatch in water, usually in large, slow-flowing rivers. Larva feed by attaching their posterior to the river bottom. They feed by gill-filtering food from the current. Adults feed essentially in daytime, outside, flying long distances (as far as 15 miles) to find a blood meal. Allergic reactions to bites can be fatal in mammals and birds.

The fact that these insects prefer to feed outside suggests a possible means of control by nest box design.

### Preventing black fly damage

- One option is to do nothing because black fly bites are natural phenomena.
- Create a sense for the black fly

that she is not feeding outside, one can tape nest box vent holes/slots to prevent air and light entry. This can, however, cause problems for the bird occupants of the box.

- Gordon Weber of Sparta, Wisconsin, reports success with the insect repellent Skin-So-Soft. For five-day and older nestlings, plastic-backed cotton balls are saturated with Skin-So-Soft and tacked to inside ceiling of wooden nest boxes. Treatment is repeated every four days.

- The sticky insect trap Tree Tangelfoot around vent holes/slots trapped up to 500 black flies per house. Protection is pretty good if you encircle all holes except the entrance hole. I lost nestlings in a Peterson house when I applied Tangelfoot to the side vent holes but forgot the slot at the top front of the house.

- An insecticide can be applied to nest-box exteriors. Howard Rasmussen of Portage, Wisconsin, reported good protection with wooden boxes using the insecticide Permethrin. I also experienced protection with that chemical on PVC houses. Use one application when the hatchlings are five days old, applying the liquid to the exterior of the house (enough to achieve a drip). Wear disposable gloves. Protect baby birds by temporarily plugging nest-box openings with paper towels.

- Field observations from last summer also suggest black fly bites of nestlings can be prevented by nest box design. I use three house designs that have vent holes — the Peterson, the Gilbertson PVC, and the Herman Olson. For all three designs, black



flies hovered around the house, and took blood meals from nestlings. For wrens that nested in these houses, there was no evidence that the black fly took blood meals from nestlings (the wren nest is a grass cup covered by a deep layer of twigs).

I use one house design that does not have vent holes, the Gilwood. For eight Gilwood houses monitored by another person, black flies did not hover around the house, and there was no evidence that the black fly took blood meals from nestlings.

I propose that in vented houses, the black fly senses she is outside and will take a blood meal. For non-vented houses and wren nests protected by a cavity jammed full of sticks, the black fly senses she is not outside and will not take a blood meal.

During the 2002 nesting season I plan to monitor nestlings for black fly bite lesions. In mid-June I will apply Tree Tangelfoot (caulk tube available at garden stores) around vent holes of a few vented houses. Black flies trapped will tell if and when black flies arrive. After the flies arrive, I will use duct tape to close vent holes of one half of my nest boxes (the other half unprotected as controls) to see if that will prevent the flies from taking blood meals. I also plan to place more non-vented houses.

*Material used in preparation of this article included:*

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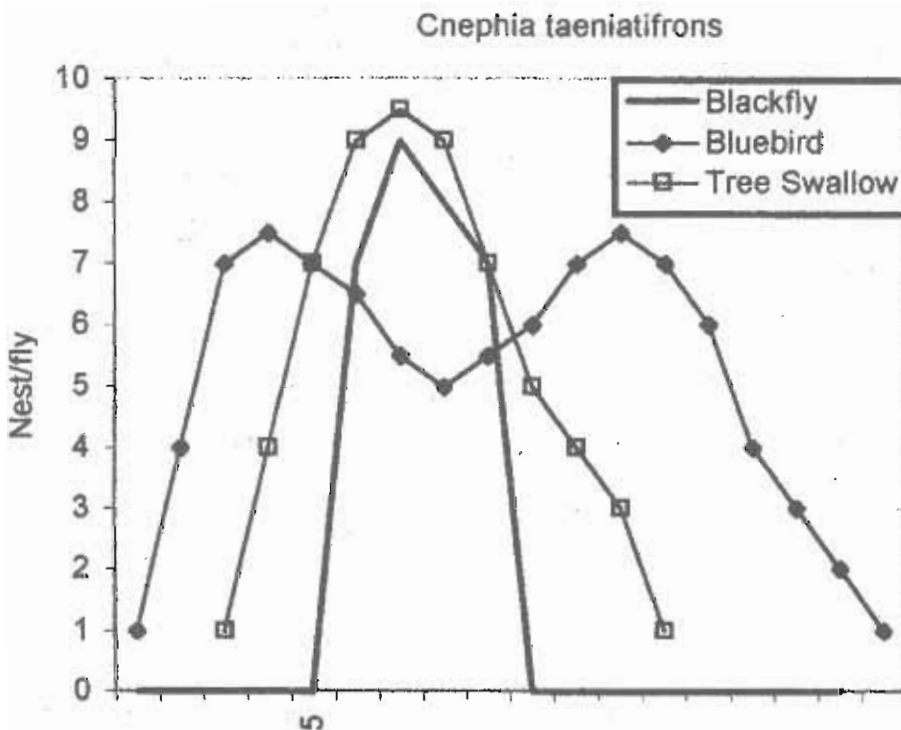
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Thanks to Joe O'Halloran and Phil Pellitteri for review of this article. Phil Pellitteri advised on Entomology research methods and black fly references.

*(This article first appeared in the Spring 2002 issue of Wisconsin Bluebird, newsletter of the Bluebird Restoration Association of Wisconsin, Inc. It has been edited for use here. It is used with permission of the author and the newsletter editor. Mr. Gaard is a member of the board of directors of the Bluebird Restoration Association of Wisconsin. His e-mail address is GZG@plantpath.wisc.edu, telephone 608/271-5679.)*



*Time comparison of first and second bluebird broods, Tree Swallow nesting, and the Cnephia taeniatifrons hatch in 2001. Tree Swallows were hit hard because peak-nesting activity coincided with peak black-fly hatch.*

## Cavity-nester site

A complete world list of cavity-nesting bird species grouped by continent is being assembled on a web page. Australia and North America have been completed. The web page for North America can be found at [http://bio.fsu.edu/~jameslab/North\\_America.htm](http://bio.fsu.edu/~jameslab/North_America.htm). The format shows family, common name, scientific name, and type of cavity.

The page is being developed by Eric L. Walters, Department of Biological Science, Florida State University, Tallahassee, FL 32306, e-mail ewalters@bio.fsu.edu.

# Fecal sac removal and disposal is part of bluebird's protection strategy

Why do bluebirds carry fecal sacs from their nests for disposal away from the nest site? Is this good housekeeping or something more?

A recent study in Georgia found that Eastern Bluebirds behaved as do many other bird species in sac removal. Their behavior is consistent with the hypothesis that fecal sac removal is done to reduce cues predators use to find nests.

The published study, Observations of Fecal Sac Removal by Eastern Bluebirds, written by Jason D. Lang, Carrie A. Straight, and Patricia Adair Gowaty, appeared in the journal *The Condor* (104:205-207).

"We observed Eastern Bluebird parents place nesting fecal sacs high on electric wires," the authors wrote. "This stimulated our interest in fecal sac removal, which occurs

commonly among bird species, yet remains a neglected topic in studies of parental behavior.

"Observations support the explanations that fecal sac removal keeps nests dry and clean and reduces exposure to pathogens and parasites, but if these were the only reasons parents removed fecal sacs, one might expect parents to drop fecal sacs just outside their cavities.

"Alternatively, if fecal sac removal reduces cues predators use, parents should dispose of fecal sacs far from nests."

The study was conducted from March through August in the years 1995 through 1999. Eastern Bluebirds were observed feeding young and removing fecal sacs at 348 nets on 128 territories at four sites near Athens, Georgia.

"With the exception of balancing fecal sacs high on electric wires, Eastern Bluebirds seem to behave like other species when removing fecal sacs from nests," the authors wrote.

"American Crows and Florida Scrub-Jays placed fecal sacs on branches. ... Prothonotary Warblers carried fecal sacs about 120 feet before dropping them, and Tree Swallows carried sacs between 60 and 160 feet. ...

The study showed that the bluebirds deposited fecal sacs from 120 to 300 feet from the nest, flying from 60 to 150 feet farther on these trips than on trips when no sacs were carried. Bluebirds were observed placing fecal sacs on wires, wooden fence posts, tree branches, and, once, atop a utility pole. If the sac was dropped during the disposal trip, bluebirds sometimes caught the sac in mid-flight and continued the disposal effort.

"Bluebirds removed 95 percent of fecal sacs during feeding trips, rather than making special trips for this purpose. ... Female and male parents do not differ in removal rates or disposal of fecal sacs.

"Because adults traveled farther than usual to dispose of fecal sacs, we conclude that the current best explanation for fecal sac removal by adult Eastern Bluebirds is reduction of cues, visual or chemical, that predators might use for finding nests," the authors wrote.

(Ms. Gowaty, perhaps the most frequently published of current bluebird researchers, can be reached by e-mail at [gowaty@ecology.uga.edu](mailto:gowaty@ecology.uga.edu).)



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# From the technical literature

These are summaries of articles recently published in ornithological journals.

## Experience counts in parenting

A study of Common Terns in Massachusetts showed that older birds — 18 years and older — had better breeding performance than younger birds. The terns normally attempt to raise two chicks per breeding season. Pairs with one or more older bird were more able to fledge two chicks in good condition, the study showed. Performance of the birds increased with age at least to age 18 and perhaps beyond, according to the research paper. The birds have a life-span of from 20 to 25 years. The study was done by Ian C. T. Nisbet, Victor Apanius, and Margaret S. Friar, and published in the Spring 2002 issue of the *Journal of Field Ornithology*, 73:117-124.

## Tree Swallow young beg together

Tree Swallow nestlings appear to work together to alert parent birds of their need for food. A study in Nova Scotia showed that begging calls of one nestling will increase the rate of calls of the other young in that nest. Smaller nestlings also seem to increase the volume of their calls in response to calls from larger siblings. The researchers surmise “that several similar calls might advertise a more effective overall signal to feeding parents, thus increasing net feeding rates.” The study was conducted by M. L. Leonard and A. G. Horn, and published in *Behavioral Ecology and Sociobiology*, 50:430-435.

## Woodpeckers accept foster nestlings

Red-cockaded Woodpecker is an endangered species. To increase the genetic variability of small colonies, nestlings could be moved from their parent nest to the nest of foster parents. A study has demonstrated that parent Red-cockaded Woodpeckers will accept foster nestlings. Chicks were moved from one nest to another. Fledge rates for these birds and nestlings left with their natural parents were almost the same. The authors of the study suggest that translocation of chicks can be used safely and effectively for the purpose of genetic variation. The study was conducted by M. T. Wallace and R. Buchholz, and was published in the *Journal of Wildlife Management*, 65:327-333.

## Can parent birds recognize weight problems of young?

Will or can parent birds recognize weight-gain problems affecting their nestlings? An infestation by blow fly larvae and mites of House Wren nestlings did not seem to influence the rate at which parent birds fed those young. This was observed during research reported in a paper published in the February 2002 issue of *The Condor* (104:183). The study was done in Wyoming by Brian L. Morrison and L. Scott Johnson of the Department of Biology, Towson (Maryland) University.

“We observed no significant difference in rates at which pairs fed nestlings at nests with naturally heavy infestations of fly larvae (six to 19 larvae per nestling) and nests in which nestling exposure to larvae was

experimentally eliminated or severely reduced (zero to two larvae per nestling), the authors wrote.

The study found that nestlings heavily infested with larvae gained weight more slowly than nestlings not infested or infested to a lesser degree. The weight-gain difference was reported at from about three to five percent. A companion study also showed that infested nestlings had lower hemoglobin levels. The authors suggest that parasitized nestlings “may be too weak or too anemic to intensify begging activity which would alert parents to their increased need for food.”

## Older males favored in extra-pair copulation

Female birds sometimes copulate with males other than their mates. Western Bluebirds, normally monogamous, recently were studied to try to determine what factors were most influential to females in what is termed extra-pair copulation. The study, undertaken in California, found that “female receptivity to extra-pair males was positively associated with the age difference between the extra-pair male and the female’s social mate,” according to a summary published in the *Journal of Field Ornithology* (73:228). The females engaging in extrapair activity chose older males. The researchers said they did not know what cues female birds used to distinguish between older and younger males. The study was done by J. L. Dickinson, and published in *Behavioral Ecology and Sociobiology*, 50:423-429.

# Predation most common cause of nest failure: Cornell Lab data

Predation was the most common reason for failure of Eastern Bluebird nests according to information gathered by the Cornell Lab of Ornithology in 2000-01. Predation and nest abandonment were almost equal causes of failure among Western and Mountain bluebirds, according to the Cornell report.

Cornell gathered information from participants in its Birdhouse Network.

Predation was found in over 40 percent of the 837 Eastern Bluebird nest failures reported. Nest abandonment was reported in just over 10 percent of the cases.

For Western Bluebirds, predation or abandonment each were reported in over 20 percent of the nests. Mountain Bluebird suffered predation or abandonment each in about 30 percent of the nests for which reports were received.

Competition, weather, and parasites were the next three most likely causes for nest failure for all three species.

The report also showed that Noel guards were the most common means of predator control used by Birdhouse Network participants. Forty-four percent of 1,677 reporters said they used the guards. (Noel guards are wire mesh tubes attached to the front of the nest box to prevent predators from reaching into the box through the entrance hole.)

Eighty-six percent of the participants said they used some form of predator deterrence. Conical guards were used 10 percent of the time, PVC or stovepipe baffle six percent, greased pipes or poles three percent. Twenty-three percent of the respondents said they used other methods, most of which involved devices

extending the outside length of the entrance hole.

The report was presented in *Birdscope*, Winter 2002, a publication of the Cornell Laboratory of Ornithology. The lab's web address is [www.birds.cornell.edu](http://www.birds.cornell.edu).

## PVC guard works for duck boxes

A predator guard made of four-inch PVC pipe has worked well to protect Wood Duck boxes for Jeff Bahls of Lowell, Wisconsin.

"I cut the PVC pipe 30 inches long. I place the pipe over 1.25-inch galvanized-metal conduit that holds the boxes. I pounded the 10-foot-long conduit into the ground until solid. This leaves from five to eight feet of conduit above the ground. I bolt the PVC guard just below the box, using a single bolt at the top of the PVC guard, allowing it to wobble," he said. "My theory is this the four-inch guard is too big for Raccoons' paws to grab around. The PVC itself too tough for the 'coons to claw into, and the wobble does not allow the coon to bear hug the guard.

"In southern areas, steel wool could be inserted through the mounting bolt to guard against snakes.

"I spray paint the outside of the PVC to make the guard a little more natural looking, like birch. I can also tell by scratches in the paint if anything *tried* to the climb the guard.

"So far, this had cut my nest losses by Raccoons to zero.

"Galvanizing on the metal conduit certainly helps also, preventing rust that makes pipes easy to climb."

(Mr. Bahls can be reached by e-mail at [jbahls@powerweb.net](mailto:jbahls@powerweb.net).)



*You might think this nest box is mounted above a predator guard, but inventor William Myslak of Brookeville, Maryland, calls it a varmint deflector. He has used it on his box mounts for two years, and reports that it has prevented snakes, Raccoons, and squirrels from gaining access to the boxes. His deflector is made of two pieces of 18x24-inch aluminum sheet bent slightly to accommodate the mounting pole, and then pop riveted at each end. Wind sometimes will spin the deflector on the pole, he says. A nail in the center fixes that. Mr. Myslak can be reached by mail at 20801 New Hampshire Ave., Brookeville, MD 20833.*

# Easy-mounting guard has simple elements

By Allen Bower

Putting up a nest box for bluebirds is only half the task of helping the birds have a place to nest. The other half of your duty is to keep predators from reaching the nest box by putting a predator guard under the nest box on a metal post. It keeps mammal predators — raccoons, snakes, chipmunks, red and gray squirrels — from reaching the nest box and eating eggs, young, and adult birds.

I use brown aluminum downspout or four-inch thin-wall PCV pipe, each 30 inches long, as my predator guards. I hang these on the post with a coat hanger wire. I cap the top of the guard with a plastic bottle so snakes and mice can't climb the inside of the guards to reach the nest box.

## Tools needed

For this project you will need hacksaw, battery-powered electric drill (or drill of your choice), pliers, wire cutters, felt pen, measuring tape, a knife, tin snips or heavy shears.

## How to hang the Predator Guard

1. Saw four 30-inch lengths of pipe from 10-foot sections of down spout or four-inch PCV pipe.
2. One inch down from the top, drill a hole on each side of the 30-inch guard section. You also will drill a hole through the mounting post.
3. Drop the predator guard over the post. Insert the wire through one side of the guard, through the post, and through the other side of the guard.
4. Then bend the wire down on both sides of the post to about 30 degrees (see illustration, page 22).
5. Bend the wire up close to the outside of the guard and over the top

of the guard. Cut off the excess wire.

## How to Cap the Top of the Predator Guard

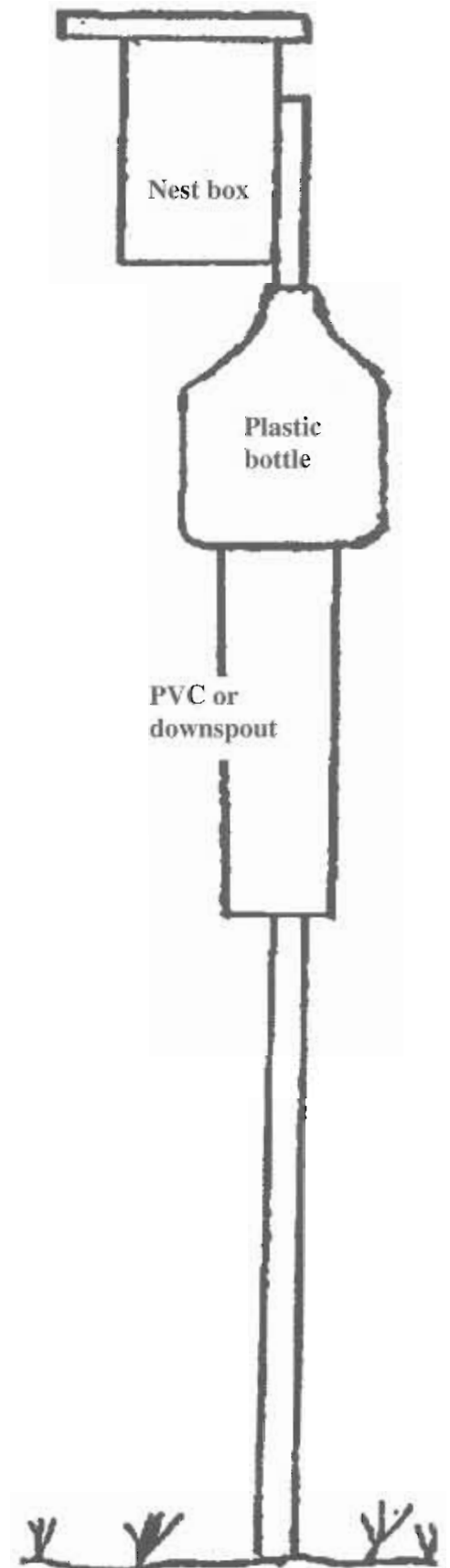
The predator guard pipe has to be capped off at the top to stop mice and snakes from climbing the post through the inside of the guard to get to the nest box. I use a plastic bottle to cap the top of the guard (fig. 2). Bottles without carrying handles work best. Handles can give predators climbing assistance. Use bottles that are not transparent, or spray paint the insides of the clear bottles so birds can't see insects that might be inside the bottle.

You will cut the bottom of the bottle to fit it over the down spout or PVC pipe. I find the plastic bottles easier to work with than other materials. Fit the bottle snugly around the post at the top and guard at the bottom. A snake big enough to eat bird eggs can squeeze through a half-inch crack. A mouse can squeeze past any crack that it can get its head through.

Put the fitted plastic bottle over the guard. Slide both up the post. You want the bottle about an inch below the nest box (see illustration at right). You want the guard within the bottle. Mark the post accordingly. This is where you drill the hole in the post for the wire on which the guard hangs (see illustration on page 22).

Drill the hole, mount the guard, and replace the nest box. Having a guard that hangs loose, so it moves and makes a noise hitting against the post, helps it to be effective in scaring off predators. You are now ready for bluebirds to safely nest.

*Continued on page 22*



*How the guard looks when installed on a post-mounted nest box.*



## Renewing early and upgrading help NABS

Please help NABS continue to be a continent-wide resource for bluebird conservation. The cost of simply doing business today is increasing. NABS has its share of paper, postage, and operational cost increases.

You can help by renewing at the next higher membership level. If you are a senior member (\$10), consider renewing as a regular member (\$15). If you are a regular member, consider renewing as a sustaining member (\$30). If you are a three-year regular (\$42), join for three years at full regular membership rates (3 x \$15 = \$45). If your membership is enjoyed by two or more people, please renew at the family rate (\$25).

You also can help NABS save money by renewing your membership before your expiration date, noted on the mailing label of *Bluebird*.

# — guard

*Continued from page 21*

## Maintenance of the Predator Guard

1. Use a car polish/wax to clean the guard. Do this in the spring. This will keep the guard slippery against predators and give the guard a longer life.

2. If hornets make their nest inside the predator guard, spray the area with WD-40 or wipe with fuel oil.

## Material Cost

I considered no cost for the coat hanger wire and the plastic bottle. I checked the prices for the down spout, 4-inch PCV pipe, and 4-inch PCV cap from three different lumber yards and was amazed at the price differences. These prices are not including the sales tax.

- 10 feet of brown aluminum down spout: prices ranged from \$5.79 to \$6.49.
- 10 feet of 4-inch thin-wall PCV pipe: from \$3.69 to \$5.95
- 4-inch PCV blank cap: \$1.07 to \$1.39

You can get four 30-inch guards from a 10-foot section of pipe. With this plan and those prices, you can make a predator guard for from 92 cents to \$1.62. Note that the PCV cap could substitute for the plastic bottle. This would roughly double the price of the guard. Watch construction sites and you might be able to pick up



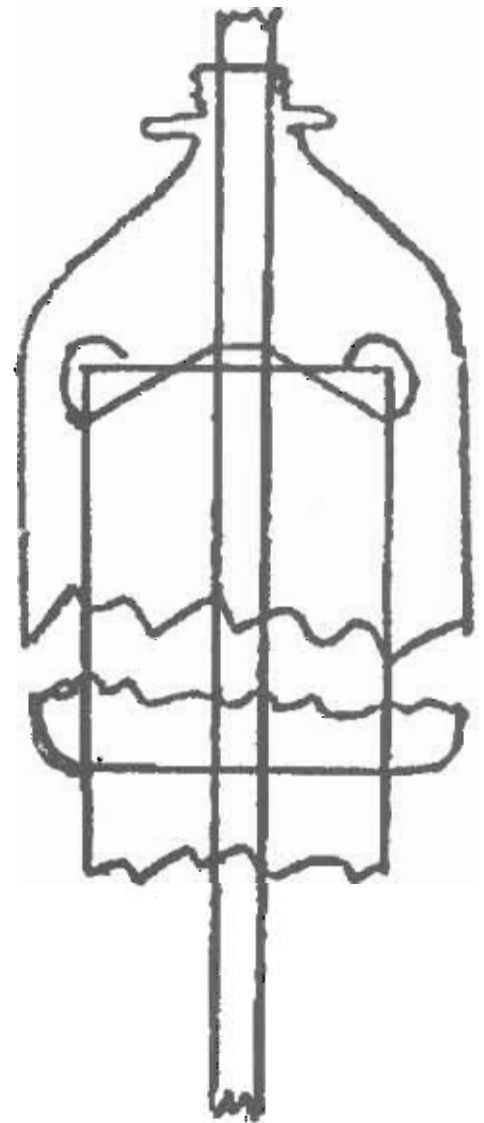
scrap pipe and used down spout free of charge.

I feel more emphasis should be made on every bluebird box having a predator guard. I don't believe in predator guards on the nest box. I think the boxes should be bluebird friendly.

This predator guard does not stop cats that can jump seven feet high from a hard surface, and it won't stop ants. But that's another story.

Use a predator guard that works best for your situation, but use one.

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



*An exploded view of the guard, assembled and mounted.*

## Books discuss bird conservation on golf courses

Bird Conservation on Golf Courses: A Design and Management Manual. Scott W. Gillihan, 2000. Ann Arbor Press. Chelsea, Michigan. 335 pp. Soft cover, \$34.95.

Managing Wildlife Habitat on Golf Courses. Ronald G. Dodson. 2000. Ann Arbor Press. Chelsea, Michigan. 177 pp. Hard cover, \$49.95.

Both books were reviewed in *The Auk*, Vol. 119, No. 1, January 2002, by Martin B. Main, Department of Wildlife Ecology and Conservation, Southwest Florida Research and Education Center, University of Florida.

He said, in conclusion: "These two books complement each other nicely. Gillihan's book is an excellent guide to the design and management of golf courses for the benefit of birds and other wildlife. Dodson's book is not a guide to management, but provides more detail on philosophical arguments for environmental responsibility that may lend themselves to classroom discussion, and provides examples of golf courses where environmental stewardship has been successfully incorporated."

### *Affiliate listing*

The listing of NABS affiliates, their names and contact information, usually found on this page is being updated. The new listing, plus a list of affiliate web sites, will be published in the Fall 2002 issue.

## So many ways

By **Haley Priest**

What is really incredible about bluebirding is that there are as many ways to bluebird as there are bluebirders! Different styles of bluebird boxes is but one example.

One bluebirder will swear by the two-holer, while another swears by Gilbertson, another by Peterson, another the slot, and some die-hards stick with the basic NABS design.

From the beginning of my bluebirding career, I heard outstanding testimonials for each box. They all sounded *so* good.

Once I started my trail and had enough room, I began trying different box styles. I was amazed at the findings. The very reasons some liked and swore by one kind of box turned to disaster on my trail! And sometimes, a particular design turned out to be just right for my trail.

Even still, a successful style at one site on my trail might not work at another site on the same trail. I have learned to be flexible, to move different boxes to different sites, depending on each site's unique needs. (Interestingly, many bluebirders stick to one box style and have success throughout their trail with that choice.)

There is another factor I consider when working with different boxes: the love/hate relationship I have with some of my boxes. Take the Gilbertson PVC box, for instance. Now here is a box I am on my hands and knees to. For me, on my trail, and on certain sites, this box has made it possible for many bluebirds to fledge without getting killed by House Sparrows. I am exceedingly grateful for this box. It's small inside diameter is but one of the many reasons this box is considered to be one of the best if not *the* premier House Sparrow-resistant box.

But that small size drives me nuts! I worry so about a big brood of babies surviving in such a cramped space.

However, seeing seven Tree Swallows fledge just fine from this Gilbertson box taught me that size does not seem to be a factor for successful fledging.

Conclusion: try as many boxes as you can and find out what works best for you and your site or your trail. Over time, you'll come to prefer some boxes over others, but you will hopefully always experiment with new boxes.

If you are newer to bluebirding and you have room for only one box, think about starting with the NABS box. They are easy to build and incorporate all of the basic rules of thumb having to do with bluebirds: proper ventilation slots, good construction, easy to open, inside size dimensions good for bluebirds, etc.

From there, experiment.

(Ms. Priest can be reached by e-mail at [mablue@gis.net](mailto:mablue@gis.net).)

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