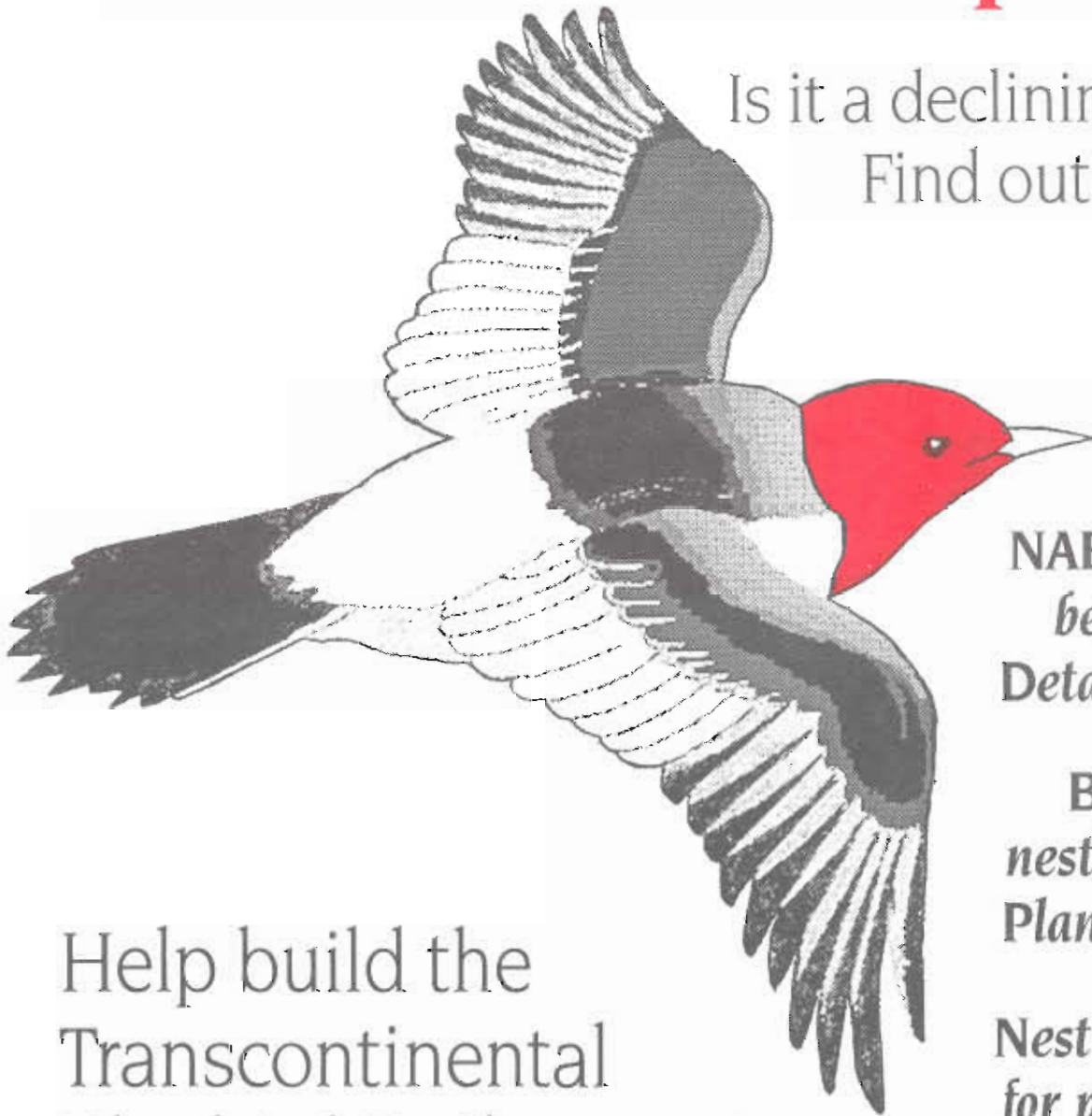


Bluebird

Journal of the North American Bluebird Society
Spring 2000 Formerly *Sialia* Vol. 22, No. 2

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From the President

By Ray Harris

I would like to draw attention to the work and dedication which Chuck Finley has given NABS during the past two years. Chuck volunteered to take the reins as treasurer, ignoring the fact he was still recuperating from eye surgery. He became ensconced nicely, and was then laid low again with heart surgery. After his recuperation, he worked as treasurer until all the necessary details were done. He has since been relieved of the treasurer's task at his own request.

During this time he also volunteered to try to bring the NABS constitution into the 21st century; our constitution was last revised in 1986. Chuck, with assistance, has the constitution ready for inspection. We hope it can be ratified at the Annual Convention at Galena this June.

Copies of the 1986 constitution with additions and deletions keyed for easy inspection are available by writing to NABS headquarters. Please enclose US\$2 and a SASE to assist with costs. Comments, if any, should be mailed to NABS headquarters; they will be addressed at the annual business meeting at the convention.

Copies also will be available to NABS members in their registration package at the convention.

REWARDS OF THIS GAME

It is impossible to try and keep track of the rewards one derives from being a bluebirder and trail nest-box monitor. I have been banding bluebirds for about 16 years, and started to band Tree Swallows two years ago. My day was made two weeks ago when I received a Certification of Appreciation from U.S. Geological Survey and The Canadian Wildlife Service.

On July 7, 1999, I recovered a Tree Swallow in a nest box as she was brooding a clutch of eggs. She had been banded. The number was not one of mine, and was eventually forwarded for identification.

The Tree Swallow was banded as an adult, May 3, 1998, in Alturas, Calif. She traveled across several mountain ranges, then turned north for several thousand miles. Mother Nature's creatures constantly amaze.

IF YOU TELL THEM, THEY WILL CALL

A note from NABS Speakers Chairperson Ron Kingston informs me his volunteer speakers annual questionnaire, together with some promotional brochures, are in the mail.

I wonder if there are many speakers, such as myself, who kind of wait for speaking requests to come. Several months ago I began putting out the word beyond my own circle that I am willing and available to speak to seniors, community groups, schools, etc. Guess what? Requests are beginning to come.

Elsewhere in this issue of Bluebird you will see that NABS still has a strong commitment to research. I would draw your attention to the geographical range of the grant recipients and the three Bluebird species. Dr. Kevin Berner, NABS Research Committee chairperson, writes this has happened by chance, not by design.

TWO GOOD IDEAS

Two things which have helped the NABS board immensely in its governing duties have been partial travel

Continued on page 3

4 NABS research grants are given

These persons have received this year's research grants from the North American Bluebird Society.

• Stephen S. Germaine, Arizona Game and Fish Department, Phoenix, Ariz., for a study entitled "Effects of Ponderosa Pine Forest Ecosystem Restoration on Reproductive Success of Western Bluebirds."

• Dr. Gary Ritchison, Eastern Kentucky University, Richmond, Ky., for a study entitled "Mating Deci-

sions by Female Bluebirds: Multiple Cues and Multiple Benefits."

• Dr. Wallace Rendell, Queen's University, Kingston, Ontario, for a study entitled "Patterns of Egg Mass Variation and Incubation in Eastern Bluebirds: Causes and Significance."

• John Citta, University of Montana, Missoula, Mont., for a study entitled "Population Dynamics of Mountain Bluebirds."

— from the president: Goodbye

Continued from page 2

assistance aid and that weird-and-wonderful communications medium, e-mail. Travel assistance has enabled almost 100 percent attendance at the board's business meetings. Heretofore, we were sometimes unable to have such wide participation.

TBT DESERVES YOUR CONSIDERATION

May I suggest to affiliate and other regional groups that if you haven't committed to being part of the Transcontinental Bluebird Trail, please give it serious consideration. Our Mountain Bluebird Society in Southern Alberta has found a wonderful partner who has willingly supported us by allowing the trail on their land. It has been good for our group, as it has given us a new challenge to help with TBT.

GOODBYE FROM ALBERTA

So, it comes time to say farewell to NABS members through this column, as June will see me leaving the presidency. Traveling to NABS conventions as a member, director, and president has given me the opportunity to meet hundreds of bluebirders and see nest-box trails in such wonderful venues as Orange County, Boise, Missoula, Great Falls, Red Deer, Regina, and Hamilton. It is

to be hoped I will add more as the years roll by.

To the new president, I wish him well as he brings a wealth of bluebird and administrative experience to the office.

Happy to meet. Sorry to part. Happy to meet again.

Register now for Minnesota event

The annual conference of the Bluebird Recovery Program of Minnesota will be April 15 from 9 a.m. to 4 p.m. at the University of Minnesota Arboretum in Chanhassen. Speakers will include Doug LeVasseur, president-elect of NABS, and seven others. Subjects include bluebirding trail tips, high-wire songbird mortalities, digging dangers, and Downy Woodpeckers. Two field trips are planned.

Registrations must be received by April 1. For registration blanks, write to BBRP Conference, Box 3801, Minneapolis, MN 55403.

Bylaws changes on NABS web site

NABS members wishing to review changes to the organization's bylaws can find them on the NABS web site: www.nabluebirdsociety.org.

Please note that there will be no extended discussion of these changes at the annual meeting, held in conjunction with the June convention. The web posting replaces such discussion.

Bluebird

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Letters to the editor and articles in this magazine express the opinions and positions of the authors. Articles published do not necessarily represent the opinions and positions of the officers, directors, or employees of the North American Bluebird Society.

Help Build the Bluebird Trail

Launch of major bluebird conservation effort May 20

The Transcontinental Bluebird Trail (TBT) will be launched across North America on May 20. The TBT is a network of bluebird trails, dotted by volunteer-monitored nest boxes, spanning the continent. It's one of the largest coordinated grass-roots conservation efforts ever undertaken here. Wild Birds Unlimited, Inc. has teamed with the North American Bluebird Society and NABS-affiliated organizations in this effort.

NABS-affiliated organizations and private trail managers in more than 100 cities and towns in the U.S. and Canada will be celebrating May 20 as their bluebird trails officially become part of the TBT. Over 11,000 nest boxes are registered on the TBT.

"The dedicated volunteers, conservation organization partners, and nature enthusiasts who have given their time, expertise, and financial support to the TBT deserve to be credited for establishing one of the most enthusiastic and widespread conservation efforts in North America," said John Ivanko, co-executive director of NABS.

The TBT includes Adopt-A-Box Trails. The first Adopt-A-Box trail was launched in May 1999 in Columbus, Ohio. New Adopt-A-Box-sponsored or privately managed bluebird trails continue to be added weekly. A map on the NABS web site reflects the approximate locations of the trails (www.nabluebirdsociety.org).

The boxes on the Adopt-A-Box trails can be sponsored for \$35. Sponsorship supports the management of a nest box on a special Adopt-A-Box trail. A NABS-affiliated organization develops and monitors these special trails. The



This pencil drawing of an Eastern Bluebird was done by NABS member Paul Carrier of Harwinton, Connecticut. Mr. Carrier monitors a trail of 200 nest boxes.

Adopt-A-Box sponsor receives:

- An Adopt-A-Box certificate and information on bluebirds.
- A \$2 coupon redeemable at participating Wild Birds Unlimited stores.
- Access to a web page where the sponsor can stay up-to-date on trail and nesting activities.
- A one-year membership to the North American Bluebird Society, which includes *Bluebird*, the organization's quarterly journal, featuring updates on the TBT, research reports and informative articles.
- An invitation to attend the annual North American Bluebird Society convention.

Affiliated organizations participating in the TBT Adopt-A-Box program

receive \$10 of each \$35 Adopt-A-Box sponsorship to help underwrite their conservation work.

The box sponsorships and Wild Birds Unlimited also help underwrite the nest-box signs to be attached to the nestboxes, promoting conservation awareness and helping deter vandalism (see enclosed catalog).

The more than 270 Wild Birds Unlimited stores are headquarters for information on the TBT and Adopt-A-Box sponsorships. To find the nearest Wild Birds Unlimited, call toll-free 800/326-4WBU or visit www.wbu.com. Sponsorship forms are available on the NABS web site at www.nabluebirdsociety.org/tbt/tbt.htm.

Red-headed Woodpecker

Is it a declining species?

By William P. Mueller

The Red-headed Woodpecker (*Melanerpes erythrocephalus*) is a species formerly much more common in the eastern and central United States and southeastern and south-central Canada than it is today. Although still widely distributed, this species is apparently declining in some areas. As with North America's three bluebird species and other cavity nesters, a range of factors may be responsible.

My graduate research at the University of Wisconsin-Milwaukee is aimed at determining possible correlations between declining numbers of this species and changes in the landscape and other human impacts on the species in the state of Wisconsin.

Results from the North American Breeding Bird Survey (BBS) show declines in the population of the Red-headed Woodpecker in many areas of the eastern United States. The species is on the WatchList of the National Audubon Society and Partners In Flight, the latter a consortium of federal and state natural-resource agencies and ornithological organizations monitoring bird populations and working toward species preservation. This species is also on the WatchLists of Illinois, Michigan, New Hampshire, New York, Indiana, Massachusetts, Minnesota, New Jersey (where it is listed as Threatened), Ohio, Rhode Island, Texas, Connecticut (where it is listed as Endangered), Iowa, Kansas, Missouri, North Dakota, Oklahoma, Wisconsin (where

it is listed as a species of Special Concern), and Nebraska.

FACTORS IMPLICATED IN POPULATION DECLINE

Possible reasons for decline of the Red-headed Woodpecker include loss of habitat due to land use changes and suburban development, firewood cutting, agricultural expansion, and so-called clean farming methods which remove hedgerows and associated trees. Other factors may include logging of mature hardwood stands, resulting in limited food supplies of acorns and beechnuts, and the removal of possible nest trees. Additionally, removal of dead trees for cosmetic reasons and competition for nest sites with the European Starling may be implicated in a population decline.

Some authorities speculate that the population of the Red-headed Woodpecker increased during the period of expansion of the Dutch elm disease, which caused the loss of millions of American elms. Sick and dying elms may have provided an excellent source of food and nest sites for the Red-headed Woodpecker, and may have allowed a temporary population increase.

Since these trees were ultimately lost to windthrow or removal, the Red-headed Woodpecker population in some areas may simply be returning to former levels. Since the population monitoring done by the BBS only began in 1966, it may be difficult to determine what those former

Continued on page 6



Food for another day

...a Red-headed Woodpecker, which had its headquarters near my house, was observed making frequent visits to an old oak post, and on examining it I found a large crack where the woodpecker had inserted about 100 grasshoppers of all sizes (for future use, as later observation proved), which were put in without killing them, but they were so firmly wedged in the crack that they in vain tried to get free. I told this to a couple of farmers, and found that they had also seen the same things and showed me posts which were used for the same purpose. Later in the season, the woodpecker whose station was near my house commenced to use his store, and today (February 10) there are only a few shriveled-up grasshoppers left.

—Dr. G. S. Agersborg in *F. E. L. Beal's Food of the Woodpeckers of the United States, 1911.*

— Red-headed Woodpecker: Is species in decline?

Continued from page 5

levels may have been. It may be possible to correlate numbers of losses of elms with a population decline in this woodpecker species. Research is needed on this subject.

Populations seem to be in greatest decline in New England, New York, the Appalachians, and across the southeastern states, as well as Kentucky and Ohio. In an analysis of the Breeding Bird Survey in Wisconsin, it was found that no Wisconsin species showed a more consistent decline over the past decade than did the Red-headed Woodpecker. In this state, during the period of 1982-91, a decline of an average of 10 percent per year has been noted. Data for the years 1997 to present have not yet been analyzed.

Another factor implicated in the decline of the Red-headed Woodpecker is vehicle-caused mortality. Wisconsin ornithologist A. W. Schorger did an 18-year study of road-killed birds which was published 45 years ago. This study found the Red-headed Woodpecker to be the second most commonly killed species in southern Wisconsin at that time. Due to its habit of flycatching near and across roads in semi-open woodland, the Red-headed Woodpecker is susceptible to vehicle collisions.

Data from the U.S. Department of Transportation show passenger travel nearly doubled during the past two decades, and passenger-miles per person increased by more than 50 percent. This increased level of vehicle traffic may be correlated with



decline in the Red-headed Woodpecker. Loss of one of an adult pair to a vehicle collision during the period of incubation and feeding young may result in diminished reproductive success.

To determine the importance of this factor, I have initiated an investigation of the numbers of birds killed by collisions with motor vehicles in

Wisconsin. I have requested the members of the Wisconsin Society for Ornithology, and other Wisconsin ornithologists and birders, to send me records of all road-killed birds they find during the calendar year of 1999. To avoid bias in these data, I have specifically not asked for information limited to the Red-headed Woodpecker, but for information for all species whose carcasses can be found on roadways and identified.

This project is now in its ninth month. As of September of 1999, over 1000 records have been submitted for 75 species, from more than 50 of Wisconsin's 72 counties. Thus far, this aspect of the study has yielded only three records of road-killed Red-headed Woodpeckers for the entire state. The situation thus seems much changed from that reported by Schorger in 1954. It is unclear whether this means the species was more abundant at that time, or simply a more frequent victim of vehicle collisions. It is not known if changing habitat or roadside maintenance have caused a change in feeding habits. These are questions that merit further study.

Competition with the European Starling (*Sturnus vulgaris*) for nest sites also has been suggested as a cause for the decline. Professor D. Ingold of Muskingum College in

Continued on page 7

— Study: habitat loss is factor; save those snags

Continued from page 6

Ohio has done much research in this area. Ingold has determined that competition with the starling may not cause a decrease in the number of young produced, because the woodpeckers have a different nesting phenology, nesting later in the breeding season.

Those individuals which have encountered competition early in the season are often able to re-nest later. Observations of interactions between Red-headed Woodpeckers and starlings have demonstrated that the woodpecker is able to vigorously defend itself and is not unduly influenced by these interactions. In 62 recorded interactions between starlings and the Red-headed Woodpecker, the woodpeckers were the aggressors in 82 percent of the cases

SUMMARY AND RECOMMENDATIONS

The Red-headed Woodpecker seems to be experiencing a population decline in some parts of its geographic range in North America. Research into possible causes for the decline is underway. This research may point toward management recommendations for this species.

To protect this species now, there are actions that may help. As with other cavity-nesting species, if you own woodland property, don't remove snags, the dead and dying trees which provide nest cavities for woodpeckers and bluebirds, as well as a number of other wildlife species.

Although it may be tempting to cut dead trees for firewood or to

improve the cosmetic appearance of your woodland edge areas, consider that the presence of Red-headed Woodpeckers may add more value than any number of logs in the fireplace. Unlike bluebirds, Red-headed Woodpeckers are seldom known to use nest boxes provided by humans. Existing cavities and those newly excavated by the birds themselves are their major source of nest sites. Save those snags!

(Bill Mueller is a long-time bird enthusiast who studies all species, not just the Red-headed Woodpecker, in southeastern Wisconsin. He has a bachelor's degree from UWM, majoring in the Biological Aspects of Conservation, and currently is working toward a master's degree at UWM. He can be reached at 1242 S. 45 St., Milwaukee, WI 53214. E-mail illlawas@earthlink.net)

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Nest Box Cam 2000: A bird's-eye view

Nesting season is upon us, and The Birdhouse Network (formerly the Nest Box Network) is gearing up to bring you an inside look. Tens of thousands of people viewed the lives of cavity-nesting birds using this popular web site last year, its second year of operation.

During 1999, Carolina Chickadees were watched while they built their

nest and cared for their young. Two Eastern Bluebird families nested and fledged young before the camera's eye. To join the audience, log on the web site at <http://birds.cornell.edu>. To access the 1999 archives, go to <http://birdsource.tc.cornell.edu/birdhouse/cam/nestboxcam99.htm>.

(Excerpted with permission from Birdscope, winter 2000 issue.)

NABS convention 2000 Galena

Bluebirders from across North America will gather in Galena, Ill., June 22-25 for the annual convention of the North American Bluebird Society.

Galena is in the heart of Eastern Bluebird country, and also offers wonderful scenic and touring opportunities. The city is sometimes called "the town that time forgot." Eighty-five percent of town buildings are listed on the National Register of Historic Places. Its Main Street is a smorgasbord of antique stores and charming shops and restaurants.

Hosting this year's convention is the Jo Daviess County Natural Area Guardians. Featured speakers will be Don and Lillian Stokes, authors of many popular books on birds, including *The Bluebird Book*.

The convention will be at Chestnut Mountain Resort, a full-service resort eight miles southeast of Galena on a wooded palisade overlooking the Mississippi River. The special rates apply to early arrivals and those extending their vacation stay.

Make your reservation directly with the resort. Over half of the rooms were booked by the end of

**NABS 2000
CONVENTION
WILL FEATURE
DON & LILLIAN
STOKES,
AUTHORS OF
"THE BLUEBIRD
BOOK"**

February. Do not delay.

Room rates per night are: Single, \$90; Double, \$95; Triple, \$100; Quad, \$105. To make reservations, contact the resort at 1-800-397-1320 or via e-mail www.chestnutmtn.com.

For other accommodations or campgrounds or RV facilities, contact the Galena Jo Daviess County Convention and Visitors Bureau: 1-800-747-9377 or www.galena.org. An impressive list of places to stay is available.

For those flying to the area, the Dubuque (Iowa) Regional Airport is an hour away. You may rent a car there (Avis, 1-800-331-1212; National, 1-800-227-7368) or a Chestnut Mountain Resort van will meet planes for \$12 per person. Discount is available to parties arriving on same flight. For van service, make arrangements with the resort.

Following a day of registration on Thursday, June 22, slide presentations will acquaint you with the geology and birds of the area. Programs will be presented at 7 p.m. and repeated at 8 p.m. No registration is required.

Thursday also will include meetings of NABS directors and of NABS affiliates.

Two all-day field trips, planned for Friday, June 23, remain available.

Choose from "Birding and Botanizing," or "History and Geology." All trips return to the resort in time to relax by the pool, to visit the NABS exhibit room, or simply to enjoy the view. A hog roast, a local tradition, caps the evening. It follows a 5 p.m. guided bus tour through The Galena Territory, a premier golf resort which is home to several bluebird trails, to the Galena Winery, where the vineyard may be toured and the wines sampled.

Saturday, at 9 a.m., the general meeting will begin. Keynote speakers will be Don and Lillian Stokes, two of America's best-selling nature writers. You will have the opportunity to meet the authors throughout the weekend.

A buffet lunch will be served overlooking the Mississippi River.

Beginning at 1:30 p.m., six 45-minute programs will be offered, two each hour. The schedule will be posted. Pick and choose as you wish.

A cash bar opens at 6 p.m. The annual NABS banquet follows at 7 p.m. at the resort, and it will include awards presentations, musical entertainment, and The Main Street Players, who will present "Remembering Old Galena," a fascinating portrait of the town's colorful history.

For those staying over, Sunday morning diversions will be offered.

Co-chairpersons for the convention are Joan Harnet (815/845-2390) and Grace Storch (815/777-9691). E-mail address is jdsacd@humus.com.



Last year's photos show convention excitement, fun

If you wish to take a look at photos of NABS convention activities, to sharpen your appetite for this summer's bluebird extravaganza in Galena, Illinois, punch up this web site on your computer: <http://www.wep.ab.ca/nabsconf/>

There you will find a wonderful set of photos taken at the 1999 Montana convention. The photos and web site are provided by Robert K. Lane, a board member of the Ellis Bird Farm in Alberta.

You MUST register for convention and rooms by June 1, but earlier is better!

To make room reservations, contact the resort at 1-800-397-1320 or via e-mail www.chestnutmtn.com.

Registration for the convention (\$25 fee per person, which includes Saturday lunch) is required, as well as for the field trips on Friday (per person fees range from \$20 to \$30), the hog roast Friday night (cost is \$20 per person), the banquet and entertainment Saturday evening (cost \$25 per person), and Sunday morning diversion (no fee, but registration is a must). See the NABS web site for more information or e-mail Joan Harmet at joandick@aeroinc.net.

'Stokes Bluebird Basics' video takes off

"Stokes Bluebird Basics," a 15-minute introductory video which covers all the basics from putting up boxes to enjoying the family life of these beautiful birds, is selling very well. It was written and is hosted by Don and Lillian Stokes, two of America's leading authorities on birds and nature, with the participation of and review by the North American Bluebird Society.

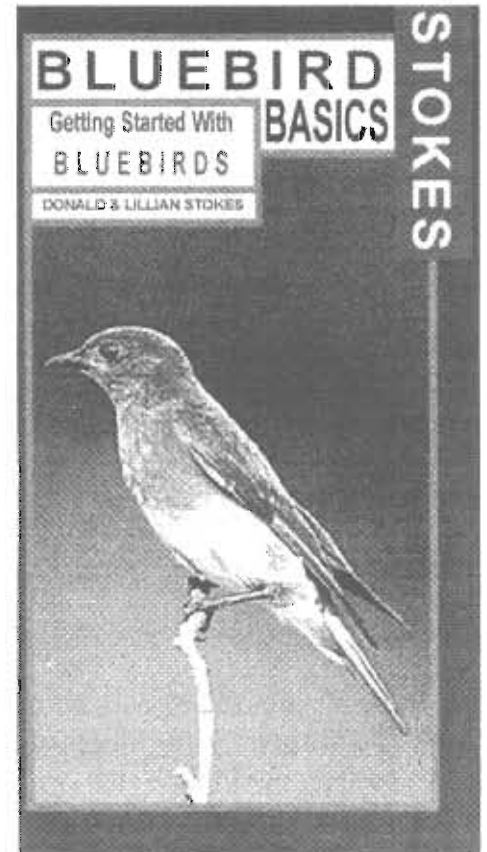
The information covers all three species of North American bluebirds: Eastern, Western, and Mountain. This easy-to-understand video tells you all you need to know to get started with bluebirds and bring the joys of these wonderful birds into your life. It is ideal for use in presentations, workshops, or at school bluebird talks. (To order, see enclosed catalog.)

Valuable topics include selecting good bluebird habitat, choosing the right bluebird nest box, monitoring your bluebird nest box, protection from predators, how to deal with bird competitors, starting a bluebird trail, enjoying bluebird family life, information on all three species of bluebirds, and the importance of keeping records and research.

Filled with excellent information and stunning photography, this video will be the essential resource for anyone interested in bluebirds.

Don and Lillian Stokes are best-selling authors of *Stokes Field Guide to Birds*, *Stokes Bluebird Book*, and 21 other books on birds and nature. They are the hosts and creators of the new, national, 13-part TV series, "Stokes Birds At Home," which premiered on public television stations in January 2000.

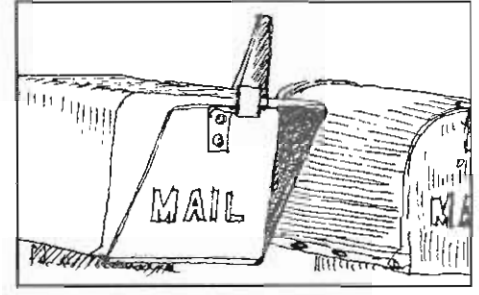
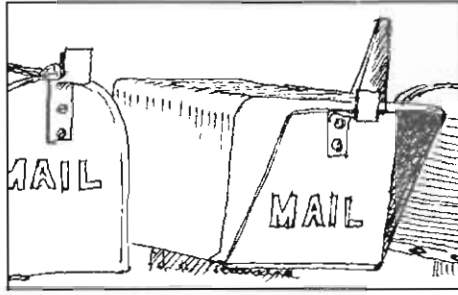
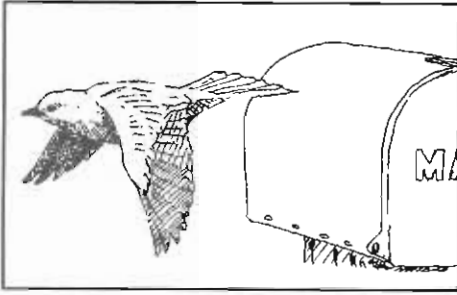
A portion of the proceeds from sales of this video will be donated to the North American Bluebird Society, to help continue bluebird conservation in North America. Special thanks



are due to Steve Eno, Dorene Scriven and Myrna Pearman, NABS Technical Advisory Committee members, for their review of the video.

A shaggy bird joke

Two robins were sitting in a tree. "I'm really hungry," said the first one. "Me, too," said the second. "Let's fly down and find some lunch." They found a nice plot of ground full of worms. They ate and ate. "I'm so full I don't think I can fly back up to the tree," said the first one. "Me either. Let's just lay here and bask in the warm sun," said the second. They plopped down on the ground, enjoying the sun. No sooner had they fallen asleep, when a big tom cat snuck up and ate them both. As the cat sat washing his face after his meal, he thought, "I love baskin' robins!"



Bluebirds: Not Just for the Country

Dear editor,

Quite some time ago, it became apparent to me that the more we preached to people about putting nest boxes in areas where they could view them easily and monitor them frequently, the greater success our friends, customers, and associates had in attracting and raising bluebirds.

The more we encouraged people to build up the population of bluebirds in subdivisions on the fringes of downtown Nashville, the greater success we had in attracting bluebirds to the city.

One of the (educational) presentations I do is entitled "Bluebirds: Not Just for the Country." I go into the specifics concerning methods we feel

enhance a metropolitan area's opportunity for bluebirds to nest.

Some residential areas prove to be quite the haven for bluebirds. They have perfectly manicured lawns, an abundance of power lines for perch area, and a fairly consistent bustle of human activity (to annoy natural predators and, who knows, maybe just because the bluebirds actually like to be around us!).

Of course, we don't recommend our customers make pets of the birds, but routine interaction does seem to be a plus, if for no other reason than to be able to eject House Sparrows immediately and frequently. (We can't really explain why a lot of human activity around the box doesn't seem to annoy the bluebirds, but almost always bothers the House Sparrows; we just try to use that information to our advantage.)

With regard to open area, our experience has been that with ample perch area and a well-made, closely monitored nest box, a clearing of only 30 feet or so (sometimes less) in the front area of the house is sufficient.

We recommend not mounting to trees or huildings. The varied terrain of many downtown residential areas (i.e., small area of closely mown grass plus a few berry-producing shrubs and a dogwood tree or two, followed by taller evergreen trees) has proven to be a plus, even if this terrain is spread over several residences.

— Steve Garr, Mt. Juliet, Tenn.

Writers offer helpful ideas

Dear editor,

In the last issue (Winter 1999, Vol. 22, No. 1), a solution was suggested (page 18) for combating paper wasps. The suggestion was OK, but why not use the sanitary method, which lasts the lifetime of the box?

Simply staple a thin pliable sheet of plastic, such as one of the heavier garbage bags (heavier is better) to the bottom side of the roof. This system has worked for me for seven years with 100 percent success. No mess, no repeat, and you never are in danger of getting stung.

Another suggestion: When designing and building new bluebird boxes with slanted roofs, always put saw kerfs (grooves) at least one-eighth-inch deep on the bottom end and left and right sides of the roof. This will lengthen the life of the box considerable by causing rainwater to funnel down to the front and drop off harmlessly.

— Chris J. and Alma Slebaugh Sr., Nappanee, Indiana

BLUEBIRDERS WANTED

Bluebirders in Massachusettes who are interested in getting together to share stories and information about their favorite topic are asked to contact Haleya Priest at 413/549-3937 or via e-mail at hpandtL@crocker.com.

For responding bluebirders, the potential exists for ongoing meetings and participation in the development of a statewide bluebird organization.

Screws vs. Nails

Advocates make a case for each

Nails or screws. When constructing nest boxes, both have their supporters. And success is reported with each, assuming specific nails or screws are used. Glue gets into the act, too.

A CASE FOR SCREWS

Discussion on the e-mail network BLUEBIRD-L was prompted by a question about what kind of nail to use to build a nest box. Dialogue by 12 participants provided several reasons for the unanimous response: Use screws, not nails. (Read on. Nails have their proponents, too.)

Most urged use of drywall screws; others said deck screws; some wrote either one would work.

"One of the main reasons for using screws in colder climates is that the freezing and thawing doesn't cause screwed together boxes to come apart — quite the opposite with nailed boxes. ...," offered Jim Walters, Iowa City, Iowa.

The ease of construction was cited by several as a reason to use screws. A power drill makes assembly and repair a quick job.

Some noted that deck screws are designed for outdoor use; others said they've used drywall screws successfully for many years; one person added that a dab of silicone caulk on the exposed heads will protect the drywall screws from the elements.

While raccoons have been known to pull off roofs of nail-joined redwood nest boxes, they cannot remove ones which have been screwed on.

Taking it a step farther, Jeff Holbrook of Canton, N.Y. wrote, "I use square recess screws. They never strip out like the normal Phillip's heads do. ... They are much stronger

... You will never snap the head off like you often do with the drywall types."

A CASE FOR NAILS

"When I decided to build bluebird nest boxes (in 1981), I knew nothing about nails," wrote Harry Krueger, Ore City, Texas, in *The Hole Story*, newsletter of The Oklahoma Bluebird Society, summer 1999 issue. He bought electrogalvanized 6d nails and hot-dipped galvanized 6d nails, took them home, pounded one of each a quarter inch into a board, and set it outside to weather for six months. The electrogalvanized nail had begun to rust, but the other had not.

Mr. Krueger explained that hot-dipped galvanized nails have a mottled- or rough-textured appearance. The rougher, the better, he advised.

Mr. Krueger recommends 5d hot-dipped galvanized nails, not 6d (which most often is recommended). "Because it is much smaller in circumference ... (it) will not cause any splitting in three-quarter-inch wood," he explained. He also said 5d nails are less likely to work their way out.

Gluing the wood edges before nailing them together makes a firmer nest box. "I have nest boxes that are 10 years old and are still solidly glued and nailed along the edges, with no warping," he said.

THE CAVEAT

Noticing in recent years that nest boxes from different sources in different parts of the country were put together with drywall screws, Mr. Krueger asked, "Why?"

He determined that drywall screws

Continued on page 13

Mouse house food factory

Field mice are an important part of the food cycle for many mammals and raptors. By providing the perfect habitat for mice, you can enhance the habitat for many other species: owls, hawks, fox, bobcat, and weasel.

The mouse house is nothing more than a wooden pallet on the ground that holds two bales of hay with corn, winter rye, or any type of grain which will attract mice. The mice will feed on the grain and burrow into the hay and make nests. Soon, they begin to multiply, and before long you have a mouse factory.

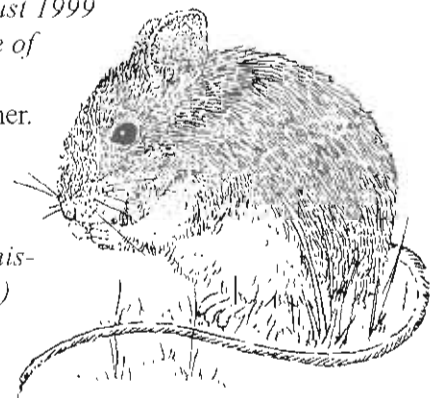
Place the house in an open area. Cover the bales with rubber, plastic, or some waterproof material and place rocks on top to hold it down. This keeps them dry all year.

When we saw bobcat tracks in the higher elevations of our tree farm, we decided to build three mouse factories to provide a source of food for the bobcat and other species. For three seasons the factories worked well, with mice multiplying as expected. However, when I checked them in the spring, there were no mice in the third house — garter snakes also had come to dine!

— Tom Thomson, Thomson Family Tree Farm, Oxford, New Hampshire

(This article appeared in the July/August 1999 issue of Tree Farmer.

It is used with permission.)



Brown Creeper Nesting Structure

If you build them (and place in varied habitat), they will come

By Benjamin Leese

The Brown Creeper falls into the category of overlooked cavity nesters despite its interesting habits and extensive range. Some would argue that it is not a cavity nester, as it prefers to build its nest behind bark, but it occasionally does nest in cavities. On rare instances, creepers also have nested in special structures which have been developed for the species, but nesting records are few and far between.

This species merits the attention of bluebirders. Relatively little is known about this reclusive bird, which makes it an even more interesting subject for studies of its nesting behavior and habitat requirements.

The most recent book to summarize the Brown Creeper's life history is *The Birder's Handbook* by Paul Ehrlich, David Dobkin, and Darryl

Wheye. Their entry on this species is paraphrased here.

Brown Creepers glean their food from the bark of trees. Generally, the birds begin at the base of the

tree and move their way up the tree gradually, picking insects from the bark along the way. The monogamous pairs build a nest between the trunk of a tree a peeling piece of bark. The pair usually nests in conifers, but will utilize deciduous trees and even cavities occasionally. The nest is "a hammock-like cup" made of moss, pine needles, and feathers. The nest is situated between three and 50 feet (usually between five and 15 feet) above the ground. The young are fed by both the male and female, and are fledged in 13 to 16 days. During the winter, Brown Creepers are often found in mixed flocks with species including chickadees and titmice.

I have developed a nest structure which I believe will be acceptable to the Brown Creeper. I have not yet tested the structure, as I devised it during the bluebirding doldrums of winter. I hope that other bluebirders will try one or two of these structures and create variations. I suggest leaving both sides open to mimic the natural nesting habitat as much as possible.

Most authors suggest that Brown Creepers are limited to mature

forests. Others suggest that creepers prefer to nest in swampy areas, and I have observed Brown Creepers in newer forests on occasion. Because of the disputed nature of the creeper's habitat, I advise anyone erecting creeper nesting structures to put them in different habitats.

More information is obviously needed on this species, which is declining in parts of its range, and I believe that this structure may give us insight into the life of the Brown Creeper. Please apprise the author of any successes with this nesting structure.

Acknowledgments

Thanks are due to CAVNET (Cavity-Nesting Bird Scientific Discussion Group, CAVNET@UVVM.UVIC.CA), especially Marcel DarVeau, Andre Cyr, Dick Cannings, and David J. Flaspohler.

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(Mr. Leese can be reached at RD 5, Box 5565, Spring Grove, PA 17362.)



The structure, built to the dimensions shown at left, is mounted on a tree in the position illustrated in the top drawing. This is meant to simulate the piece of loose bark behind which nests often are built.



Clip articles about bluebirds and other cavity-nesters for NABS scrapbook

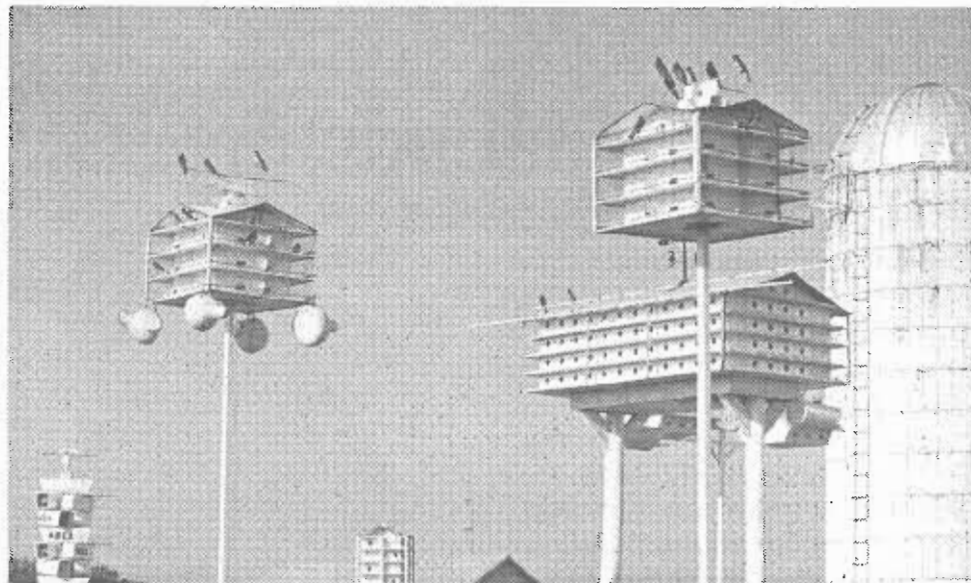
Help NABS keep track of publicity and articles about NABS, affiliated organizations, and bluebird conservation. Clip articles and send them into NABS. Many find their way into the NABS scrapbook, and a selection is used in the NABS media kit. Send to: NABS, Press Clippings, P.O. Box 74, Darlington, WI 53530.

— Screws vs. nails

Continued from page 11

“have very deep ridges ... and have the ability to hold better because they have more bite. ... They also have ... a bugle head that sets flush without splitting the wood and a square-drive recess that is a lot better than slotted-head screws ... Even though the 5d hot-dipped galvanized nails are time-tested and successful, I feel these screws will be superior for joining boards together, last longer, hold better, and cause less splitting.”

(This article was extrapolated, with permission, from an article entitled “Nest Box Fasteners — Nails, Glue, and Screws” which appeared in Bluebird News, Vol. 4, Ed. 1, January 1991 and reproduced in The Hole Story, newsletter of The Oklahoma Bluebird Society, Vol. 2, Issue 4, Summer 1999, and from an article entitled “Construction Zone: Nails or Screws?” which appeared in Bluebirds Fly, the newsletter of the California Bluebird Recovery Program, Vol. 5, No. 1, Spring 1999.)



Chris and Alma Slebaugh Sr. of Nappanee, Indiana, provide many nesting sites for Purple Martins, including the mammoth 132-compartment complex seen here, just to the left of the silo, which accommodates both people and birds. You can climb up inside it, “bed down and listen to the martin music only inches away,” Mr. Slebaugh said. He is now refitting the inside with darkened plexiglass so people will be able to climb in and watch nestlings being fed and other in-nest activities. The hotel doubles as a “warm roosting site for bluebirds in the wintertime,” said Mr. Slebaugh. “The bluebirds always wisely roost on the opposite side of the howling winds in the winter,” he said in a recent note. “On the morning of Jan. 1, my wife walked out to the hotel just as the sun was peeping above the horizon, and a beautiful male bluebird exited the hotel, lit on the perch, and chattered and warbled.”

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For transfer or stock delivery instructions, call Bob Martin, NABS treasurer, at 1-800-225-2419 (First Union Securities).

Be sure to consult first with your financial planner regarding your specific situation and circumstances.

Nest-box preference and productivity by Eastern Bluebirds, Tree Swallows studied

By **Scott G. Somershoe and David A. Zegers**

Although many studies have tested nest-box preference in Eastern Bluebirds and Tree Swallows, few have addressed the issue of productivity or fledging success. The Peterson box with its oval entry hole is reported to be preferred by bluebirds, but there are no data in the literature that indicates which nest-box design provides for the greatest productivity.

Many of these studies also fail to differentiate between birds preferring, or choosing, a box from two unoccupied boxes, or nesting adjacent to a box occupied by a competitor. As a result, erroneous conclusions may have been drawn about nest-box preference, and the Peterson box may not actually be the box preferred by bluebirds.

If the goal of establishing nest boxes is to facilitate the increase of the population of Eastern Bluebirds, one should erect boxes that provide greater productivity. The purpose of this study was to determine the preference of nest boxes by Eastern Bluebirds and Tree Swallows, to examine how nest-box preference or choice is influenced by the presence of competitors nesting in one of a pair of boxes, and to determine how nest-box design influences productivity.

This research was conducted during the 1997 and 1998 breeding seasons in Lancaster County, Penn. The study areas consisted primarily of farmland and open meadows with fences and/or medium-sized trees (six to 20 feet high) nearby for perching. Specific sites were chosen in optimal



bluebird habitat as described by Zeleny (1985).

In March 1997, we erected 12 pairs of nest boxes. Each pair consisted of one North American Bluebird Society (NABS) box with its round entry hole and one Peterson box with a round entry hole. In March 1998, 18 additional pairs of boxes were raised. All 30 Peterson boxes used in 1998 were constructed or modified to have an oval entrance hole. Each pair of boxes was mounted six feet apart on separate wooden

posts, facing the same direction. Pairs of boxes were at least 100 yards apart, to prevent competition between neighboring pairs of bluebirds. No boxes had predator guards in 1997, while all boxes in 1998 had two-foot stove-pipe predator guards attached to the post at the base of the box.

Nest boxes were monitored six times per week throughout nest site selection, nest building, and egg-laying stages. We checked nests twice weekly during incubation and the 12 days preceding hatching, and left nests undisturbed until two days after fledging was to occur, by day 21.

In 1998, we measured the height of the nest on the day that the first egg was laid, thus providing for a consistent measure of nest volume. We examined nest volume to determine if there was a relationship between the size of the nest and fledging success. No adults or nestlings were handled or banded for identification.

DATA ANALYSIS

Nest-box preference was calculated using only those nests that had at least one egg deposited within them. In addition, only nests that were built in a box without the presence of competing species already established in a given pair of boxes were used in calculation of nest-box preference. Mean clutch size was calculated by including only completed clutches, thus reducing bias from clutches destroyed before completion. The percent of eggs hatched was calculated to include all eggs laid in all nests. Fledging

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— Eastern Bluebirds and Tree Swallows study

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success, or productivity, was calculated as the total number of fledglings per eggs laid.

RESULTS

During the 1997 breeding season, bluebirds produced 11 nests, all of which were in NABS boxes. All bluebird nests were initiated when both boxes in a pair were unoccupied. Thus, these bluebirds preferred to nest exclusively in the NABS box with the round entry hole over the Peterson box with a similar round entry hole.

In 1997, bluebirds averaged 3.9 eggs per nest. Eighty-six percent of the eggs hatched, while the fledging success rate was 83.7 percent.

In 1998, bluebirds produced 38 complete nests between the NABS and Peterson boxes. Bluebirds built 23 of 25 nests in Peterson boxes (with an oval entry hole) using one of an unoccupied pair of boxes. Of those bluebird nests built in NABS boxes, 11 of 13 were built in one of an unoccupied pair of boxes.

Bluebirds preferred to nest significantly more often in the Peterson box with the original oval design than in the NABS box with the round entry hole.

Although bluebirds preferred the Peterson/oval-hole box, mean clutch size was the same, 4.2 eggs per clutch. The NABS and Peterson boxes produced nearly identical hatching percentages, 85.5 and 84.3 percent respectively. Fledging rates were not significantly different for NABS boxes, at 60 percent, and Peterson boxes, at 63.7 percent. Bluebirds built significantly smaller nests in Peterson boxes in 1998, although there was no relationship between nest volume and fledging success.

In 1997, all Tree Swallow nests in NABS boxes were built in one of a pair of such boxes, both boxes unoccupied at the time the birds made a box selection; 25 percent of all swallow nests in Peterson boxes were built when competitors were not nesting in a given pair of boxes. There was no significant preference for a particular style of nest box in 1997. Clutch size in the NABS and Peterson boxes were 5.5 and 5.6 respectively, while hatching and fledging success was 64.3 percent and 63.6 percent respectively for NABS and Peterson boxes (all birds that hatched ultimately fledged; none were lost).

In 1998, swallows built five nests in NABS boxes and five nests in Peterson boxes, all in one of an

unoccupied pair of boxes. There is no difference in nest-box preference. Although clutch size was not significantly different between the two box types, 5.1 for NABS, 5.6 for Peterson, there was a difference in hatching rate, 56.1 percent for NABS, 92 percent for Peterson.

Fledging success was significantly higher in Peterson boxes (72 percent) than NABS boxes (29 percent). Tree Swallows also produced significantly smaller nests in Peterson boxes. Because the sample size was small, we are unable to test for a relationship between nest volume and fledging success for Tree Swallows.

Bluebirds and Tree Swallows nested adjacent to one another within

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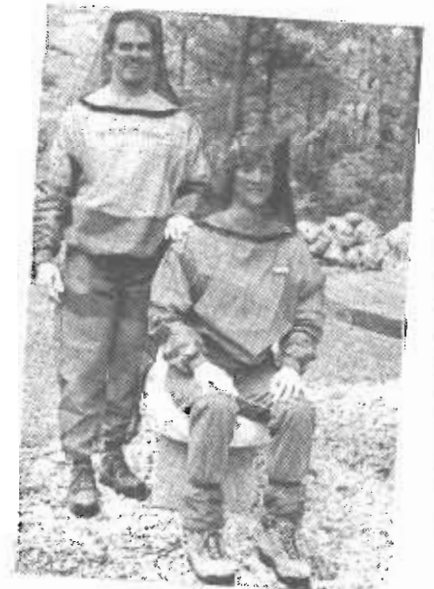
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— Bluebirds and Tree Swallows study

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a given pair of boxes four times in 1997 and six times in 1998. There was no difference in fledging success in either year for birds nesting simultaneously versus nesting alone in a pair of boxes. At no time in either year were both boxes in a pair occupied by two pairs of bluebirds or Tree Swallows.

OTHER NESTING SPECIES

We removed nests and/or eggs of House Sparrows, which repeatedly attempted to nest in several boxes during both years. House Sparrows evicted a pair of bluebirds from a NABS box and built a nest on top of their four one-week-old nestlings. House Wrens fledged 10 nestlings from three nesting attempts in 1998, all of which were initiated in boxes after bluebirds had fledged young. Tufted Titmice fledged two nestlings from a NABS box in 1998. Carolina Chickadees unsuccessfully attempted to nest three times in 1998.

PREDATION

Cats, raccoons, and snakes were assumed to be the non-avian predators that destroyed nests during the study. Although we had more boxes and nests in 1998, with installation of the stove-pipe predator guards, the number of nests lost to non-avian predators stayed at one. In 1998, many nests were lost to nest abandonment, which may have resulted from a variety of possible causes. The main avian predators were House Wrens and House Sparrows. House Wrens destroyed eggs in several bluebird nests, while House Sparrows killed bluebird nestlings and also destroyed eggs in nests. Sparrows pecked to death four Tree Swallows, a House Wren, and a Carolina Chickadee during the two-year study.

DISCUSSION

Nest preference: In 1997, blue-

birds made clear preferences for nesting in the NABS box with an oval entry hole over the Peterson box with a round hole when they had a choice of either unoccupied box. Even though the sample size was relatively small, this provides valuable information about nest-box preference in bluebirds.

The results obtained in 1997 justified the change in the shape of the entrance hole in Peterson boxes, from round to oval in 1998, because the odds of obtaining those results from chance alone are statistically unlikely.

In our study, we found that bluebirds built significantly more nests by choice in Peterson boxes with oval holes. The change in preference that we ascertained for Peterson boxes in 1998 was more likely due to the change in the shape of the entrance hole rather than yearly variation. Although preference for the Peterson box with the oval entrance hole agrees with the literature, we are uncertain as to whether the researchers in those reports clumped together both nests made by choice and those nests built adjacent to an occupied nest box in their measure of nest-box preference or if they made a differentiation between them.

This differentiation is important in determining true nest-box preference. If nests not made by choice were

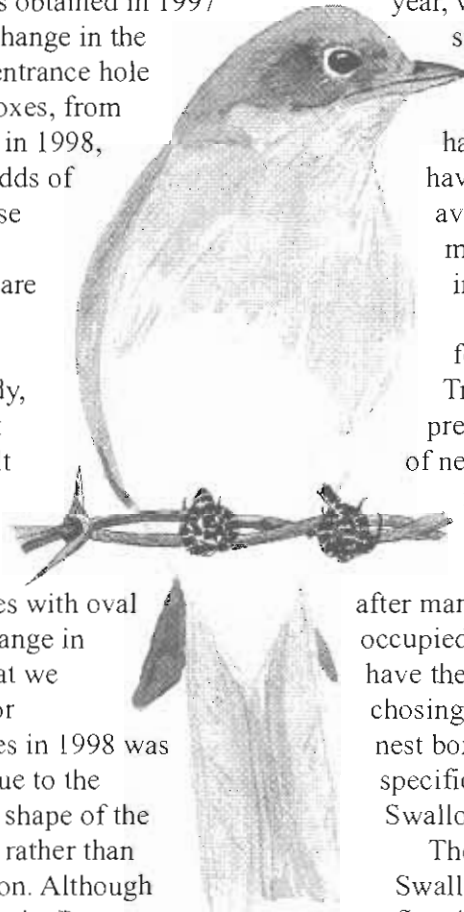
included in the calculation, we may obtain a different box preference. Data about choice could easily be recorded for bluebirds, especially since they initiate their first clutch prior to other nest-box competitors such as Tree Swallows.

Tree Swallows showed no preference for a nest box style in either year, which may be due to: 1) the small sample size; 2) boxes being placed away from prime Tree Swallow habitat; and 3) bluebirds having occupied many of the available boxes by the time many of the Tree Swallows initiated nesting.

In addition, we have found no reports on whether Tree Swallows show a preference for a particular style of nest box. The lack of known nest-box preference in Tree Swallows may be due to swallows initiating nesting after many cavities already are occupied. Thus, swallows may not have the ability to be selective in choosing nesting cavities. Also, most nest boxes have not been erected specifically for the use of Tree Swallows.

The overlooking of Tree Swallow box preference may be a flaw in appropriate bluebird conservation. Because Tree Swallows may prefer the same box as Eastern Bluebirds and because their preferred habitat is quite similar to that of Eastern Bluebirds, we inadvertently may have directed competition towards bluebirds by placing boxes in habitat also suitable for Tree Swallows. Thus, we need to quantify box preference for Tree Swallows in order

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— Bluebirds and Tree Swallows study

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to reduce potential competition between these species.

CONCLUSION

This study is the first to report a significant preference of Eastern Bluebirds for nesting in Peterson boxes with oval entry holes over NABS boxes with round entry holes when given the choice of two unoccupied boxes. We also report similar fledging success rates between the NABS and the Peterson boxes for bluebirds and no difference in productivity between these box designs.

Ultimately, we need to determine which box bluebirds prefer in terms of whether they choose a box from an unoccupied pair of boxes or a box adjacent to one that is occupied by a competitor. In addition, we need to determine whether there is a greater productivity in the preferred box design in order to make appropriate decisions about managing the bluebird population with nest boxes.

Although productivity did not differ between box designs or species in 1998, possibly due to the small sample size, we must note the importance of recording and reporting fledging success rates in paired nest-box studies. Only with this data can we draw conclusions about which box is preferred and provides the safest nest site for Eastern Bluebirds.

FUTURE RESEARCH

Such a study with paired boxes should be conducted throughout the breeding range of Eastern Bluebirds to decisively conclude whether our results represent regional effects or that bluebirds do indeed prefer Peterson boxes for other reasons. The corresponding fledging success rates should be recorded in a much larger sample to determine whether the results stated here about significantly smaller nests in Peterson boxes may

result in higher fledging success rates. This may be expected because a small nest would require a lower energy commitment, and thus more energy could be saved for brooding.

Finally, researchers may consider adding two-foot stove-pipe predator guards to the base of each box with both ends folded in towards the post, which we found successful in preventing non-avian predators from reaching the nest.

ACKNOWLEDGMENTS

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(Mr. Somershoe is at the Department of Biology Georgia Southern University Statesboro, GA 30460, 912/681-0801, fax 912/681-0845, e-mail ssomershoe@gasou.edu.)

Bluebird News from Shore to Shore

From the bluebirders of the **Audubon Society of Corvallis (ASC), Oregon**, comes an item about a female Western Bluebird banded as a fledgling in 1997 at the home of **Jim and Agnes Ann Vomocil**. Two years later, tending bluebird nest boxes at the home of their son, Mark, the Vomocils read the band on a nesting female. Mr. Vomocil was holding the female he had banded two years before. It was nesting about nine miles from its place of origin. Writing this for newsletter of the ASC, **Jessica Mosher** and **Eric Knoshaug** point out that statistics show female bluebirds typically moving farther than males from natal to breeding sites. Males have an average dispersal range of about two miles, female about six miles.

Elsie Eltzroth of **Corvallis**, who forwarded the note about to us, also included an interesting item about a pair of Cliff Swallows that built a nest in a nest box. This species normally constructs its own rounded structure of mud pellets, attaching it to the face of a rock outcrop, cliff, or building. These birds lined a nest box with mud and added a small mud overhang above the entrance to the box.

From Alberta comes a tale of five near-dead nestlings brought back to life. **Bob Harrison**, secretary of the **Mountain Bluebird Trails Conservation Society**, shared the story with us. **Nanton, Alberta**, monitors **Laurie Messner** and **Anthea Naylor**,

checking nest boxes, found five hatchlings, about four days old, abandoned, limp, cold, and apparently dead. Holding one of the small birds, they noticed slight movement. They warmed all birds with their hands, and soon had signs of life from each. They backtracked on the trail, placing the orphans in three active bluebird nests. All five were adopted successfully by their appointed parents. One more adoption was necessary, however, as the rescued birds were obviously later hatches than the young birds with which they were placed. So, the five youngsters were moved one more time, to nests with more compatible young. All five fledged.

Dave Gunter of **Howe, Indiana**, told the **Indiana Bluebird Flyer** that he intends to increase space between his six bluebird nest boxes this coming season by using his neighbors' yards. He hopes this also will get them interested in

bluebirding.

Jan Tellstrom, golf pro at **Smock Golf**

Course south of **Indianapolis**, has been given the first annual **Indiana Bluebird** of the Year award. His golf course has nest boxes for Purple Martins, Wood Ducks, Eastern Bluebirds, and hummingbird and butterfly gardens.

Kansas Bluebirds, led by **Jim Piland** of **Waldo, Kansas**, is a new organization, funded by the Kansas Wildlife and Parks Department. With 115 members, it reported 3,568 birds fledged this past season.

Bluebirds Fly, the newsletter of the **California Bluebird Recovery Program**, carried comments in its Autumn 1999 issue on keeping cats indoors. The campaign for responsible cat ownership got a good boost from editor **Don Yoder**. He offered a list of U.S. birding organizations supporting this important effort.

Keep YOUR cat indoors, please.

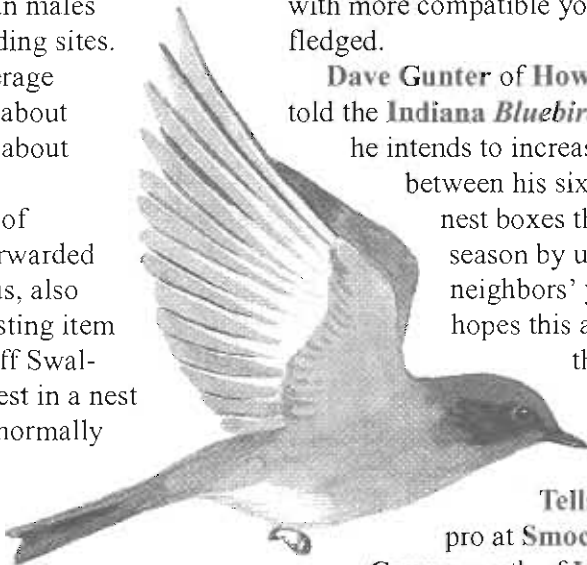
The **John Findlay III Bluebird Trail** in southern Jefferson and northern Shelby counties in **Alabama** fledged 515 bluebirds in 1999, bringing its total since 1977 to over 11,000. **Mark and Patsy Scott** are trail coordinators, working with 13 trail monitors.

Almost 2,600 Mountain Bluebirds were banded in 1999 by members of the **Calgary Area Bluebird Trails** group, according to a report from **Don Stiles**. Also banded were 900 Tree Swallows. An eight-year-old Tree Swallow was recovered during this effort, the third time a bird this age has been reported by the banders here. One nine-year-old swallow has been captured and identified. The North American record for Tree Swallows is held by a 12-year-old bird recovered in Ontario. The oldest bluebird recovered in Calgary last year was five years. One bluebird recovered in 1999 had been banded 145 miles (242 km) away.

Don Stiles, by the way, received the first annual Blue Feather Award presented by the **Mountain Bluebird Trails** group and the **Ellis Bird Farm**, both Alberta organizations.

R. N. Hudgins of **Obion, Tennessee**, writes to tell us of 1,290 bluebirds fledged in 1999 from 465 nests

Continued on page 19



NatureScape Alberta

Co-existing with creatures in your yard

A book entitled *NatureScape Alberta: Creating and Caring for Wildlife Habitat at Home*, co-authored by NABS member Myrna Pearman, was published recently.

Ms. Pearman, a biologist who works at the Ellis Bird Farm in Alberta, is chair of the NABS technical advisory committee. Working with her on the book was Dr. Ted Pike, an entomologist.

The book helps you meld the hobby and tradition of gardening with the biological principles of habitat

development. It is a step-by-step guide to:

- appropriate plants for birds and butterflies and other pollinators;
- feeding birds and other wildlife;
- installation of water gardens;
- creation of artificial nesting sites and shelters for animals;
- and it helps homeowners co-exist with the creatures of their yards.

NatureScape Alberta is available for US\$24.95 from Federation of Alberta Naturalists, Box 1472, Edmonton, AB T5J 2N5 Canada.

— More shore to shore news

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in 155 boxes. He continues to use “heat covers” to protect birds from summer temperatures, he says, and had to move about 50 boxes last summer to try to reduce predation by snakes and raccoons.

A four-year-old female Western Bluebird has had her career as a mother tracked by banded **Marilynne Keyser**, working with trail monitor **Gail Bolstad** in **Sherwood, Oregon**. The bird has nested every year since 1996, fledging 31 young. Her mate this year was a five-year-old male.

The **Beaver Dam (Wisconsin) Senior Center Bluebird Restoration Project** had 723 nest boxes in place before the beginning of last season, added 450 to those during a busy 1999 season, and has a long list of suitable sites yet to be employed. Members of the center also have placed nest boxes for American Kestrels and Tree Swallows. The senior center has a fine woodworking shop where members build the boxes,

and they make five-inch PVC pipe available free to persons wanting to construct their own nest boxes.

The **Ellis Bird Farm in Alberta** held its first bluebird festival last summer. Expecting 150 attendees, workers were surprised when 500 persons came to visit. They enjoyed breakfast, displays, tours, horse-pulled wagon rides, and more.

A pair of albino-leucistic Eastern Bluebirds, a billion-to-one shot, were seen in **Maryland** last summer. They were thought to be from the same brood in north central Maryland. These birds were completely white, but they had black eyes and dark legs instead of the pink eyes and pale legs you would expect with albinism. That explains the use of the word leucistic, which means abnormal paleness or imperfect albinism.

Submit nesting data via research web site

A new research web site that will allow NABS members to enter nesting information directly on-line is under development. By May 1, a field-collection worksheet that corresponds with the data form on the web site can be downloaded from the NABS web site.

Members are encouraged to submit nesting information by using the web site. It will improve data-processing efficiency and save money.

See the NABS web site, under research, for more information: www.nabluebirdsociety.org.

'Stokes Birds at Home' is on public television

Bluebirds are a featured part of a 13-part public television series on backyard birding, “Stokes Birds at Home,” which began showing across the country in January.

Hosts Don and Lillian Stokes travel across the country for special birding events and to film people who are passionate about their birding hobby. Episode eight features Don Yoder's Western Bluebird Trail on a golf course in California. Check local listings for time and date or visit web site www.stokesbirdsathome.com.

Yoder talks about how he got started in bluebirding and the innovations he has made to his boxes (he has a mesh extended-entrance raccoon predator guard). The television episode contains many beautiful photos of Western Bluebirds using his boxes. NABS, the California Bluebird Recovery Program, and the Transcontinental Bluebird Trail are mentioned.

Barred Owls

Study attempted to identify individuals by their vocalizations

By Pamela L. Freeman

Dark eyes, barred breast feathers, and distinctive vocalizations characterize Barred Owls. They are found throughout the eastern United States, and have been expanding their range for the last several decades. Barred Owls are now breeding throughout western North America hoth to the north and south, and have been found to compete with the endangered Spotted Owl. In 1994, Hamer and colleagues reported several instances of hybridization between the two closely related species.

Barred Owls are usually associated with old-growth and mature forests, where the larger trees provide quality nesting cavities. They are chiefly a nocturnal species, and they defend year-round territories. All these characteristics make Barred Owls more difficult to study and follow. However, their distinct territorial vocalizations often give away their location.

Vocal advertisement is one of the most important methods Barred Owl use to maintain their territorial boundaries. One of the most commonly heard vocalization is the rhythmic "cook" call, which sounds to birders like, "Who cooks for you, who cooks for you all." The Legato call, which is five to nine evenly accented hoots ending with a "hoo-aw" is another common vocalization, and the call I heard most often. A duet between the male and female Barred Owl, which sounds like a wild chorus of these two calls combined with many other strange noises, is a sound of the night forest that is not soon forgotten.

I wanted to know whether the Legato call was individually distinctive. If it is possible to discriminate individuals from their call alone, it may be possible to study Barred Owls without having to capture, band, or radio track birds.

METHODS AND RESULTS

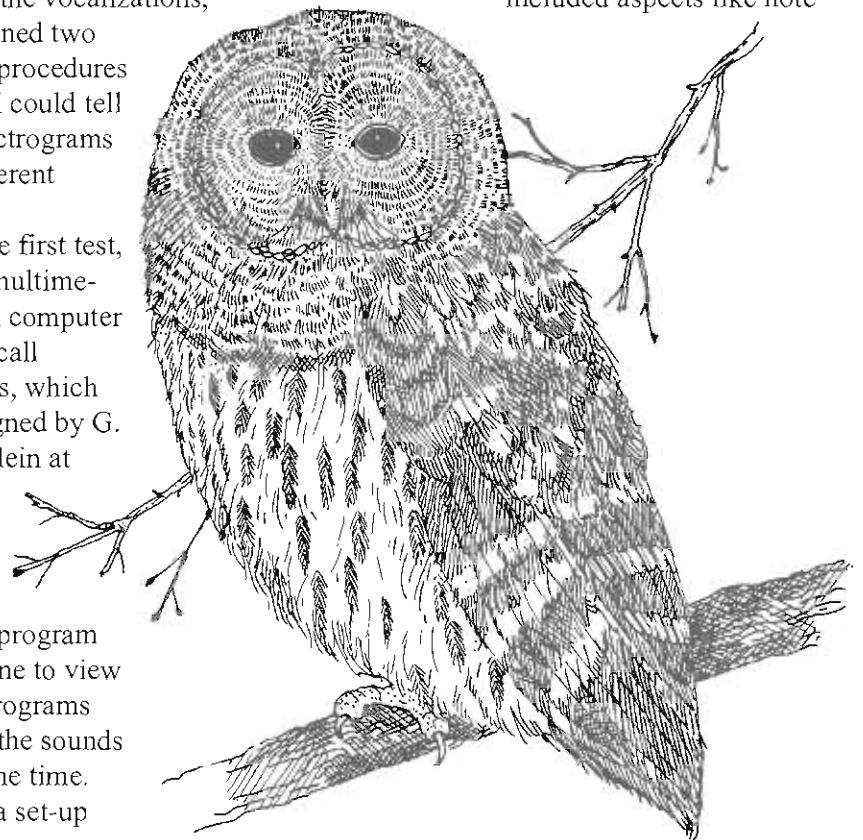
From mid-February through May in 1997 and 1998, I recorded owls at 17 different locations in Itasca State Park, Minnesota. I created spectrograms of the vocalizations, and designed two different procedures to test if I could tell apart spectrograms from different locations.

For the first test, I used a multimedia-based computer program call Sortspects, which was designed by G. Nuechterlein at North Dakota State University. The program allowed me to view the spectrograms and hear the sounds at the same time. Then, in a set-up much like a complex game of matching, I attempted to get all spectrograms recorded from the same location together.

By studying the slight pattern differences in spectrograms and by listening for differences in tempo and frequency of the calls, I was able to

individually identify spectrograms and locations. I had three volunteers try the matching game, too. Our abilities to match spectrograms from the same locations were varied, and reflected our personal abilities (from 38 to 87 percent accurate).

The second method I used to test whether owls could be individually identified was a much more quantitative approach. I measured 22 variables on each spectrogram which included aspects like note



length, time between notes, and frequency of notes. I analyzed these measurements with a computer model and found that the discriminate model could place individual locations with

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— Barred Owls: individual vocalizations?

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85 percent accuracy.

DISCUSSION

This study found that vocal identification techniques have the potential for use in other Barred Owl studies without incurring the intensive costs of handling, banding, or radio-tagging birds. People studying behavior of Barred Owls may be able to use sound recordings to individually identify calls of study birds in the field. Detailed maps of owl territories and boundaries could be drawn from identification based on spectrogram analysis, as has been done with Tawny and Great Horned Owls. By monitoring mortality and population turnover rates, managers even may be able to determine the general health of a population and forecast trends.

If you have several pairs of Barred Owls that you hear on a regular basis, I suggest that you start listening for distinctive call variations between birds. There is a good chance that you may be able to hear these individual differences. I found that once you record an owl, it somehow becomes your partner, and from that point on you gain a little bit of knowledge about how Barred Owls behave every time they call.

If you would like further information about this project, please feel free to contact myself or consult my Master's thesis.

ACKNOWLEDGMENTS

I would like to thank Drs. G. Nuechterlein, D. Buitron and other committee members for their support and guidance throughout this project. I also would like to thank the volunteers who donated their time to sorting spectrograms. The North American Bluebird Society, American Museum of Natural History, Association of Field Ornithologists, and

North Dakota EPSCoR provided partial funding for this project.

LITERATURE CONSULTED

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Rohner, C. 1996. *The numerical response of Great Horned Owls to the snowshoe hare cycle: consequences of non-territorial floaters on demography*. *Journal of Animal Ecology*. 65:359-370.


Nest-box project combined effort

Over 150,000 bluebird nest boxes could be built across the United States through the efforts of a wood-products producer and a retailer of those products.

For several months, the North American Bluebird Society has been talking with the Georgia-Pacific Corporation and Lowe's regarding their joint efforts to produce bluebird nest-box plans for distribution through Lowe's stores nationwide.

Georgia Pacific makes plywood, among other products. Lowe's is one of America's largest building-supply retailers, with 536 stores in 37 states.

Myrna Pearman, chair of the NABS Technical Advisory Committee, and committee members worked on this project, and deserve thanks for their significant efforts.



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Ellis Bird Farm, Alberta

A legacy that began with one nest box and a determined man

By Myrna Pearman

When Charlie Ellis put up a bird box on his front lawn in the spring of 1955, he had no idea how much this simple act would change his life or the lives of thousands of other people. Charlie was intrigued with a simple nest-box plan that he came across in a farm magazine, so he decided to build one. Shortly after he set it out, he was thrilled to see a pair of Tree Swallows take up residence. But House Sparrows soon moved in, killing the female swallow and building a nest on top of her and her dead nestlings.

Charlie was outraged. He decided he would spend the rest of his life helping native birds by providing them with secure nesting sites, and by controlling local populations of the exotic, destructive House Sparrow.

Charlie started building more boxes. Within a few years, he maintained a 300-box trail on the farm. He would get up at 5 o'clock every morning during the summer to walk his trails. In his pockets he would carry a supply of white feathers, an eagerly sought commodity by nesting Tree Swallows. Mountain Bluebirds soon found his boxes, too, and Charlie was rewarded by witnessing his bluebird population grow from just a single pair in 1956 to more than 60 pairs in the late 1970s. It is now believed that the Ellis farm had one of the highest nesting densities of Mountain Bluebirds ever recorded.

In addition to maintaining their extensive bluebird trail, Charlie and his sister, Winnie, transformed their backyard into a haven for wildlife. Orchards and flower gardens were planted specifically to attract birds, while water ponds around the farm



Winnie Ellis checking nest box in 1993.
Photo © Myrna Pearman

attracted deer and other wild creatures. Backyards bird baths were kept full, and myriad bird feeders were placed around the yard. During the winter, Charlie would shovel up to two tons of sunflowers seeds into large cattle troughs which he used as bird feeders. For several winters, Charlie and Winnie also fed large flocks of Bohemian Waxwings. Winnie would stir up apples and raisins by the case lot, and Charlie would serve their hungry visitors on pie-plate feeders.

In the early 1980s, Charlie's greatest concern was the fate of "his" bluebirds should he no longer be able

to tend his nest-box trail. Coincidentally, Union Carbide was looking for a site to build an ethylene glycol plant. Following a suggestion by the Red Deer River Naturalists, Carbide agreed to continue the Ellis legacy through a non-profit charitable company, Ellis Bird Farm Ltd (EBF).

This company is administered by an independent, volunteer board of directors with representation from Union Carbide, the Red Deer River Naturalists, the Federation of Alberta Naturalists, the County of Lacombe, and the community. Charlie and Winnie Ellis were both accorded honorary, life-time memberships. Charlie passed away in 1990, but 94-year-old Winnie continues to be actively involved with the operation of the organization.

The mandate of EBF is fourfold: to carry out a summer nesting program); to carry out a winter bird-feeding program; to conduct and support scientific research; and to develop and deliver education programs.

Today, a 450-box trail is maintained in a 100-square-mile management area encircling the farm. All adult and nestling bluebirds are banded each year, and retraps are documented. EBF also is spearheading several research projects, including a nest-box design preference study. The EBF Research Committee is overseeing analysis of

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— Ellis bird farm

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18 years of data, with an emphasis on determining whether bluebird and Tree Swallow hatching dates might show correlation with climate change.

EBF has been internationally recognized for its education programs, and it has published several popular books (*Winter Bird Feeding, An Alberta Guide; Nestboxes for Prairie Birds; Water Gardening, A Prairie Guide*).

Today, EBF continues to operate as a viable working farm. A long-term, conservation-farming program, which emulates and expands the techniques practiced by Charlie Ellis, is being implemented; wildlife-habitat enhancement is a top priority. Union Carbide's Prentiss Plant sits on one corner of the original homestead. The rest of the Ellis farm continues to raise cattle, crops and bluebirds.

In an effort to educate, inspire and encourage both city and rural dwellers to make their backyards more environmentally friendly, the farm yard is being established as a demonstration backyard wildlife habitat area. Water gardens, butterfly and hummingbird gardens, bat boxes, and bird nest boxes now complement the orchards and natural areas. Walking trails link points of interest around the farm, and a delightful Tea House is open to visitors during the summer.

EBF is open afternoons from Wednesday through Sunday between June 1 and the Labor Day weekend. Drop-in visitors and tour groups are welcome. For bookings or more information, phone/fax 403/346-2211. E-mail Ms. Pearman at mpearman@ccinet.ab.ca. Visit the web site at www.ellisbirdfarm.ab.ca.

(This article was adapted with permission of the author from a version which appeared in Game Warden Magazine, March 1997.)

North American Bluebird Society Affiliate Organizations

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

Alberta

Calgary Area Bluebird Trail Monitors
c/o Don Stiles
20 Lake Wapta Rise SE
Calgary, Alberta T2J 2M9

Ellis Bird Farm, Ltd.
Box 5090, LaCombe, Alberta T4L 1W7

British Columbia

Southern Interior Bluebird Trail Society
P.O. Box 494, Oliver, BC V0H 1T0 Canada

Manitoba

The Friends of the Bluebirds
3011 Park Ave.
Brandon, Manitoba, Canada R7B 2K3

Ontario

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

Arkansas

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

California

California Bluebird Recovery Program
2021 Ptarmigan Drive, #1
Walnut Creek, CA 94595

Colorado

Colorado Bluebird Project, c/o Bob Wilson
2654 Serber Lane, Grand Junction, CO 81506

Georgia

Bluebirds Over Georgia
5858 Silver Ridge Dr.
Stone Mountain, GA 30087

Illinois

Jo Daviess County, IL, Bluebird Recovery Program
15 Cedar Rim Trail, Galena, IL 61036

Illinois Audubon Society
25582 Mallinson Road, Geneseo, IL 61254

Indiana

Indiana Bluebird Society
P.O. Box 356, Leesburg IN 46538

Brown County Bluebird Society
P.O. Box 660, Nashville, IN 47448

Iowa

Johnson County Songbird Project
1033 E. Washington, Iowa City, IA 52240-5248

Maine

Bluebird Association of Maine, c/o Lisa Paige
RFD 4, Box 7600, Gardiner, ME 04345

Minnesota

Bluebird Recovery Program of Minnesota
(BBRP) Audubon Chapter of Minneapolis
P.O. Box 3801, Minneapolis, MN 55403

Montana

Mountain Bluebird Trails
P.O. Box 794, Ronan MT 59864

Nebraska

Bluebirds Across Nebraska
P.O. Box 67157, Lincoln, NE 68506

New York

New York State Bluebird Society (NYSBS)
15 Bridle Lane, Dryden NY 13053
c/o Rich Wells, President
9141 Cautaraugus Street, Springville, NY 14141

Schoharie County Bluebird Society
c/o Kevin Berner
State University of New York
Cobleskill, NY 12043

North Carolina

North Carolina Bluebird Society
P.O. Box 4191, Greensboro NC 27404

Rutherford County Bluebird Club
P.O. Box 247, Ellenboro NC 28040

Ohio

Ohio Bluebird Society, c/o Doug LeVassent
20680 Township Road #120
Senecaville, OH 43780

Oklahoma

Oklahoma Bluebird Society, c/o Mark Weathers
5656 S. 161st W. Ave., Sand Springs, OK 74063

Oregon

Hubert Prescott Western Bluebird Recovery Project, c/o Patricia Johnston
7717 S.W. 50th, Portland, OR 97219

Audubon Society of Corvallis
P.O. Box 148, Corvallis, OR 97339

Pennsylvania

Bluebird Society of Pennsylvania
P.O. Box 267, Enola, PA 17025

Tennessee

Benton County Bluebird Society of Tennessee
c/o Dan McCue
155 Post Oak Ave., Camden, TN 38320

Virginia

The Virginia Bluebird Society
c/o Julie A. Kutruff /Anue Little
3403 Carly Lane, Woodbridge, VA 22192

Washington

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

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I wish to contribute an additional \$10 (tax deductible) to help print and distribute educational materials on bluebird and cavity nester conservation. Funds are urgently needed to keep printing nest-box plans, the color bluebirding brochure, and related educational materials.

Send completed form and payment to:

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The North American Bluebird Society, a non-profit conservation, education, and research organization, promotes the recovery of bluebirds and other native cavity-nesting bird species.

Send us stories

Bluebird relies on stories, articles, and photographs from you. We also welcome your letters. Please include your name and address on all communications. Stories and articles are best submitted via e-mail or typed (double-spaced, please).

Send submissions to: Jim Williams, c/o *Bluebird*, 5239 Cranberry Lane, Webster, WI 54893. Or, send e-mail to twojays@win.bright.net.



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