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Cover photo: Western Bluebird fledgling (Glenn Price/Shutterstock.com)  
Table of Contents photo: Black-bellied Whistling-Ducks are cavity-nesters found primarily in Texas and  
Florida. Andy Morffew captured this beautiful image near his home in Florida. To see more of his photos, visit  
www.andymorffew.com
By now we should all have plenty of bluebirds to take care of. We are between first and second nestings here, with over 100 fledged in our first nesting. We hope you have a great bluebird year.

Once again it is time to think about our annual convention, held this year in Boise, Idaho. We are also working on 2015 and 2016. Not certain for the 2015 location, but we do have a promise to host us. We have Myrna Pearman inviting us to Lacombe, Alberta for 2016. I am always looking for an Affiliate to host the group if any of you are interested. And no, it is not too early to start thinking about 2017. NABS will help with the finances if needed. Consider it an opportunity to showcase your efforts to promote bluebirds and other cavity nesters.

Please send me any updates for your Affiliate as they occur so that we can keep our records current. I have a few of you that I do not have current email addresses or contact persons.

I would also encourage any of you who have information to share to write it up and send it to Scott Gillihan, our editor. We want to know how you handle problems in your area, and we just like to share the good things that happen as well.

As I write this, I have my reservations made for Boise, Idaho and I surely hope to see many of you there. If not, there’s always next year’s convention!

Sincerely,

Phil Berry
NABS Vice President - Affiliate Relations
Well the bluebirds are back and nesting is well underway in British Columbia. For those in Florida and other points south, you may even have your third nesting started by the time this goes to press! And as you read this, our 37th NABS Conference in Boise, Idaho will be behind us. Where does the time go? One thing is for sure—wonderful memories follow the above events.

Unlike previous years, this past spring did not see a quiet time for NABS. On behalf of our printer, Sutherland Printing Inc. in Iowa, and the NABS Board, we apologize for the technical error made on our label printing on the Spring journal. We posted notices immediately on our website home page and Facebook in an attempt to slow the responses but they kept pouring in on email, by phone, and in the regular mail. Thank you all for taking the time to let us know—better we get several hundred queries than none at all—and all have been answered. Looking for positives when something like this happens can be tough, but we quickly discovered that the last name and address block were okay so everyone would at least get their journal. The second positive for me was the added opportunity to speak with so many of you! My first instinct was to phone and resort to email or USPS only if I could not leave a message or talk directly to you. (Sometimes you got both!) Your understanding and patience was greatly appreciated plus it afforded us an opportunity to make additions to some of our records.

I would like to welcome all our new members and those of you who have returned to our flock. Our membership roster is stable and a special “thank you” goes out to members who have donated to either our operating fund or the Zeleny Endowment Fund at renewal time. These tough economic times have become the new norm and your adding a bit extra allows us to keep our membership rates at the current level without losing any of the benefits.

This issue of Bluebird has information for two important processes that together help ensure the proper governance of NABS—the Election and the Annual Meeting. Please show your support of the entire Board by taking a moment to fill out and mail your ballot. Step two is marking your calendar to join us for the Annual Meeting later in September. Details have already been posted on our website home page (www.nabluebirdsociety.org) in compliance with the Bylaws.

Any time of the year is a good time to “talk bluebirds” and other native cavity-nesting birds. Over the past months I have had the good fortune to correspond with many members and non-members who have been out working with school children, making presentations to gardening and service clubs, or getting corporate sponsorship of new nestbox trails on public and private land. Whether the audience is new to learning of our conservation efforts or old hands just itching to share stories or learn what is working for others, these events are always full of promise. Most recent for me was a visit to the North Okanagan Naturalist Club (the Canadian equivalent of an Audubon organization). It had been a few years since I'd made a formal presentation to their dedicated bluebird monitors and this year we spent time in open discussion. Conversation was lively, the food terrific—and we all came away having added to our knowledge. A group photo is always a great ending and I am happy to share it here.

And on the same topic, I am pleased to announce that after several years of hard work spearheaded by our Educational Committee to bring our NABS presentation material into the digital age, we have a new DVD available that replaces the old slide show. The DVD has a long and a short presentation with scripting plus contains the seven Fact Sheets from the NABS website. Soon available from our StoreFront.

Like us on Facebook!
Great friends, great photos, great videos, and great information are all waiting for you on the NABS Facebook page. Stay connected with NABS members and other bluebird enthusiasts at www.facebook.com/NorthAmericanBluebirdSociety
From the Managing Editor
Scott W. Gillihan

It’s a pleasantly warm, sunny Saturday afternoon, and I’m gazing out our kitchen window. Our home backs up to a 3-acre vacant lot with native shrubs and grasses; beyond that is the back of an elementary school and a preschool. I can see three playgrounds with colorful equipment, basketball courts, a softball diamond, a large grassy field for soccer, football, and kites. I can see trees to climb, a hill to roll down, a wild area to explore. What I don’t see: kids.

This is not unusual. Other than school recess periods, I rarely see kids on the school grounds or in the vacant lot. Kids just don’t go outside anymore, at least not like they used to. The nonprofit Alliance for Childhood notes that, “Compared to the 1970s, children now spend 50 percent less time in unstructured outdoor activities. Children ages 10 to 16 now spend, on average, only 12.6 minutes per day in vigorous physical activity."

A large and growing body of evidence proves that this lack of outdoor activity is shockingly harmful to children. This youngest generation is suffering from “rising rates of depression, attention deficit disorder, Vitamin D deficiency (an epidemic in the world), and child obesity,” according to Richard Louv, author of the bestselling Last Child in the Woods. And there are issues beyond children, issues about the future of the natural world. Spending time indoors does nothing to engender an interest in the natural world. Put simply, children who spend time in nature grow up to become advocates for it; children who do not spend time in nature, who do not learn to love and appreciate it, grow up to become indifferent toward it. We’re setting the stage for a society where no one—voters, consumers, business leaders, political leaders—cares about nature.

For the sake of children, for the sake of bluebirds, and for the sake of all things wild and free, please please encourage the kids in your life to spend time outdoors. The very future of the world depends on it.

My thanks to everyone who contributed articles, photos, and feedback for this issue. Thanks also to Jack Hauser (for bringing Heidi Hermes’s photos [pg. 13] to my attention); and Lauren Kane (for ongoing access to scientific journals via BioOne).

As always, please send any photos, articles, or ideas to me at NABsEditor@gmail.com or 5405 Villa View Dr., Farmington, NM 87402.

“Look at everything as though you were seeing it either for the first or last time. Then your time on Earth will be filled with glory.” —from A Tree Grows in Brooklyn, by Betty Smith
Letters to Bluebird

To the Editor:
I read the article in the Spring issue of Bluebird, “Tanglefoot Problems and an Alternative.” I appreciate the intent of the article, but I would like to have seen some data along with the article to support the claims about the dangers of Tanglefoot. We place a tube of it in every trail monitors bucket in South Carolina. We use it only if there is a problem with fire ants that are climbing the pole. Fire ants are a serious problem here. We encourage our monitors to place it low on the pole which may decrease the chance of non-target animals getting into it. We have never found a problem with the use of Tanglefoot that we are aware of.

We certainly do not want to use any product that will harm wildlife, but I think publishing articles like the one mentioned above without accompanying data can cause confusion and decreased use of a potentially useful product.

Ron Brenneman
South Carolina Bluebird Society

Editor’s note: See more support for the judicious use of Tanglefoot on page 15.

Notices from NABS

Special Notice to NABS Members: ANNUAL MEETING
Thursday, September 18, 2014 at 8pm Eastern Time

In compliance with Article XIX of the NABS Bylaws adopted October 5, 2012, notice is given for the Annual Meeting. This year the meeting will be held via conference call.

Although the Board of Directors has utilized conference calls for many years, this will be our first Annual Meeting using this method. We hope you will join us for a short meeting on the eve of September 18. Annual committee reports will be available on our website in late August and a call to accept them as presented and to ratify the election results will be conducted.

Since Bylaw changes made in 2012, this will be the first time that the NABS conference was held prior to the August 15 election. Think of our election and Annual Meeting as an official two-part process. Voting was changed to a mail-in ballot so that all members could have a say, not just those in attendance at a conference. Please show your support of NABS and your elected officials by returning the enclosed ballot at your earliest convenience, then marking September 18 on your calendar for the Annual Meeting of the membership at large.

How do I join in the Annual Meeting?

Call in to 530-881-1200. You will then be asked for an access code. Enter 306847# (you must include the pound key). Because there may be a large number of folks calling in, we suggest you begin to call at around 7:50pm Eastern time. The plan is to start at 8pm sharp.

If you have any questions prior to the call, please send them by September 12th in order that we can move the meeting along. Contact Sherry at president@nabluebirdsociety.org or any of the Executive listed on the website http://www.nabluebirdsociety.org/Board/boardofdirectors.htm

Do You Monitor a Trail on a Golf Course? NABS would like to know!
The NABS Education Committee is looking at nestbox trail management on golf courses and will soon be gathering basic information to create a helpful guide for potential new GC trail additions. If you currently work with a course superintendent or manager and are willing to be a future participant in the development of an educational package, please send a short note to Bernie Daniel, Education Committee Chair at bdaniel@cinci.rr.com with your contact information and name of the golf course where your trail is located. We know everyone is busy with the nesting season well underway, so respondents may be sent a questionnaire later in the fall when the Committee also has time to meet and work on this project.
Membership Renewal
Is it time to renew your membership? Check your mailing label on the back cover for a message!

Officials of North American Bluebird Society, Inc.

**Executive Committee**
- Sherry Linn - President
- Phil Berry - First VP for Affiliate Relations
- Jim Burke - Second VP for Community Relations
- Kathy Kretnitzer - Secretary
- Gwen Tietz - Treasurer

**Awards Committee**
- Anne Storm - Chair
- Greg Beavers
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- Scott W. Gillihan

**Education Committee**
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- John Schuster
- Julie Zickefoose
- Bet Zimmerman Smith

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- Bernie Daniel
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- Dick Tuttle

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- Jackie Berry
- Phil Berry
- Tena Taylor

**Nestbox Committee**
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- Kevin Berner
- Bernie Daniel
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- Myrna Pearman
- John Schuster
- Bet Zimmerman Smith
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**Speakers Bureau**
- David Cook - Chair
- Dan Sparks

**Website Committee**
- Jim McLochlin - Chair
- Dan Sparks

**Webmaster**
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In Castle Rock, Colorado, a suburban town located one hour south of Denver, the POST (Parks Open Space Trails) Partners Volunteer Program within the Parks & Recreation Department has overseen the monitoring of bluebird nestboxes at various parks, schools, trails, and open space sites across town since 2007. One of the first monitoring sites when the program began was Gateway Mesa Open Space, an undeveloped permanently protected open space parcel located east of town and adjacent to a large horse pasture. It was here that the mysterious “Pink Lady” was discovered. This is a case of one Mountain Bluebird female with a tendency to lay multiple successive pink-colored clutches in the same nestbox over a three-year period.

Bluebirds will normally lay eggs that are blue in nests of finely woven grass materials. With Mountain Bluebirds, less than five percent of the time the eggs are white. But in rarer instances, less than one percent of all bluebird clutches, bluebird females will lay pink-colored eggs. Recent research indicates there may be a correlation between egg color and the health status of the female bluebirds; healthy females lay more colorful (or in this case, bluer) eggs while young or unhealthy bluebirds may have pale blue, white or even pink eggs (Siefferman et al. 2006). There is another theory, based on observations of pink eggs from a different bird species, that the pink tinge is the result of light bouncing back off the egg yolk inside thin-walled eggshells giving them a transparent or pinkish glow, which should fade away to white as the chicks develop.

The Pink Lady first gained the attention of the trained POST Partners volunteers that monitor the bluebird boxes in July 2012. Based on weekly checks of the boxes at Gateway Mesa, monitors observed and documented a pair of Mountain Bluebirds using box GM03 (all the nestboxes in Castle Rock are assigned an alphanumeric code in order to accurately track the nesting and breeding activity on a yearly basis), but this first nest was not unusual. The first brood of six chicks hatched from blue-colored eggs and successfully fledged on May 27. Despite weekly checks and a complete second nest built on June 2, the bluebird pair did not lay the second clutch for several weeks. It was this second nest that garnered attention. On July 3, a clutch of four pink-colored eggs was discovered in box GM03. The four chicks in the second clutch hatched and developed normally and fledged on August 11. It is not known if the same pair parented both clutches. But at that point the nesting season was complete and the birds left Castle Rock for their wintering grounds.

Coincidentally, in the same year as the first appearance of the pink eggs, a University of Colorado (CU) graduate student was conducting research of bluebird biology on the same open space property. The research measures breeding output as a way of quantifying fitness trade-offs between immune defense, migration, and reproduction in the face of limited resources (Fish 2014). Field efforts of this research included banding of all individuals, including the chicks from the pink-colored eggs, as well as the collection of fecal and blood samples of adult birds, including the female Mountain Bluebird that was laying the pink eggs. According to the researcher, further analysis of the fecal specimens and blood smears will be conducted, along with DNA extraction, pending additional funding support.

At the start of the nesting season following the initial appearance of the pink eggs, a Mountain Bluebird pair returned to the same GM03 box and laid a clutch of six pink colored eggs followed by another clutch of four pink eggs, all of which hatched, developed normally, and successfully fledged in the 2013 breeding season. Based on the recurring theme of pink eggs, the Mountain Bluebird female in GM03 received the affectionate nickname of “Pink Lady.” Fortunately, the CU researchers were able to recapture the Pink Lady and took more measurements, including a blood sample and a
feather sample to be further analyzed. All chicks from both broods were also banded before fledging.

Based on 2013 monitoring data of 130 nest boxes in Castle Rock, the Pink Lady’s clutches represented just 10 out of 303 Mountain Bluebird eggs monitored in 2013. Although that represents a percentage of occurrence higher than the estimated one percent frequency for pink eggs, all eggs were laid by the same Mountain Bluebird female.

Once again, at the beginning of the 2014 season, another clutch of six pink-colored bluebird eggs was found in the same nestbox as the other pink eggs. It was confirmed that it was a Mountain Bluebird nest and a silver metal leg band was observed on the female when she paused momentarily before entering the nestbox. Attempts to capture this female and read her band have been unsuccessful to date so it is unknown if this is the Pink Lady or one of her offspring from 2012 or 2013, but it is high likely to be the same female.

Interestingly, the recent pink-colored egg clutch had turned a dull white one week after discovery. This color change may allude to the theory that the eggs are not truly pink in color; rather, the egg appears pink due to the light reflected from inside the eggs that should fade away as the chicks develop. This implies the eggs are thin-shelled laid by a young or unhealthy female. In the case of the Pink Lady, the adult female was, at a minimum, in her second year when her first pink clutch was discovered in 2012, indicating age as a possible initial cause for the pink hue, although that does not explain the subsequent pink clutches in 2013 and 2014. This Mountain Bluebird female may be in her fourth year now, which is unusual and unlikely for an unhealthy bird.

So why does the Pink Lady keep laying pink-colored eggs? Is there a genetic disposition or is it an indicator of overall bird health in this region? Further analysis of the birds, including blood and fecal samples, will be needed. Despite the color of the eggs, the bluebird chicks develop and fledge normally to add to the growing bluebird population, which is perhaps the most important aspect of these extraordinary events.

**Literature Cited**


Barbara Spagnuolo is the Natural Resource Specialist with the Town of Castle Rock Parks & Recreation Department, where she has coordinated the monitoring of over 130 bluebird nestboxes at various parks, schools, open space areas, and trails since 2007.

**Membership Renewal**

Is this your last Journal? Please check your mailing label for membership expiration date. If renewing through PayPal, remember you can use either your credit card or your PayPal account.

Q: I see on the form I can renew for multiple years – how do I do it using PayPal?
A: Change the quantity from the default of 1 to the number of years you want to renew for. PayPal does the math and Marion picks up the number of years to adjust your NABS record.
Eastern Bluebird Juvenile Helpers in Two Successive Seasons
Vickie L. Henderson

SUMMARY—During two successive nesting seasons, 2011 and 2012, Eastern Bluebirds nested in a nestbox close to my house, providing opportunity for frequent and close observation of family behavior. During the raising of second broods in both seasons, first-brood juveniles helped parents in the care and feeding of young. In 2012, after the loss of his mate, the adult male solicited and encouraged help from juveniles. Subsequent observations demonstrated a juvenile’s high motivation to participate in family feeding activities. In both seasons, there were individual variations in juvenile efficiency and maturity, with progressive learning noted in 2012. Observations suggest that helping behaviors may have a primary socialization and learning function for the helpers, rather than the purpose of providing significant sustenance.

Introduction
The Eastern Bluebird is a secondary cavity nester whose nesting sites include naturally occurring cavities, such as those excavated by woodpeckers, and manmade nestboxes (Bent 1949, Gowaty and Plissner 1998). Eastern Bluebirds are known for their tolerance of human activity (Bent 1949, Nicholson 1997, Pitts 2011), making them prime subjects for observation of behavior and other aspects of their life history. The breeding season of Eastern Bluebirds in Tennessee generally lasts from March to August, usually with two nesting cycles and sometimes three (Gowaty and Plissner 1998, Laskey 1939, 1943, Nicholson 1997, Pitts 2011). Additionally, Eastern Bluebird juveniles are generally dependent upon their parents for 30 days or longer after fledging (Gowaty and Plissner 1998, Nicholson 1997, Pitts 2011). Familial attachments are said to be strong in bluebirds during the post-fledging period, and juveniles out of the nest are known to form cohesive units that may remain together from late summer until migration; others remain together through the winter (Gowaty and Plissner 1998, Pinkowski 1977, Pitts 2011). Familial and community flocking can aid winter survival (Frazier and Nolan 1959, Nicholson 1997, Pitts 2011).

Cooperative Breeding and Helpers
Skutch (1961) defined a helper as “a bird which assists in the nesting of an individual other than its mate, or feeds or otherwise attends a bird of whatever age which is neither its mate nor its dependent offspring.” He recommended attention to three areas: 1) description of the helper’s age and breeding status, 2) its relationship to the bird(s) being assisted, and 3) the activities in which it engages.

Helping behaviors among birds include sounding an alarm at the approach of danger, repelling animals that intrude on the nesting area, feeding young, cleaning the nest, and other precocious nest-building and incubating activities (Skutch 1961). Sociability and the occurrence of two nesting cycles in a season favor the likelihood that juveniles of a species may help care for their younger siblings (Skutch 1961). In the case of Eastern Bluebirds, a second nesting cycle generally begins during the first brood’s post-fledging dependent period and, when tolerated by parents, juvenile offspring flutter around the nestbox, land on top, and look into the entrance hole, displaying curiosity about second-brood nestlings (Thomas 1946, Pinkowsky 1974). In some cases, one or both parents may be intolerant of the juveniles’ presence at the nestbox (Pinkowsky 1976).

Cases of Eastern Bluebird first-brood juveniles helping parents feed nestlings from the second brood are described in the scientific literature (Laskey 1939, Pinkowsky 1974, 1977, Whetherby 1933). Gowaty and Plissner (1998) and Pitts (2011) describe helping behavior in Eastern Bluebirds as rare. It is further suggested that juvenile attempts to feed may hinder rather than help the feeding process (Gowaty and Plissner 1998, Pinkowsky 1975b). Cleaning of the nest by juvenile helpers is also described (Laskey 1939, Whetherby 1933, Pinkowsky 1975a, 1975b); generally
this behavior occurs after feeding when juveniles remove fecal sacs from the nest cavity as they depart (Laskey 1939, Pinkowski 1975a, Whetherby 1933).

Protecting the nest area by juveniles through fluttering and alarm notes is discussed by Thomas (1946). In particular, he documents juvenile fluttering and alarm response to the presence of snakes.

**Nestbox Area and Nature of Observations**

My observations included two successive breeding seasons, 2011 and 2012, in which bluebird pairs nested in a nestbox in my yard to raise second broods. The nestbox was in a suburban setting, in a low-vegetation open area surrounded by woods. The nestbox was positioned on the south side of the house at a distance of 5 meters (17 feet). I primarily observed activity from the patio, 8 meters (25 feet) from the nestbox. The patio position became a predictable location for my observations; acceptance of my presence on the patio was evidenced by a lack of alarm, agitation, or delay by the mated pair while in the nesting and feeding area. When I positioned myself in a different area, parents predictably showed hesitation in approaching the nest and/or issued warning chips when young were present.

A mealworm feeder was positioned between the nestbox and the house. Placing mealworms in the feeder added to human/bird interactions, increased the acceptance of my presence, and offered frequent opportunity to view behavior and family interactions.

The nestbox faced south toward an open yard, and was positioned on top of a pipe at a height of 1.5 meters (5 feet). The entrance to the nestbox was equipped with a predator guard measuring 16 centimeters (6¼ inches) in length and 11 centimeters (4¼ inches) in diameter. The guard was constructed from sturdy hardware cloth with protruding clipped ends that were bent perpendicular to the body. The guard successfully prevented predation for four breeding seasons despite many raccoons and two free-ranging cats intermittently observed in the area.

Bluebirds were not banded, which would have aided in identification during observations. Rather, behavior and plumage were the primary characteristics used to distinguish individuals. Pitts (2011) describes behaviors as relatively reliable in identifying individuals, including an individual’s preference for certain perches prior to approaching the nest and variations in individual bird behaviors when he was near the nest. Also, bluebirds recognized him as a “predator” due to his capture of them for banding and band checks, and many would attack him while ignoring another person with him, suggesting bluebird recognition of individual humans.

Two key behaviors, coupled with gender plumage differences, helped me to identify members of the breeding pair with reasonable probability: 1) recognition/tolerance of my presence, including flying toward me in anticipation of mealworms, and 2) familiarity with navigating the mealworm feeder guard. The mealworm feeder guard was a wire fence-like structure surrounding the feeder dish and anchored to a platform. The guard was designed...
to exclude larger birds by forming adjacent square openings of 35 millimeters (1 3/8 inches), permitting entrance to birds the size of bluebirds or smaller.

Bluebirds that are familiar with the feeder guard generally fly into the feeder from a perch with ease, touching the wire guard briefly as they enter to feed from the mealworm dish. This is a smooth, coordinated maneuver. Bluebirds that are not familiar with the feeder flutter around it, often landing on top to look down, and make several attempts to enter, sometimes clinging to the guard or the platform to grab mealworms within reach, and initially flying away without entering. The motivation to navigate the guard is high, however, so this behavior only distinguishes individuals during their first several encounters with the feeder guard.

I concluded that the female of the 2012 breeding pair was a different individual from the female of the 2011 pair, while I believed the male to be the same individual in both seasons. The 2012 female was hesitant toward my presence, indicating that she was not familiar with me, and was observed to initially be unfamiliar with the mealworm feeder. Later other differences in the 2012 female’s behavior helped to affirm this assumption, including her aggression toward first-brood juveniles while nest building, in contrast to the 2011 female’s tolerance and feeding of a juvenile during second-brood incubation. The male of the 2012 pair showed behavior consistent with the 2011 male, including flying toward me as I filled the mealworm feeder, landing on a nearby perch, and wing-waving and chattering.

Results and Discussion

Observations of second-brood nesting in 2011 and 2012 revealed that first-brood juveniles helped their parents in the care and protection of second-brood nestlings prior to and after fledging. Juvenile helping behaviors in both seasons included feeding nestlings, removing fecal sacs from the nest, protecting the nest area by chasing away intruders, and feeding and protecting fledged siblings. In 2011, warning chips, distress notes, and fluttering were exhibited in the presence of a snake.

In 2011, first-brood juveniles at age 76 days were observed taking food to the nestbox to feed 12-day-old second-brood nestlings. The nestlings fledged at day 15. Subsequently, first-brood juveniles were observed feeding from the mealworm feeder and taking food to distant tree limbs in the same manner as adults in the feeding of second-brood fledglings.

In 2012, first-brood juveniles were approximately 62 days old when they were first observed to feed 13-day-old second-brood nestlings. On the morning of the following day, the adult female was absent and did not reappear. In the afternoon of the same day, the adult male solicited feeding help from one of his male offspring by flying with him to the feeder while wing-waving and chattering. The juvenile responded by taking a mealworm to feed the nestlings. The adult male continued to encourage juvenile feeding in this manner, while also continuing to feed the nestlings. At times he returned to a perch to guard the nest area while juveniles fed the nestlings. One juvenile female had difficulty navigating the nestbox predator guard. Her considerable persistence, trial-and-error effort, and subsequent ability to learn by observation, demonstrated high motivation to join in the care of the nestlings.
During the initiation of second nesting, parents in both seasons showed intolerance when juveniles begged after self-feeding was achieved, although the juveniles were not driven away from the nesting area. This parental aggression could also be interpreted as discipline or means of establishing dominance during the juvenile’s transition from a dependent begging relationship with parents to a more independent role in the familial community. As time progressed, parental aggressive behavior decreased or ceased except when a juvenile assumed a begging posture or failed to defer to parental dominance at the feeder or perch. One juvenile female during the 2012 season persisted in begging and grabbing food from siblings. This behavior may have been a catalyst for three physical confrontations between the two female siblings; Gowaty and Plissner (1998) describe aggression among Eastern Bluebird siblings as rare.

The maturity of juveniles, with respect to discontinuing begging behavior and stealing prey from siblings, varied with individuals. Feeding efficiency, defined as frequency of feeding trips and speed with which the food was delivered after landing, varied with individual juveniles. Juveniles appeared less efficient than adults; male juveniles seemed to learn faster and feed more efficiently than female juveniles, the latter appearing more easily distracted. In both seasons, juveniles fed the nestlings a variety of prey items, even when mealworms were available. During the 2012 season, flight maneuvers used to navigate the nest guard and feeding efficiency were noted to improve with practice.

While differences in efficiency of feeding behaviors between adults and juveniles were noted and consistent with reports found in the literature, it is also noteworthy that helping behaviors during both seasons were first observed several days before second-brood fledging and that feeding activities occurred in conjunction with other related helping behaviors. This suggests that, in addition to the care of young, the helping behaviors may serve a social function. Effort expended in the care of younger siblings may serve to strengthen sibling bonds, aid in the development of communal social skills, and further improve the survival rate of second-brood fledglings. Additionally, valuable social skills may be acquired during the parental-aggression phase, helping the juvenile to learn important communication skills needed for success in communal flocks during the nonbreeding season.

**Literature Cited**


**Vickie Henderson** is an artist, writer, photographer, and bird enthusiast in Knoxville, TN. She is a member of the Knoxville Chapter of the Tennessee Ornithological Society and author and illustrator of the Discover Birds Activity Book and Red-Shouldered Hawk Territory: A Sketchbook Journey through Nesting Season. She enjoys watching and documenting bird behavior to inspire the enjoyment and conservation of birds. Visit her blog at vickiehenderson.blogspot.com
I received a call about a robin’s nest that fell down twice from a gutter. The frustrated homeowner put the babies in what was left of the nest, placed the nest on a table on her deck and called me wanting to know what to do. As we were talking, she saw an adult robin with a mouthful of worms feed the babies in the new location. We worked out a plan on how to make the nest safe and secure on the gutter. I told her to call me back if it did not work out. Well, she did call back, happy and excited! The nest was restored, firmly in place, and the baby robins were being fed by the parents. Success!

Wild Bird Rehabilitators want bird parents to feed their own babies. After all, “Mother knows best.” We also try to re-nest uninjured baby birds so we don’t interfere with a bird’s breeding cycle. Experience shows that bird parents do feed babies in makeshift nests reattached to tree branches, bushes, gutters, and even tree cavity sections duct-taped to another tree. A parent bird’s instinct to feed and protect their young is very strong and they will not willingly abandon their babies. Also some species of birds can be put in another active nest as long as the bird is the same age and species. Bluebirds are a perfect example. Just be sure that the maximum clutch size is not exceeded. You would not want to stress the parent birds with so many mouths to feed.

Unfortunately, a bird’s nest location is not always perfect. Predators and storms can wreak havoc and human intervention is sometimes needed for survival. Putting a baby bird back in its nest is not always the right thing to do. That begets the question: When do you intervene? Here are some situations where a bird definitely needs your help and a call to a Federally Permitted Bird Rehabilitator is warranted.

- Baby bird found on ground with NO or very little feathering—can’t find nest.
- Baby bird found on ground, something is wrong, seems injured.
- Baby birds feel cold in nest/bird box; heads don’t pop up, parent birds absent.
- Baby bird with lots of mites. Mites will eventually kill the bird.
- Child brings home a baby bird. Gone from nest for several hours.
- Nestling or fledgling bird with one or both parents confirmed dead.
- A hummingbird found on the ground.
- Emergency! Bird brought in by a cat or dog. Call and transport the bird to a Bird Rehabber ASAP. It needs to be properly medicated and triaged.

The shorter the time between the scratch or bite and the bird getting treatment, the greater the bird’s chance of survival. Even if you do not see an obvious wound, cat/dog saliva, which is full of nasty bacteria, can still get into a bird’s eyes and/or orifices and will eventually kill the bird; it will die more slowly and painfully.

- “Suspect” dog or cat interactions. Did you know a bird’s body has the ability to seal a small puncture wound within minutes? Sometimes you will not see any blood. Call a Bird Rehabber for advice. Most likely the bird will need to be medicated for a few days, “just in case.”

Ok, so you rescued a bird. Yes, you will need to call someone for assistance, but first calm your bird and yourself. Find a box. Punch a few air holes in the sides. Make a cloth or tissue “nest” in the box. Then place the bird in the “nest” and close the box. Make the call.

Featherless baby birds need to be kept warm. So add a warm (microwaved) rice sock or Hot Hands pack near, but not touching the bird. And yes, it is tempting to want to feed that helpless begging little bird, but resist! Bird diets are specific to each species; liquids and food fed improperly can cause a bird to aspirate, get sick, or die. It is illegal to keep a wild bird. So please understand that the proper care and correct diet for a wild bird is not found on the Internet no matter what the website states. Do not fret; you will be transferring the bird to a qualified person so they can feed it correctly with the appropriate diet. If you have the desire to rescue and feed baby birds, become a volunteer with a Federally Permitted Bird Rehabber; we can always use the help!

Maureen Eiger is a State and Federally Permitted Wild Bird Rehabilitator, a Board Member of Wildlife Care Alliance and The Roanoke Valley Bird Club.
Heidi Hermes is a fine-art photographer in Minneapolis, MN. She and her husband Tim monitor a bluebird trail on the golf course behind their home. She shot these photos of male bluebirds fighting in her yard.

About the photo at left, Heidi says it “was taken about an hour after the fight, when the pair had really decided this was the home for them. They’re doing the Happy Dance.”

By the way, the nestbox is not mounted on the chain-link fence—it’s mounted on a post in the yard, with a predator guard.

You can see more of Heidi’s photos online at: http://fineartamerica.com/profiles/heidi-hermes.html
Discount for all NABS members!

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We all live in different worlds. What always works for one person may never work for another. The way bluebirds act in one locale may be entirely different just a few miles away (as evidenced in Dr. Patty Gowaty’s research in Athens GA and Clemson SC).

The mentions of Tanglefoot in the Spring 2014 Bluebird are a case in point. Dean Rust, in a two-page article wrote one sentence listing Tanglefoot as part of a defense system to make a trail “the best that it can be.” The editor added a 1/3-page reprint of an article written by Barbara Chambers, “Tanglefoot Problems and an Alternative” which implored bluebird monitors to “remove all Tanglefoot from buckets and monitoring equipment.”

Unfortunately, the warning overshadowed the advice. I know of one person who did not see the one sentence written by Rust.

In many instances, such as using Tanglefoot, there’s a balance in weighing the possible harm to the possible value.

I read an article in a newsletter from the Pacific Northwest that touted the value of their ants, which do no harm, in cleaning out nests. And, Barbara lived in Virginia where fire ants do not abound. In those instances, the small chance that Tanglefoot might come in contact with an animal carries enough weight to discontinue the practice.

But, in Southern states, Texas in particular, fire ants pose a strong threat to bluebird nestlings. Vaseline smeared on a pole (Chambers’ alternative) simply melts away. Even with grease, fire ants form bridges with some dying in the grease so others can climb over. A ring of Tree Tanglefoot Insert/Pest Barrier (an organic product) applied around the pole, preferably under a baffle, poses almost no threat to wildlife and provides great protection from fire ants.

Editor’s note: The NABS web catalog sells Tree Tanglefoot in a 6 oz tube and a 15 oz tub: www.nabluebirdsoociety.org/Catalog/catalog.htm

Pauline Tom in Texas adds a ring of sticky Tanglefoot Insect Barrier around the pole, in the section covered by the baffle, to deter fire ants’ access to nestlings.

Vehicle/Property Donation Program

If you have a car, truck, motorcycle, RV, boat, or even an airplane that you no longer need, NABS would like to receive it as a tax-deductible charitable donation.

To donate, simply call this toll-free number: 866-244-8464. Our agents will have your vehicle, boat, RV, etc. picked up and taken to a facility where it will be evaluated by experts. A determination will be made regarding what should be done to maximize its selling price, thereby resulting in significantly higher value than it might otherwise generate so you will receive the maximum tax benefit allowable by U.S. law. For tax purposes you, the donor, will receive a formal Certificate of Donation complying with all State and Federal requirements for authenticating your donation to NABS, an IRS 501(c)(3) tax-exempt charity.

Thank you for supporting the conservation of bluebirds and other native cavity nesters!

www.nabluebirdsoociety.org
Important Notice – NABS Election – August 15, 2014

Our election is held annually on August 15th. Current Bylaws can be referenced on our website at www.nabluebirdsociety.org/Board/boardofdirectors.htm

Who can vote? NABS Bylaw - Article XVII (4) states:
Only members in good standing as of May 15th shall be eligible to vote in the Annual Election. A list of current members at May 15th has been pulled from the NABS database and will be used to establish eligibility. Bob Benson, NABS Director & Nomination Committee Chair, is not on the ballot and has agreed to act as Election Committee Chair overseeing the tabulation of the vote.

The nominations closed on May 15th and the slate was approved by the Board of Directors. To comply with NABS Bylaws, the slate was posted on the NABS website before June 15th and short biographies are included here.

The following have been nominated for three-year terms and stand for re-election:

**Phil Berry** – Your current 1st Vice-President, Phil interfaces with NABS Affiliates working on ways we can better help each other in our shared pursuit of bluebird conservation and helps arrange the annual conference. He and his wife Jackie live in Florida where Phil was involved in the formation of the Florida Bluebird Society. Phil has served on the NABS Board for over 10 years. As well as making presentations, Phil and Jackie handle the mailing of quarterly membership renewal notices.

**Kathy Kremnitzer** – First elected to the NABS Board in 2011, Kathy serves as Secretary on the Executive Committee. She also serves as current President of the Maryland Bluebird Society. Kathy retired last year after a successful career as a teacher. She continues to work with both youth and adults through presentations and hands-on bluebird trail creation and monitoring in Maryland. Nesting season sees Kathy assisting with queries through the NABS Hotline and from our Facebook page.

**Jim Burke** – Jim is a founding officer with the South Carolina Bluebird Society. He currently serves SCBS as President and is our NABS 2nd VP for Community Relations. Jim has been on the NABS Board since 2012. Jim and his wife Sharon reside in Aiken, SC and worked tirelessly on the extremely successful NABS convention in 2013. Jim promotes bluebirds and native cavity-nesting birds for both organizations travelling the Eastern States and giving many presentations.

**Jim McLochlin** – Our website manager for many years, Jim has served as a Director on the NABS Board off and on over the past two decades. He came back on the Board in 2011 and has agreed to stand for another three-year term. Jim divides his time between Nebraska and Texas, sharing his love of bluebirds with his supportive wife Marie.

Two ballots are included in this issue of *Bluebird*. Household memberships are allowed two ballots and share their ID Number. Mark only one box on your ballot, be sure to include your NABS ID Number (found on your mailing label), and sign your ballot for it to be valid. If you have any questions regarding your membership status or eligibility to vote, please contact Marion Ball, NABS Membership Database Manager, at membership@nabluebirdsociety.org or Sherry Linn at president@nabluebirdsociety.org

You may choose to place your ballot in an envelope for mailing but it must be mailed to the address on the ballot.
A new effort is underway in New York City to reduce the number of bird–building collisions, which may kill nearly 1 billion birds per year in the United States. The American Bird Conservancy (ABC), New York City Audubon, New Jersey Audubon, and Ennead Architects have joined forces to develop a facility to test the effectiveness of bird-friendly glass. The goal is to find glass that is visible to birds (so they don’t fly into it) but still provides clear views for humans looking through the glass.

“Glass manufacturers are hearing the world’s call for more bird-friendly windows and doors, and they are accelerating their research efforts accordingly,” said Dr. Christine Sheppard, who heads up the Bird Collisions Program at ABC. “Our job is to evaluate their new products through highly refined testing protocols and provide scientifically sound feedback that continues to move the ball forward in reducing bird collisions.”

“More than 90,000 birds die in New York City from collisions with glass,” said Dr. Susan Elbin, Director of Conservation and Science for New York City Audubon. “Pointing out issues with glass that reflects habitat or is invisible to birds is not enough. We need to provide architects and building owners with real solutions.”

“The expansion of knowledge afforded by this work has greatly enhanced the development of effective design solutions,” said Guy Maxwell, partner in Ennead Architects. “As new information, products, and design solutions become available, bird-friendly architecture is becoming increasingly achievable and more compatible with other goals of sustainable construction.”

“Much of the world is demanding more wildlife-friendly products and a big part of that is bird-friendly technology. Bird collision mortality is certainly a contributing factor to the unfortunate reality that we now have over 200 species of birds suffering population declines or in serious trouble,” continued Sheppard.

Local governments have shown increasing interest in implementing bird-friendly building codes or guidelines and as a result, the world’s glass window makers are lining up to have new glass/window products tested for evolving bird avoidance technology. San Francisco, Oakland, Minnesota, and Toronto have already implemented bird-friendly building codes.

Sheppard and ABC have created a testing program to expand the knowledge of what visual signals deter bird collisions with glass, to provide comparative ratings of deterrence for existing commercial products, and to provide support and feedback for companies developing new bird-friendly products. The ability to provide quantitative ratings for materials has proved essential in development of ordinances and guidelines for bird-friendly design.

The tests are conducted in a long dark tunnel, with back-lit glass at one end. When a bird is released into the tunnel from the other end, it flies toward the glass, which looks to the bird like the way out. Birds are observed as they fly down the tunnel and attempt to exit either via the invisible control panel or a panel of glass being tested. A mist net prevents birds from actually hitting the glass. Each test is videotaped using high-speed, synchronized cameras. Flight type is recorded, as well as destination (to the control side or test side). Each bird is released after one flight.

Birds to be used in the tests will be caught in April and May, during migration periods and following established protocols. All personnel handling birds for this project are experienced bird handlers. Birds to be tested will be brought to the tunnel where they will be evaluated; any bird that appears stressed will be released. Otherwise, the bird will be released into the tunnel by hand, through a sleeve set into the end panel. Any bird that does not fly after 30 seconds will be withdrawn from the tunnel and released.

These “test pilots” will be inconvenienced for only a short time, then released back to the wild to continue their lives. But the information they provide about the effectiveness of bird-friendly glass will go a long way to protecting all birds from the hazard of building collisions.

Collisions with buildings may kill up to 1 billion birds per year in the United States
Bringing Back the Burrowing Owl to British Columbia: 
Lauren Meads, Aimee Mitchell, Dawn Brodie and Mike Mackintosh

History and formation of the society
The Burrowing Owl is a Species at Risk in Canada and was originally extirpated from British Columbia in the 1980s. Their natural habitats are the grasslands and deserts of North America. In Canada, the populations of Burrowing Owls migrate in the fall to the southern United States and possibly Mexico.
Due to the loss of habitat both in breeding and wintering grounds and the decrease in fossorial mammals, the Burrowing Owl population in Canada continues on a downward trend.
Starting in 1990, volunteers initiated a comprehensive program for the re-introduction of captive bred owls to the wild, including captive breeding facilities, artificial burrow networks and field monitoring research. In 2000, the Burrowing Owl Conservation Society of BC was formally created to set program direction, finance the program and increase public awareness of grassland habitat.

Captive breeding
The Burrowing Owl Conservation Society of BC currently raises more than 100 owls each year for release in the Nicola Valley and South Okanagan grasslands of BC. Three breeding facilities are in operation across the province.
Fifteen owls from Oregon have recently joined the society’s breeding stock. The original breeding stock is made up of wild owls from Washington State.

Artificial burrows
Artificial burrows constructed from plastic buckets, are installed in hand-dug holes on privately-owned ranches, Provincial land and NGO land.

“Soft-release” cages
Improved release techniques, including soft-release caging (Aimee Mitchell 2008), has resulted in greater survival of released owls and their numbers of wild-hatched offspring.
A story of community conservation

Leg bands

Owls released from the breeding facility are banded with a distinctive green over black alphanumeric coded aluminum band on the right leg and a U.S. Fish and Wildlife Service aluminum band on the left leg. Wild-hatched offspring of the released owls are banded when they are four weeks old.

Migration and tracking

Each fall, Canadian Burrowing Owls migrate to the southern United States and possibly to Mexico. BOCBSBC owls have been sighted as far south as San Diego, California.

We are currently working internationally to follow and protect the owls on their migration route. There is mounting evidence that destruction and disturbance on wintering grounds may be having the most significant impact on the winter survival and subsequent return of owls to Canada.

Our best option for tracking Burrowing Owl migration is to employ citizen science. We have confirmed sightings of BOCBSBC owls in Washington, Oregon and California. Over the last 10 years we have strong indications to where the owls are overwintering. This method is currently the best solution for a non-profit organization to obtain information compared to costly satellite transmitters and hard to recover data loggers.

The Burrowing Owl Conservation Society of BC is working with the Global Owl Project. Captive owls have been used to test the suitability of new satellite trackers. In the future, we hope to collaborate with GOP to track the migration routes of BC owls.

With the improved survival and productivity of captive owls released each year, the numbers of owls returning to BC are gradually increasing.

Number of owls hatched each year

Community involvement

Volunteers — The Society provides opportunities for people from many backgrounds to become directly involved in conservation and stewardship activities connected with British Columbia’s grasslands.

Landowners — Over the last several years of the program, contributing landowners have modified their grazing regimes to support our work. They are using management practices that support a healthy grassland ecosystem, which will provide an opportunity for the reintroduction program to be successful. We are currently working with eight ranchers in the North and South Okanagan.

Education — A benefit of the program has been the raising of public awareness about the difficulties of trying to reverse environmental change and the need to ensure that effective conservation measures are developed for grassland species and habitats.

Acknowledgments

Habitat Stewardship Program for Species at Risk
We acknowledge the financial assistance of the Province of British Columbia through the B.C. Government Grant program
The Burrowing Owl Winery — Jim Wyse
Wildlife Preservation Canada — Elaine Williams
Canadian Wildlife Service
Private donations
The volunteers and directors of the Burrowing Owl Conservation Society of BC

www.nabluebirdsociety.org  Summer 2014 | Bluebird
Once called the Golden Swamp Warbler, the Prothonotary Warbler inhabits the dusky world of bottomland swamps and river edges. Because of those narrow habitat requirements, most humans have never been lucky enough to see this beautiful bird.

The Prothonotary Warbler is a member of a very impressive group: Neotropical migratory birds. These are the species that migrate between breeding areas in the north temperate zone and nonbreeding (wintering) areas in Mexico, the Caribbean, and Central and South America.

Every year, twice a year, these species, which include everything from hummingbirds to hawks, swallows to shorebirds, fly thousands of miles between their destinations. Not only does this represent an amazing physiological feat, requiring more endurance than a triathlon or the Tour de France for a human, but the migratory habit itself influences the whole ecology of these species, setting them apart from their sedentary relatives.

Migratory birds face perils and challenges during all stages of the annual cycle, particularly because the habitats they need are vanishing from all points along the migratory route. To understand migratory birds, one must understand the changes in their ecology during different times of the year.

Nearly half of the more than 800 species that breed in the U.S. and Canada migrate south for the winter months. We tend to think of these species as “ours” and, like any self-respecting northerner might do, our birds go south when the weather gets rough. Recently, however, some scientists have proposed that these migrant birds are actually tropical birds that come northward to take advantage of the veritable banquet of palatable, easily captured insect prey that abound during the temperate zone summer.

The great abundance of prey may allow these birds to raise a relatively large number of young in a short period of time, thus making it worth the long trip, and allowing the evolution of migratory behavior.

As in most migratory songbirds, the male Prothonotary Warblers arrive on breeding areas before females. Males sing vehemently and sometimes engage each other in spectacular aerial battles as they stake out territories around one or more nest-cavity trees.

Males mark each potential nest site by placing a bed of fresh moss inside the cavity, and when the females arrive several days to a week later, males escort them to any and all nest cavities available on the territory. Females may visit a number of territories before choosing a male and a particular nest site. It is not uncommon for the same male and female to be mated in several consecutive years. Males and females sometimes may actually travel together and maintain the pair bond away from the breeding grounds, but the maintenance of pair bonds in most migratory songbirds remains a mystery.

Although food is plentiful in the temperate zone, the breeding season is short, and there is much to accomplish. Female Prothonotary Warblers must build the nest alone, build up energy stores quickly enough to lay five to six eggs (representing up to 70 percent of the female’s body mass), maintain energy stores to incubate the eggs for 40 to 50 minutes every hour for 12 to 13 days, and then find and bring food to those five or six young every 15 minutes from dawn to dusk for the next 12 days in the nest and 15 to 20 days after they leave the nest.

Then, if she laid her first clutch early enough (e.g., before June 15), she has time to build her energy...
stores again to lay four more eggs and start it all over again.

Of course, about one of every four nest attempts is cut short when eggs or young are taken by raccoons, weasels, black rat snakes, or other predators. This is a relatively low predation rate because the warbler is afforded much protection by nesting in tree holes and over water. For other songbirds that nest in open-cup nests, 50 to 60 percent of attempts often fail due to predation.

Prothonotary Warblers also suffer a relatively low incidence of parasitism by Brown-headed Cowbirds, and appear able to raise the larger cowbird chick in addition to their own young without great difficulty. For many other small songbirds, such as most vireos and many warblers, cowbirds are a significant cause of nestling mortality. Unlike in the case of predation, though, victims of cowbird parasitism are saddled with raising the young cowbird, often after losing all of their own young, and cannot renest as quickly.

For the Prothonotary Warblers able to bring off a brood of young successfully, the breeding season ends around early August. Adults and young begin moving off of breeding territories, following river corridors toward the Gulf of Mexico, and gathering energy stores for the migration ahead.

Most songbirds migrate through the night and stop during the day to feed and rest. For birds to be able to continue their journey, finding adequate food and protection from predators is critically important in these “stopover” sites.

Yet, as patches of habitat shrink and become more isolated from each other by development or agriculture, birds must move over larger areas to find sufficient food among the patches, exposing themselves to predation risk and using up energy that could be used in the nightly migration. This translates into longer time needed to make the trip and greater risk of mortality from predation, exhaustion, and starvation.

The most perilous part of the journey occurs when birds must cross a large body of water, where severe winds or weather can mean death when there is nowhere to land. In the case of Prothonotary Warblers and many other songbird species, the greatest challenge is the Gulf of Mexico.

In the Fall, birds funnel down to gather in the little remaining natural habitat amid the high-rises and other development along the Gulf Coast of the U.S., from Texas to Florida. Prothonotaries and others forage vigorously to build body fat, and at dusk they set out for the 10-hour flight across the Gulf to the Yucatan Peninsula.

They arrive on the Mexican shore sometime before dawn, exhausted. As many birders along coastal migration corridors know, one can walk along beaches on an early morning in spring or fall and find them littered with birds too tired to move away very quickly. Many will not survive but those who do will continue their journey south. Most Prothonotary Warblers will follow the Atlantic coast of Central America down to Costa Rica, Panama, and northern Colombia, reaching the mangrove swamps of their wintering grounds by September or October.

Returning home from a summer “vacation” can be a let-down for most of us. But, imagine returning to find your home burned to the ground or removed to

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**Helping Warblers in Winter**

Prothonotary Warblers respond well to nestboxes set out on their breeding grounds, and NABS members are encouraged to provide boxes in suitable habitat. However, the most significant threat to Prothonotaries probably occurs on their wintering grounds. The birds’ favored habitat is the mangrove forest—a dense tangle of trees and roots found in coastal areas of the southern U.S., Central and South America, and the Caribbean. Unfortunately for Prothonotaries, these coastal areas are also prime real estate for tourist resorts, shrimp farms, and other forms of development. As a result, mangrove forests are being cleared faster than the tropical rainforests we hear about so often—half of the world’s mangrove forests have been destroyed in the last 50 years. Simple steps that you can take to help protect this critical habitat for Prothonotaries:

- Do not support tourist resorts in coastal areas if their construction causes the destruction of mangrove forests.
- Buy shrimp from Louisiana, Alaska, and other domestic sources, rather than from Latin America.
let a road through. Prothonotary Warblers returning to wintering areas often find just that sort of thing. Mangrove habitats are among the most severely threatened throughout the world because they occur in highly desirable coastal areas.

Most migratory songbirds that eat insects during the winter period hold territories on the wintering grounds and return to exactly those territories each year. With more habitat disappearing every year, birds are faced with a terrible game of musical chairs. There are far too few chairs for all of the players, and those without a chair may not survive. Once again, there is not usually an option simply to use another habitat this year, after millions of years of evolution have shaped a certain habitat association.

Eventually, in the midst of the tropical dry season that begins in January and February, some internal clock signals that it is time for the Prothonotaries to move north again. Back across the Gulf of Mexico, into the bayous of the lower Mississippi, and north along the rivers as the leaves of willow trees have barely begun to emerge.

Males and then females move along the invisible routes that were established long ago, but that change yearly at the whim of an ever-burgeoning human population. Finally, they settle on a half-acre of land where they will attempt to raise young again, perhaps along a river near you.

Lisa Petit is a research biologist with the Smithsonian Migratory Bird Center at the National Zoological Park in Washington, DC.

This article appeared in a slightly different format in the Spring 2001 issue of Bluebird, where it was reprinted (with permission) from a longer version that had appeared in Audubon Naturalist News.
The introduction of the English House Sparrow to North America in the 1800s was a tremendous environmental blunder, in part because of the species’ aggression toward bluebirds and other native cavity-nesting birds. Even in the 1800s, the introduction was recognized as a disaster, and efforts were made to eliminate the species from our shores. The U.S. government analyzed the issue and the U.S. Department of Agriculture’s Division of Economic Ornithology and Mammalogy produced an 1889 document entitled *The English Sparrow* (*Passer domesticus*) *in North America*. Among its nearly 400 pages are recommendations for widespread control efforts, including establishing bounties, shooting, trapping, destroying nests, and poisoning (including the use of strychnine and arsenic—these government guys weren’t messing around!). NABS members might be interested in the following section, which fell under the heading “Use of the Sparrow for food” (by the way, the “reed-bird” referred to below was probably the species we now know as the Bobolink, a small blackbird found in grasslands and hayfields):

During the last half dozen years Sparrows have been used as an article of food in many places in this country, as they have been in Europe for centuries, and the demand for them for this purpose has doubtless lessened their numbers somewhat in and about a few cities. The following examples of testimony illustrate this point.

From J. Percy Moore, Philadelphia, Pa.:
Immense numbers are killed in the autumn, when feeding on the seeds of reeds in the marshes, and prepared and sold as reed-birds by the restaurants. (September 27, 1886.)

In Albany, N. Y., Sparrows were regularly quoted in the market reports during the fall of 1887, bringing $1 per hundred, or 25 cents per dozen. The following extracts from the Albany Express show that the birds are appreciated there:
Sparrows are still a feature of the market, and one Albany lad, Charles Lambert by name, shot one hundred and thirty-five of the little pests Saturday, out of a single flock of about five hundred, on the outskirts of the city. A well-known game and poultry dealer took in one thousand seven hundred of them last week and sold about all. Yesterday the same man disposed of two hundred. (November 7, 1887.)

The Albany youth are still waging war on the Sparrows, and they are all gradually being driven from the city. One game and poultry dealer in town has thus far bought and then sold to others about three thousand eight hundred of the little pests. They make an excellent pot-pie and are regarded as excellent eating by those who have made the trial. The flavor is said to be somewhat like that of reed-birds and much superior to quail. (November 18, 1887.)

If you’d like to read more of this fascinating historical document, it can be found online at Google Books (http://books.google.com/books) by searching for the title or the author (Walter Bradford Barrows).
Large mealworms now available!

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“Feeding live insects to the wild birds in my yard has helped me build a special bond with individual birds.”
—Julie Zickefoose
First and foremost, any actions and recommendations by bluebird landlords or enthusiasts take should be designed to do no harm to native cavity nesters. Their actions should promote public knowledge and the welfare, safety, and conservation of these birds and their environment, and encourage respect of the law and the rights of others.

Hippocrates was a Greek physician born around 460/470 B.C. He is associated with training, ethics, and professional ideals. One of his aphorisms was: “Life is short, and the Art long; the occasion fleeting; experience fallacious, and judgment difficult.” He counseled those who wished to become competent in medicine to reflect and learn, and “bring to the task a love of labour and perseverance, so that the instruction taking root may bring forth proper and abundant fruits.... diligent study is like the cultivation of the fields, and it is time which imparts strength to all things and brings them to maturity.”

These words are very relevant to the Art of bluebirding. Often it is hard, if not impossible, to know what is the “right thing to do.” As a bluebird host, I confess to having made many mistakes. Unfortunately, several of these mistakes have had heartbreaking results: abandoned nests, broken eggs, or dead nestlings and adult native birds.

Some of my mistakes were a result of something I actively did, like dropping a Gilbertson box during monitoring which resulted in eggs breaking. Others were a result of something I failed to do, like prevent paper wasps from causing parents to abandon a clutch of eggs about to hatch. Some of these losses were due to inexperience, some to experimentation, others to bad judgment.

**Inexperience:** I read as much as I can, and ask questions, hoping to learn from others. I also try to learn something from my own near misses or mistakes so I do not commit them again. As painful as it is, I try to share those lessons learned with others, so THEY do not have to find out the hard way.

**Experimentation:** When conducting experiments, we must make our best efforts, based on available information and good judgement, to first do no harm. For example, somebody tried putting plexiglass roofs on a nestbox, in an attempt to deter House Sparrows. The heat cooked the eggs. There is no need to repeat an experiment like that. This is why I encourage people to report not just on successful experiments, but also on failed ones, despite how embarrassing that may be.

There are other occasions where well planned, responsible, ethical, and legal experiments are conducted that result in losses—sometimes very painful ones. However, in the end, the work contributes considerably to our knowledge base. Thus, in the long run, it can be beneficial and worthwhile in that, if the information is shared, it offers a future opportunity to improve nesting success for many other native cavity nesters.

**Bad Judgment/Carelessness/Ignorance:** Sometimes in an attempt to help, despite our good intentions, we can end up doing more harm than good. This usually happens from micromanagement, interference, or carelessness. Examples include

While monitoring a Peterson nestbox, I saw a large European paperwasp (*Polistes dominulus*) nest underneath the recessed nestbox floor. As I started to scrape the nest off with a hive tool, irritated wasps flew out at my face. I jumped backwards, jerking the box at the same time. All of the precious bluebird eggs tumbled out of the nest and smashed on a rock below. I learned to stuff a crumpled paper towel or tin foil underneath Peterson boxes to prevent paper wasps from nesting in the recess of this style box. For more on predator and problem identification and solutions see www.sialis.org/predatorid.htm
checking a box so often during nest building that nervous titmice abandon it, attracting predators or attacks by nestbox competitors by putting food on top of or inside of a nestbox, removing a nest you think is abandoned when it’s not, rushing resulting in an accidental loss, not keeping good track of nestling ages and causing premature fledging, or failing to monitor an inbox trap hourly resulting in the death of a native bird.

I understand that nature can be cruel. We cannot prevent bad weather or rid the world of predators. I accept some losses as a result of natural processes. They may result in the evolution of a stronger breed or more experienced parents.

We also cannot control what other people do (like letting House Sparrows breed). But we can try to educate them, so at least they will make informed choices.

If we do nothing, we probably won’t make as many mistakes. We also will not learn, and probably won’t help many birds.

I figure the world outside the nestbox is tough enough—if we can help the young of native birds make it that far, it may make a difference. What I find most difficult is forgiving myself when things go badly as a result of a fault of my own.

We put up nestboxes in the hopes of helping native birds procreate. I pray that the good we do as a bluebird monitors offsets our failures. Maybe they haunt us so we will do everything in our power to avoid repeating them, or feel compelled to help others.

One thing I THINK I know for sure: Giving up when things go wrong is not the answer.

NOTE: Contrary to popular belief, the Hippocratic Oath does not contain the phrase “do no harm,” but the medical profession does emphasize this principle, especially when debating use of an intervention with an obvious chance of harm but a less certain chance of benefit.

Bet Zimmerman Smith is creator of the immensely helpful website about cavity nesters, www.sialis.org. She is a member of the NABS Board of Directors and a committee member, and a regular contributor to Bluebird.

This article originally appeared on www.sialis.org

Bluebirds Everywhere

“Bluebirds Everywhere” is a feature that celebrates the widespread and creative uses of bluebird images and the word itself. We invite you to submit your own images and ideas—simply email them to NABSeditor@gmail.com or mail them to NABS Editor, 5405 Villa View Dr. Farmington, NM 87402. Let’s see what bluebirds you can find!

Tracey Ramsey found these cartons for Blue Bird organic produce at her local Whole Foods store. Note the interesting contrast between the old-timey label on the left and the modern graphics on the right.
Mountain Bluebird Featured in New USPS Songbird Stamps
In April the U.S. Postal Service released a set of 10 First-Class postage stamps featuring songbirds of North America. It’s a wildly colorful set of birds, including a beautiful male Mountain Bluebird. Also included are other boldly colored birds such as the Painted Bunting, Scarlet Tanager, and American Goldfinch. USPS art director Derry Noyes created the designs and illustrator Robert Giusti painted the images. The stamps may be viewed and purchased at post offices and online at www.usps.com/stamps. Image courtesy of USPS.

Bermuda’s Eastern Bluebird Featured in New Postage Stamp Series
The Bermuda Post Office released a set of four stamps that feature the Bermuda Eastern Bluebird. These stamps commemorate the 60th anniversary of the founding of the Bermuda Audubon Society, which was founded in part to save Bermuda’s bluebirds. No one is certain when the species first arrived in Bermuda, although its presence was confirmed as early as 1829. Originally nesting in cavities in cedar trees, the bluebirds now nest almost exclusively in nestboxes.

Project to Save Cavity-Nesting Birds Wins Award
Back in the Fall 2012 issue of Bluebird we reported on a project to protect Saw-Whet Owls and other cavity-nesting birds from entering the vent pipes of outdoor vault toilets on US Forest Service lands. By covering the vent pipes with wire screen, countless birds have been spared a gruesome death in the vault pits. The Port-O-Potty Owl Project has been so successful that it has been given the Wings Across the Americas Conservation Award. You can read more about this successful project at www.tetonraptorcenter.org/poo-poo-project.html

Victory for Owls and Other Wildlife (and pets and children!)
From a press release from the American Bird Conservancy: Following years of pressure from conservation, public-health, and animal-rights groups, the maker of the rat poison d-CON agreed to stop producing its super-toxic rat poisons and pull the products from retail store shelves by early next year. Reckitt Benckiser, the parent company of d-CON, had been challenging a decision by the EPA to limit the sale of super-toxic rat poison to avoid unintentional poisonings of children, pets, and wildlife. Under an agreement with the EPA, d-CON will replace its super-toxic poisons—called second-generation anticoagulant rodenticides—with safer products by March 2015.

Rolls Royce Honors a Different Kind of Bluebird
In the 1920s and 1930s, Sir Malcolm Campbell owned the world of speed records. He set nine land speed records and four on-water records. He was the first person to drive a car faster than 300 mph. His string of record-setting cars and boats were painted a distinctive blue, and each was called Blue Bird. To honor Campbell’s impressive record, Rolls-Royce Motor Cars is rolling out a limited-edition coupé with a stylized bluebird motif and offered only in a special shade of blue. Befitting a Rolls Royce, much of the car is hand-built by the company’s craftsmen. Each car features a 453-horsepower 6.75-liter V-12 mated with an eight-speed automatic transmission. Retail price: about $730,000. Oh, and if you want one, you’d better hurry—only 35 of these fantastic cars will be built. Photo courtesy of Rolls-Royce Motor Cars
Somebody Turn on a Light
Research has shown that cavity-nesting birds probably rely little (if at all) on smell, touch, or sound to locate their eggs or young in a nest cavity. Instead, they rely on vision.

But as you might imagine, it’s dark inside a nest cavity—very dark. Researchers in Poland inserted light meters into tree cavities with active nests to find out just how dark. (The nesting species was the Collared Flycatcher, which is about the size of North America’s chickadees.) They discovered that, on a sunny day, only about 4% of the daylight reaches the level of the nest—about the same amount of light as you’d have on a moonlit night. This is barely enough light to allow birds to see eggs or nestlings, and in most cases is not enough light to allow them to see color.

Birds could improve their visibility inside cavities by building up their nests so that the eggs and young are closer to the cavity opening, i.e., closer to the light. But there’s an advantage to having them tucked down deep inside a cavity: they’re farther away from predators. Cavity-nesting birds must make a trade-off between safety and visibility—the nest must be deep enough to make it hard for predators to reach, but not so deep that it’s impossible for Mom and Dad to see.

Like a lot of research, this project answered some questions but raised others. The most intriguing ones:
- If the light at the nest is too dim to allow birds to see colors, why are bluebird eggs usually blue? (Family history probably has something to do with it as a lot of other members of the thrush family lay blue eggs—American Robins, for example.)
- How can cavity-nesting birds quickly adjust their vision from seeing in broad daylight to seeing inside a dark cavity and back again? When parents land at the cavity opening and put their head inside to feed nestlings, their eyes need to adjust to the darkness almost instantly (something that no other animal can do, as far as we know).

These questions will need to be the focus of future research before we can know definitive answers.

Can We Improve Habitat for Cavity Nesters in Vineyards?
Habitat loss continues to be the primary factor driving declines in bird populations. This problem is especially acute in California, where steady growth in the human population has been mirrored by declines in the populations of many bird species. One particularly hard-hit habitat is oak woodlands: just since 1950, more than 1 million acres have been paved over for cities or plowed under for agriculture.

One of the most common agricultural land-cover types found on these former oak woodlands is viticulture—growing grapes for wine. Some enlightened wine producers have welcomed insect-eating birds to their vineyards as partners in the process. Western Bluebirds have been especially welcomed because of their voracious appetites for grape-eating insects and because of their acceptance of nestboxes. (The only downside is that bluebirds enjoy an occasional grape themselves!)

A recent study in California vineyards examined how various factors could improve bird habitat. One strategy was to retain oak woodlands and other native vegetation along streams that flow through the winery property. These remnants of native vegetation were found to support communities of birds similar to what is found in larger, unbroken stretches of native habitat, and different from the bird community that inhabited the vineyards. In the vineyards, installing nestboxes resulted in more Western Bluebirds and other insect-eating birds than in vineyards without nestboxes.

Of particular interest is that the native vegetation that was retained along streams supported populations of at least two cavity-nesting species of conservation concern, the Oak Titmouse and...
Nuttall’s Woodpecker. If more vineyards and other developments can be encouraged to conserve tracts of native oak woodlands and streamside vegetation, enough habitat could be set aside to maintain healthy populations of these species and others.


**Why Would Chickadees Want to Be Even Colder in Winter?**

If you’re outside for a long time on a cold winter day, you do what you can to stay warm. You bundle up, you keep moving, maybe you drink some hot chocolate. You do these things to keep your metabolism up—to keep your internal “furnace” going at full tilt. The last thing you’d want to do is to let yourself get even colder, right? But that’s exactly what Black-capped Chickadees do.

When chickadees are exposed to cold temperatures in winter, they allow their body temperature to drop several degrees. The colder the air, the lower their body temperature. It might seem that the birds are just cold because they’re in a cold environment. But the drop in body temperature occurs no matter how active the birds are or how much fat they’re carrying. And they can lower their body temperature for a while, then raise it back to normal, without the ambient temperature changing at all.

What’s going on is called facultative hypothermia, which is a fancy way to say that the birds are deliberately lowering their body temperature to save energy. A chickadee’s normal body temperature is about 41°C (106°F). On cold days, they can temporarily lower their temperature at least 5.5°C (10°F) to 35.5°C (96°F). On cold nights, when they are less active and have less need to be alert for predators, they drop their temperature even lower.

By not keeping their internal “furnace” fired up at full capacity all the time, they use at least 15% less energy over the course of a day. That 15% savings can be a life-saver in winter: they don’t need to spend as much time searching for food (which may be hard to find in winter, and exposes them to danger from predators) and they can more easily survive periods of extreme cold or periods when food is scarce. No need for hot chocolate!

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 working together in a partnership in international bluebird conservation. No cost is associated with affiliating with NABS. Your affiliated organization will be listed on the NABS website and in Bluebird. If your organization has a newsletter, please forward a copy to our headquarters. To find out more about becoming a NABS Affiliate, read our Affiliate Letter. Notice: If you are listed below, please check listing to see if it is current. If not, please send correct information to Phil Berry at pbsialia@gmail.com and info@nabluebirdsociety.org.

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<td>Family Foundation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bronze Level (at least $500)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature’s Way</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>True Blue Level (at least $250; available only to NABS Affiliates)</th>
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<tbody>
<tr>
<td>MICHIGAN audubor</td>
</tr>
<tr>
<td>SOUTH CAROLINA BLUEBIRD SOCIETY</td>
</tr>
<tr>
<td>Texas Bluebird Society</td>
</tr>
<tr>
<td>NYS Bluebird Society</td>
</tr>
<tr>
<td>Virginia Bluebird Society</td>
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</table>

<table>
<thead>
<tr>
<th>Nestbox Neighbors (at least $100; available only to NABS Affiliates)</th>
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<tbody>
<tr>
<td>Hendricks County Bluebird Society</td>
</tr>
</tbody>
</table>
Renew Today! Give a friend the gift of bluebirds!

Date ____________________

☐ New Membership  ☐ Renewal  ☐ A gift subscription from: __________________________________________ _________________ for:

☐ 1 Year  ☐ 2 Years  ☐ 3 Years  ☐ 4 Years

<table>
<thead>
<tr>
<th>Households</th>
<th>Single Person</th>
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</thead>
<tbody>
<tr>
<td>Subscribing</td>
<td>☐ $30  ☐ $20</td>
</tr>
<tr>
<td>Supporting</td>
<td>☐ $50  ☐ $40</td>
</tr>
<tr>
<td>Contributing</td>
<td>☐ $85  ☐ $75</td>
</tr>
<tr>
<td>Guardian</td>
<td>☐ $110 ☐ $100</td>
</tr>
<tr>
<td>Life</td>
<td>☐ $500 ☐ $500</td>
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</tbody>
</table>

| Organization | ☐ $50 |
| Small Business | ☐ $50 |
| Corporation   | ☐ $125 |

A+ (for Affiliate members only)  ☐ $15

Name of Affiliate organization: _______________________

NOTE: Multiple years are not available for “A+” — this membership type must be renewed annually.

Additional Donation

☐ $30  ☐ $50  ☐ Other __________

☐ Check enclosed (in U.S. funds)
☐ Visa  ☐ MasterCard

Card # __________________________

Last 3 digits on reverse side: _________________

Expiry: ______ Signature: _________________________

Total amount paid/charged to credit card: _________________

Where did you learn about NABS? __________________

_________________________________________________

_________________________________________________

We do not share or sell NABS’s membership list.

Payment must be in U.S. funds.
Mail to: NABS Treasurer, P.O. Box 7844, Bloomington IN 47407

An online membership form with payment through PayPal is available online at www.nabluebirdsoociety.org