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Cover photo: Male Western Bluebird in eastern San Diego County, California, taken by zoology professor Marshal Hedin (see more of his photos at <https://www.flickr.com/people/23660854@N07/>).

Table of Contents photo: Red-breasted Nuthatch, taken by a photographer who goes by the name Seabamirum (many more photos at <https://www.flickr.com/photos/seabamirum/>).



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

www.nabluebirdsociety.org

Winter Message to Our Affiliate Organizations

Mike DeBruhl

Winter is slowly arriving in some parts of NABS country and has landed with a “thud” in others! Combined with the pandemic, this presents interesting challenges for spending time as we look / dream forward to Springtime. As heard from some, your time is being utilized to finalize budgets and program plans for 2021, stockpile & repair nestboxes, reconnect with members, and generally prepare trails for colder weather. Our feathered friends appreciate it and let me assure you that NABS recognizes your efforts. Keep up the good work.

I am very pleased to see that the seeds planted to encourage increased communication between affiliates are taking root. The most visible signs of this are the newsletters and annual reports now being sent to NABS colleagues across the continent.

In this regard, a really big **THANK YOU** to — Tennessee Bluebird Society, Bluebird Society of Pennsylvania, Southern Interior Bluebird Trails Society (British Columbia), Bella Vista Bluebird Society (Arkansas), South Carolina Bluebird Society, Calgary Area Nestbox Monitors (Alberta), Texas Bluebird Society, North Carolina Bluebird Society, Florida Bluebird Society, and the New Jersey Bluebird Society — for sharing their newsletters and information.

An example of “Gee Whiz” data shared comes from our **Calgary Area Nestbox Monitors Society** affiliate. Here is a line that caught my attention and blew my tiny mind: “*The latest issue of Bluebird suggests that we share our Annual Report with other NABS affiliates. We are very pleased to do so! Our group, Calgary Area Nest-box Monitors Society, is based in Calgary, Alberta and covers a wide territory. We consist of nearly 100 monitors/teams who regularly check about 5,000 boxes. Our target species are Mountain Bluebirds and Tree Swallows. About 1/3 of our monitors also band young birds and some adults.*” **WOW** — 5,000 nestboxes monitored by 100 monitors over vast areas. Quite an impressive feat!

As promised, I recently forwarded the revised **Guidelines for Affiliate Membership** approved by the NABS Board. As a reminder, the guidelines apply to organizations that ARE NOT currently NABS affiliates. If you did not receive them, please let me know.

Lots of things are in the works for a great NABS 2021. But above all, **Please STAY WELL AND SAFE** and continue to reach out to other affiliates and share and learn from each other. Believe me, it is worth the effort. - *Mike*



From the President

Bernie Daniel

Well here we are back in November (but I assume it might be after the New Year's Day that you read this)! I am not sure how we got here so quickly but like I mentioned last Fall I will not be unhappy to see an end to 2020. I will guess that many of you would agree that, overall, this is one of the most forgettable years in memory? No tears to be shed for its passing by me—good riddance.

Well, in March of 2021, our Society will be 43 years old! We are certainly not the new kids on the block anymore! But compared to some other conservation organizations like the Sierra Club, which will be 129 years old next year, or the Audubon Society, which will be 106, we are still a relatively young organization. But while looking forward to the next four decades seems like a long time—we know, looking back at those 43 years, time seems much shorter? Many of our NABS Affiliate organizations are about a decade younger but a few of them are as old or older than NABS!

Of course, NABS is a comparatively small organization and our mission is considerably more focused than those older, larger organizations mentioned above. But size notwithstanding, cavity-nesting birds have benefitted from the efforts of NABS and our Affiliate organizations. National and continental surveys of bird population changes show that all three species of bluebirds are faring much better these days than many other kinds of native birds. You might recall the review I presented in the 2019 winter issue of *Bluebird* about the massive declines in many North American bird families over the last half century. Very few bird species are doing well these days, but compared to our native sparrows, warblers, and blackbirds, all three species of bluebirds are looking very solid. NABS, our Affiliates, and the rest of the bluebirding community have made a positive impact—there can be no doubt about that.

But what does the future hold for bluebirds and all the other native cavity-nesting species that we support? Asked another way, in the future will we be as successful as we have been in our past? I have been pointing out warning signs (based on bird surveys) that, compared to the 1980s and 1990s, our efforts to help bluebirds seem to have been less effective recently. This information comes from continental surveys of bird populations such as the North

American Breeding Bird Survey (BBS), the Cornell eBird program, and the Christmas Bird Count. You may recall that over the last three years I have written articles on what I believe these surveys are telling us about bluebird population changes. Sometime this year the BBS should give us a summary of how the three species of bluebirds did in the survey over the last five years. Rest assured I will report on those results when the 2015–2020 population trends for bluebirds are released.

Of course, the biggest question is why is this happening? At this point, all we can do is speculate. Bird population changes play out over a continental landscape and they occur over years or decades. Thus, it is difficult to pinpoint one thing and to say that is the “smoking gun”—or that is what is causing issues for bluebird reproduction. We can identify many things that *could* be playing a role such as the worldwide decline in insect populations. Bluebirds are insectivores and all species, avian or otherwise, that rely on insects as their primary food source will suffer from declines in food supplies. Are insect populations now declining to levels that are starting to affect our nestbox trail production? Most likely the answer to that question will be different depending on what part of the continent your trail is located? And that is just another example of the complexity of this problem.

Another issue that could be influencing our bluebird population growth might be *us*! Yes, I am suggesting bluebirders themselves might play a role in what we are seeing in the bird surveys. It seems reasonable to suggest that the total number of nestboxes might be a key factor in the apparent changing fortunes of bluebirds! Specifically, we could ask how the numbers of individuals across North America who offered nestboxes for bluebirds in 2020 compare with those who were offering them in the 1980–2000 time frame. I feel that this is an important question. But it also seems to be one that we have almost no information on at this time?

We have estimated that between NABS and our 61 Affiliate organizations we have perhaps 15,000 members. We know that most of those members have nestboxes and trails across all these states and provinces. But we are not the “whole story”—clearly. It seems likely that bluebirders in NABS and

the Affiliates represent only a fraction (probably a small fraction?) of the total number of persons, continent-wide, who put up nestboxes? We have a lot of anecdotal evidence that this is true from the many calls we get on our NABS hotline and from the hundreds of questions we get on our NABS Facebook page each season. There are several other organizations (e.g., Bluebird-L) with Facebook pages offering help in dealing with bluebirding also. During the breeding season all these sites, like the NABS page, are bombarded with requests for “how to” or “what to do” questions from individuals who do not belong to any bluebirding organization. We know they are “out there”!

So, based on the aforementioned, I suggest that we have little knowledge on the total number of bluebirders. Relatedly, we have no information on how the number of persons offering nestboxes today compares with the numbers offering them in, for example, the 2000 nesting season. What if in 2020 we had only one-half as many active bluebirders across the continent as we had in 2000? How do we think that would affect our total annual production and our ability to grow bluebird populations? I think we probably know the answer to that question. Then of course, asking whether many of these bluebirds who operate outside of our Society’s influence are using good trail management is another unknown that only adds to our uncertainty. Naturally, we might expect that these two questions are probably closely tied: (1) How many nestboxes are there? and (2) How many bluebirders are offering those nestboxes?

These are just two examples of factors that could be changing over time and which might in turn affect our success in growing bluebird populations. There are likely other factors such as changing weather patterns, changing land use trends, and changes in nestbox predator populations. If we are going to address issues surrounding bluebird production, we will need to figure out ways to get an understanding of these factors – if we can.

I do not like to be that person who raises issues and then walks away presenting no ideas on what we could or should do to address those concerns. *So here are my thoughts on what NABS and our Affiliates might do in the next years to begin to gain a better understanding of what is going on with bluebird populations:*

First, I believe one of the best things we could do is to continue to encourage our members to expand their

participation in NestWatch. The NestWatch project at the Cornell Laboratory of Ornithology collects nestbox data from across the entire continent and therefore can provide us with a more comprehensive view of our comparative success in various parts of the bluebird ranges, how this success might vary from one region to another, and also how these changes and trends are playing out over time.

Second, we could begin to search for ways to develop some kind of approximation as to how many individuals and landowners across the continent are setting out nestboxes for bluebirds. It seems likely that thousands of nestboxes are purchased each year either from sales online or from the commercial suppliers of birding items (e.g., Wild Birds Unlimited). Many others doubtlessly are building their own nestboxes from all the online plans that can be found these days. Even something as basic as an estimate of how many nestboxes are sold each season would give us some insights? Alternatively, might county agricultural extension services and state departments of natural resources (and the equivalent organizations in Canada) have some useful information on the percentage of landowners who put up nestboxes? We won’t know until we ask and if they have it the information might be instructive to us.

Third, we might consider trying to secure more detailed information on the status of insect populations across North America. We have a lot of information on what kinds of prey items bluebirds prefer when feeding nestlings. That knowledge could be compared with available information on insect population changes at the local levels. This might seem like a daunting task, but the information might be available if we look. Furthermore, we do not need to start with the entire continent – we might develop a database at a smaller scale (e.g., state/province) first and see what it can tell us? For example, most university departments of entomology and the agricultural departments of most states and provinces are collecting information on insect populations every year. It is possible that information on insect trends in many parts of North America is already there for the taking if we wanted or had a means for doing so. Taking it a step further there are many simple assays that anyone can perform to assess insect populations at a local scale.

Fourth, we might well consider offering requests for research proposals to conduct studies and analysis on the topics mention above. Each year the NABS

research grants program provides funds for small studies that are submitted to us in November. The NABS grants program is currently a competitive one but nothing specifies that it must be so. If we choose to do so we can award grants for *specific, pre-selected projects* that we deem important to our mission, which is raising bluebirds. I suggest that we start to redirect some of our research grants to *projects that bear directly on topics that relate to bluebirding*—such as some of those discussed in the paragraphs above? There are several ways in which we could set up such a research program. For example, the Cornell NestWatch program already has a large database on cavity-nesting birds so NABS could potentially provide funding to NestWatch scientists for the purpose of conducting studies on specific topics we feel are important to our mission.

Speaking of research grants, for some time now the New York State Bluebird Society (NYSBS) has partnered with NABS on the research grant program. We at NABS are gratified with this collaboration! NYSBS adds their research funds with those from NABS to increase the money available for awards. In turn, a member of NYSBS sits on our Grants Committee and helps select the projects for funding. Both organizations have been pleased with the results of this partnership. If other Affiliates find this concept appealing, please contact me and we can certainly talk about it! We at NABS would very much be interested in partnering with other Affiliates as well. In addition, we would all benefit for getting the perspective of other Affiliates on research topics that would interest them.

I'd like to touch also on our communications with the membership. As you know NABS is slowly moving to more digital communications with the use of email and the internet to inform and to exchange information with our members. This is a direction that we really should have started earlier but we are aware that not all of our members use email or the internet. While it is necessary that we continue to go electronic, we will never leave any members behind. There will always be ways of communicating and for getting business done in NABS by surface mail and telephone. So, this year the board will look into the possibility of submitting Board of Director ballots online and also offering the option of receiving *Bluebird* via email as a PDF. I need to mention that neither of these ideas is a reality at this time, However, the Board will be looking into various options for both issues. One thing I feel we should

make clear at the start is our standard membership fees will remain the same regardless of what version of *Bluebird* (hard copy or PDF) a member selects. The offering of a digital *Bluebird* will be optional and like almost all organizations that offer a digital version of their product (even large organizations like the *Wall Street Journal*) the cost of that product does not decrease for the digital option. But, if you opt to have NABS send you *Bluebird* electronically we can devote more of your membership fee towards helping bluebirds! (<

With the previous comments in mind, I want to again encourage all of our members to supply NABS with a working email address. According to our NABS VP Jim Burke, who handles all membership matters, we currently have working email addresses for approximately 70% of our membership. But ideally, we'd like to get that number as close to 100% as possible so that we can make the members aware of issues related to bluebirding in a manner more timely than the four times a year in our quarterly journal. Please send your email address to Jim Burke at jburke@nabluebirdsociety.org

Finally, and I know that I have mentioned this before, I believe that our current NABS officers will stay on for another year. Last year, 2020, was supposed to be a period of preparation and planning for new leadership but as you know with the pandemic situation nothing went as planned. So this year, 2021, will be that year. Here is the thing, if we cannot find some new faces to step in for the Board and Officer positions the future of NABS becomes more “cloudy.” Most of the current officers have been in their same position for six years—*going on seven!* Now is the time for some of our other younger members to step up—every organization needs fresh perspectives and new ideas in the leadership. Let's hear from you, please!! (<

Also, now it is time to dig in for the winter season—so you will be safe and warm. But what about our bluebirds? Did you remember to winterize your nestboxes??

Take heart! Spring will come in only a few months....

– Bernie



From the Managing Editor

Scott W. Gillihan

I agree with Bernie Daniel and probably many of you when I say I will be glad to put 2020 in the rearview mirror. Here's to a brighter 2021!

For suggesting or facilitating materials for this issue, I thank Debbie Bradshaw Park and Pauline Tom (Texas Bluebird Society), Penny Brandau (Ohio Bluebird Society), Jane Brockway (Mountain Bluebird Trails), Evelyn Cooper (Louisiana Bayou Bluebird Society), Nancy Fraser (Prescott Bluebird Recovery Project), Judy Hall (Virginia Bluebird Society), Lori Jo Jamieson (New Jersey Bluebird Society), and Joan Watroba (Bluebird Society of Pennsylvania). My thanks also to all of the writers and photographers who contributed material. And of course, my thanks to the sponsors, advertisers, officials, and Affiliates, and the members of NABS, for supporting the conservation of bluebirds and other native cavity-nesting birds. This is important work that you're doing, and you should feel proud of your accomplishments.

Please send any letters, photos, articles, or ideas to me at NABSeditor@gmail.com or 5405 Villa View Dr., Farmington, NM 87402.



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Letters to *Bluebird*

To *Bluebird*,

Regarding the Summer 2020 article by Lara Tseng: I just had to give my praise to Lara. Her article was so well written for a 13 year old! She is well versed, very educated, and a great conservationist and bluebird enthusiast!

It is so rewarding to hear of young people getting into the outdoors and environment. She sounds well beyond her 13 years and I wish her all the best and hope she continues to follow her education and future dreams. We need more young adults like her for our future. And for the bluebirds!

Donna Lang
Hadley, PA

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Getting Ready for the 2021 Nesting Season

Looking for something productive to do during these unusual times? How about spending some time preparing for the 2021 nesting season? A good place to start is at the North American Bluebird Society website <http://www.nabluebirdsociety.org>. Once you're there, click on [Fact Sheets & Plans](#).

There you will find downloadable plans for 11 styles of bluebird nestboxes and 2 predator guards. You will also find links to download 8 different full-color bluebird fact sheets and a full-color brochure. The fact sheets are 4-page documents except for Mealworms which is 2 pages.

There is also a link where you can purchase the NABS DVD for \$10. The DVD has two bluebird

presentations. The long version contains 89 slides. The short version has 46 slides. Both versions are in PowerPoint and PDF formats. There are scripts for both presentations. You can also modify the PowerPoint presentations for your particular situation. The presentations are organized into five sections:

1. Why Bluebirds?
2. Bluebird Biology
3. Helping Bluebirds
4. Predators and Competitors
5. Conclusion

So get busy and build some nestboxes. Make a Zoom presentation to school children or civic organizations. Spring will be here before you know it!



A Surprise Every Time You Open a Nestbox

Susan Mates

In February of 2011, I was deciding whether I wanted to be a bluebird monitor. I was looking for a citizen scientist project that would get me out-of-doors and allow me to feel that I was doing something to help birds survive better. I expected to have a weekly commitment that would require keen observation, good record keeping, and, secretly, an excuse to wander around in pretty places.

All of those things happened, but what I didn't expect was that:

Each time you open a nestbox, it is like a treasure hunt. You will never know what to expect. You will catch your breath when there is the first egg in a beautifully designed nest, and laugh when you see a brand new baby chick with its clump of fuzzy down on its head. You might even startle a miffed tree squirrel that decided to occupy a box. Eight years in, there is a surprise every time.

You will be rewarded by bluebirds fluttering in to greet you at their boxes. You will watch their courtship, take pleasure in witnessing how they feed their hungry brood, and learn the personalities of some of them.

You will learn more than you guessed about the other birds in the area, their songs and their nests, where their favorite places are, and how they pay attention to each other.

You will be humbled by the property owners, who so generously allow us to traipse through their beautiful

land, and some of them will become true and dear friends.

You will be struck by spotting close up, a Turkey Vulture airing its enormous wings, or seeing a line of pigs running pell-mell toward a food bucket, or catch the eyes of a mother coyote hunting across a field in the mist.

Our project helps to supply nestboxes that replace habitat lost to human intervention, and we hope the boxes provide a boost for their survival. You will be amazed by the determination and bravery of the parents defending their brood. There are vulnerabilities and dangers for them at each stage, and their struggles and triumphs become more personal for us through this work.

You are, at times, going to be sticky with sweat, drenched with rain, or covered by mud. You will spend an hour picking weed seeds from your socks. And yes, sometimes you are surely going to encounter death, because you are, after all a witness to the whole cycle of life, and not all of the birds are going to survive.

When you see a line of fledglings sitting on a fence, waiting for a meal, you will feel hopeful that nature can heal, and that maybe you have been a tiny part of that. And I can guarantee that you will also, each time, find deep joy and awe.

This article originally appeared in the newsletter of Oregon's Prescott Bluebird Recovery Project. It is reprinted here with permission.



CatLover17 / Pixabay.com

Experiences with Snake Repellants

Marti Kane

In the Fall 2020 issue of *Bluebird*, President Bernie Daniel's article about snake repellants included a request for information from bluebird nestbox monitors who have used snake repellants. I have used Dr. T's Snake-A-Way, which is the second product shown in Bernie's article. I used it at home with my one bluebird box there and I used it at Wilkerson Nature Preserve in Raleigh, North Carolina, on approximately seven bluebird boxes on our bluebird trail. I don't have any strong evidence that it prevented rat snake predation, but I provide some anecdotes below. **I would never depend on a repellent alone.**

Here is how I used the product: I made sure to keep grasses within a six-foot radius of each nestbox as short as possible. At home this was not a problem as I could use a mower. At the nature preserve, I had to hand cut the grasses in our big fields weekly during the summer. I sprinkled the product liberally around the periphery of the short-grass circle. I had to repeat this treatment every four or five days, or after every rainstorm, whichever came sooner. This was a problem for two reasons:

1. I was using quite a lot of toxic chemical on a nature preserve. Dr. T's Snake-A-Way has both sulfur and naphthalene in it and these chemicals are toxic. I checked the MSDS for the product and it said no studies had been done on the environmental impact of using this product. However, naphthalene is a known carcinogenic compound. As a nature preserve manager, this was a concern for me.
2. The cost of using the product on a bluebird trail. The cost for using it on one box at home (if you can stand the smell in your backyard) is one thing. But if you are using it on multiple boxes, you are going to go through many bags of the product over the breeding season.

I used Dr. T's Snake-A-Way product in 2019 at Wilkerson Nature Preserve. I was desperate. In 2018, I had lost more than 50% of my bluebird babies to rat snake predation. The snakes were able to climb the eight-inch raccoon baffles. I even tried an experiment by placing a large floppy skirt or cone of vapor barrier plastic over the baffles on some of the boxes to see if the snakes could climb that. (The plastic skirt extended all the way to within six inches of the ground.) The snakes seemed to be able to get over/

around that too. In 2019, I removed about half of my bluebird boxes from the bluebird trail (went from 12 boxes to 7) so that I could keep a better eye on them. I clamped a four-foot square of heavy-duty hardware cloth between the stovepipe baffle and each nestbox. I began using the Snake-A-Way all around each box when the weather warmed up. As best we could tell, most of the young were able to fledge successfully from the boxes with the hardware cloth and Snake-A-Way. There was one box where the young were gone by Day 15, which is a bit suspicious. In my experience, the rat snakes take the young right before fledging. At this particular box, I had observed a rat snake sitting on top of the baffle and whamming the hardware cloth with its nose. We removed that snake and increased our use of Snake-A-Way around this box. So, did the Snake-A-Way help, or was the increased fledge rate thanks mainly to the hardware cloth? I don't know for sure because I retired at the end of this season and don't know if the current manager is using the product or not.

Here's another way I have used the Snake-A-Way product: I have observed **three summers in a row**, at the bluebird box in my backyard, a premature fledge when mother bluebird saw a rat snake in the vicinity of the nestbox and forced her young out of the box. This usually happened around Day 15 when the young are not very good at flying. I happened to be home when these events occurred so I was able to catch the rat snakes and move them about one mile away. In 2019, two of the bluebird young that



North Carolina Bluebird Society board member Alexia Maneschi inspects a nestbox protected with a 4 ft × 4 ft piece of hardware cloth with sharp pointed edges on all sides.

prematurely fledged were not able to fly at all, so I placed them back in the nestbox. (I was worried that the snakes would be able to hunt the babies on the ground after dark.) At sunset, I checked the box. Sure enough, there was one rat snake hunting in the grass nearby. He was sitting right where I had picked one of the babies up off the ground. I relocated this snake. When I returned to the box (about 11 pm now), there was another rat snake tangled in the netting I had placed below the raccoon baffle. I removed that snake from the netting and relocated it also. At that point I placed Snake-A-Way all around the nestbox so that I could get some sleep. When I woke up the next morning, there were no more snakes caught in the netting. So either I only had two rat snakes in the vicinity of the nestbox (the ones I caught and moved one mile away), or the Snake-A-Way product was successful in keeping the others away from the box. *Note: I would never use netting on my boxes at the nature preserve. I only use it at home where I can check it at least twice a day and remove any snake caught in it before it injured itself or perished in the heat.*

As an aside: I have seen this same premature fledging when a snake is near the boxes (during the day) at Wilkerson Nature Preserve. I learned to walk past my boxes every day and listen for the alarm calls of the parents. In almost every case, when parents were doing really loud chatting, I found a rat snake within 25 feet of the boxes. *This is why I tell everyone with a bluebird box to make sure to point the entrance hole to a tree or shrub about 12–15 feet away. That way, the young can glide to safety when they fledge, especially if they have to leave the box a couple of days early. I never put a box where young will fall into tall grasses or have to fly a long distance before getting to a tree. You want to keep the young off the ground in this situation.*



The PVC pipe protecting this nestbox is four inches in diameter and five feet long. The bottom is buried about three inches. Be sure to put a cap on the top of the pipe so that a bird does not fly into the pipe and become trapped.

The photo on the opposite page shows the hardware cloth setup at Wilkerson. I have been experimenting this year with another method of using a four-inch PVC pipe *over* the bluebird box pole (see photo above). This pipe is buried a few inches in the ground and extends nearly five feet to just below the nestbox. *You must cap the top of the PVC pipe so that birds will not become trapped inside the pipe.* This method worked well at a golf course in Raleigh this summer—no snake predation was observed in boxes protected this way, whereas other boxes at this site with only the eight-inch raccoon baffles were depredated at least 50% of the time. Apparently the PVC is too slick for the snakes to climb. Experiments will continue in 2021. *Note: I did not use the Snake-A-Way product in 2020 due to my concerns about toxicity and cost.*

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House Wrens Compete for Nestboxes

Leo Hollein

House wrens are small, energetic, predominantly brown birds (Figure 1) that have the habit of cocking their barred tails. They have a loud bubbling song that is sung frequently during breeding season. House Wrens are migratory and are only present here in the Great Swamp National Wildlife Refuge in northern New Jersey during the warmer months. During those months, they build their stick nests in natural or artificial cavities. They compete with other birds for use of the nestboxes. They are the third most common species to nest in the Refuge bluebird boxes.

House Wrens are renowned for nesting in unusual places. Figure 2 is photo of wren nest built in a Wood Duck nestbox in the Refuge. Although the volume of the duck box is over *10 times* the size of a typical wren box, the wrens attempted to fill the box with sticks to above the level of the large entrance hole. (This restricts larger birds from entering the box.) The wrens made a valiant effort but were not able to complete their herculean task of filling the box with sticks above the entrance hole. Even so, they were successful in nesting in a corner of the box and fledging young.

House Wrens can fledge young from multiple clutches in a season. Their fledglings disperse from their natal area in several days. House Wrens begin their second clutch soon after the first clutch fledges. Figure 3 is a wren nest with 6 round eggs. They are in a grass cup atop the sticks. As shown wrens sometimes add various items to the nest.



Figure 1. House Wren.
All photos by the author.



Figure 2. House Wren nest in Wood Duck nestbox.

House Wrens Destroy Eggs of Other Birds

House Wrens have the antisocial habit of destroying the eggs of other cavity-nesting birds including bluebirds, Tree Swallows, and chickadees. This is done to gain access to a nestbox and/or to reduce competition for food. Figure 4 is photo of bluebird eggs that were pecked open and dropped out of the entrance hole by a House Wren. I once observed a bluebird catch a wren destroying its eggs. It drove off the wren before the entire clutch was pecked open. There were three eggs remaining in the clutch. The bluebirds did successfully protect the remaining eggs, which ultimately hatched and fledged.

The Refuge bluebird box trail adopted paired boxes (nestboxes on separate supports about 20 feet apart) in the previous decade. This increased the number of nesting bluebirds as it provided housing for both Tree Swallows and bluebirds in the same area. It eliminated competition between these species for a single nestbox. Bluebirds and Tree Swallows are territorial nesters when it comes to their own species. However, they tolerate other species that may nest in the adjacent box. Bluebirds will never allow another bluebird pair to nest in the adjacent box. After a Tree Swallow starts brooding its clutch, the pair will allow another pair of Tree Swallows to nest in the adjacent box. This occurs in about 10% of the box pairs.

Wren Populations Vary Significantly over Time

The chart presents the history of House Wren nests and fledglings in the Refuge since 2004. As

shown, the number of nesting House Wrens in the Refuge varies significantly over time. House Wrens attempted only one nesting in both 2010 and 2013. In the years from 2016 to 2018 House Wrens had over 20 nesting attempts and fledged over 100 young. House Wren populations cycle over time. However, these variations suggest something besides natural cycles.

The increased wren nesting on the Refuge is most likely due to the large number of boxes used by wrens in an adjacent county park. Some of these boxes are built specifically for wrens while others are bluebird boxes located in habitat not optimum to attract nesting bluebirds. Adding wren boxes in the vicinity of bluebird boxes does not deter wrens from also using the bluebird boxes for nesting.

Starting in 2019 the county park had someone actively monitoring their nestboxes for the first time in years. Efforts were made to rationalize their nestboxes to increase bluebird and reduce House Wren nestings. In both 2019 and 2020 House Wren nestings and House Wren fledglings were reduced by half in the Refuge. Less than 50 House Wrens fledged in both years. Most of the House Wren nestings in the Great Swamp are in an area adjacent to the county park. Hopefully, this trend of fewer wren nestings will continue in future years

Wrens and Bluebirds Rarely Use Box Pairs at the Same Time

House Wrens have nested in record numbers in the Refuge in the last five years as shown in the chart. Data is now available to assess how House Wrens interact with Tree Swallows and bluebirds regarding use of the paired nestboxes. In the last



Figure 4. Eastern Bluebird eggs destroyed by House Wren.

five seasons House Wrens and Tree Swallows have nested in the box pairs at the same time more than 15 times and have successfully fledged clutches while simultaneously nesting in both paired boxes. Bluebirds and House Wrens have nested in adjacent boxes just once.

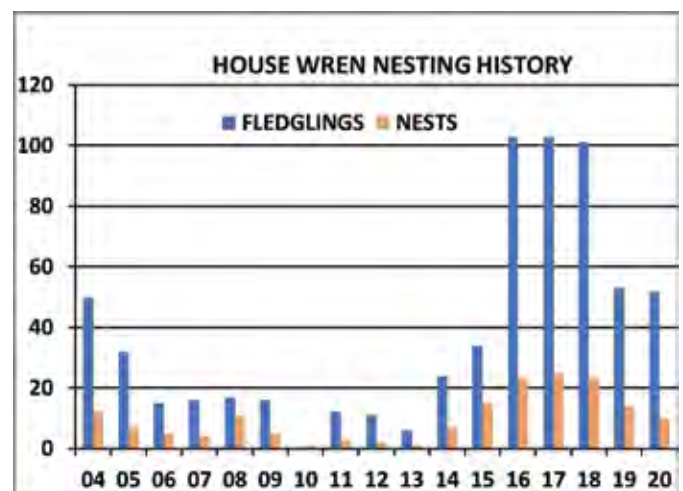
On several occasions bluebirds fledged young and House Wrens subsequently nested in the box. Apparently House Wrens do not attack bluebird hatchlings.

Tree Swallows capture prey while flying. Both House Wrens and bluebirds hunt on the ground or in vegetation. They compete for the same food resources and want to limit competition for food in their territory.

If the House Wren nesting population remains high, it will reduce nestbox pairs available for bluebirds. It will be interesting to see what happens in the years to come.



Figure 3. House Wren nest and eggs.



Wasps in Nestboxes

Christine Boran and Anne Little

There are two types of paper wasps that we have seen in our trail nestboxes—the native (all dark brown colored ones with a few white lines on their thoraxes) and the nonnative (yellow and black striped European paper wasps). The native species are generally docile and easy to crush up into the ceiling with a metal paint scraper, and scrape out of the nestbox without incident. The European paper wasps are more aggressive. It is helpful to learn how to ID them first when you see them in nestboxes. If it is the nonnative European paper wasp, they are the ones that will sting if you disturb them. Try removing them at night instead when they are inactive.

Do not use chemical insecticides inside bird housing. Here is a trick from Ron Kingston: mix water with some dish soap and put it in a spray bottle. Spritz a tiny bit of this directly on the paper nest and wasps there. That disables the wasps long enough so that you can quickly remove them with a paint scraper. If there is an active nest with birds and a new paper wasp building (which does not happen often), lay a small lightweight cloth over the nest first (e.g., a clean lightweight terry washcloth) to keep anything from dripping on the nest, then spritz a small amount of

the dish soap/water solution on the wasps and scrape them out. Don't forget to remove the cloth and close up the box. Most paper wasps and mud dauber wasps build nests in empty boxes—no need to use a cloth. Take a clean paper towel to rub excess solution from the ceiling to dry faster.

Once the season's nesting is completed, mud daubers build their mud tunnel nests starting in August to overwinter their larvae inside with paralyzed spiders to feed on during the winter months. Check your boxes in late fall and winter and scrape out the mud tunnels without worrying about getting stung. Keep in mind if it's very warm in early spring before the bluebirds have started to nest, the paper wasps emerge quickly looking for a place to start their paper comb nests again. You can be prepared with the right tools to remove them. We also suggest a deterrence reinforcement of using a mild chemical- and perfume-free bar soap (such as Ivory) rubbed thinly on the ceiling again for the new nesting season.

This article originally appeared in The Bird Box, newsletter of the Virginia Bluebird Society. It is reprinted here with permission.



European paper wasps (*Polistes dominula*).
Pest and Diseases Image Library, Bugwood.org



Native paper wasp commonly found in North America
(*Polistes fuscatus*).
Korona Lacasse, flickr.com

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Welcome Back Eastern Bluebirds of Yesteryear

The Cornell Lab of Ornithology's Citizen-Science Project NestWatch (<https://nestwatch.org>) is undertaking an epic task that will assist in understanding the historical nesting patterns of North American birds. From the 1960s to the early 2000s citizen scientists documented nesting behavior by participating in the North American Nest Record Card Program. This program resulted in the submission of more than 300,000 nest records. Of this collection more than 60,000 are Eastern Bluebird nest records. The NestWatch Nest Quest Go! project's goal is to transcribe the paper cards to digital format. The research potential of this information is invaluable.

North American Bluebird Society members can help digitize the data using the Nest Quest Go! Zooniverse website. Volunteers have already helped transcribe the Mountain and Western Bluebirds, along with numerous other species, but all hands are needed on deck for this massive undertaking. If you have empty nest syndrome this fall and winter and are missing your birds, take a crack at virtual nest monitoring. All data will eventually be imported into NestWatch for researchers to freely use.

NABS is supporting this project with a \$6,000 donation.

To get started, enter this link into your browser:

<https://www.zooniverse.org/projects/brbcornell/nest-quest-go-eastern-bluebirds>



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



A Bit of Nestbox History

T.E. Musselman

[*Editor's note: T.E. Musselman was one of the pioneers of bluebirding; he is often credited with the idea of a bluebird trail. Here is an excerpt from an article he wrote in 1939¹ about his early efforts to establish a network of Eastern Bluebird boxes in Illinois.*]

Seven or eight years ago I conceived the idea of building Bluebird boxes in quantity and erecting them on fence-posts along the hard roads leading into Quincy, Adams County, Illinois. The idea appealed to the popular fancy immediately.

My first route extended north from Quincy to Hamilton, Illinois. It took about fifty boxes to cover this thirty-eight miles of road. The boys in the biology class at Hamilton High School under their superintendent, Mr. Leroy Knoepple, constructed nearly fifty additional boxes and extended the route to Nauvoo, Illinois. The next year I built one hundred and fifty boxes which I erected along the sixty-eight miles of road to Perry, Illinois. The biology class in Bluffs High School under their teacher, Mr. J. W. Summers, constructed additional boxes and lengthened my route about eighteen miles. The boys at Griggsville High School under Superintendent Nichol added a right angled route running from Perry through Griggsville to Pittsfield. The next year I added a route from Quincy to Payson, eighteen miles south of Quincy, east to Richfield and north into Liberty. H. B. Terrell of the Quincy High School Biology Department added about thirty boxes connecting this Payson route with his home town of New Canton. Mr. H. B. Corrie of the Winchester High School has agreed to bring boxes from his town as far west as Pittsfield if I will extend my route from Payson to meet him there.

¹ Musselman, T.E. 1939. The effect of cold snaps upon the nesting of the Eastern Bluebird (*Sialia sialis sialis*). *Bird-Banding* 10:33-35.



Musselman experimented with a wide range of nestbox styles.

All of these boxes are standardized, have removable tops, and by the time the entire project is complete will include nearly one thousand Bluebird boxes. Magazines and newspapers have printed copies of my plans and because of such publicity I feel that in many sections of the country, similar projects will be carried on. From the standpoint of conservation this is a commendable movement. However, for the bird-bander such a project presents an abundance of opportunities to band many birds; to learn the courses of migration; to determine the winter homes; to chart the summer drifts of these birds; to learn their ages; and to solve many other interesting experiments valuable to science.

At the present time I am building a cluster of fifty smaller, chubbier boxes for a similar experiment with Prothonotary Warblers. These I shall add to others which I have erected and I am hoping within a year to have detailed information about the nesting of these beautiful golden swamp warblers which are so numerous in the Illinois lowlands along the Mississippi and Illinois Rivers.



www.flickr.com/photos/schizoform

A Cowbird Tale: This Time it Was a Win-Win

Ken and Judy Ray

As you can see in the first photograph below, when our “bluebirds of happiness” began their third clutch of eggs this year (it was mid-June) their nest was visited by the “cowbird of audacity.” As you may know, cowbirds are “brood parasites” — which means they lay their eggs in other species’ nests and then let the host species incubate, feed, and care for their young. There’s little chance that we humans would not notice this intrusion, but apparently, the “host” parents do not see any difference (or, they willingly accept their duties as adoptive parents).



Cowbird egg in nest. If removed, the female cowbird may return and destroy the nest.

Photo by Ken/Judy Ray

In researching this, we read that a cowbird nestling becomes a threat to the hosts’ nestlings because the cowbird egg has a shorter incubation requirement (10–12 days, as opposed to 12–14 days for bluebird eggs). Being the first hatchling to emerge from the egg, the cowbird initially gets *all* of the attention (i.e., food) from the doting host parents, and grows very quickly. *Amazingly, the host parents don’t recognize any difference between the cowbird and bluebird hatchlings.* By the time the bluebirds have hatched, the cowbird hatchling is larger — and thus hungrier — than the bluebird hatchlings, so it can crowd to the front of the line when the parents bring everyone food. (Notice the size differential in the picture at right. The cowbird’s mouth is open.) This can have a devastating impact on the bluebird hatchlings, sometimes to the point of starvation for some.

Our initial impulse was to remove the cowbird egg from the nest, *but we didn’t* — for a couple of reasons:

1. As cowbirds are native to the U.S., they are protected under the Migratory Bird Treaty Act, thus, in most instances it is unlawful to use lethal control — which includes the removal of their eggs from a nest — without a permit. And...
2. It has been documented that often times if the mother cowbird notices that her egg is missing from the hosts’ nest, she will return and destroy the entire nest of the host.

So, hesitantly, we decided not to remove the interloper’s egg and thus risk the total destruction of our lovely bluebirds’ nest. We hoped for the best... that all of the bluebird hatchlings would survive sufficiently to successfully fledge.

The cowbird leaves the nest 8–13 days after hatching. Bluebirds leave the nest in 16–21 days. So the cowbird left the nest a few days before the bluebirds. Fortunately, our three bluebirds fared well enough to successfully fledge.



Cowbird babies are larger and can easily take all of the food from the other babies.

Photo by Ken/Judy Ray

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–Julie Zickefoose

Brown-Headed Nuthatches Return to Missouri

American Bird Conservancy

The release of 46 Brown-headed Nuthatches, translocated from Arkansas to restored pine woodlands in Missouri's Mark Twain National Forest in August and September 2020, marked this species' return to the state. The brown-capped cavity-nester had been absent since the early 1900s, following widespread habitat loss.

"I really think that a big take-home from all of this, and something we can all be proud of, is how well science, management, and conservation of species came together in this effort," says Jane Fitzgerald, ABC's Central Hardwoods Joint Venture (CHJV) Coordinator. "Most of the people who, decades ago, imagined all of this happening are now retired, but a new cadre of folks saw, and see, the vision and are moving the ball forward."

During pre-colonial times, 6.6 million acres of shortleaf pine and pine-oak woodland covered Missouri's Ozark Mountains. After settlement and development, which included widespread logging and fire suppression, these ecosystems were reduced to approximately 600,000 acres. The dramatic reduction in habitat led to the regional disappearance of some bird species tied these open pinelands, including the Red-cockaded Woodpecker and Brown-headed Nuthatch.

The nuthatch release was only possible after successful habitat restoration, which required years of hard work and patience. Although the Mark Twain National Forest had been actively restoring 12,000 acres of pine woodland, the work was greatly accelerated when the forest was awarded significant funding through the Collaborative Forest Landscape Restoration Program. This program, administered by the U.S. Forest Service, is intended to encourage collaborative, science-based ecosystem restoration of priority forest landscapes on and around national forest lands across the United States.

To help build this collaboration, American Bird Conservancy and the CHJV brought together key partners, including federal, state, and nongovernmental organizations and agencies that formally agreed to work together to restore pine woods in the same large landscape, called the Current River Hills. Ten years of dedicated funding was awarded to the Mark Twain National Forest

in 2012, and now roughly 100,000 acres of shortleaf pine and pine-oak woodland has been, or is being, restored. It was this habitat restoration work that was vital to establishing the area as a place to bring back Brown-headed Nuthatches.

Shortly after the restoration work in Missouri began picking up, a team of researchers from the Forest Service's Northern Research Station and the University of Missouri pooled resources to investigate various aspects of the bird's biology, quantifying the nuthatch's preferred habitat conditions in Arkansas, showing how the Missouri restoration efforts benefited other songbirds while confirming the nuthatch's continued absence, and assessing the habitat structure at the Mark Twain restoration sites.

In addition, the Missouri Department of Conservation's state ornithologist and a wildlife biologist at the Forest Service's Northern Research Station worked with ecologists from Tall Timbers Research Station in Florida who had experience with Brown-headed Nuthatch translocations. With this input, they developed methods needed to safely capture the birds in Arkansas, then safely transport them to Missouri.

Because the nuthatches were released on public land, anyone can see these birds. Mark Twain National Forest visitors can help monitor the nuthatches' presence and movements by submitting their observations to the eBird database (www.ebird.org).

American Bird Conservancy is a nonprofit organization dedicated to conserving birds and their habitats throughout the Americas. Learn more at <http://abcbirds.org>



Shawn Taylor / www.flickr.com/photos/athature/

Bugs, Bugs Everywhere, Yet Nothing to Eat?

Lori Jo Jamieson

In the year of COVID-19, our time is being spent differently than before. We inhabit a smaller footprint of space, and frequently, we do so with many of the same people. For some, this is a welcomed change that has provided a slower pace of life and a chance to reorder our priorities. The hobby of bird watching has increased across all age groups, and we already know the peace that it brings. But there's no peace in watching an invasive insect with few known predators munch through one's backyard flora.

I am writing here about the **spotted lanternfly** (*Lycorma delicatula*), indigenous to parts of northern China, Taiwan, and Vietnam, where it has natural predators and pathogens. It is generally believed that egg masses present on woody plants or wood products imported from Asia were accidentally introduced into Berks County, Pennsylvania, in September 2014. New Jersey populations were first detected in 2018 in the Pennsylvania-adjacent counties of Burlington, Camden, Gloucester, Hunterdon, Mercer, Salem, Somerset, and Warren. As of 2020 it is also considered an invasive species in the Delaware Valley, eastern Pennsylvania, southwestern New Jersey, northern Delaware, eastern Maryland, and northern Virginia.



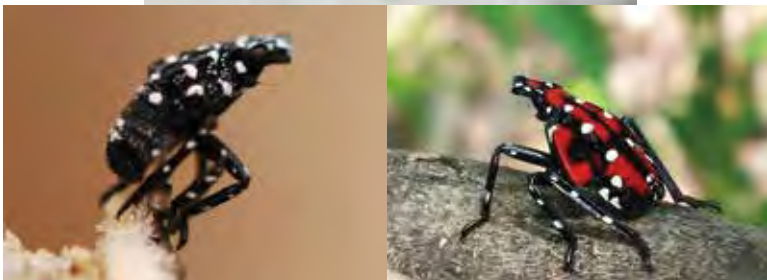
Tree-of-heaven.

Photo by Luis Fernández García / Wikimedia Commons

Spotted lanternflies are classified as belonging to the same order as cicadas, leafhoppers, and aphids. They prefer to feed primarily on the sap of a nonnative host plant, tree-of-heaven (*Ailanthus altissima*), but will feed on a wide range of fruit and ornamental trees as well as wild and cultivated grapevines. Their feeding preferences change as they mature. This insect has the potential to greatly impact agricultural crops and hardwood trees. Vineyards in infected regions have already experienced its impact as have commercial farms and landscapers.

In October 2019, I first discovered, reported, and squished adult lanternflies in silver maples, black walnuts, and wild grape on my property in Warren County. Yes, this leafhopper bug crossed the Delaware River from Pennsylvania easier and quicker than Washington ever thought possible, traveling up and over Marble Hill and down to my little pastoral acre on the other side. Throughout the winter, I searched for and destroyed any egg masses I could find but most were high in the trees. The egg masses look like mud or gray putty, and can be hard to spot.

With April came the nymphs, three instars, or stages, of them. These are incredible hoppers, requiring a cymbal-playing sort of action to catch and crush them. I sprayed Neem oil on them, pulled out the beautiful wild grapevines they inhabited, and cut down several small black walnut trees, all to make their world much smaller. Hoping to minimize the effect on resident birds, I waited until nests were



A bitter bug to swallow? Adult spotted lanternfly (above), juvenile (also called instar) forms (below).

Photos by Lawrence Barringer, Pennsylvania Dept of Agriculture; Bugwood.org

inactive. There is a catbird who still scolds me, and I'm taking it personally, and with regret.

In the Fall issue of *Bluebird*, President Bernie Daniel's article included how Allen Jackson believes the availability of insects could be the cause of smaller clutches and lower weight of bluebird chicks in New Jersey. It makes sense that a reduced food source spells trouble for many bird species. In the case of lanternflies, there is no bug shortage. There just aren't many takers when it comes to choosing them as a food source. When a bird attempts to catch them, the bugs spread their wings to expose red hindwings. The red is a universal symbol in nature of "you won't like how I taste," and birds that have swallowed a bitter lanternfly usually spit them out.

According to a recent study, when spotted lanternflies suck juice from the specific tree species that they like, the tree-of-heaven, the bitter juice (the main chemicals is "ailanthone") from the tree comes into their body. This makes them distasteful indeed: birds do not like them and may vomit after eating them. "You really can taste the bitterness yourself if you lick or bite on the insect yourself," says Dr. Piotr Jablonski, who actually tasted both the surface of the insect cuticle and the interior of the insects.⁽¹⁾ (*Let's just take his word for that, shall we?*)

Further studies are uncovering exceptions to this rule. While spotted lanternflies change to red coloration when they narrow their host plant preferences to primarily the tree-of-heaven. Experiments showed that birds taste-avoided lanternflies collected on this primary host, but not those collected on the secondary hosts.⁽²⁾ In this study, the other hosts were Korean willow and persimmon.

As I gathered citations for this article, a new one appeared online, posted just minutes before my search. From the September 17 "Penn State News," written by Amy Duke, it is the most promising and encouraging news yet. How perfect, too, that the lead photo of her article is of a juvenile bluebird holding a lanternfly in its beak! Could this new bug be a new food source?⁽³⁾

Kelli Hoover, professor of entomology in Penn State's College of Agricultural Sciences, and Anne Johnson, a doctoral candidate in entomology, are studying the potential for native birds and insects to feed on the spotted lanternfly. The team, which includes Margaret Brittingham, professor of wildlife resources, and Allison Cornell, assistant professor of biology

Concerns for Birds and Other Wildlife Entrapped in Spotted Lanternfly Tape

Deb Smith

One recommended method to help control the spread of spotted lanternfly (SLF) is to wrap sticky band tape barriers around tree trunks. Nymphs and adults are caught in the tape as they crawl up from the ground onto trees to feed. Guidance for using the tape includes only using it where SLF is actively seen and taking it off trees as winter approaches, when SLF die out.

However, those sticky bands also catch unintended, nontarget creatures including birds, bees, butterflies, lizards, and small mammals. An option to prevent this is to attach a raised guard or cage over the sticky bands using chicken wire, mesh screen, or hardware cloth. The bottom of the guard/cage must be open just enough to let the SLF crawl through but keep nontargets out. See video showing this procedure at <https://extension.psu.edu/spotted-lanternfly-banding-2020>.

ANYTHING THAT UTILIZES TREES, including woodpeckers, other birds, bats, snakes, and squirrels are being caught on the glue intended for SLF resulting in severe trauma and probable slow death. If you encounter a trapped animal do not attempt to free it, but rather sprinkle some cornstarch or place tissues around the animal to prevent further sticking. Then, gently place a small towel over the animal's head. Cut a circle around the animal with a box cutter or scissors and place it in a box to keep it calm. *Take it to the nearest wildlife rehabilitator as soon as possible.* The actual process of removing the animal from the tape is lengthy, extremely meticulous, and requires special care to prevent hypothermia and further shock and trauma. "Laypeople" trying to help have unfortunately torn the skin or broken the bones of the animal they were hoping to help. Even with specialized care, many animals succumb to their injuries.

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at Penn State Altoona, will study spotted lanternfly specimens that have been raised in a quarantined laboratory with tree-of-heaven as their food source. Later this fall, at The Arboretum at Penn State and Millbrook Marsh Nature Center in Centre County, and at Shaver’s Creek Environmental Center in Huntingdon County, Pennsylvania, suet containing ground spotted lanternfly adults that have fed on tree-of-heaven or grapevines will be placed side by side in suet feeders attached to trees. Video cameras will record birds that visit the feeders and the suet cake they prefer.

Hopeful Update

Here’s an excerpt from a Penn State News article from Friday, September 25, 2020: Recently, researchers from Penn State Berks, the College of Agricultural Sciences, Penn State Extension, and Cornell University came together after a previous Cornell-led study showed that two fungi, *Batkoa major* and *Beauveria bassiana*, were decimating SLF [spotted lanternfly] in the woods of Berks County, near the Pagoda. These fungi cause disease in insects but are harmless to humans. When a SLF encounters these fungi, it picks up fungal spores, which germinate and colonize the body, killing the insect in days. A telltale sign of fungal infection is a white fuzz that emerges from the cadaver days after contact. That fuzz, in turn, contains more spores that can infect other insects.⁽⁴⁾

You Can Help!

The Penn State researchers are enlisting the help of citizen scientists, preferably birdwatchers, in the spotted lanternfly quarantine zone, to post reports, videos, and photos of birds they see feeding on spotted lanternflies, where and when they saw them, and whether tree-of-heaven is located nearby. Post your observations on their Facebook page, “Birds Biting Bad Bugs,” or email them to birdsbitingbadbugs@gmail.com.

Please get involved. More information is available here:

<https://www.nj.gov/agriculture/divisions/pi/prog/spottedlanternfly.html>

<https://extension.psu.edu/controlling-tree-of-heaven-why-it-matters>

<https://gardenerpath.com/how-to/disease-and-pests/spotted-lanternfly>

https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/sa_insects/slf

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This article originally appeared in a slightly different version in Jersey Blues, the New Jersey Bluebird Society’s newsletter. It is reprinted here with permission.



Encapsulated Eastern Bluebird Egg

Evelyn Cooper

If you don't know what an encapsulated egg is, look at the egg in the lower right of the eggs pictured at right. The egg has another half shell attached to it. The half shell is from one of the "just hatched" babies in the picture. This happens sometimes when babies are hatching. This half shell is loosely attached. Barbara Helms of Pensacola, Florida, a Louisiana Bluebird Society member, contacted me with the picture of this going on in her nestbox and I noticed the encapsulated egg. I explained to her that she could remove the shell, but since she had never even heard of it, she was not comfortable attempting it. I told her to not worry and keep checking on the babies. I also told her that with other babies hatching and the female coming in and moving the eggs and babies with her beak, it could come loose. Barbara sent me a picture of this. They did hatch and Barbara was so relieved and happy. Most times the half shell is so tightly enclosed on the egg that the baby inside cannot peck through the two thicknesses and it dies in its shell. This is another important reason we should monitor often and learn what to do in every situation. I have had quite a few on my trail in my 22 years and I never had a problem removing the attached shell. Barbara was happy to see the shell was loosened from the egg without her help.

This article originally appeared in Bayou Bluebird Nest News, the newsletter of the Louisiana Bayou Bluebird Society. It is reprinted here with permission.

Photos by Barbara Helms



Jim Bearden Wins Award

NABS member Jim Bearden has been given the Georgia Recreation and Parks Association's Volunteer of the Year Award. Jim was honored for his 11+ years of service as a member of the Friends of Green Meadows Preserve, a Cobb County public park in Marietta, Georgia. For seven of those years Jim has volunteered as the Coordinator of the Preserve's bluebird program. In that role, Jim hosts and manages the Preserve's bluebird trail website (<http://bluebirdtrail.blogspot.com/>) and conducts more than 10 tours per year of the bluebird trails for school groups and the general public. He has also trained teachers, students, and a senior group as nestbox monitors, including reporting data to NestWatch.

Since first taking his dog Daisy for a walk in 2010 at Green Meadows Preserve, Jim has been smitten

with the park. In 2011, he installed the first bluebird nestbox. That first nestbox was home to a pair of bluebirds that built their nest and laid six eggs that successfully hatched and fledged six new bluebirds. Jim's Bluebird Trail Project at Green Meadows Preserve has grown tremendously, fledging over 1,800 new baby birds from the nestboxes that he monitors.

Jim has been so successful at bringing awareness about bluebirds that throughout Metro-Atlanta he is known affectionately as "the Bluebird Guy." He has connected countless individuals to Green Meadows Preserve and has provided a lifetime of knowledge to the public, to the benefit of humans and nature alike.

Congratulations Jim!

Bluebird Blasts from the Past

Bet Zimmerman Smith

If you haven't perused back issues of the NABS journal, you're missing out. They are jam-packed with interesting information. Here are a few blasts from two decades ago, from Vol. 22, No. 4, Fall 2000 issue of *Bluebird*, with commentary and updates from me [in brackets].

- The infamous "Mad Bluebird" photo was taken by Michael L. Smith of Maryland in February of 1979. He shot the photograph with a long lens through a glass door. The photograph changed his life. His grumpy bird has been featured on hundreds and thousands of signed prints, stained-glass sun catchers, and books like *The Bluebird Book* by Lillian Stokes. Stokes noted that "If you look at a bluebird's face head on, they just happen to have the configuration that we interpret as looking angry. The brow is low, and the little point of red looks like their mouth is turned down. A lot of times birds hunker down like this and fluff up their feathers when they're cold." [The Mad Bluebird graced the cover of this particular issue of the journal.]



The cover of the journal featured in this article.

- Crows are quite intelligent, and relish bird eggs and nestlings. [I've seen them raiding House Sparrow nests built in English ivy on the side of the building in Washington. I thanked them.] Chris Cuddeback from Front Royal, Virginia, noticed several nestboxes where nesting material had been pulled out through the entrance hole. Then a crow was spotted standing on the box roof, reaching forward and down, putting its beak into the entrance hole. The baby birds inside, expecting an incoming meal, stretched their necks out and ended up as a meal themselves. [Ravens, which

are also canny corvids, will do the same thing. To prevent avian predation, you can put a large overhanging roof on the box, use a deeper box, put a thick wooden face guard over the entrance hole, and/or lower nests to 4½ inches below the hole. Remove used nests so bluebirds don't build on top, making the nest too high.]

- Bluebirds (and Tree Swallows) seem to prefer oval holes over round holes, according to research conducted back in 1999 by Kevin L. Berner and Bobby J. Cummins. But a potential concern about the oval hole is excluding starlings. The Peterson box sports a 1¾ inch × 2¼ inch (3.5 cm × 5.7 cm) vertical oval hole. Berner found that live-trapped starlings placed inside boxes with this size oval holes were able to escape easily. He also observed starlings entering oval-holed boxes. Berner found that restricting holes to 1¼ inch × 2¼ inch (3.2 cm × 5.7 cm) made starling invasion a lot harder. Fortunately, Peterson boxes are not often used by starlings. [The take-home message is to carefully monitor boxes with oval holes, and make sure that the hole is not enlarged by squirrels or woodpeckers. If it is, put a metal hole guard or thick wooden face guard over the enlarged hole, or replace the box front.]
- Dr. Terry Whitworth has conducted research on bird nest blowflies since 1969. He even wrote a book about them, entitled *Bird Blowflies of North America*. This parasite is part of the bluebottle fly family, Calliphoridae. It only lives in North America, and only infests live baby birds. And it



Disgusting blowflies found in a single nestbox.
Photo by Bet Zimmerman Smith.

doesn't just bug bluebirds. It has been found on over 200 different bird species. Blowflies lay eggs in nests or on nestlings shortly after the birds hatch. They tend to feed at night. You may see minute scabs or blood spots on a nestling's bare abdomen. About the time the nestlings fledge, the larvae form a black pupal case. Adult flies emerge one or two weeks later. [Thus it's helpful to remove used nests and any pupae right after birds fledge. By timing it this way, you are also preventing unintentional removal of new nests.] According to Dr. Whitworth, these buggers rarely kill nestlings. "What I discovered is these larvae consume large amounts of blood from nestlings," noted Dr. Whitworth. "However, nestling birds are incredible blood factories, and they replace it very quickly." He suggests that if nestlings are heavily infested, you might do a nest exchange to prevent them from being weakened. But he felt this was probably not necessary. "In a world where survival of the fittest operates, parasites help weed out weak nestlings, or the young of poor parents, or those nesting in marginal areas. It seems kind of cruel, but it is probably for the best in future generations." [Usually by the time these gross whitish-gray larvae are clearly visible, they have already done much of their damage. A significant infestation of blowfly larvae (>10 per chick) can be detrimental to baby birds because of the extent of blood loss when other nesting factors (such as low food supply, extra cold or extra hot) are extreme, and can delay fledging. While monitoring, you can lift an infested nest up with a spatula, and brush out larvae from the bottom of the box. I find keeping the interior of the box dry also helps. If the nest is wet with lots of pupa, you can replace the nest with clean, dry fine grass or pine needles fashioned into a nest cup. Some people put hardware cloth about an inch off the floor to make cleaning easier, but I find female bluebirds just stuff nesting material down into the grid, or it fills up with debris. Check out Terry's Bird Blow Fly website at www.birdblowfly.com for lots more fascinating facts about these pests.]

- Naturalist Tami Gingrich of Ohio found a nestbox with two starling babies being vigorously defended by a pair of Eastern Bluebirds. No young bluebirds were in the nest, and the starlings seemed to be thriving. She watched the bluebirds feed the starlings. When she returned a few days later, the nestbox was empty, so she assumed the starlings had fledged. [When a different species cares for the young of other birds, it is called "heterospecific cooperative breeding." Marilyn

M. Shy listed 65 different species of birds that had been observed feeding or adopting birds of 71 species. I read about starlings that fed nestling Purple Martins after the starling eggs were removed from a martin house. I guess turnabout is fair play!]

- The issue also featured plans for Steve Gilbertson's newly designed "Gilwood" box. This small, simple box can be mounted on ½ inch thin-walled metal electrical conduit. "I feel that if a box is either complicated or requires unusual components, there may be added expense, waste, or frustration, leading possibly to fewer boxes afield. That is why there are only two lumber dimensions and only square cuts required to construct the Gilwood box," said Gilbertson. The Gilwood has an upside-down mouse hole/U-shaped entrance hole with an adjustable bar across it to exclude starlings [Although some people have observed small starlings entering a Gilwood, they are unlikely to nest in it due to the small interior volume]. The roof overhangs on all sides, which prevents water entry. [Some people feel the floor box is too small. But on my trail, Eastern Bluebirds consistently choose it over most other styles. I have a list of nestbox style pros and cons at sialis.org/nestboxproscons.htm.]



A bluebird nest in a Gilwood box on my trail.
Photo by Bet Zimmerman Smith.

This is only a sampling the things I learned from just one issue. If you're cooped up and bored during the Year of the Pandamnit, maybe check it out the *Sialia/Bluebird* archives online at nabluebirdsociety.org/publications.

Bet Zimmerman Smith maintains a 50 nestbox trail in NE Connecticut. She also created and manages an ad-free website dedicated to helping small native cavity nesters at Sialis.org. Her husband Patrick invented the word "pandamnit" after enjoying a "quarantini."

Bluebirding Giants

Bet Zimmerman Smith

Our quarterly NABS *Bluebird* journal typically features pictures of bluebirds. But here we have a picture of some bluebirding giants.

Myrna Pearman (who recently retired from Ellis Bird Farm) and Lorne Scott (a NABS Life member from Canada) dug up this historic photograph taken by Joanne Osterhouse at the second NABS annual meeting in Front Royal, Virginia, on November 10, 1979.

"I've kept the [*Sialia* and *Bluebird*] journals for over 50 years. They come in handy," said Lorne. "In comparing notes with some other slides I took back in 1979, I think I have them all identified. If I made a mistake, no one will find me in the Canadian Hinterland."



Back row, left to right:

- Reverend Ray Prebis
- William R. Stott Jr., Board Member (1947–2013)
- George Grant, Vice President
- Delos C. (Chuck) Dupree Sr., Treasurer (1920–1996)
- Jack Finch, Board Member (1917–2006, known as "The Birdman of Bailey")

Front row, left to right:

- Lorne Scott, Board Member and Life Member (still kicking!)
- Marilyn Lou Guerra, President (1931–1999)
- Mary Theresa Dougherty Janetatos, Executive Director (? –2019)
- Larry (Lawrence) Zeleny, Founder and Life Member (1904–1995)

Not pictured: Robert M. Patterson, President

Alas, I never had the honor of meeting any of these legends except for Lorne, who was at the fabulous NABS 2016 conference in Alberta. However, I do own a Jack Finch nestbox and have read about those who are now somewhere over the rainbow, where bluebirds fly.

You can find photos and bios of the current Board of Directors on our website at nabluebirdsociety.org/board-of-directors/.

Here are a few other snippets of NABS history. NABS was incorporated on March 20, 1978. The journal was originally called *Sialia*, which is the Latin name of the bluebird genus. The publication's name changed to *Bluebird* in Vol. 30, No. 3, Summer 2008.

Lorne also dug up the very first issue of *Sialia*, printed in the Winter of 1979. I can't wait to read it! We will be scanning it and adding it to our website under the "Publications" soon.

Jim McLoughlin (our talented former webmaster) and I scanned all the journals we could find as PDF files. NABS is working on obtaining and scanning the remaining 14 missing issues. When that is done, we will have the complete treasure trove online from Volume 1, Winter 1979 through Volume 40, Summer 2018.

As a special perk, the remaining back issues are only available to NABS members, who eagerly await them in the mail every quarter.

If YOU are interested in submitting an article or photos for consideration for publication in *Bluebird*, email it to nabseditor@gmail.com. Submissions are accepted continuously and published as they are received.

"We are like dwarfs on the shoulders of giants, so that we can see more than they, and things at a greater distance, not by virtue of any sharpness of sight on our part, or any physical distinction, but because we are carried high and raised up by their giant size."

– John of Salisbury, *Metalogicon*, I 159

Bet Zimmerman Smith created and manages the website www.Sialis.org, and is a NABS Life Member and Board Member.

Bluebird Poem Analysis

Molly Wilsbacher

With all of the unfortunate circumstances surrounding us today, I am reminded of one of my favorite poems by Robert Frost (1874–1963), “The Last Word of a Bluebird.” At first glance it appears to be about a bluebird sending word to his friend Lesley that he has to fly away for a little while, like many birds do for the winter. The bluebird wants Lesley to be good and healthy while he is gone, and the bluebird says he might be back in the spring.

However, if you look inside the poem, it is probably about someone who unfortunately died recently (represented by the bluebird), and that an angel (represented by the crow) has come to tell Lesley that the little bluebird sends her good tidings before he goes to heaven. The mention that the bluebird might come back in the spring to sing provides hope; not in the literal sense, but hope that other bluebirds would return in the spring to comfort Lesley and brighten her days. This interpretation makes sense to me because Robert Frost probably wrote this poem to his young daughter Lesley to help comfort her over the loss of her brother Elliot who died of cholera at the tender age of 4 or 5.

Finally, I think the poem resonates today. It is important to keep hope in our hearts when we suffer heartache and disappointments in life. After the mourning and grieving period passes, we could be rewarded with joy and contentment, especially if we remain positive and righteous. And, if we are really fortunate, we will be rewarded with the song of a bluebird.

This article originally appeared in Bluebird Monitor, the newsletter of the Ohio Bluebird Society. It is reprinted here with permission.



Coming to Your Backyard This Winter

Each year the folks at the Finch Research Network (<https://finchnetwork.org>) gaze into their crystal ball and forecast the probability of southern movements by finches and other seed-eating birds of the boreal forest. In some years, the northern cone crop is poor and massive numbers of seed-eaters head south into the U.S. to spend the winter. For the winter of 2020–2021, a poor cone crop in eastern Canada is driving cavity-nesting Red-breasted Nuthatches into at least the eastern portion of the U.S. You can welcome our little visitors from Canada by providing suet, black-oil sunflower seeds, and peanuts.



Photo Gallery



Red-bellied Woodpecker (Jack Bulmer / Pixabay)



Boreal Owl (Andy Reago & Chrissy McClarren / Flickr.com)



Eastern Bluebird (Tom Murray / Flickr.com)



Tufted Titmouse (Jo Zimny / Flickr.com)



Carolina Wren (Naturelady / Pixabay)



White-breasted Nuthatch (D. Fletcher / Flickr.com)



Eastern Bluebird (mlmclaren / Pixabay)



Chestnut-backed Chickadee (Avia5 / Pixabay)



Hooded Mergansers (David A Mitchell / Flickr.com)

BluesNews

First Idaho Martins

For the first time ever, Purple Martins have been confirmed as breeders in Idaho. The western subspecies of Purple Martin still breeds in tree cavities, usually those created by woodpeckers. This subspecies is far less colonial than its eastern cousins—rather than breeding in groups of dozens of pairs, the western subspecies breeding groups are usually only a few pairs (although this may have more to do with the limited availability of nest cavities than anything else). In 2019 a single pair was found nesting in southern Idaho, about 22 miles north of the next-closest breeding location, in northern Utah. The pair successfully raised two youngsters. Hopefully, this is a sign that Purple Martins are expanding their range in the Rocky Mountains.



Proposed Downlisting of Woodpecker

The U.S. Fish and Wildlife Service has proposed downlisting the Red-cockaded Woodpecker from endangered to threatened under the Endangered Species Act. First listed as endangered in 1969 after a century of habitat loss had reduced the bird's range to only a few states, the species now ranges across 11 states. Estimates from the late 1970s found 1,470 breeding clusters, or groups of cavity trees used by a group of woodpeckers for nesting and roosting. That number has risen to 7,800 clusters in recent years. But even with that growth in numbers, conservation groups are concerned that the downlisting is premature since the species still faces threats from habitat loss and severe storms.



Remembering Ray Weatherholt

Raymond Weatherholt Jr., 80 (Lanesville, Indiana), passed away on September 8, 2020 at Baptist Health Floyd Hospital. For nearly two decades Ray was involved in the Sunnyside Master Gardeners program where he founded the Blue Bird Team (a NABS Affiliate). The Blue Bird Team (BBT) went on to construct over 4,500 boxes and install more than 60 trails consisting of over 2,000 boxes. The BBT gifted the other 2,500 nestboxes to other individuals who were then mentored by the Team members. In addition to cavity-nesting birds, Ray loved science, life, and all nature. He was a lifelong teacher who never stopped learning! Because of this Ray brought a wealth of knowledge to the table and he loved sharing it with whomever he came in contact.

At the present time, the BBT has approximately 50 people involved with its nestbox program. Each season, Ray would donate the use of his shop and his many tools to the team who would meet during the winter months and assemble new boxes and repair old ones. Ray redesigned or modified BBT's nestboxes several times and they are now working on yet another modification to help their feathered friends. Ray will be greatly missed by the BBT as a friend, mentor, educator, and leader. Under Ray's leadership, the BBT has placed nestboxes in several southern Indiana counties including State and County Parks, school

properties, colleges, private properties, and other places. Some of the BBT's nestboxes are located in neighboring states as well. Ray inspired the BBT to develop and build the best nestboxes possible and to strive for excellence in the field and trail monitoring. He was a mentor to many, as he was always identifying a new flower, insect, or bird and telling us something about it that we did not know.

He held a Master's degree in Botany and was a retired Life Sciences teacher at Floyd Central High School. Ray will be greatly missed by his community and he is remembered as a beloved teacher who sparked

a love for learning and science in many students over the years. He is also remembered for his passion for nature, gardening, and for encouraging others to get involved with helping our feathered friends and butterflies. While at Floyd Central, he was involved with the establishment of science classes such as anatomy, microbiology, and botany, and he was inducted into the school's Hall of Fame in 2016. Several former students of Ray's went on to become doctors, nurses, scientists, and teachers.

The circle of NABS and the Sunnyside Master Gardeners Blue Bird Team have lost a respected and intellectual leader and bluebirds have lost a true friend in the passing of Ray Weatherholt. RIP.



Ray Weatherholt, middle, and his fellow nestbox builders with a sign commemorating the Blue Bird Group's 4,000th nestbox built.

Remembering Lum Bourne

Bernie Daniel

Long time member of NABS and the Indiana and Ohio Bluebird Societies, Howard L' Hommedieu (Lum) Bourne died peacefully on November 23, 2020 at 93. Lum was born in Bath, Indiana, on May 29, 1927, and he graduated from high school in College Corner, Ohio, in 1945. He served in the US Navy for two years.

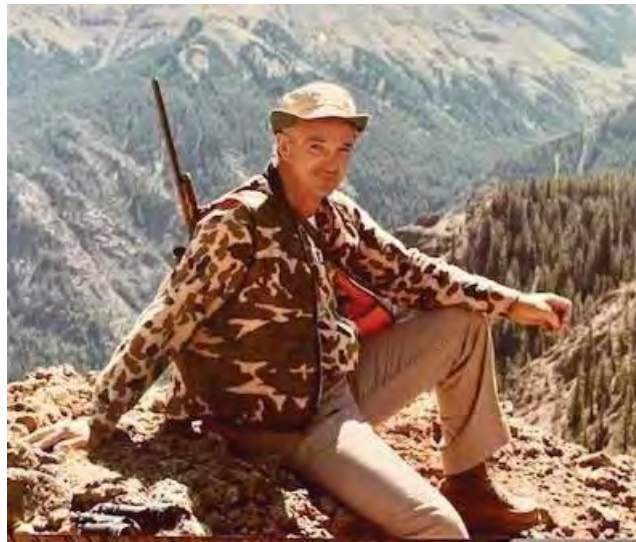
Lum was a pilot and quite a “character” as well. He once flew his beautiful Luscombe Silvaire between his high school and its flagpole—he was quite proud of that hair-raising demonstration. He also was fond of hiking and hunting in the Wyoming wilderness with his pals.

Lum spent most of his adult life as a farmer with his late wife Meriam—they loved most things out of doors including of course bluebirding in Ohio and Indiana. The pair of them fledged thousands of Eastern Bluebirds, Tree Swallows, House Wrens, and other cavity-nesting species from the hundreds of nestboxes that they managed every season. I often thought it peculiar that Lum and Meriam lived in Franklin County, Ohio, but managed nestbox trails in Franklin County, Indiana, some 150 miles west! Each breeding season the two of them spent several days a week in each state—all of the driving! Lum designed a beautiful and successful nestbox out of fence post

cladding and then and built over 1000 of them. I have a couple of those boxes and I know that they will last for decades and be fledging bluebirds for a very long time. In addition, he was a lifetime member of the NRA and Rocky Mountain Elk Foundation. Lum led an active life and was still bluebirding right up to the end of his time.

He is survived by his 6 children, along with 12 grandchildren and 26 great grandchildren as well as many nephews and nieces. I understand that his daughter Krista will continue monitoring her parent’s bluebird trails and continue to make Lum’s unique nestboxes. That is wonderful news.

I have known Lum and Meriam from the time I was president of the Ohio Bluebird Society and they were such insightful, enthusiastic, and cheerful people and pure joy to be around. They will be missed by many in Ohio and Indiana and elsewhere!



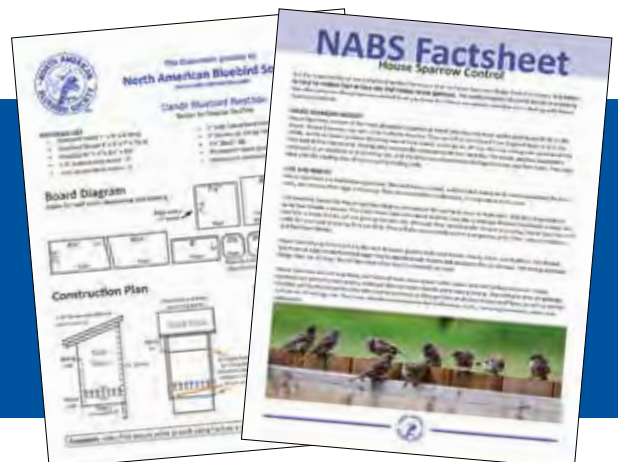
Lum’s family thought to close his obituary with this beautiful comment from W.L. Dawson: “Oh, how the waiting countryside thrills with joy when the Bluebird brings us the first word of returning spring. Reflecting heaven from his back and the ground from his breast, he floats between sky and earth like the winged voice of hope.”

I certainly cannot top that!

Have You Visited the NABS Website Lately?

The site is **packed** with helpful information: fact sheets, nestbox plans, back issues of *Sialia / Bluebird*, information about Board members, Affiliates, awards, contact information for bluebird emergencies, and more! Head over to:

<http://www.nabluebirdsociety.org/>



Affiliates of the North American Bluebird Society

The North American Bluebird Society serves as a clearinghouse for ideas, research, management, and education on behalf of 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*. To find out more about becoming a NABS Affiliate please contact Mike DeBruhl at cmdebruhl@atlanticbb.net. If your organization is listed below, please review your listing to ensure it is current and send any changes to Mike. Thanks!



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