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Winter 2006-2007

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Affiliates of the North American Bluebird Society

The North American Bluebird Society serves as a clearinghouse for ideas, research, management and education on behalf of all bluebirds and other native cavity-nesting species. NASW invites all state, provincial, and regional bluebird organizations to become NASW affiliates in a celebration of equals working together toward a common goal... a further partnership in international bluebird conservation. A cost is associated with affiliating with NASW. Your affiliated organization will be recognized and listed on the NASW web site. If your organization has a newsletter, please forward a copy to our headquarters. To find out more about becoming a NASW affiliate, read our NASW Affiliate Guidelines.

Notice: If you are listed below, please check listing to see if it is correct. If not, please contact secretariat@bluebird.org with correct information.

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North American Bluebird Society

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Questions should be directed to the NASW address shown above.

The NASW web site offers answers to many questions.

Please log on at: www.nabedsociety.org for member and other useful information.

Message to Affiliate Members Organizations

Hello Affiliate Members and Representatives,

I want to thank all of you for what you are doing to ensure that our beloved bluebirds are continuing to come back in record numbers and are no longer at such jeopardy as they were once thought to be.

The North American Bluebird Society counts you as a partner in the effort to increase Bluebird numbers. This letter is to tell you that NASW is changing. One of the changes is to put an emphasis on communicating with our affiliates. NASW now has a board member with the specific goal of staying in touch with you. I’ve been asked to be that person and I’m looking forward to getting to know each one of you.

I have taken affiliate information from the NASW website (www.nabedsociety.org), and constructed an email address book and I am sending this same message via email to each affiliate contact person. If you received this message via email and you are still the proper contact person that is great. If you got this email and you are no longer the appropriate contact person for you affiliate, please send an email back to me with the correct information. If you are the proper contact and did not get an email please check the address you gave us and correct it. My goal is to find someone in each affiliate organization that can put articles in your newsletter and, in some ways, communicate with affiliate members.

Once I have an accurate email list, I will be asking you to send me information that will aid NASW in serving and partnering with you in a more productive manner.

Thank you in advance for helping me in this endeavor.

Brian Swanson

NAB Vice President for Affiliates

Web site: nabedsociety.org

North American Bluebird Society

Winter 2006-2007

North American Bluebird Society

Nominations for NASW Awards

The North American Bluebird Society annually makes awards for outstanding contributions to bluebird conservation. This year’s awards will be presented at the NASW 2007 convention in Athens, Georgia in September.

The deadline for submission of nominations is July 15, 2006.

If you wish to nominate an individual, a group, or anyone involved in research for an award, please contact NASW Awards Chairman Greg Beavers at gbeavers@bluebird.org. Please be sure to include telephone number and e-mail address. If you wish to submit a nomination but have no access to it, it will be acceptable for you to mail it to your regular address, NASW, P.O. Box 43, Miamisburg, OH 45147, but be sure to send it in on time. It will not be delivered for you by any other method.

For individuals awarded, consider the ways in which nominators have publicized or aided bluebird/cavity-nester conservation. Examples might include speaking before groups; working with young people; creating poetry, artwork, music, radio, or television; working at nature centers, workshops, or fairs; inventing or improving trap or box designs; designing and producing publications; planting trees; etc.

For nominations of a group, consider workshops offered, number of members maintained by group members; increasing cavity-nester numbers; success stories; methods of recruiting members, successful fledglings; etc. Programs must have been in place for a minimum of five years.

For research awards, briefly summarize research completed (and in progress) involving bluebirds/cavity-nesters, and include bibliographic citations of articles published about bluebirds or other North American cavity-nesters (copies of articles or abstracts are desired).

North American Bluebird Society

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lower grasses might make insect gathering easier for the parent Bluebirds. Perhaps the authors themselves best summarize this study by noting that rather than ask why golf courses perform so poorly (compared to “traditional” habitats), one might instead speculate as to why Bluebirds seem to do so well on golf courses.


The authors set out 120 nestboxes in vineyards and oak-savannah woodlands (populated with several common oak (Quercus spp.) tree species, low grasses, and weeds and also on a nearby grape vineyard) that had been developed out of the same savannah landscape. The study was conducted over two breeding seasons using standard NABS style cedar boxes (modified for top-opening) mounted on T-posts with PVC predator guards. They set out boxes with two different hole sizes, 39 mm (~1.5") and 32 mm (~1.25"), on both habitats and monitored the boxes on a 7 – 14 day schedule and once an active nest was observed on a 3 – 4 day schedule. Boxes with nestlings 14 days or older were monitored by listening rather than opening. A nest was considered successful if the box was empty within 2 days of the assumed fledge date and there was no signs of predation. In this study the vineyard proved to be at least equal to the oak savannah habitats and observed that while the canopy cover was not different, the mean distance from the box to a perch site was significantly less (11.4 meters versus 35.6 meters) in the vineyard. Over the period of the study the temperature inside the nestboxes ranged from approximately 6 to 28.5 degrees C (~43 to 83 degrees F) and did not differ between the two habitat types. The authors conclude that in this case the vineyard habitat was equivalent to the oak savannah as Western Bluebird habitat. However, they point out that this one study, on one vineyard, cannot be generalized to the conclusion that all vineyard will perform in a similar manner. In addition, the apparent effectiveness of vineyard habitat as Western Bluebird nesting habitat should not be exploited as a reason not to protect oak-savannah woodlands as species other than cavity nesting birds depend on it. Bluebirds constituted over 88% of the nestlings in the study but four other cavity nesting species also utilized boxes in the study: tree swallow, house wren, ash-throated flycatcher, and violet-green swallow.

What should me conclude from these two studies? The scientists conducting these studies are reluctant to make sweeping statements about whether golf courses or vineyards are good habitat for Bluebirds. This is because their results were written up in a scientific format and were for other scientists to read. The authors realize also that most scientists would require a good deal of analysis and study before coming to that conclusion about the relative quality of two habitats for wildlife. The study on Eastern Bluebirds was over a longer period (6 versus 2 seasons) and in 7 different golf courses so stronger conclusions can be made. However, from the standpoint of Bluebirders I think both of these studies are very encouraging. Certainly these results suggest that both golf courses and vineyard supported Bluebird reproduction. The question as to whether these two less typical habitats are the better or equal quality habitat is a question that can be addressed over time.

Greetings of peace.

My name is Jonathan Ridgeway. On January 18, 2007, NABS President Bernie Daniel advised the Board of Directors that I accepted a nomination to be NABS’ next President. With Board approval, I appointed me as his successor to begin immediately. I would like to offer our membership some description of my background and then explain what is happening in NABS.

I retired with 38 years of progressively responsible career public service, the last 20 as a senior level capital projects manager in NYC’s Daniel Environmental Protection Department. I studied project management, strategic planning, team building and a variety of other subjects in the field of management. In the past 20 years I contributed a vast number of hours in volunteer leadership positions to various nonprofit organizations: neighborhood groups, historical societies, political, patriotic and lineage organizations, a multi-generational community education resource center, a museum board of managers and served on a Congressional Advisory Committee and zoning and planning boards. I became a NYS Bluebird Society County Coordinator in 2002, joined its Board of Directors, and have since become a Life Member of NYSB, NABS and Sierras Club. My wife, Lynne, and I attended the 2003, 2005 and 2006 NABS conventions in Nebraska, North Carolina and Texas and actively participated in hosting 2004 in New York.

The NABS organization and Board of Directors have experienced great turmoil recently but I believe it is all in the past. Upon acceptance of my appointment, I asked the Directors and volunteers to agree that we would work together with respect, collegiality, confidence and renewed spirit on a new path predicated on a new vision. At my request, a new slate of officers was unanimously set in place, comprised of the same Board members, with new or continuing assignments.

The most pressing challenges are showing signs of progress. Until five months ago nothing was done to get renewal when memberships expired. Sending notices has increased our renewal rate from 10% to 50% and our bank balance is 4 to 5 times what was reported last April, not including the special Zeleny Fund which is essentially stable. Many members are now upgrading the level of their membership to household at $30, up from individual at $20. I am confident the NABS website will soon be better than ever because of the exceptional webmaster who has joined out team. Our Journal Committee is committed to publishing a finer product and getting it to our members on time. We closed our offices and Board members and volunteers now fulfill the tasks formerly performed by a paid staff we no longer employ.

Our Strategic Planning Committee has been accumulating and analyzing ideas. Thirty years ago NABS was a peer with the same purposes as our present day Affiliate organizations. Our aspiration is to leave those missions where they belong, in the care of the societies who know their local habitats best and foster the success of our Affiliates while continuing to support those areas which have no local organization. NABS can best serve the 3 species of bluebirds and other native cavity nesters only if it can help to facilitate resources across North America which would be less readily available to the local groups. We will work to identify what we can do to add value to our Affiliate organizations and then formulate and implement strategic plans to meet those objectives.

Whether you are a new or a veteran member, we truly will be grateful if you will continue our journey with us. We are dedicated to making serious improvements. We hope and believe you and others in the Bluebird community will like what you observe. We are grateful for your cooperation and participation, past and future, and we are counting on you being with us.

Most Respectfully, Jonathan Ridgeway, 2007 President
Disaster in the Highwoods
By Bob Niebuhr

Every year that I have had a bluebird trail a few boxes have been shot, stolen or damaged by humans. There wasn't much I could do about it except replace the boxes. Art Aylesworth showed me the picture of the early 90s of a box which had been shot and the female and five nestlings had been killed. He took the picture and story to the Koton newspaper and it started the shooting of boxes for several years.

When Rod Spencer called me from my trail in the Highwoods on July 21st and said over a dozen boxes had been smashed along eight miles of country roads, I wondered why? Then I was furious, but I remembered Art's story. I took my camera and went out to the trail and took pictures. I took the pictures to the Great Falls Tribune and the following Thursday the story and pictures were the lead article in the Outdoor Section.

What happened then still amazes me. The public outcry from this incident was unbelievable. The phone did not stop ringing all day and the outdoor editor was getting the same expense. There were not MDN members calling, just citizens outraged by what happened.

Then I started receiving money for a reward fund or to build boxes, (a total of $890 for the reward fund and $350 to build boxes). Ninety percent from non-members who were the driving force behind these funds starting. Calls, cards, e-mails and money came in from as far away as Texas, Arkansas, North Carolina, and California. Montana FWP's TIP-MONT program also offered a reward of $500. A lady brought me three first quality boxes and a man from Denver called to get the plans and said he was going to build 15-20 more boxes and bring them to Montana next spring. A landowner on the trail built and replaced four. A total of four large articles have been published in the Tribune. In the last 90 days, I have been interviewed by Public Radio and one TV station. Non-members are building 175 nestboxes for Mountain Bluebird Trails.

Four teenage boys pleaded guilty for the vandalism and each was given a large fine and lots of community service hours. I guess I can say justice has been served, but that doesn't give me the satisfaction I thought it would.

But the concern and caring people have shown, and their desire and willingness to help has humbled me. Fifteen years ago a half dozen people were involved in bluebirding in this area. Today there are ten times as many and the public appreciates it. That satisfies me.

When I think about it, there is a bigger lesson to be learned from this incident. Sometimes I think the general public doesn't appreciate what we do. But the public's response proved that idea wrong. There hasn't been a day in the last two months when at least two or three people have brought it up.

As for the vandals, the boys called me two weeks ago and wanted to come and see me and make amends. They did and apologized, and agreed to make 50 boxes at their expense. They will go with me to put the boxes up and help with the trail in the spring. It took courage to do this. I believe they were sincere. From what I have seen, they have done a lot of growing up and in the next six months they'll learn a lot more about bluebirds.

As this story unfolded, other Mountain Bluebird Trails members have said they have also had boxes shot, damaged or stolen. It will never end I'm sure, but I'm sure a photo and story in a local paper will lessen the number of incidents, and increase the public awareness. That was Art's objective in the beginning. Try it. The bluebirds will thank you.

What is not mentioned in the article is the punishment and fines each of the boys received from the judge. They tried as juveniles in Justice Court, but it was explained to them by the judge that the penalties would have been much harsher if they were adults and it would have been in Federal Court. Each boy was fined $350.00 per box and 15 boxes were destroyed which comes to $5250.00 each. PLUS each boy was given 100 hours of community service which the judge valued at $6.00 an hour or $600.00 each. PLUS they built me 50 nestboxes for which they paid $2800.00.

Total value $4780.00 or $18.67 per box.

Science on Bluebirds
A Review of Two Studies on Bluebird Nesting Success on Alternative Habitats.

By Bernie Daniel, Ph. D.

The continuing loss of woodlots, pastures, natural areas and agricultural lands to development for human habitation and commercial enterprise shows no signs of abatement. In fact, according to human population such trends are likely to increase. Therefore it is critical that alternate kinds of land that could provide suitable habitat for wildlife be found and exploited. This is true for cavity nesting birds as well. This article summarizes two recently published scientific studies that examine the effectiveness of Eastern and Western Bluebird reproduction on commercial and recreational habitats. The first study compares the success of Eastern Bluebirds using nestboxes located on golf courses to those using typical rural habitat often exploited in the Eastern United States.

The second study, is similar in purpose and compares the utility of grape vineyards with the utility of human-populated areas (a rapidly disappearing natural habitat in the California) to support Western Bluebird reproduction. If these alternate human-devised habitats are inferior to the more natural or traditional habitats then one would expect to observe less successful breeding outcomes for the birds using it. In poorer quality habitat one might expect, for example, birds nesting later in the year (indicating lower preference), or smaller clutches and broods, or smaller numbers of fledglings. Controlled scientific studies based on statistical analysis such as those described below help us address questions related to the suitability of alternate habitats with a certain known level of confidence. Two studies are reviewed:


In this study the authors compared measures of nesting success in Eastern Bluebirds (Sialia sialis) nesting on golf courses with those nesting in traditional rural habitats. This study was conducted in North Carolina and involved the analysis of more than 3000 nesting attempts occurring over a 6-year period. Over the study 150 nestboxes located in hayfields, old fields, pastures, and utility right of ways were compared with 250 boxes situated in 7 different golf courses. Boxes were monitored on a 7-day schedule. The research team compared a number of features pertaining to the condition of the parent birds, the date of the first nest, the time interval between first and second nests, the number of eggs laid, and the number and condition of chicks produced in the two different habitats. The condition (assessed by analysis of body size/weight ratios as well as body symmetry) of breeding females captured from nests on the golf course were not different from those nesting in more traditional Bluebird habitats while the males from the golf course nests were actually in slightly better condition. However, the investigators did find some small but significant differences for nesting parameters. Over the study period the first nest was constructed one day later, and the time interval between the first and the second nest 3.5 days longer for the boxes located on the golf courses. The boxes on the golf courses had, on average, significantly smaller clutches (4.41 versus 4.50 eggs/nest) but this very small difference did not result in smaller brood sizes or less birds fledged (3.81 versus 3.83 fledglings/nest) on golf courses. However, the condition of the chicks (also assessed by body size/weight ratios) was found to be slightly poorer in the nests on the golf courses. Overall, the authors conclude that golf courses provide adequate, though not optimal breeding habitat for Eastern Bluebirds. Although the authors recognize that human disturbance and chemical use may be involved, they hypothesize that lower food availability may be the more important factor. Sweep net sampling on golf courses resulted in significantly smaller collections of arthropods than in the rural areas. However, they also note that while the short grass and managed grounds of a golf course might provide poor habitat for insect populations needed by breeding birds, the
The Uninvited!

By Barbara Chambers

Birds are not the only organisms to be found in the Bluebird boxes on our northern Virginia trails. Other organisms we encounter in our boxes include spiders, wasps, mites, ants and blowfly larvae. In some years, we find them all. Therefore, we need to know as much about them as possible. Are they beneficial, are they harmful, or do they have no effect at all? What should we do about them (if anything)?

Spiders are ubiquitous! By June they have invaded several of our nest boxes. House Wren twig nests almost always have spider egg sacs. Do they select twigs with spider sacs intentionally? We don’t know.

Wasps build nests on the nest box ceilings as well as under the snake guards. The ones under the snake guards are difficult to remove; however, the ones inside the nest box must be removed. The Bluebirds, and other bird species, will abandon the nest if the wasp nest is not removed. The nest box monitors must check for wasp nests weekly and carefully remove any they find. It is safer to remove the wasp nests early in the morning as they are less aggressive when it is cool.

Ants occasionally invade our nest boxes. Unless we observe ants on the chicks, we usually don’t intervene. Dr. Whitekiller found large ant populations near some of the nest boxes in the City of Central Arkansas (one of our monitors during the 2001, 2002, and 2003 breeding seasons) intervened in two cases. She removed the chicks, constructed a new nest out of nesting material (not green grass) and placed it in the nest box. She also put Tree Tanglefoot Pest Barrier® around the nest box pole, just under the snake guard, to keep the ants from returning to the nest box. She then quickly returned the chicks to the box and watched from a distance to be sure the adults returned to feed.

Many species of birds have extraterrestrial parastites (e.g., mites, flies, fleas and lice). Bluebirds are no exception. Dr. Whitekiller found one mite species, Dermanyssus propinquus, on our Bluebirds. What we try to avoid is transferring these mites from one box to another when we monitor. Since these mites do not appear to affect fledging success (Whitekiller, unpublished data), we do not recommend intervening in the nesting process because they are present. However, after the offspring have fledged, we remove the nest and secure it tightly in a trash bag. We brush out the nest box well, and we attempt to clean any of our tools that had contact with the infested nest box to avoid transferring mites to the next nest box we check. Using white gloves to check the boxes makes it easier to detect the tiny mites. If available, place dry grass below the box. It may help the inhabitants build a new nest faster.

We have also encountered another ectoparasite in our nest boxes. Dr. Whitekiller found blowfly larvae (Phaenicia/Calliphora sp.) inside our nesting boxes and in our nests. They suck the blood of the nestlings and may reduce their chances of survival by reducing the mass of their body and making them anemic. If you don’t notice the larvae on the nestlings, it doesn’t mean they aren’t present in the nest box. You may have to check under the unique shape of a pupa (a form of the mite between egg and adult). Each pupa will be enclosed in a dark case. The adult blowfly larvae may survive over the winter in the box; therefore, it is important to clean the nest boxes after all chicks have fledged. Place the nests in trash bags and seal the bags well before placing them in the trash. We don’t want any larvae or pupae to survive. In 2001, Dr. Whitekiller found greater than 40 larvae on one nest. She weighed the four nestlings on day 10 of the nesting cycle and found the chicks’ masses ranged from 11.45-20.56 grams. Chick masses that year ranged from 23.09-29.71 grams (excluding the blowfly infested nest; Whitekiller, unpublished data). Because she was concerned that the chicks would not survive to fledge, she removed all larvae from the offspring. She also removed the nest, brushed out the nest box, and replaced the nest with an extra one she had with her. After returning the chicks to the box, she used a spotting scope to observe the nest from a distance to make sure the parents returned to feed the young. They all fledged successfully, although it took them much longer than usual (Whitekiller, unpublished data). We would not recommend following this protocol, unless you know what you are doing. If you want to know more about blowflies, check out the NABS web page (http://birdblowfly.com).

Dr. Whitekiller will be publishing the results of her research soon when she does we will notify our readers. What have your experiences been with these uninvited guests? Write to the editor and share your insights with the rest of us. This could be a good forum for exchanging information.

Barbara Chambers is the State County Coordinator for the Virginia Bluebird Society

Preventing Nestbox Vandalism

by E. A. Zimmerman

To date, I have not had a nestbox vandalized on my two rural trails, even though some of the boxes are on busy roads. Others have not been so lucky. Vandalism can be a serious problem, especially on urban trails. As incredible as it may seem, vandals have been known to remove eggs from nestboxes and smash them, light firecrackers inside a box, and even use an active nest, fill occupied boxes with burning cigarette butts or shards of glass, shoot boxes with a gun or smash them with a baseball bat, or use boxes for drug dealing.

In five seconds, one person can destroy a nestbox and next year’s generation of bluebirds. Here are some tips from expert bluebird monitors on the Bluebird Listeners® who have had to deal with vandalism.

BOX CLOSURE: Make it hard for a passerby to open the nestbox.

Secure boxes with Phillips-head screws, or better yet deck screws, which have a square or hexagonal recessed slot. It won’t stop a baseball bat, but will stop the average curious individual. Be sure to bring the special screwdriver or bit with you when monitoring, and keep a spare in your car.

Some trail monitors use small paddlocks. Others think this invites trouble, as some monster might try to take the roof off to see what valuables lie inside. A law enforcement colleague once told me “locks keep honest people out.”

LOCATION, MOUNTING AND CAMOUFLAGE: Put boxes out of harm’s way or hide them from view.

• Place boxes off the beaten track. Many vandals are lazy and prefer to bash something near their car and then drive off. Do not put boxes in public, high-access areas such as parking areas, road intersections, or dirt bike or ATV trails. Look at the surroundings - if there is food waste, beer cans, and cigarette butts, people are congregating and perhaps looking for something to do or destroy.

• Put boxes on private property, with permission of course.

• Hang boxes (15-18 feet high in the branches of a hardwood tree) completely out of reach. Hanging boxes virtually eliminate vandalism. They don’t pose an obstacle for golfers or mowers, and put boxes out of the way of sprinklers, bears, etc.

• Hide or camouflage boxes. Or stain them a soft gray or drab light brown that helps them blend in the surroundings.

• Golf courses: Do not put boxes at tee off spots and near holes where temps might flare over bad shots. Remember these people are carrying clubs!

• Replace stolen or broken boxes immediately. Some birders need them. After replacing a box three times, vandals may grow bored.

BOX TYPE

• Try Giblerston boxes, as would-be vandals may have a hard time figuring out how to open them.

• Don’t put up boxes that are too pretty or made of high quality lumber, as this could tempt theft.

• For boxes at cemeteries or near churches, extend the backboard about 6” above the roof, and then cut it out to leave a cross.

EDUCATION: Some people honestly don’t know that birds use a nestbox to raise a family. Help people understand what nestboxes are used for, to appreciate how important they are to cavity-nester survival, and encourage them to get involved.

• Give talks, make displays, or do presentations.

• Encourage people who are regularly in the area to keep an eye on nestboxes for you, or to “adopt” a box. Brief employees (e.g., at a golf course) who work in the immediate vicinity, or familiarity, or better, befriend them. I have trail at a local transfer station/closed landfill, and my best defense against intruders is familiarity. Once my father-in-law came with me to help check some boxes, and I thought they were going to hog-tie him because they didn’t realize we were together.

• Invite a camera crew from the local TV station to come out and witness a trail being monitored, or the local paper or radio to do a story on the trail. Include information on successes and failures of a year’s work on the trail, and try get others involved in the next generation of bluebirds.

After vandalism, seek local help, e.g., an article in a local paper with a photo of dead birds on the ground with a smashed box. The ensuing public outrage might do more than anything else to prevent future vandalism.

Keith Krüller of Texas puts up a “sacrificial” educational box near a restroom or playground etc., that is made of inexpensive interior plywood with a coat (low 4 feet) on a solid post so children/curious adults can look in. Put an old nest in the box, ideally with a Flesiglas protruding from it. Include a laminated sign stapled on the box that explains what the nestbox is
and who installed it, and invites them to look inside (with a pointer to the latch), and to watch for birds feeding their young at other boxes along the trail that should not be disturbed.

SIGNAGE: Put up warning signs or mark boxes to decrease the likelihood of pilferage. Some people are afraid of drawing attention to their boxes, or inviting miscreants to investigate or misbehave by giving them ideas. They feel those bent on destruction will ignore or be encouraged by warnings. If you decide to try signage, here are some ideas:

- On the side of the box or the pole, or on a plastic tag, post a running list of the date the box was checked, occupying species, and number of eggs and babies. When people realize a box is being regularly monitored, they may respect the box more.
- Write on the box (in permanent magic marker) "Monitored by (organization), Protected by Federal Law."
- Put up copper tags or staple homemade laminated signs to the box that read BLUEBIRD NEST BOX, TAMPERING VIOLATES FEDERAL LAW. NOTICE: It is a Federal offense to molest or destroy any protected species of wildlife. THE EASTERN BLUEBIRD IS A PROTECTED SPECIES.
- Get an inexpensive wood burning pen (89) and burn messages on the inside and outside of the box with words along the lines of "Built by (voluntary helping bluebirds)." This may discourage someone inclined to steal a box for their own use, or alert parents when a child shows up with a purloined box. For boxes made by scouts, handwriting (using a waterproof Sharpie) "This bluebird nestbox built and donated by Boy's name of Scout Troop 101." When this was done in one 640 acre campground and hiking area, only two boxes disappeared over a four year period.
- The Texas Bluebird Society has made up lovely blue and white signs that can be placed on the side of the box placed in a cemetery or elsewhere that say "This box donated in loving the memory of..."

ENFORCEMENT: As a last resort, get the law involved.
- Take pictures of damage for proof. Alert local law enforcement. Ask them if they would be willing to follow up on the crime, or patrol the area periodically.
- If the perpetrators are identified, instead of prosecuting them, consider requesting that they come with you and help you check some boxes, or help build more bluebird boxes. I like to think that there are some kids out there that do this out of ignorance or lack of understanding. As Keith Krider has said "None of us will be around forever! We need to continuously show others the miracle of nature and how they can help and make a difference."
- "One Nestbox at a Time." We often never know how and when we make a difference."

For more tips and details on preventing vandalism on a bluebird trail, see http://www.nabls.org/vandalism.htm. Sincere thanks to the participants on the Bluebird_Listserv for sharing their ideas on how to handle this challenge.

Bet Zimmerman is a Certified Environmental Professional and a member of the Woodstock, CT Conservation Commission. Bet is the owner and manager of a comprehensive web resource on Bluebirds (www.sialis.org), and she writes and speaks about all aspects of Bluebird conservation.

70 feet long from the corner post, creating a diagonal 99 feet long, which is a perfect length for my steel measuring tapes.

I install a temporary pipe along the original chalk line, 70 feet from the corner post. From this stake, I measure 99 feet and drive in another temporary stake where I intersects my second tape at 70 feet from the corner post, and perpendicular to the original row of nest boxes.

I stretch a second chalk line from the corner post that just touches the second temporary stake. Along this line, I install four (4) mounts from the corner post spaced at 25 yards apart and perpendicular to the original row of nest boxes.

Once there are complete rows of mounts in two directions that intersect at ninety degrees, I can continue to install additional rows in each direction b measuring 75 feet with each tape measure.

After I plot two rows along the grid’s front and one side, sixteen (16) mounts stand in the field. At this point, I can stop measuring and finish installing the remaining mounts by simply using my eyes to aim, or line up, the free mounts with the standing mounts in two directions. With care, I have found that the last nine (9) posts can be plotted "by sight" within several inches of their proper course, keep measuring if you have helpers.

After all of the mounts are in place, I attach baffles and nest boxes. I have used 3 kinds of mounts in the past for grids, including steel pipes, T-posts, and sign posts, depending on what was available at the time. The above mentioned methods evolved over time and are nothing new to anyone who installs fences.

Using NGB’s to Teach Math and Units of Area

A NGB can be used to teach mathematical applications. After the Pythagorean Theorem is used to set up a NGB, the grid can be used to teach applied math because a 25 box grid, 100 yards on a side, covers 2,072 acres. The area from the first to third row covers 100 acres, less than one acre (43,650 square feet). Most people have never seen an acre staked out in front of them.

The idea of a metric NGB is also intriguing. With 20 meters (21.87 yards) between nest boxes and rows, a six by six grid of 36 nest boxes would measure 100 meters on a side and cover one hectare, the unit of area commonly used by ornithologists in scientific literature.

What is known about the diet and feeding behavior of Tree Swallows makes many calculations possible. For example, swallows feed their young tiny flying insects, 99% of which are smaller than one centimeter, or one half the width of a nickel. After swallows snatch hapless insects from the air, they pack those into BB sized balls called boluses for an average of 18 insects per bolus, and carry them back to the nest to feed their nestlings.

If swallows feed their nestlings 6,000 insects a day, then how many boluses are fed to a swallow family in one day? (Answer: 333 boluses). And, using the same values, how many insects are fed to the nestlings of one swallow family during a 20 day period from hatching to fledging? (Answer: 120,000 insects). Most interesting, if all 25 nest boxes of a NGB are claimed by swallows, then how many insects will the growing families consume before they fledge? Would you believe 3,150,000 insects? Wow! And that's not counting insects consumed when the adults are building nests, laying and incubating eggs.

Tree Swallows are valuable birds whose eggs hatch when their wetland habitats can best provide flying insects for them. Swallows can feed nestlings when insect populations allow them to hunt in the vicinity of their nest sites. However, dry soils and periods of drought limit the abundance of prey, as do human efforts to control mosquitoes. The condition of the land and its use should be researched before installing a NGB.

In the natural scheme of things, Tree Swallow NGB’s are excellent buffers, protecting people, livestock, and wildlife from harmful and pesky insects, including deer flies, mosquitoes, and black flies. NGB’s on public lands and school properties are good for pest control, conservation, and education. And yes, nest box grids can provide nesting opportunities for Bluebirds.

In the next issue of Bluebird, I will review some proven interpretive techniques used at NGB’s to turn white-billed swallows into promoters of conservation during field trips packed with action. Until then, Happy Bluebirding!

Literature consulted:
- McCarty, John P. 2002. The number of visits to the nest by parents is an accurate measure of food delivered to nestlings in Tree Swallows. Journal of Field Ornithology. 73:9-14.

Plotting a Five by five grid for 25 Nest Boxes

By Dick Tuttle

Starting in 2001, I began promoting nest box grids (NBG’s) for Tree Swallows (Tachycineta bicolor) in habitats not entirely suitable for bluebirds, mostly poorly drained fields with tall vegetation. Since then, I have established seven NBG’s totaling 105 nest boxes. Here, I will describe what I have learned about plotting grids.

My grid boxes are spaced 25 yards apart, even though tree swallows can nest comfortably as close as 20 meters (21.87 yards). When I plot a grid, I use two steel measuring tapes, each 100 feet long.

Even though I create grids for swallows, I manage for Eastern Bluebirds (Sialia sialis) when features such as fences are part of the landscape. As an example, I installed a three by three grid for nine nest boxes on saturated soil leading to a pond. A wire livestock fence separated the wetland area from an active pasture. I located the first row of three nest boxes ten yards from the pasture’s fence.

Each season, a pair of Bluebirds uses one of the boxes in the grid’s first row to raise two families. They hunt the pasture from the fence and also use it to launch attacks on curious swallows that show interest in their nest box. In short time, the swallows always grow content to nest in the remaining nest boxes.

When plotting a NBG along a road, I plot the first row parallel to, and twenty (20) yards from the berm. I usually face my nest boxes east. I also want all NBG’s to be visible to the public so they can be used for education.

Here are some hints for installing

1. Use a post pounder to install a corner post for the first row of nest boxes sixty feet from the berm. Tie a chalk line to the corner post.
2. While unraveling the chalk line, walk down the road a hundred yards or more and install a temporary pipe or stake sixty (60) ninety degree corner with one side perpendicular to the original row along the road. I use the Pythagorean Theorem, \( c^2 = a^2 + b^2 \) to accomplish this, where \( c \) is the hypotenuse (diagonal line) of the right triangle. With a square corner, the nest boxes also line up diagonally from row to row, making a symmetrical grid that captures the attention of onlookers. The exact spacing mimics the nest so perfect spacing of cavities in a beaver pond.

For my grids, where a and b are 25 yards long, c is 35.36 yards, or 106.75 inches. This diagonal happens to be longer than my measuring tape, which poses a small technical problem. This is easily solved by establishing a temporary right angle at the corner with two sides
Bluebird Partnerships

***************

Science of Bluebirds

University of Georgia
Institute of Ecology

2007 North American Bluebird Society Convention at the University of Georgia

NABS heartily invites you to Athens, Georgia for its milestone 30th convention, the first we ever hosted ourselves. There were a lot fewer local organizations when NABS set out to serve people interested in bluebirds and other native cavity nesting species who had no local group to and link the ones there were across North America. Our new aspirations are to add value to the efforts of our Affiliates throughout the continent, to not lose touch with our grass roots and continue to support those without organizations. Our program mixes an impressive list of distinguished academic specialists with fun recreational events.

Keynote Speaker: University of Georgia's Dr. Patricia Adair Gowaty will elaborate on the Bluebird Partnerships. World authorities will address house sparrows, fire ants and paper wasps. Other esteemed presenters will focus on Eastern, Mountain and Western Bluebirds. There are bus trips to Atlanta, the Georgia Botanical Garden and Stone Mountain, a local bird walk, a silent auction, educational exhibits and vendors, a NABS reunion and Affiliates dinner, a "Bluebird L" breakfast and the annual awards banquet with Celtic music. We want you to be there because your participation will make it even more rewarding.

Research Projects by Dr. Patricia Adair Gowaty

As an evolutionary (behavioral) ecologist, I ask questions about selective forces shaping phenotypic variation in behavior that results in patterns of social organization. I focus on natural selection and variation in mating systems (e.g., social monogamy and extra-pair paternity), sex allocation (distribution of effort by parents to sons versus daughters as in sex ratios of progeny), and sex differentiated behavior. For 30 years, I have studied populations of Eastern Bluebirds. My students and I are currently studying the effects of food competition with fire ants on behavior, demography, mating system, and life histories of Eastern Bluebirds. Recently, with collaborators, I have studied the effects of mate choice on offspring viability in Drosophila pseudoobscura, mallards, mice and several other species. These studies were motivated by the theory of sexual conflict (Gowaty 1997) and the hypothesis of reproductive compensation (Gowaty 2003), which argues that the selective pressures favoring mate choice reside in variation in offspring viability that results mainly from pathogenic challenges and social and ecological constraints on reproductive decisions. I am also working on a theory of social behavior (Gowaty & Hubbell 2005) that predicts adaptively flexible sex role behavior of both females and males - even under chance variation in inducing variables.

Meeting & Meals Registrations

<table>
<thead>
<tr>
<th>Registrant #1</th>
<th>Cost</th>
<th>Registrant #2</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$45</td>
<td></td>
<td>$45</td>
<td>Registration for one to three days includes all presentations on Thursday and Saturday as well as Lunch on Saturday.</td>
</tr>
<tr>
<td>$25</td>
<td></td>
<td>$25</td>
<td>Thursday Night - NABS Members Reunion and Affiliates Dinner</td>
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<tr>
<td>$35</td>
<td></td>
<td>$35</td>
<td>Friday Night - NABS 2007 Banquet with Awards and Entertainment</td>
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<tr>
<td>$15</td>
<td></td>
<td>$15</td>
<td>Saturday Morning - &quot;Bluebird L&quot; Breakfast</td>
</tr>
<tr>
<td>$35</td>
<td></td>
<td>$35</td>
<td>Saturday Night - Dinner at Georgia Botanical Garden includes bus transportation to Garden</td>
</tr>
</tbody>
</table>

Sub-Total for Registration and Meals

Field Trip Registrations

<table>
<thead>
<tr>
<th>Registrant #1</th>
<th>Cost</th>
<th>Registrant #2</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$65</td>
<td></td>
<td>$65</td>
<td>Wednesday Pre-Conference Bus Trip to Atlanta (Aquarium, Cyclorama)</td>
</tr>
<tr>
<td>$30</td>
<td></td>
<td>$30</td>
<td>Friday Bus Trip to Georgia Botanical Gardens and Historic Athens. Includes Lunch.</td>
</tr>
<tr>
<td>$65</td>
<td></td>
<td>$65</td>
<td>Sunday Post-Conference Bus Trip to Stone Mountain</td>
</tr>
</tbody>
</table>

Sub-Total for Field Trips

Total for Registration, Meals and Trips

Participants are encouraged to register by June 30, 2007. Forms postmarked this date and earlier will be rewarded with extra door prize tickets and a prepaid ticket for the opportunity to take home a quilt (a $10 value). Registration by June 30, 2007 will guarantee the current room rates at the Georgia Center.
### NABS 2007 Registration Form - Personal Information

<table>
<thead>
<tr>
<th>Registrant #1</th>
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<tbody>
<tr>
<td><strong>Name</strong></td>
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<tr>
<td><strong>Street Address</strong></td>
</tr>
<tr>
<td><strong>State or Province</strong></td>
</tr>
<tr>
<td><strong>Home Phone</strong></td>
</tr>
</tbody>
</table>

**E-mail if you wish to be contacted with updates**

- At the Convention I should be recognized as: (Please check all that apply.)
  - 1st Time Attendee
  - NABS Board Member
  - NABS Affiliate Representative
  - Presenter
  - Exhibitor
  - Field Trip Leader

- Attendee of 10 or more
- Former NABS Board Member
- NABS Speakers Bureau
- Artist
- Vendor
- Volunteer

Complete this form and return with full payment to:

- NABS 2007
- c/o Helen Munro
- 22 Bobolink Rd.
- Jackson Springs, NC 27281

Checks should be made payable to NABS 2007.

- There will be space limitations on field trips. Reservations will accepted based on postmarks.
- We will send you an acknowledgement postcard within 3 weeks.
- Registrations will be accepted up until August 25, 2007. After that, registrations will be accepted depending on availability.
- Cancellations prior to August 25, 2007 will be refunded, less any obligations already made.
- Make room reservations directly with the Georgia Center (800-884-1381). Identify yourself as part of NABS 2007 and Event # 61669.
- It is not necessary to be a NABS member, but please consider joining at the conference.

### NABS 2007 – Athens, Georgia
**Thursday, September 20, 2007 to Sunday, September 23, 2007**

#### Pre-Conference
**Wednesday (9/19/2007)** Bus Trip to Atlanta
- Registration - Sanford Suite
  - Thursday - 10 am to 5 pm
  - Friday - 8 am to 9 pm
  - Saturday - 8 am to 9 am
- Silent Auction Items - Room T/U
  - Viewing and Bidding
    - Thursday - 10 am to 9 pm
    - Friday - 8 am to 9 pm
    - Saturday - 8 am to 4 pm sharp

#### Educational Exhibits and Vendors - V/W
- Friday - 8 am to 5 pm
- Saturday - 8 am to 5 pm

#### Thursday - NABS Board Meeting - Room K/L
- 8 am to Noon

#### Thursday - Program Speakers - Room K/L
- 1 pm to 1:45 pm - Dr. Bob Cooper, a Professor in Forestry and Natural Resources, will talk about the biology of house sparrows.
- 2 pm to 2:45 pm - Dr. Ken Ross, a Professor of Entomology. He is one of the world's authorities on red imported invasive fire ants that eat the same foods bluebirds do.
- 3 pm to 3:45 pm - Dr. Bob Mathews, an Emeritus Professor of Entomology who is the world's authority on paper wasps that live in bluebird boxes.
- 4 pm to 4:45 pm - Dr. John Pickering, an Associate Professor interested in cataloging all of the world's species on the web.

#### Thursday - NABS Reunion & Affiliates Dinner
- 7 pm - Dining Room

#### Friday - Field Trip - Buses load at 8:45 am and leave at 9 am. They will return to Georgia Center by 3 pm.
- Buses will go to the Georgia Botanical Garden for a personalized tour. At noon a box lunch will be served followed by a tour of historical Athens narrated by a guide from the Athens Visitors Bureau.

#### Friday - Banquet
- 6:00 pm - Cash Bar
- 7:00 pm - Dinner - Celtic Music, NABS 2007 Annual Awards Ceremony

#### Saturday -
- 6:30 am “Bluebird L” Breakfast
- 8:00 am North American Bluebird Society Annual Membership Meeting, Election of Officers & Directors and Highlights of current NABS activities
- 9:00 - 10:00 am Dr. Peter Areces - University of British Columbia, Canada (EABB)
- 10:00 - 10:30 am Dr. Nancy Buschhaus - University of Tennessee at Martin (EABB)
- 10:30 - Noon Dr. Janis Dickinson - Cornell (WEBB)
- Dr. Jeanne Fair - Los Alamos Nat. Laboratory (WEBB)
- Dr. Judy Guinan - Radford University (WEBB)
- Dr. Geoffrey Hill - Auburn (EABB)
- Dr. Scott Johnson - Towson University, MD (MOBB)
- Dr. Jon Pliesser - Private consultant (EABB & WEBB)
- Dr. David Pitts - Eastern Tennessee (EABB)
- Dr. Melanie Rathbun - Boston University (EABB)
- 4:00 pm sharp - Silent Auction Closes
- Pick items up between 4:15 and 5:00 pm.
- 5:00 pm Bus to Georgia Botanical Gardens
- 6:30 pm - Buffet Dinner at Georgia Botanical Gardens
- Dr. Patricia Adur Gowaty - Keynote Speaker
- 8:30 pm - Bus returns to Georgia Center

#### Sunday
- 6 am - Bird Walk with local guide
- Post Conference
- 9 am - Bus Trip to Stone Mountain


Web site: nabbluebirdsociety.org


Web site: nabbluebirdsociety.org
The NABS 2007 Convention and What Registration Covers

This year's Convention has presentations by many internationally known scientists. They will address a variety of topics relating to all three species of bluebirds, Eastern, Mountain and Western. Many interrelated issues will be addressed: paper wasps, house sparrows and fire ants. This Convention should prove to be an exceptionally rewarding educational experience as well as a lot of fun. The registration fee covers admission to all presentations and the Saturday, Sept. 22 lunch. It will be a box lunch you can eat in any of the public areas of the Georgia Center or take back to your room for some quiet time between the morning and afternoon sessions of the conference. Registration is required for attendance at any program, field trip or event.

As guests of the Georgia Center you have access to their campus bus system so anytime you would like to check out downtown Athens on Thursday or Friday or take a riding tour of the campus, you can hop on the bus in front of the Georgia Center. University of Georgia Walking Tour Information is available at the Concierge Desk, where they can answer many questions about the area and provide needed directions. As on any college campus, parking is limited. There is a charge ($8 per day) for the parking garage next to the Georgia Center which can be added to your room bill. Consider parking your car and taking advantage of the buses that are available.

Thursday, Friday & Saturday Night Dinners

Thursday Night’s dinner will be an informal reunion of NABS members and Affiliates. In fact, anyone attending the convention is welcome to attend. It is an opportunity to discuss the mutual concerns of all bluebird societies and acquaint and reacquaint with fellow bluebirders.

Friday Night’s dinner will be the annual NABS banquet. NABS awards will be presented and Dr. Ken Ross and his band will play Celtic Folk Music. It promises to be a mellow evening.

Field Trips

Pre-Conference Trip to Atlanta will include a visit to the new Georgia Aquarium. This outstanding facility requires reserved tickets and tickets will be pre-purchased as determined by registration. Lunch will not be included, but food is available at the Aquarium. The afternoon will be spent at the Cyclorama, the 360 degree painting of the Battle of Atlanta. The bus will leave at 8 a.m. and return by 4 p.m.

Friday’s Field Trip - Buses will go to the Georgia Botanical Garden for a personalized tour lead by Jim Affholder, Professor of Horticulture UGA and Director of Research at the Georgia State Botanical Garden. At 11:30 a.m. a box lunch will be served. Buses will reload at 12:30 pm and proceed to the Athens Visitors Center for a tour of historical Athens narrated by a local guide. Buses will return to the Georgia Center by 3 p.m.

The State Botanical Garden Of Georgia located at 2450 South Milledge Avenue can be reached from the Georgia Center by turning right out of the driveway, then left onto South Milledge Ave., and following it to the Botanical Gardens.

The Georgia Center of Continuing Education is a premier conference center at the University of Georgia, 1197 South Lumpkin Street, Athens, GA 30602-3603. Call 1-800-884-1381 to make your reservations and identify yourself as part of Event # 61669. The room rates are $79 to $99 (plus tax). Their website is www.georgiacenter.uga.edu.

When arriving at the Georgia Center, plan to check into the hotel registration desk. Then proceed to the Sanford Suite to check into NABS 2007, receive your registration material and get a map showing the location of meetings and exhibit rooms.

North American Bluebird Society

Officers and Board Members

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

Founder - Lawrence Zeheny

Executive Director Emeritus - Mary D. Janatton

Development Education

President - Jonathan Ridgeway (NY)

2006 Committees

First Vice President - Brian Swanson (VA)

Executive - Jonathan Ridgeway (NY)

Secretary - Lynne Ridgeway (NY)

Treasurer - Greg Beavers - Indians

Finance - Greg Beavers (IN)

Nominating - Bob Benson (MA)

Board Members

Robert Benson - Massachusetts

Pauline Tom - Texas

John Schuster - California

Javis Dickenson - New York

James Dodson - North Carolina

Patricia Adair Gowaty - Georgia

Jimmy Dodson - North Carolina

Berole Daniel - Ohio

Web site: nabsbluebirdsociety.org

Executive Director Emeritus

Mary D. Janatton

Development Education

Bob Benson (MA)

Bernie Daniel (OH)

Bon Sparks (IN)

First Vice President - Brian Swanson (VA)

Greg Beavers (IN)

Phil Berry (FL)

NABS Hotline

John Schuster (CA)

Elaine Elteroth (OR)

Bob Niebuhr (MT)

Bill Davis (FL)

Bob Ewart (Sask, Can)

Steve & Cheryl Easo (NE)

Evelyn Cooper (LA)

Don Yoder (CA)

Springfield - Summit Skyride, Scenic Railroad, 4D Theater and many more.

Web site: nabsbluebirdsociety.org

Student Research Poster Exhibit

Renee E. Carleton, DVM
Doctoral Candidate
Warren School of Forest and Natural Resources, University of Georgia, Athens, GA. Initiated and managed resettlement of the Eastern Bluebird population on the campus of Berry College in Rome, GA 2002-2006. Dissertation research, “The role of a population of eastern bluebirds.”

Jill Goldstein Schulze, Instructional Coordinator of Science, Gainesville State College - Oconee Campus. My first experience studying bluebirds came in 1991 while working at Has廷 Reservation under the direction of Janis Dickinson as a field assistant working with western bluebirds. I am now finishing up my doctoral research on eastern bluebirds at the Institute of Ecology at the University of Georgia. Using long-term data collected by Gowaty and colleagues in Athens, GA, I have created a series of species-centered ecosystem models of the life cycle of bluebirds.

Silent Auction/ Door Prizes

I can still remember my first bluebird convention. It was a North Carolina Bluebird Society’s annual meeting in 1995 and most of the 100 participants went home with a door prize. My first North American Bluebird Society convention was in Regina, Canada, in 1998. This was the first year that local bluebird societies were asked to join as NABS Affiliates and the emphasis went from door prizes to silent auction items. There was one lady that had decided to do her Christmas shopping and every fifteen minutes she would go along the tables and up her bids. When the final tally was in, she had won the bids on about 50% of the money raised.

Since then, the number of door prizes and silent auction items has increased. Each person registering for the convention is given a certain number of door prize tickets. Additional door prize tickets can be purchased at the convention. These tickets are placed in containers adjacent to the door prizes so if you win, you win something you really want.

The silent auction items are paired with a bid sheet with the name of the item, the name of the donor and the initial bid. These bids can be increased until 4 p.m. on Saturday. All items must be picked up and paid for by 5pm on Saturday. Some one-of-a-kind and special bluebird items are acquired this way. The money goes to help offset the cost of the speakers and meeting room rentals. It is hoped this year will help fund NABS 2009.

Start thinking of items that you would like to donate. Perhaps you have been given an extra set of binoculars or a special bird book or backpacks for carrying your monitoring supplies. Canvas your local birding store to see if they would like to donate. Donations will be acknowledged with the tax I.D. number necessary to declare them as a donation on income taxes.

This is a tradition that needs your support. Even if you are unable to attend, you can contribute to the convention by donating items. Your generosity will be appreciated.

Please send silent auction items and door prizes to Mary Jane Shearer, 2090 Templekn Knight Drive, Tucker GA 30084. Her phone number is (770) 938-7861, in case the shipper needs it.

Pauline Tom of Texas has volunteered to work on this project and will provide any additional information you may need. Her email is pтом5678@gmail.com and her phone number is (512) 268-5678.

Directions to Athens, Georgia (www.visitathensga.com)

FROM ATLANTA: (60 miles from city center, 80 miles from airport)
I-85 North to GA 316
Take I-85 North from Atlanta to GA 316 (Exit #106). Follow 316 East for approximately 40 miles to the Athens Perimeter (Loop 10). Bear right on Loop 10, traveling east. After approximately 6 miles, take Exit #8 (Lexington Rd/Oconeet St.). Turn Left. Oconee St. becomes Broad St. and goes directly into downtown Athens.

TRAVEL NOTE: In February 2006, the Georgia DOT began a three-year improvement project on State Route 316, the main thoroughfare from Atlanta to Athens. Though the Georgia DOT estimates that about 80% of construction will take place without lane closures, and will restrict any lane closures to off-peak hours, it is suggested that motorists access traffic updates through the Georgia DOT Web site at www.dot.state.ga.us, the NavIGator site at www.georgia-navigator.com or call (770) 986-1011.

Alternate routes to Athens from Atlanta include:
I-85 North to GA 139 Take I-85 North from Atlanta to GA 129 South (Exit #137). GA 129 becomes Jefferson Hwy., then Prince Ave. and leads directly into downtown Athens.
State Route 78 East Take GA 78 East. Exit right onto GA 316 and proceed on GA 316 to the Athens Perimeter (Loop 10). Bear right on Loop 10, traveling east. After approximately 6 miles, take Exit #8 (Lexington Rd/Oconeet St.). Turn Left. Oconee St. becomes Broad St. and goes directly into downtown Athens.
I-20 East Take I-20 East to Conyers. Exit onto GA 138 East (Exit #82). Then take GA 78 East. Exit right onto GA 316 and proceed on GA 316 to the Athens Perimeter (Loop 10). Bear right on Loop 10, traveling east. After approximately 6 miles, take Exit #8 (Lexington Rd/Oconeet St.). Turn Left. Oconee St. becomes Broad St. and goes directly into downtown Athens.

FROM THE NORTH
Take I-85 South to US 441 South (Exit #149) for approximately 20 miles. Go under the Athens perimeter; road becomes MLK Jr. Boulevard. Turn Right onto North Avenue. Follow North Avenue into downtown Athens.

FROM THE SOUTH
Take US 129/441 North. Follow signs for 441 into Athens.
Transportation

Airports
Athens - Ben Epps Airport
Athens - Ben Epps Airport is three miles from downtown Athens and offers connecting flights via US Air to and from Charlotte, NC. Local taxi service is available to and from the airport. Rental car service is also available. Athens Airport shuttle service is available to and from the Georgia Center.

Hartsfield-Jackson International Airport, Atlanta
Hartsfield-Jackson International Airport is located 80 miles from Athens. Rental car service is available. AAA Airport Express offers 6-7 daily shuttles from the Atlanta airport to several Athens locations, including most hotels. For airport shuttle reservations through AAA Airports Express, contact them at 1-800-354-7874 or view more information at their website. www.aaaairportexpress.com.

Greyhound Bus
Call 1-800-231-2222 for information. Sample Fare from Charleston, NC, to Athens, GA, is about $50 (one-way) with two buses a day.

Amtrak
Call 1-800-872-7245 for information. The closest train station to Athens, GA, is Gainesville, GA which is 30 miles away. Additional transportation arrangements would have to be made.

Car
Driving directions are given on the opposite page. Please note that there is a charge ($8 per day) for the parking garage next to the Georgia Center.

The Athens Welcome Center is located at 280 East Dougherty St on the north end of historic, downtown Athens. They will furnish each person registering for the NABS Convention a Visitors Guide and map. If you wish to receive this information, before the convention, please call 1-800-633-0603 and they will mail it to you. They can answer many questions. They are also a wi-fi zone if you need to check your email with your laptop. Their website is http://www.visithastingsga.com/.

Restaurants
There are many local restaurants. Downtown Athens is within walking distance of the Georgia Center or can be reached by the University Bus System. The Georgia Center has the Courtyard Café and the Savannah Room. Both of which have varied menus that are reasonably priced. See the website at http://www.georgiacenter.uga.edu/restaurants/index.phmml to view the menus.

Campgrounds
KOA Tent and RV
5473 Mt. Olive Road
Commerce, GA 30529
Phone - 1-706-335-5535

The Pottery RV
100 Pottery Road
Commerce, GA 30529
Phone - 1-706-335-5984, 1-800-233-0667

Sandy Creek Park Wildnerness and RV (in parking lot) - 400 Holman Rd. Athens, GA 30607
Phone - 1-706-613-3631

Watson Mill Bridge State Park - Tent and RV
650 Watson Mill Rd. Coner, GA 30629
Phone - 1-706-783-5349

A Bluebird Sampler—Some of NABS 2007 Speakers

Dr. Scott Johnson of Towson University in Maryland has studied the breeding biology of songbirds for 25 years. Up until recently, most of his work has been done with House Wrens. For the past 3 years he has been working on Mountain Bluebirds looking at two main subjects: how reproduction and behavior is affected by brooding at high altitudes and how male coloration affects female mate choice.

Dr. Peter Arcole of the University of British Columbia has over 25 years of experience working on the ecology, behavior and genetics of birds, mammals and plants in Africa and North America. Peter became involved with bluebirds when Vince Buslady, former president of the Inland Bird-banding Society and long-time bluebird enthusiast, invited Peter's collaboration to collect and publish results from Vince's long-term study of Eastern Bluebirds near Green Bay, WI.

Dr. David Pitts from East Tennessee State University will give a talk entitled "Winter survival: Flight, Food, Feathers, and Flocks."

Dr. Jeanne Fair of Los Alamos National Laboratory says, “My primary research interest is to understand the impacts of stress on wildlife, from both a physiological and population perspective. Birds are a key transmission vector and host to human infectious diseases and are susceptible to environmental contaminants, drought, and other environmental stresses that can disrupt normal physiological functions without causing avian disease. This research builds upon the unique resources at Los Alamos including an established Avian nestbox Network focusing on Western and Mountain Bluebirds...”


Dr. Judy Keinan, Assistant Professor of Biology, at Radford University studied the mating and parental behavior of Western Bluebirds in Arizona for three years. She has worked with Dr. Patty Gowaty and Elise Elitzroth in describing the Western Bluebird for Birds of North America No. 510.

Dr. Janis Dickinson, Associate Professor, Department of Natural Resources, Cornell Lab of Ornithology Director of Citizen Science program that includes Cornell Laboratory of Ornithology's "The Birdhouse Network", which has a new NSF-funded national data entry system to be rolled out and piloted in 2007. Continuous monitoring of color-banded Western Bluebirds over a 7 square kilometer study area at Hastings Reserve in Carmel Valley, California.

Dr. Nancy Buschhaus of the University of Tennessee at Martin who attended the Teaching Scholars Institute at Western Kentucky University. TSI brings good teachers together for the express purpose of enhancing their abilities in the classroom.

Dr. Geoffrey Hill, Schunegel Professor, at Auburn University in Alabama reports that “My students and I have monitored a color-banded population of 100 pairs of bluebirds since 1999. We have published a dozen papers in technical journals on bluebirds. Most of our studies focus on the function and evolution of structural coloration, and we have made the Eastern Bluebird one of the model systems for the study of structural feather coloration.”

Dr. Jonathan H. Flinn, Senior Scientist of ABR, Inc. in Forest Grove, Oregon, has examined proximate causes of sex-biased natal dispersal in Eastern Bluebirds for his doctoral work at Clen-

Dr. Patty Gowaty on various studies of mating systems and breeding biology of Eastern Bluebirds and assisted Elize Elitzroth with her Western Bluebird work near Corvallis, Oregon.