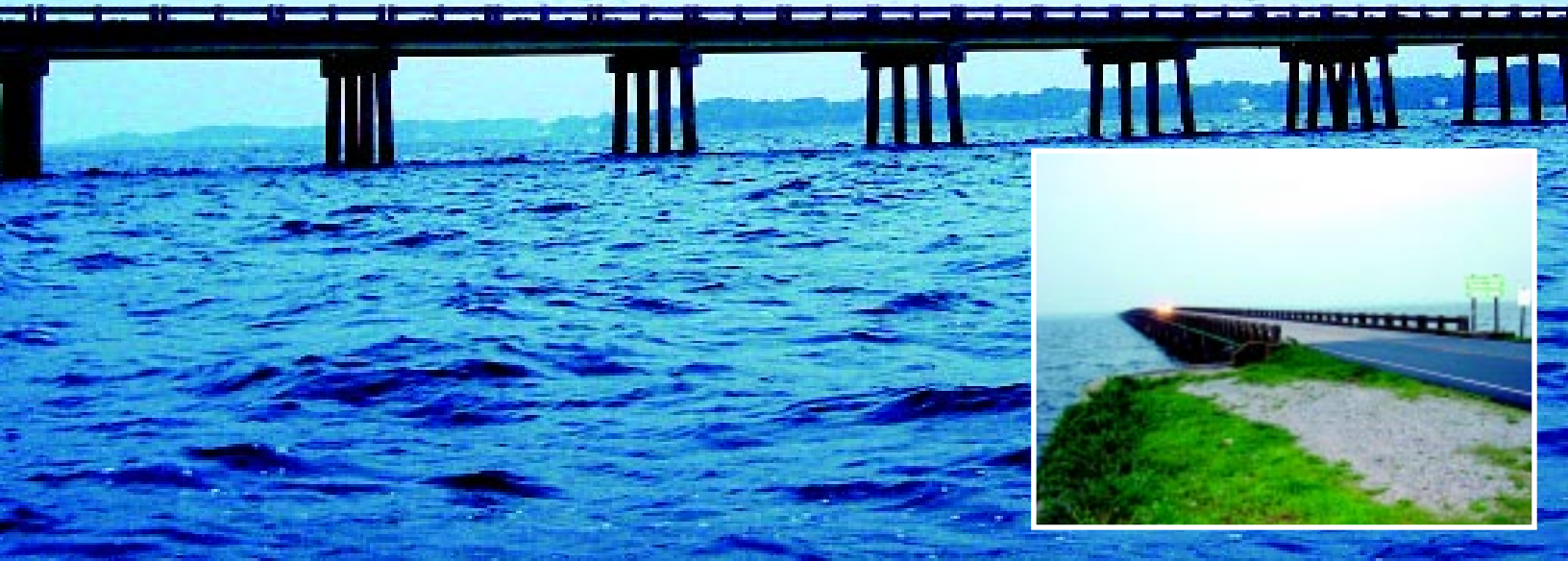


Martin Deaths on North Carolina's Umstead Bridge

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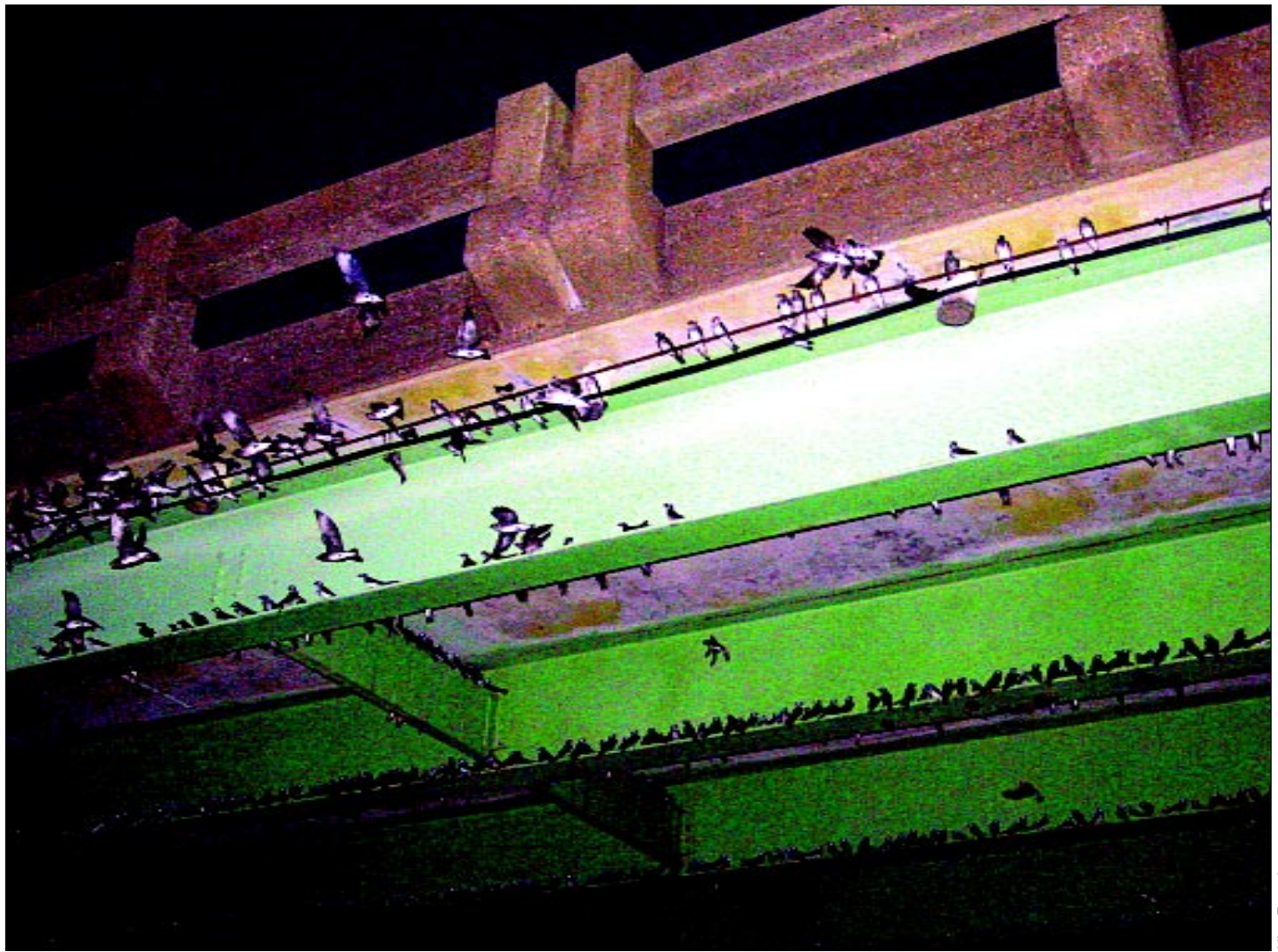


Although my husband and I moved to the Outer Banks of North Carolina in 1999, it wasn't until 2001 that we witnessed the huge Purple Martin roost at the William B. Umstead Memorial Bridge for the first time. Traveling back to our home in Columbia, NC at sunset after a day at the beach, we watched an immense cloud of martins reeling and diving in unison over the backdrop of a golden, pink, and violet sky. Their undulating collective flight created an amazing spectacle. As they descended on the bridge attempting to roost on the structures underneath, they flew unwittingly and directly into the vehicles ahead of us, causing taillights to flash and traffic to slow. Not yet caught up in the flock ourselves, we watched, horrified, while the van ahead of us drove full steam forward into a swirling wall of martins, seemingly unaware of the dead and maimed creatures it left in its wake.

As our vehicle was enveloped by the swarm, I exclaimed "Slow down! Slow down!" to my husband, hoping to avoid striking any more birds. It felt as though the sky was falling. We slowed to a crawl, but the birds zoomed headlong through the bridge guardrails and continued to slam into the sides of our car. Unwilling participants in this avian slaughter, we finally arrived on land, relieved that no more martins would die tonight by our hands. We got out of the car on the western land side and waited for the birds to settle in. Our senses were overwhelmed with the zip of wings zooming

past, the screeching of martins on the wing, and the sweet chatter of perched birds preening quietly on the cables under the bridge. With every passing vehicle a few more injured or lifeless martins were flung at our feet. I noticed a lone bird flailing in vain, attempting to alight. Reaching down to pick it up, I discovered it was a badly injured fledgling. Bleeding, its left wing nearly torn from its body, it watched me calmly as it settled into the warmth of my hands, shuddered, and died. In the intermittent glow of the headlights whizzing past, we searched for any martins that could possibly be saved. Finding none, we made our way back to our car dismayed and defeated, stepping through a graveyard of plumed corpses. As blackness descended, we drove home silently, wiping blood from our hands, while the waves lapped at the bridge, hushing the chattering flock and settling the survivors into sleep for the night.

My husband and I witnessed the same tragic scene from early July until the birds' migration in mid-to-late August in succeeding years as well. I have often wondered in frustration what might be done about it. In early spring of 2003, I found my answer when I met my co-worker, *PMCA* member Ryan Speckman. Ryan has been a martin landlord and *PMCA* member since his teenage years. When we met, we discovered our common interest in martins almost immediately and he shared his tall stack of *Purple Martin Updates* with me. Reading them from cover to cover, I discovered several articles about



Photos by Alisa Esposito

Alisa Esposito

Opposite Page: 50,000 to 100,000 Purple Martins coming in to roost for the night on North Carolina's William B. Umstead Memorial Bridge over the Croatan Sound near Manns Harbor. Above: For 6 to 8 weeks each summer for the past 20+ years Purple Martins have staged on the wires and I-beams under this bridge prior to their migration home to Brazil.

the Lake Ponchartrain, LA bridge roost that PMCA members helped raised money to protect with the erection of exclusionary fences [see *Updates* 4(2):2-6; 4(3):5; and 5(4):2-9]. I immediately contacted the PMCA to tell them about the Outer Banks bridge roost and the martins dying there.

The William B. Umstead Memorial Bridge is 2.8 miles long and spans the Croatan Sound from east to west between Roanoke Island and the town of Manns Harbor on the mainland of North Carolina. The Purple Martins roost and impact vehicles along a section of the structure within a half mile of the western end. Fishing from the bridge within the roost area also results in martin deaths. The casted fishing line, lure rigs, and hooks tangle in gnarled loops over the cables on which the martins perch, entangling them and causing what is doubtless a

prolonged and agonizing death (see photo on page 14).

Anxious to witness the birds coming in for the night, my husband, Chris Lucash, and I paddled the water beneath the bridge on August 19, 2003, in a canoe, while Ryan Speckman kayaked. We discovered that the birds were not only roosting on the telephone cables running the entire length of the bridge, but also on every other

available surface including the cement pilings and metal support beams. There were possibly 50,000 to 100,000 martins, with an unknown number of deaths occurring

“... we watched, horrified, while the van ahead of us drove full steam forward into a swirling wall of martins, seemingly unaware of the dead and maimed creatures it left in its wake.”

for approximately 6 to 8 weeks in late summer. No one has ever done a formal count of annual martin mortality on the bridge, but whenever I cross (at a 'fast' 30-40 miles per hour about once a week) I count consistently between 30 and 75 dead martins throughout the season. Of course this does not include those birds whose impact

caused their bodies to be thrown into the water, or scavenging by gulls or crows (who also get hit by cars while braving a meal). Audubon's "Important Bird Areas" director, Walker Golder, informed me that he had counted "100 dead martins" while crossing the bridge one day.

[Roost numbers rise and fall with the season, but if you conservatively assume that an average of 50 martins die on this bridge per day for 8 weeks each summer, then upwards of 2800 martins per season could be getting killed there annually.]

The PMCA found a report of Purple Martins roosting on the Umstead Bridge as far back as twenty years ago. They also supplied me with references from the 1940s of a bridge roost (and reported martin deaths by vehicles) over the nearby Albemarle Sound. The Croatan and Albemarle sounds connect to one another and their bridges are approximately 40 miles apart. Although there are no birds gathering there now, it suggests that this roost may have moved from its previous location over the Albemarle to the current Croatan Sound site when the Umstead Bridge was built there in the 1970s. Although we cannot be certain this is the same historic roost, we do know that bridge-roosting martins have been killed by traffic in the area for almost 60 years! PMCA staff and I all hoped to see the annual slaughter end.

In mid-May, the PMCA contacted State and Federal wildlife agencies, and private organizations that might be of help in protecting the Umstead martins in 2003. The response was positive. Everyone who was contacted responded to our concerns. Many folks had actually seen the roost themselves and came forward with their own observations about the carnage they had witnessed. The PMCA and I hoped that a monitoring program and protection plan would be undertaken by the Commonwealth of North Carolina. Everyone on the email circuit agreed that the NC Dept. of Transportation should be informed

and involved. Keith Watson, the USFWS migratory bird biologist, told us that the DOT had been contacted about this roost in 2002. In the summer of 2002, Manns Harbor resident Ginger Wise had had her fill of the annual death toll and contacted our State Senator, Mark

Basnight, who put her in touch with the DOT. In August of that year, North Bank Bird Club president, Jeff Lewis and Mrs. Wise, met briefly at the Umstead Bridge with a DOT representative. Unfortunately the meeting took place after the birds had migrated. There were no martins present for the DOT representative to see, just a few carcasses that had survived scavenging and obliteration by vehicle tires.

Meanwhile, the 2003 season was well underway. My husband Chris and I host a colony of twelve pairs

in two houses. When our first nestlings started to approach fledgling stage, I began to worry again about the roost. At the beginning of July, we started getting reports of martins at the bridge. I worried this year's roost would go by again without notice, without monitoring, and worst of all, without protection. Unable to stand the thought of another year of slaughter, and the possibility of our birds dying there, I got on the phone with the PMCA. The PMCA again contacted wildlife officials and the DOT and stressed our concerns. My husband and I took video and photographs to document mortality and roost size. I contacted Ginger Wise who agreed to act as bridge monitor; she would take notes on martin mortality and observe the roost activity as much as possible. Ginger continues to be an enormous help in this effort.

Soon the PMCA got back to me with the good news —

the DOT agreed to take part in a meeting! We would meet at the bridge during the peak of the roost on July 29, 2003. Finally, DOT representatives would be able to observe for themselves the twofold problem of martin mortality and the resulting traffic safety hazard. A summary of the meeting follows:



Alisha Esposito



Alisha Esposito

Top Photo: A fledgling Purple Martin killed on the Umstead Bridge by a passing vehicle. Bottom Photo: One of several dead martins found by the author hanging under the bridge, entangled in monofilament fishing line.

"In attendance at the roost was the NC Wildlife Agency, two representatives from NC DOT, the USFWS, plus North Bank Bird Club members. The roost was AMAZING! There were so many birds, the state non-game biologist, Jenna Begier, estimated there were 'many tens of thousands.' The wind was gusting and there were low white clouds rolling over making every bird darkly visible against the sky. The birds kept streaming in from every direction. They started arriving at about 7:15 PM and by 8:50 PM they were all down. There were enormous clouds and swirling gusts of martins forming swarms that split and dove across the bridge as they tried to gain a foothold on the cables to perch. So many birds! There was much opportunity to view the birds crossing the bridge — they crossed in small groups numbering in the hundreds, and cars would drive straight into these, splitting the flocks in half. The DOT folks had a chance to see the public safety problem as well because every car that crossed the bridge slowed, sometimes to a crawl, brakelights blazing in a swarm of enveloping birds. A few tractor trailers passed through and one had to stop almost completely. When Chris and I were leaving the bridge we found a dead subadult female on land, on the center lane a full 150 feet from the end of the bridge.

The DOT bridge engineer stated twice that this was 'a MAJOR problem' and he would recommend an exclusion fence. Mary Frazer of DOT will also be recommending a fence. Mary made it pretty clear that Mark Basnight, our state senator, should be called about this. I am going to put in some calls to the North Banks Bird Club to see about circulating petitions. The bridge engineer was concerned about funding for the project and setting precedents for the state through his district; we talked to him about the possibility of outside sources for fund-raising. All this was the most I could hope for. The birds were absolutely impressive. Now we wonder what is next?"

After this meeting, two local papers ran stories on the roost. And while we waited for word on future plans from the DOT, we continued to watch and enjoy the presence of the birds. While most martin landlords must say good-bye to their birds rather suddenly, those of us who live near a pre-migratory flock have the unique and exciting opportunity of enjoying our birds up to the point of migration. Despite the martin deaths, I feel truly satisfied when I witness the Umstead roost, knowing that we have contributed to the number of martins gathering there.

Migration is now underway and all the Purple Martins have gone. We have finally received word from the State of North Carolina regarding their Purple Martin/traffic protection plan for the 2004 season. It is disappointing; the DOT will not be erecting any protective exclusion fencing, but instead a sign, warning drivers to slow down. This will do nothing to protect the birds from traffic impacts because the martins fly into the sides of passing vehicles even when traffic has slowed to just a few miles per hour.

Recently, a new bridge was constructed near the Umstead Bridge to address the problem of traffic increases that are projected to more than double by the year 2020. A traffic increase over a martin roost

such as this does not bode well for the birds, or the traveling public. But those of us who have been involved in this drama for the past six months have not lost hope. We will continue to seek protection for this roost in the form of an exclusion fence. We want to thank the PMCA for its continued and dedicated involvement.

Alisa Esposito is a field biologist working in Red-Cockaded Woodpecker recovery. For her role in bringing to light the problems at the Umstead Bridge martin roost, and working to find a solution, Alisa is the first recipient of a PMCA Conservation Award.

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Alisa Esposito

The Umstead Bridge in North Carolina where thousands of Purple Martins have been killed in the past 30 years after colliding with vehicles.

What's Next at Umstead Bridge?

The PMCA will continue to work with NC DOT and other agencies to resolve the problems at the Umstead Bridge roost. From PMCA experiences and knowledge of other bridge roosts, fencing is the best way to ensure motorist safety, which is NC DOT's primary concern and responsibility, while at the same time having the benefit of protecting the martins as well. Our main priority will be to provide NC DOT with additional information to help persuade them that installing fencing is the best way to resolve the problems at Umstead Bridge.

If, as the project moves along, it seems that letters of support for the proposed fencing are needed, the PMCA will notify landlords through the Update and our website. We will keep everyone informed with an update in the winter issue of the Update.

Roosts can be anything from a wildlife spectacle at a site where martins can safely gather, to a public nuisance, to a deadly gauntlet for the martins to survive, depending on the circumstances at each roost. Mapping roosts is the first step to assessing them and working to ensure that all roost sites are as safe as possible for the martins. We encourage landlords to extend their season by monitoring roosts. Report roosts to the PMCA so we can help find more volunteers to monitor sites throughout the roost season. Before we can work to prevent or halt problems at roosts, we first need to know where those roosts are. Since martin roosts can move or shift, the people best equipped to find them are the local landlords.

Alisa Esposito, *PMCA* Conservation Award Recipient

The *PMCA* is pleased to honor Alisa Esposito with a *PMCA* Conservation Award for her role in bringing to light the problems at the Umstead Bridge. We asked Alisa to tell *Update* readers a bit about herself.

I grew up in the suburbs of Chicago, IL. When I was 17, I moved downtown and got city-life out of my system. Aside from the great restaurants and museums I did not enjoy living in a huge city. I remember feeling compelled to leave the "concrete jungle" every weekend so I could take long walks in the forest preserves of the suburbs. Outside my building in the industrial district of Chicago I hung a bird feeder that fed nothing but pigeons and House Sparrows over the street — at the time I didn't care or know any better — I was just glad to see some life outside the steel bars on the windows!

I traveled to Ft. Lauderdale, FL and stayed with a friend, intending only to dive and snorkel while planning what to do next. I soon noticed an ad in the local paper put out by a wildlife hospital looking for help. I began volunteering there and loved it so thoroughly that I just worked everyday until they gave me a job. My position as a wildlife rehabilitator provided me much experience in aspects of avian medicine, captive care and field identification. I was able to work with all kinds of native birds, including pelagic seabirds, raptors, shorebirds and migratory songbirds. Our goal was to take the injured or sick, make them well again and set them back out. My proudest accomplishment was creating a successful hand-rearing plan for precocial shorebirds. I learned all I could and realized that if I wanted a career working with wildlife, I had better get back to school. So I moved back home to Chicago, worked as a veterinary technician in an avian medical clinic, and started hitting the books.

I had intended on studying Zoology or Wildlife Management, but I transferred in and out of so many schools that by the time I actually got down to graduating I happened to be at a university that only offered a degree in Biology. So I have a BS in Biology.



Alisa Esposito, husband Chris Lucash, and their daughter, Amelie, in their back yard in Columbia, NC. Chris built the T-14 to offer their martins some superior nesting sites for the 2004 season.

But I do hope to go back in a few years to pursue a Masters in Wildlife Science, hopefully with an emphasis in ornithology.

I changed schools several times because I took advantage of opportunities as they came to me. After my first semester at college, my sister and I both enrolled in a summer field trip class that took us to the Great Smoky Mountains National Park in Tennessee. There we met a USFWS biologist who was restoring endangered Red Wolves back to the park. We learned that they were looking for interns so my sister and I applied. We started work there within a couple of weeks and intended to stay for about three months. Instead we fell in love with the mountains and decided to stay and finish up school in Knoxville.

We worked on the wolf project for about a year, radio-tracking wild wolves and looking after the captive animals. Later, I worked part-time as a campground ranger for the Park Service and gave educational slide programs about Red Wolves. Eventually I found out about another amazing opportunity in Puerto Rico, working with an endangered parrot endemic to the island. So I took time off of school again and left for the Caribbean. Working in Puerto Rico was amazing. I loved the people and their culture, as well as the "cotorras" (parrots). I worked primarily in the aviary for the captive breeding program, but also in the field observing wild parrots. My sister graduated and moved to Alaska, eventually becoming a US Forest Service archeologist.

I stayed in Puerto Rico for about 5 months in 1996. I then returned to Tennessee and went back to school, working a little for NPS and the USFWS, as well as for a private organization called The National Foundation to Protect America's Eagles. This foundation was dedicated to public education, captive breeding and release of Bald Eagles, and rehabilitation of injured raptors. I worked with all sorts of birds-of-prey from Golden Eagles to Caracaras, primarily in public education. We put on a free-flight bird-of-prey educational show at Dollywood theme park and spoke to school groups about raptor conservation and biology.

My husband, Chris Lucash, and I moved here to Columbia in 1999. We met when I went to work as an intern on the wolf project — he worked for the USFWS as the lead biologist for the Smokies release site. We transferred to North Carolina when that project was discontinued and Chris continues his work with the USFWS as a wolf biologist here. He had already lived in this area while working on the first wolf release at Alligator River NWR way back in 1987.

Our daughter, Amelie, was born in 2002; she is now 21 months old and a very energetic little girl so we don't have much time to get bored out here! We also have horses, chickens and turkeys, as well as two dogs, a cat and a rescued African Grey parrot to look after — all these animals keep us busy as well. We have a wonderful art center in town where I go to make pottery when I can. We also enjoy the beach in the summer and the abundant wildlife in the area.

After having Amelie, for a while I did not know what to do to get back on my chosen career path. Eventually I discovered a job not 15 minutes from my door that is absolute perfection for me. I work for a private environmental consulting firm helping to manage a unique population of endangered birds. Red-cockaded Woodpeckers (RCWs) are wonderful to work for — they are non-migratory, cooperative breeders that live in small social groups; they are also the only woodpecker that excavates their cavities in live pine trees. RCWs are endangered because of habitat loss, primarily intensive logging practices. All the birds on the preserve are federally banded as well as being color-banded for group and individual identification. During the breeding season we look for active trees (live pines exude resin from wells that the birds peck out; this sap flows down the tree forming thick, sticky trails that keep predators out of nests and make it easier for biologists to determine which trees the birds are using). We locate nests, band nestlings and adults, keep track of group interaction and individual dispersal, as well as manage the habitat for the birds. I am amazed that a position in avian conservation was available to me here. This is a job I would have traveled many miles to do and here it was waiting for me to discover it!

I had no experience with martins whatsoever until we moved to our house in Columbia. Outside in the yard there happened to be a small 12-room martin house that the previous homeowners had erected. That first spring we did not see any birds fly over the house at all — no one showed up despite the fact that we offered a great location, a pond and a freshly painted house. The following year an early arrival showed up in late February. The house had not been prepared so Chris stayed home from work the following day to take it down and get it cleaned, painted and ready for inspection. That male stayed and eventually enticed a mate to stay with him. A few weeks later a nor'easter blew in and it stayed cold and rainy for over a week. At the time we knew nothing about how to intervene and, sadly, our first birds died huddled in their compartment. The following year, 2001, would be our first truly successful year. We had a houseful of birds, although we knew nothing of the PMCA or their recommendations regarding nest checks. We were hands-off landlords and

were quite afraid to disturb our birds. We experienced the ugly maliciousness of starlings for the first time and Chris did not hesitate to get out his pellet gun as a remedy. The following year we erected another, albeit inadequate house and increased the number of breeding pairs at our colony.

This year, after our birds began egg-laying, I learned about the PMCA through a friend and I read his stack of old Updates from cover to cover. I was amazed at the level of landlord participation advocated by the PMCA and the research they had to back up their recommendations. I was remorseful in the face of our ignorance. We immediately took up nest checks, collecting data for Project Martinwatch and felt generally guilty about the inadequate housing that our birds were provided with.

In anticipation of the 2004 season Chris rebuilt the old houses with larger compartments. He built a T-14 and we have some natural gourds as well. All our housing can now be lowered for nest checks. We are trapping starlings and sparrows and using a pellet gun to control them. We have big plans for next year's colony and like all martin landlords, we look forward tremendously to our birds return.

Plans for the Future: I have been inspired by the staff at the PMCA and its members for their activism on behalf of martins. I hope that I can bring about change in the world that surrounds me as well — in the small local world that is now my home. We had been thinking of moving from Columbia, but have de-

ecided to remain here for many reasons — Purple Martins being a very important one. When we decided to stay, I felt great relief knowing that we would not have to entrust our colony to someone else. And I looked forward to focusing on martin projects that I am excited about working on, as well as continuing to work locally to ensure that a fence gets installed at the Umstead Bridge.

I have spoken to the local USFWS office about beginning a "Community Purple Martin Project" — where local folks and school kids can come to participate in nest checks, learn about martin conservation and grow to appreciate these wonderful birds. 2004 should be our first season for that project. I look forward to recruiting more potential martin landlords in our area by presenting PMCA educational slide programs as well; I gave my first presentation last week.

My most substantial Purple Martin advocacy goal, aside from helping to get that fencing erected at the bridge roost, will be to establish an annual martin festival for landlords, birders and tourists of the Outer Banks area. This festival would coincide with the peak of the roost. I would really like to see an eco-tourist influx of birders and martin enthusiasts coming to the festival and visiting the roost. It may be a couple of years before our first event gets off the ground but I believe it is a long-term goal well worth striving for. This bridge roost is a natural wonder and a marvel to witness. Unfortunately, many local folks have no idea that martins are dying at the Umstead Bridge roost, and if they have seen dead birds on the bridge they have no idea what type of birds they are. I am truly saddened (and frustrated) by this and want nothing more than to see this roost become a source of pride for the people who call the Outer Banks home. 