

# Wingbeats



## CHIMNEY SWIFT MIGRATION STORIES

In the summer of 1840, John James Audubon, who was living in Louisville, Ky., was alerted to a large number of birds roosting in a large sycamore tree. They turned out to be chimney swifts, which, at that time, were called chimney swallows.

Because chimney swallows disappeared in the winter, they were commonly believed to hibernate — even to burrow into the mud like frogs.

Audubon wrote:

*Next morning I rose early enough to reach the place long before the least appearance of daylight, and placed my head against the tree. ... Suddenly I thought the great tree was giving way, and coming down upon me. The Swallows were now pouring out in a black continued stream. I ran back to my post, and listened in amazement to the noise within, which I could compare to nothing else than the sound of a large wheel revolving under a powerful stream. It was yet dusky, so I could hardly see the hour on my watch, but I estimated the time which they took in getting out at more than thirty minutes.*

The next day, more determined than ever, he hired a woodcutter who axed a hole into the base of the sycamore. Then Audubon and his hunting buddy visited the tree at night with a dark lantern — a lantern with doors that could be closed to hide its light. Cautiously they removed the boards that covered the hole. Audubon leading, they “scrambled up the sides of the mass of exuviae,” which must have crawled with beetles and other scavengers.

He calculated the interior surface area of the tree to be 375 square feet. If a bird covered a space of 3 by 1 ½ inches, which Audubon thought was “more than enough,” each square foot would contain 32 birds. “The number of Swallows, therefore, that roosted in this single tree was 9000.”

Continuing his investigation, Audubon examined the hollow sycamore on Aug. 2 and concluded that it still sheltered about the same number of birds as before. After that he checked the tree daily.

“[On] the 13th of August, not more than two or three hundred came there to roost.” On the

18th he saw not one bird near the tree but “a few scattered individuals ... passing [overhead], as if moving southward.” One night in September he crawled back inside the tree and found it empty.

In May the following year, he noticed swallows returning to the tree to roost. And this is really when folks began to realize that these birds did not hibernate but, rather, migrated out of the area after the breeding was over.

By now you are all familiar with much of the chimney swift story and our efforts to build a roost tower — a kind of a brick sycamore. The roosting phenomenon is a critical, pre-migratory aspect of the birds’ annual life cycle.

We really don’t know much about the details: Who initiates a flock or is a “flock leader”? What is the flock composition? Does that composition change as the summer progresses? How do birds arriving from farther north locate a roost site?

We do know that many swifts are migrating south throughout September, staging at various locations along the way. They are destined for the Amazon basin. Based on historic specimens and more additional reliable observations, we know that some birds migrate over the Caribbean Sea and along the eastern coast of Central America in early autumn.

Later, some arrive on the west coast of South America in November — particularly Peru. They remain there for a month or more, then depart. They are later seen in eastern Peru and western Brazil, which is part of the Amazon basin region.

Arthur Cleveland Bent compiled and edited the comprehensive Life Histories of North American Birds from 1919 to 1968. He notes:

*Further insight into the fall migration of the chimney swift is provided by the consideration of a few of the several hundred banding records that have been accumulated. One banded at Lexington, Mo., on September 23 was recaptured at Baton Rouge, La., on September 27; one banded at Newark, Ohio, on September 20 was retaken at Nashville, Tenn., on September 27; while a third, banded on August 23 at Kents Island, New Brunswick, was retrapped at Opelika, Ala., on September 20. A swift banded at 5: 30 a. m. on September 22 at Glasgow, Ky., was taken that*

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## Fall 2012

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mental stewardship; to conserve and  
and Earth’s biological diversity.

## FLEDGLING LEDGE

Nightjars, including whip-poor-wills, chuckwill's widows and common night-hawks, are some of our most bizarre and mysterious birds. Their nocturnal habits, long migrations, and cryptic colors make it difficult for biologists to fully understand their habitats and populations.

Ten young naturalists helped recently by joining a nationwide citizen science survey through the Center for Conservation Biology. This required a nature convoy by moonlight one very hot summer night, June 28, 8:30 - 11:30 p.m.

We met at Pelican's SnoBalls in Apex for a briefing on the scientific protocol while enjoying ice cream and dill pickle-flavored snow cones. From there we drove along the east side of Jordan Lake in Chatham County.

We stopped every mile to get out and listen for the cooing calls of nightjars. A chorus of katydids, green frogs and eastern spadefoot toads filled the humid air — but no nightjars. At times, we wondered if we heard whip-poor-wills deep in the distance but then dismissed it as our ears playing tricks. At one stop we thought we spooked a gaggle of geese, only to discover young adults enjoying a nighttime swim.

For our final survey stop, we pulled onto a gravel drive between two straw fields flanked by

forest. We listened intently in all directions for a full six minutes as the protocol required. Alas, we'd been shut out. As we gathered together for one final debrief, I tried to minimize the group's disappointment.

"Our result of no birds is just as important to the conservation study as if we'd heard a dozen," I said reassuringly. "Remember that it's the combined data in all 48 states over several decades that allows scientists to ..."

*chuck will's widow*

*chuck will's widow*

*chuck will's widow*

"Did you hear that?" a young naturalist shouted. "There's a second one over there," shouted another. "Can we count them in the study?"

We could not count these latecomers in our official results, but we could make a side note of their late appearance. It was a fitting end to an unusual evening — perhaps a commentary on the shadowy nature of nightjars!

Wake Audubon's Young Naturalist Club is a group of 12- to 18-year-olds, their families, and volunteers who join together for monthly wildlife excursions and service projects across the state. Learn more at [www.wakeaudubon.org](http://www.wakeaudubon.org).

*Sean Higgins*

## NATURE NOTES BugFest!

Every year Wake Audubon participates in the Museum of Natural Sciences' BugFest — an incredibly popular September celebration of arthropods held in downtown Raleigh.

We bring our message of conservation and discuss our many projects with thousands of citizens from Wake County and beyond. This year we will have information on chimney swifts, our Sunday walks to observe the swifts roosting downtown, and our "buy a brick" campaign to build a roosting chimney. We also have a chimney swift-themed game, a chimney swift toss (into a chimney, of course), and a game of matching birds with the insects they eat.

Our popular mealworm necklaces will also be back. Eight volunteers spent a fun evening at Beth Hawkins's house putting these necklaces together (minus the mealworms). During BugFest kids will be able to scoop out some mealworms and add them to their necklace.

They will receive a handout on how to care for

the mealworms so they can watch them turn into beetles. Many people feed mealworms to birds, and Eastern bluebirds are particularly attracted to mealworms.

Our main goal at BugFest is educational, but we also sell the mealworm necklaces and other merchandise, and, given the huge attendance, this is a significant fundraiser for us. Our display is right outside the mall entrance to the museum.

This year's BugFest will be Saturday, Sept. 15, 9:00 a.m. to 7:00 p.m. We have had a tremendous response from our members and have all of our shifts filled. Come look for us, bring your family and friends, and get yourself a mealworm necklace.

The Wake Audubon booth has enough volunteers, but the Museum of Natural Sciences needs more volunteers for the booths inside. Please contact Tullie Johnson, volunteer coordinator at the museum, to sign up: [tullie.johnson@ncdenr.gov](mailto:tullie.johnson@ncdenr.gov).

Life cycle of a flour beetle,  
*Tribolium* sp.:  
[http://entnemdept.ufl.edu/  
creatures/urban/beetles/red\\_  
flour\\_06.htm](http://entnemdept.ufl.edu/creatures/urban/beetles/red_flour_06.htm)

## BONUS FIELD TRIPS Southeastern Texas

Wake Audubon has partnered with Ecoquest Travel, one of our sponsors, on a trip to southeastern Texas. Wake Audubon member Dave Davenport, owner of Ecoquest Travel, and John Gerwin are co-leaders of this trip. Both are exceptionally knowledgeable field biologists/birders.

We will go to the best spots and see all that is possible to see. We will also eat well. The trip is scheduled for Nov. 29 - Dec. 6. The itinerary includes lots of time at the Laguna Atascosa National Wildlife Refuge, a survey of the ponds and fields along the Rio Grande near Brownsville, the Sabal Palm Grove Audubon Sanctuary, the

Santa Ana NWR, and both the Bentsen-Rio Grande Valley and Falcon state parks.

We will visit all of the key habitats in this area in hopes of finding these special birds along with many other bird species and perhaps a few mammals as well.

An optional trip extension is to see the whooping cranes at the Aransas NWR, Dec. 6 - 9.

For a complete itinerary and pricing, contact EcoQuest Travel directly at 919-963-3038. Ask for information on the Texas trip with Wake Audubon.

The Rio Grande Valley near Brownsville, Texas, is home to many bird species that occur nowhere else in the U.S., including plain chachalaca, hook-billed kite, red-billed pigeon, red-crowned parrot, buff-bellied hummingbird, green kingfisher, golden-fronted woodpecker, green jay, Tamaulipas crow, great kiskadee, long-billed thrasher, and both Altamira and Audubon's orioles.

## Pine Island, Outer Banks

Wake Audubon will visit the Donal C. O'Brien, Jr. Audubon Sanctuary and Center at Pine Island on the NC Outer Banks Friday, Jan. 4 - Sunday, Jan. 6.

The Outer Banks is a fabulous place to bird, especially in the winter. Waterfowl and shorebirds will be there in abundance. Audubon NC manages the sanctuary and has invited the North Carolina chapters to get a preview look at the site. They are just beginning the design phase on upgrades

to Pine Island, which was a private hunting lodge for most of the 1900s.

We will arrive Friday night, with a welcome dinner for those who can be there by 7:00 p.m. Saturday and most of Sunday will be spent exploring the trails at the sanctuary. We may do some off-site excursions as well.

If you are interested in this trip, please contact the trip organizer, Gerry Luginbuhl, at gerryluginbuhl@gmail.com or at 919-816-9967.

See pictures and a full story on Pine Island at: <http://nc.audubon.org/donal-c-o-brien-jr-audubon-sanctuary-and-center-pine-island>.

## VOLUNTEER OPPORTUNITIES

Wake Audubon needs its members to volunteer to keep our programs running and keep our organization vibrant. Please indicate your willingness to help below. Your name will be added to our list of able volunteers, and you will be contacted by event coordinators, as needed.

Contact Anita Kuehne, Volunteer Coordinator, ats9397@yahoo.com, or return this form by mail to: Wake Audubon Society, PO Box 12452, Raleigh, NC 27605.

Name : \_\_\_\_\_

Email address: \_\_\_\_\_

Phone number: \_\_\_\_\_

- \_\_\_\_\_ Membership- welcome new members, circulate calendars, promotion at events
- \_\_\_\_\_ Lead field trips or programs with schools - any level of experience, age groups
- \_\_\_\_\_ Assist at public events, such as BugFest, Birdhouse Competition, Bird Migration Day.
- \_\_\_\_\_ Publications: assist with newsletter, writing articles or help label mailings
- \_\_\_\_\_ Assist with conservation projects: Anderson Point "work days", Streamwatch, chimney swift roost counts, etc
- \_\_\_\_\_ Fundraising: assist with budgeting and fundraising projects: writing grants, bird seed sale, Buy a Brick for Swifts campaign, etc.

If you have suggestions for event participation, programs, or field trips, please let us know!

Contact your senators and representatives to support the National Park Service's Off-Road Vehicle Management Plan.

Senator Kay Hagan  
<http://www.hagan.senate.gov/contact/>  
310 New Bern Avenue  
Raleigh, NC 27601  
919-856-4630

Senator Richard Burr  
<http://burr.senate.gov/public/index.cfm?FuseAction=Contact.Home>  
217 Russell Senate Office Bldg.  
Washington, DC 20510  
202-224-3154

Rep. Walter Jones  
<https://jones.house.gov/contact-me>  
2333 Rayburn HOB  
Washington, DC 20515  
202-225-3415

Rep. David Price  
[https://forms.house.gov/price/webforms/contact\\_form.shtml](https://forms.house.gov/price/webforms/contact_form.shtml)  
5400 Trinity Road, #205  
Raleigh, NC 27607  
919-859-5999

Rep. Renee Ellmers  
<https://ellmersforms.house.gov/contact-form>  
1533 Longworth HOB  
Washington, DC 20515  
202-225-4531

## ADVOCACY Protecting Nesting Shorebirds

Cape Hatteras National Seashore is a national treasure that offers recreation and pleasure to more than 2 million visitors each year, in the process creating seasonal and year-round jobs for many people as well as significant tax revenue for North Carolina.

As with any publicly managed land resource, CHNS serves a diversity of users and consumers whose needs the National Park Service must sort, weigh, and balance. Some uses in limited areas are temporarily incompatible for a short time each year. For example, certain endangered species of birds and sea turtles nest on or cross the beaches to get back to the sea after hatching. A conflict during a brief time each year then exists between those who want unlimited driving access to the entire beach and the safety of the vulnerable species that nest on or cross part of it and need protection from vehicular traffic.

To accommodate the diverse uses, the NPS conducted and reviewed a number of scientific and economic studies, held many public meetings, solicited public comments over a four-year period, and tested limited vehicular access in order to resolve the conflict. These efforts culminated in a plan to restrict driving for a brief interval each year on specified areas of the beach where rare and endangered birds and turtles nest.

It seemed to be a reasonable compromise. The birds would not be disturbed in their nests,

and once their offspring were capable of flight and the baby turtles had returned to the sea from their nests in the dunes, drivers would once more have access.

Unfortunately, that did not satisfy some advocates of unrestricted vehicular access. They appealed to Congressman Walter Jones and U.S. Senators Richard Burr and Kay Hagan. Rep.



*Piping Plover*

Jones was able to get a bill introduced in the House that would undo the Park Service plan. Senator Burr has introduced a similar bill in the Senate. These bills have temporarily stalled, but we need to let our congressional representatives know that the NPS review was fair and comprehensive and should not be overturned.

Those of us who support protecting the natural diversity of species on the beach want to see the NPS plan implemented. We do not want the beach turned into a wilderness area where no vehicles would be allowed nor do we want it to become a track and parking lot for cars and trucks. We believe the Park Service plan strikes a fair balance and would like to see it upheld.

*John J. Little*

## Protecting Wildlife from Feral Cats

This June, the Wake County Commissioners approved a new policy regarding feral cats. The new policy will allow citizens and groups to trap, neuter, vaccinate (for rabies), and release the cats, replacing the old policy, which called for the county to trap and euthanize them.

Wake Audubon spoke against the new policy because the release of feral cats means that they are still capable of killing birds and many other small wild animals, spreading diseases other than rabies, and creating colonies.

There are an estimated 40 million feral cats in the U.S. The impact on native wildlife is extraordinary. On average, each feral cat will kill between 100 and 1,000 prey animals. Most of these are small mammals, but lizards, frogs, toads, small snakes, and other animals are also targeted. Birds average 20%-30% of the kill.

See <http://www.abcbirds.org/abcprograms/policy/cats/index.html> for more information on the impact outdoor cats have on wildlife.

The TNVR advocates realize the destructive nature of feral cats to wildlife but believe that TNVR ultimately controls cat populations better than trapping and euthanizing. The evidence we have found is that while under some circumstances the TNVR policy diminishes or stabilizes the feral cat population, in many other locations it does not. We are particularly concerned about the presence of feral cat colonies in nature parks.

The county believes that money will be saved with this policy. We will have to see how it works, although there do not appear to be any plans to monitor effectiveness.

## BUY A BRICK, SAVE A SWIFT Fundraising Update

In the fall of 2011 Wake Audubon partnered with the Friends of the NC Museum of Natural Sciences to raise funds to install a permanent chimney swift research roost tower at the museum's Prairie Ridge facility.

This money will fund a 30-foot tall roost chimney flanked by a viewing garden designed by local architect Frank Harmon. The roost tower will provide researchers with the opportunity to study roosting swifts and will include technology to broadcast live video of swifts coming to roost.

Our fundraising goal is \$35,000, part of which will be raised through the chapter's "Buy a Brick for Swifts" campaign, which gives you an opportunity to buy an inscribed brick for the viewing patio. As of June 1, we had received \$5,205 from the sale of 68 bricks. In addition, the Carolina Bird Club has awarded the chapter \$4,000 for the project. Our hope is to install the roost chimney by the fall of 2013, so our fundraising drive is set to accelerate.

We kicked off our next phase of fundraising during Migration Week, Aug. 20-24, when we included chimney swifts as a topic of discussion during presentations focused at the Daily Planet theater in the museum's Nature Research Center. The museum and friends' fundraising team is helping by soliciting corporate donations and working with us as we apply for additional grant money.

Wake Audubon will continue to collect donations by selling inscribed bricks for the viewing patio. This is your chance to show your commitment to birds — especially swifts — and to permanently include your family's name, to honor someone, or simply to add an inspiring quote on the viewing patio. You can find a link for the "Buy a Brick for Swifts" campaign on the Wake Audubon website at [http://www.wakeaudubon.org/forms/CSwift\\_Brochure\\_sm.pdf](http://www.wakeaudubon.org/forms/CSwift_Brochure_sm.pdf), or contact John Connors at [john.connors@ncdenr.gov](mailto:john.connors@ncdenr.gov) for more details.

Beginning in September, we will offer our Sunday in September with Swifts series of guided walks in downtown Raleigh to view swifts coming to roost. These will meet every Sunday evening at 6 pm in front of the NC Museum of Natural Sciences' Nature Research Center, under the big globe.



**FEATHERED FACTS**  
Swifts are strong-flying birds. The common swift (*Apus apus*) of Europe can power

itself to a speed of 69.3 mph (111.6 kph), flying horizontally and even upward. This was documented using high speed video technology a few years ago. These birds normally fly about 25 mph, but the birds reach top speed during mating bouts. Other birds, such as peregrine falcons, fly faster while diving in a stoop, but the swift is the fastest bird accurately recorded flying horizontally and under its own power (no help from gravity).



*continued from Page 1*

*same evening in a chimney at Nashville, Tenn., 90 miles from the point of banding. Another record, which seems to indicate the direction of the movement along the Gulf coast, is of a bird banded at Sanford, Fla., on August 9 and found with a broken wing near Tallulah, La., on September 25.*

Be sure to join us for one of our Sunday with Swifts evening walks, hosted throughout September, when we will talk more about these "flying cigars," and walk a few blocks to observe their pre-migratory roosting behavior at a nearby chimney.

*John Gerwin*

## FALL FUNDRAISER

We are fortunate that one of our members and active volunteers has donated some beautiful hand-painted tree ornaments to Wake Audubon.

We will be selling these ornaments at our monthly meetings, starting September 11 and continuing through December or until they are all sold, whichever comes first.

They are \$25 each, and each one depicts a different bird with appropriate background flora.

Please bring cash or a check to the meeting if you wish to buy an ornament.





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P.O. Box 12452  
Raleigh, NC 27605

[www.wakeaudubon.org](http://www.wakeaudubon.org)

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## Calendar of Events

### **Sept. 2, 9, 16, 23, and 30: Field Trips, Chimney Swift Roost Visits, locations TBA**

Meet at 6 p.m. at the Wilmington/Jones street parking lot near the NC Museum of Natural Sciences, then stroll downtown to witness the spectacle of thousands of chimney swifts coming to roost. Leader: John Connors, [john.connors@ncdenr.gov](mailto:john.connors@ncdenr.gov), 919-733-7450 ext. 602.

### **Sept. 11: Monthly Meeting, *Aerodynamics of Animal Flight***

How do animals produce and control the complex movements necessary for flight? Join Prof. Ty Hedrick for a look at flight mechanisms in insects, birds, and bats.

### **Sept. 15: Bugfest!**

Take a family-friendly look at the world of bugs. 9:00 a.m. to 7:00 p.m. NC Museum of Natural Sciences.

### **Sept. 22: Sunset Birding at Pope's Lake**

Enjoy a heron and anhinga roosting site in a member's backyard! See [www.wakeaudubon.org/calendar](http://www.wakeaudubon.org/calendar) for details.

### **Oct. 9: Monthly Meeting, *Freshwater Mussel Ecology***

Explore the ecology and plight of freshwater mussels with a U.S. Fish and Wildlife Service biologist.

### **Nov. 13 Monthly Meeting, *Derelict Crab Pots: The Lost Traps***

Lost or abandoned crab pots continually trap and kill countless animals on our coast. Andy Wood, Education Director for Audubon North

Carolina, focuses on this problem, especially as it affects terrapins.

### **Nov. 17-18: Field Trip, *Alligator River National Wildlife Refuge***

A two-day, one-night exploration of the ARNWR, in eastern NC. Leaders: Jerry Reynolds, Jeff Beane. Cosponsored by the NC Museum of Natural Sciences. Register with Debbie Huston: [debbie.huston@ncdenr.gov](mailto:debbie.huston@ncdenr.gov), 919-733-7450, ext. 555.

### **Nov. 29 - Dec. 6: Field Trip: *Southeastern Texas***

See page 3 of this newsletter for details. Optional extension to see whooping cranes at the Aransas NWR, Dec. 6 - 9.

### **Dec. 11: Monthly Meeting, *The NC Triassic Revolution: New Discoveries in the NC Red Beds***

Vince Schneider, paleontology curator at the NC Museum of Natural Sciences, offers a look at some of the spectacular creatures that lived in what is now NC during Triassic times.

### **Dec. 15: Field Trip, *113th Annual Christmas Bird Count***

Join the longest-running citizen-science data-gathering project in the world. Leaders: John Connors, [john.connors@ncdenr.gov](mailto:john.connors@ncdenr.gov), 919-733-7450 ext. 602; John Gerwin, [jgerwin@wakeaudubon.org](mailto:jgerwin@wakeaudubon.org), 919-854-7791.

### **Jan. 4 - 6: Field Trip: *Pine Island, NC***

See page 3 of this newsletter for details.

Wake Audubon Society meets the second Tuesday of every month at 7:30 p.m. at the NC Museum of Natural Sciences, 11 W. Jones St., Raleigh.

Free parking is available in the lot at Wilmington and Jones streets, one block from the museum. Directions are available on the museum's website at [www.naturalsciences.org/visinfo/index.html](http://www.naturalsciences.org/visinfo/index.html).

All meetings are free and open to the public. Check for schedule changes and other events at [www.wakeaudubon.org](http://www.wakeaudubon.org).