The Yellowthroat

Voice of the

Oconee Rivers Audubon Society

March 2017 Vol. 28, No. 3

Next Meeting:
Thursday, March 2, 7:00 p.m.
Sandy Creek Nature Center in Athens

For the 7:00 p.m. presentation:

Project Safe Flight Atlanta

Adam Betuel, conservation director at the Atlanta Audubon Society, will discuss the conservation initiatives he and his colleagues are working on in Atlanta, primarily focusing on Project Safe Flight Atlanta (PSFA). PSFA is a program focused on the ever expanding issue of bird-building collisions.

Avian mortality caused by collisions with buildings is the third leading cause of bird death in the United States, behind habitat loss and cat predation. As our society continues to urbanize and as more studies focus on complete life cycle conservation, how birds can safely traverse our cities is important. Betuel will describe what he is doing in Atlanta to better understand this issue locally, how he hopes to make Atlanta a more bird-friendly city, and ways in which you can make your home safer for birds.

Meetings are held…the first Thursday of the month at 7:00 p.m. To get to the Nature Center, take Highway 441, exit 12, off the north side of the perimeter, go north on 441 approximately one mile and turn left at the Sandy Creek Nature Center sign displaying this logo:

SANDY CREEK
Nature Center

Go left at the end of this short road. The Education & Visitor Center building is a short way down the road on your right.

Spring Bird Walks – Think Spring!

Bird walks are from **8 a.m.-11a.m. or noon**. However, attendees may leave early. Please dress for the weather, wear practical shoes, hats and bring insect repellent and snacks/water as desired. (Also, check ORAS announcements and website for any last minute changes to this schedule).

If you have other questions please contact Ed Maioriello at: fieldtrip@oconeeriversaudubon.org

- Mar. 25: **State Botanical Garden (Day Chapel)**
- Apr. 01: **Sandy Creek Park**
- Apr. 08: **Lake Herrick/Oconee Forest Park**
- Apr. 09: **Sandy Creek Nature Center (SCNC)**
- Apr. 15: **Whitehall (S.Milledge & Whitehall Rd)***
- Apr. 23: **State Botanical Garden (Day Chapel)**
- Apr. 29: **SCP-Cook's Trail (clean-up)**
- Apr. 30: **ACC Landfill**
- May 07: **Lotsanotty (Jackson County)**

*(Attendees for the Whitehall walk need to be right on time).

Spring Field Trips (out of town) *

Apr. 22 6:00 a.m. Kennesaw Mountain
May 06 7:00 a.m. Charlie Elliott Wildlife Center

* Please check listserv announcements for any late changes.

Range Shifts and Migratory Songbirds in the Southern Appalachians *summary of the February meeting by Liz Conroy*

Thanks to Ryan Chitwood and Sam Merker for their talk on "Range Shifts and Migratory Songbirds in the Southern Appalachians" on February 2. They are master's students at UGA's Warnell School of Forestry and Natural Resources.

They discussed changes in ranges of several species. For example, the Eurasian Collared Dove—an invasive species first introduced in Florida—has expanded its range from southern U.S. into Canada. The Evening Grosbeak has shifted its range poleward (north) and into higher elevations. Climate change is the main factor and currently at least half of all bird species are at risk of extinction.

Some implications of range shifting include organisms at the "trailing edge" or "warm edge" of a range being left behind the larger population and becoming isolated or extirpated. Birds showing population declines at the southern edge are the Black-throated Blue, Magnolia, Canada, Hooded Warblers and the Blue Vireo.

Abiotic factors influencing range shift include: precipitation, temperature and available nutrients. Biotic factors include: food, predators, allee effects and competition.

Merker described his research as involving precipitation and temperature at different elevations as well as competition. His main objectives are to determine if competition is important when forecasting the range shift of a species, and to determine if focus should be on abiotic or biotic factors.

He noted that interference competition was easier to measure while resource competition is difficult to measure in birds. Aggression has been used as an indicator for interference competition. At the study site in Coweeta, N.C. Canada Warblers have been leaving the area while Hooded Warblers are persisting. Are the former being pushed out by the latter?

Decoys were used in aggression trials. A Hooded Warbler attacked a Hooded Warbler decoy but did not bother other decoys. For the most part, the birds didn't seem to care. Perhaps the abiotic factors (temperature or precipitation) are more important. Canada Warblers don't appear to be limited by interference competition from Hooded Warblers, however, the species do appear to segregate by elevation.

Chitwood then described his research; he is monitoring long term trends by following the survival and reproductive behavior of individual birds. He defined survival as simply being able to make it to the next year. Recruitment means the number of birds that are brought into the breeding population in the area.

Chitwood posed these questions: How has Black-throated Blue Warblers population density changed in our time at the warm edge of its southern range? How has survival and recruitment contributed to fluctuation in population density of these birds?

Density results of male warblers per hectare indicated far more birds at high elevations. They seem to be seeking cooler habitats since low elevations show fewer birds and middle elevation sites show a downward trend.

Members of the audience asked questions about the importance of caterpillars as food, timing of food supply and when the birds return in spring, increased snake predation at lower elevations, and how adults lack flexibility in their choice of breeding sites (they return in the spring and breed within 100 meters of where they were the year before).

Message from the President – Learning Their Songs *by Brian Cooke*

Warming weather in March hints at the return of warblers, vireos, hummingbirds, swallows, and some raptors. The soundscape of the Piedmont begins to change. Birders with keen ears will recognize the high-pitched chirping of Osprey in the sky and the loud song of Louisiana Waterthrush along our creeks. It's hard to miss the raspy song of White-eyed Vireos returning to the underbrush. Or the chatter of Chimney Swift amassing in our urban areas.

Some of the birds that return in March will be around all spring and summer, giving us time to learn their songs and commit them to memory. These birds are our Piedmont warm weather soundtrack. As a new birder, however, it can be daunting to learn all of these new birds and their songs, along with the many other migratory birds that briefly visit Athens forests.

As steep as the learning curve may seem, learning bird songs and calls can make a birding trip more enjoyable. Even the best birders sometimes need to reacquaint themselves with songs and calls. Take some time to study up before peak migration to make identification easier in the field. The Cornell Lab of Ornithology recommends the following basic steps for learning bird songs and calls:

1. Watch and listen to singing or calling birds helps commit them to memory.
2. Bird with people who are more experienced (Note: Check out our free Oconee Rivers Audubon Society bird walks!)
3. Listen to recordings before you bird, after a birding trip, while you sleep, before bed, or at work.
4. Create mnemonics for songs and calls that you'll remember.
5. Break the song into smaller pieces. What is the pitch? The rhythm? The repetition?
6. Use phone apps in the field like Larkwire, Chirp! and IKnowBirdSongs.

Take the leap this year. Begin to practice birding by ear!

ORAS Grant Supports Wild Turkey Study *by Ashley Lohr*

Have you ever walked through the woods and stumbled across a female turkey and her poults? Or maybe you've spotted a flock of turkeys foraging in a field while cruising down a country road in the middle of winter? If you're like me, these sightings always elicit feelings of excitement and awe, especially if the sunlight hits those iridescent feathers just right. Regardless of whether or not you've seen this elusive species, the Wild Turkey *(Meleagris gallopavo)* is a common ground-nesting bird. This native species was extirpated, or removed, from most of its historic range due to deforestation and overhunting during the 1920s and 1930s. Fortunately, nationwide reintroduction efforts have restored this secretive species to every state except Alaska. This restoration is considered one of the greatest conservation success stories in the United States.

The Eastern Wild Turkey subspecies *(Meleagris gallopavo silvestris)* is an important game species, especially in Georgia. Funds generated through hunting ultimately support species and habitat conservation as well as rural hunting communities. Despite a high degree of hunter participation in Georgia, the turkey population consists of an estimated 300,000 individuals, placing Georgia within the top six states in terms of turkey abundance. However, perceived population declines across the southeastern United States are concerning, particularly in areas that use prescribed burning regimes. Prescribed fire is a critical component of the pine ecosystems characteristic of Georgia. This management tool not only stimulates the growth of nesting and brood-rearing cover for turkeys but also increases insect abundance, which is the main component of a poult's diet. While prescribed fire is beneficial for these ecosystems, its effect on the Georgia Piedmont turkey population is currently unknown.

Movement patterns, survival, and habitat use of female turkeys during nesting and brood-rearing in managed forest systems are unclear, as is the effect of fire on nest and poult survival. For this reason, the Georgia Department of Natural Resources (GADNR) has partnered with Dr. Michael Chamberlain with UGA's Warnell School of Forestry and Natural Resources to fund research analyzing Wild Turkey ecology and reproduction in the Piedmont region of Georgia.

The grant money received from ORAS has financed the purchase of various tools and will be used to purchase more trail cameras for the turkey trapping season. Currently, 20 female Wild Turkeys have been equipped with µGPS units programmed to record multiple locations per day. Movement models will be used to estimate seasonal areas of use based on daily locations, and logistic regression will be used to determine what habitat components and fire return intervals (the amount of time between burning events in a defined area) females select when nesting and brood-rearing. Managers will ultimately have access to the data collected during this project so they may begin developing informed management objectives and practices.

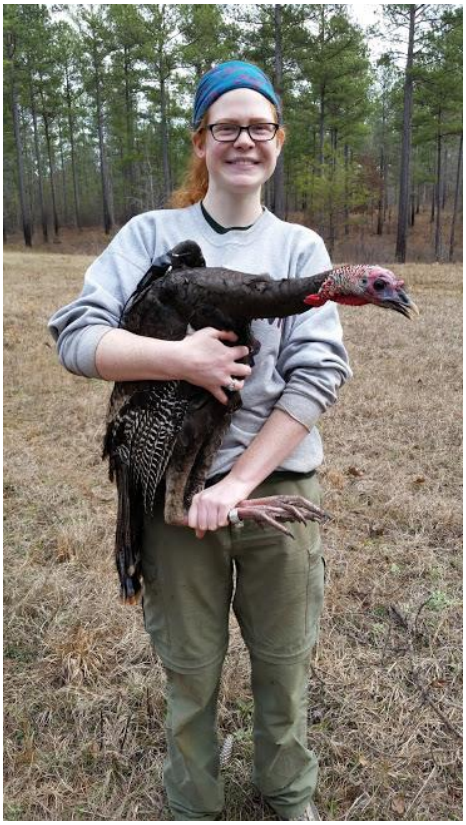

Photo of Ashley Lohr with banded Wild Turkey (jake), by Kelsey McClearn, Putnam County, Georgia—February 22, 2017

ORAS Grant Supports Sandy Creek Nature Center Pollinator Project

by Katie Echardt

Oconee Rivers Audubon Society (ORAS) awarded a $600 grant to Sandy Creek Nature Center (SCNC) to help fund a habitat restoration project at SCNC that will provide native plants to attract birds and pollinators. The project, "The Roadside Pollinator Enhancement Initiative," is part of a larger managed forest program to revitalize an ecologically compromised tract of forest land at SCNC.

The pollinator initiative is part of SCNC's Managed Forest Project which is a major effort to restore a 38-acre tract that has become overcrowded with unhealthy trees and invasive plants. This deterioration has also depleted the area's seed bank of native herbaceous plants. Most of the trees and invasive plants are being removed and will be replaced by desirable native trees, shrubs, flowers and grasses. Through the Pollinator Enhancement Initiative, selective native forb and grass seed will be planted along five acres of roadside and power-cut land at SCNC. The seed will jump-start the growth of herbaceous plants which will hopefully attract many birds, especially ground-nesting birds, as well as other pollinators.

The ORAS grant will reduce the amount of time needed for establishment (of the seed bank) from years to months, creating habitat for species not seen at SCNC for decades.

Elves (not Elvis) and Ants *by Dale Hoyt*

The granite exposures of the Piedmont would seem an inhospitable place for plants, yet there are a few that are adapted to life on these hot, barren surfaces. They grow in "dish gardens," shallow depressions in the rock surface that collect sand, wind-blown soil and moisture.

One of the most colorful is a tiny succulent plant called Elf Orpine (*Diamorpha smallii*). Only 2-3 inches in height, Elf Orpine mass together in large numbers, and their tiny red leaves create a crimson splash on the otherwise bare rock surface. Then, when they bloom in early spring, each plant produces a few small white blossoms. When viewed from a distance the dish garden becomes pink.

Elf Orpine is one of a small number of plant species that appear to be specialized for pollination by ants. Only a few plants use ants as pollinators and for good reason. Ants are predators and their presence discourages other insects from visiting the same flower. Ants also live in nests in the soil where harmful fungi are common. They cover their bodies with secretions that inhibit the germination of fungal spores, but the same substances also prevent pollen from germinating.

Because ants can't fly (the workers have no wings) they would be ineffective as cross-pollinators. To get to another flower on a different plant they have to climb down the stem, find a different plant and climb up its stem. But the masses of Elf Orpine grow close enough that the flowers from different plants intermingle. So ants can scramble from one flower to another without descending to the ground.

The flowers produce only small amounts of nectar, encouraging a hungry ant to find more by moving on. And each flower produces a small amount of pollen, reducing the chance that an ant will stop to groom itself, removing any pollen that it might carry. Similarly, each flower produces only a few seeds, so only a few pollen grains need to be transferred.

Retired UGA professor of botany, Dr. Robert Wyatt has shown that ants found on the dish gardens carry Elf Orpine pollen on their bristles and body parts. This combination of characteristics makes it likely that the Elf Orpine is, in fact, ant pollinated.

You can find Elf Orpine growing in the Rock and Shoals Natural Area in Athens. More extensive dish gardens can be seen at Arabia Mountain in DeKalb County and Panola Mountain State Park in Rockdale County. Blooming usually begins in late March-early April.

Wherever you go, thank an ant for what you see.

Photo of Elf Orpine plants, Arabia Mountain, by Dale Hoyt, DeKalb County, Georgia—March 31, 2006

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The Yellowthroat
Published monthly by the
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