



Biology students monitored bird nesting for evidence of population decline

American naturalist Roger Tory Peterson called birds "indicators of the environment," saying "if they are in trouble, we know we'll soon be" too. That's one reason Dr. Katie Stumpf has her biology students research various aspects of bird life. Studying the health and wellbeing of birds can warn of environmental challenges—some yet unknown—we might face with a changing climate. "Birds are an excellent indicator of ecosystem health since they're able to leave quicker due to their ability to fly," said Mathew Gordon of Thomaston, who graduated in May with a degree in biology and a minor in environmental sciences. "Having a healthy and diverse bird population in any ecosystem promotes other species," he said. "By studying birds, we're able to enhance the overall quality of the ecosystems they call home, which in turn will help other populations of species grow and prosper." Gordon always enjoyed the outdoors and animals. When he met Stumpf and discussed field opportunities in ornithology, he was hooked. He wants to help protect these feathery friends who seem to be everywhere—in every yard—but whose numbers are in decline. A recent study estimated a 30% drop in North American birds since the 1970s. That means a loss of one in four birds—about 500 million—in the last 50 years, according to the National Audubon Society.

"We're losing huge numbers of birds, and that's true of the Southeast, as well," Stumpf said. "Most of the declines are due to habitat loss from human activities like agriculture or urbanization." "Aside from being the cutest things ever, birds are one of the first animals to respond to environmental changes," she said. "They're an indicator species since they're so visible and ever-present. It's pretty obvious when they start to disappear." Since 2019, Stumpf has led research on one of Georgia's most popular birds—the eastern bluebird. Her students published studies on nest site selection and net-avoidance behaviors. Graduate students do research at Panola Mountain State Park in Stockbridge. This year, she localized the research with nine birdhouses Dr. Al Mead helped build. Students in her Field Ornithology class picked site locations across Georgia College's main and West Campus based on what they learned about bird nesting preferences. Students did bi-weekly checks on their assigned birdhouses. Two boxes failed to produce nest eggs due to snakes and other predators. In seven, students were able to watch step-by-step as mother birds—mostly Carolina Wrens and Chickadees—slowly built their nests and laid eggs. Nestlings began hatching at the end of April. Another recent biology graduate, Alexcis Critten of Acworth, posted her birdhouse facing

northwest in a bushy garden at the Newell-Watts house on South Clarke Street. Studies indicate northwest-facing boxes protect bird eggs from intense morning light and extreme summer heat. The location also had plenty of pine straw, trees and a nearby grassy field. Although the wren liked the northwest-facing box—overall results showed north- and east-facing birdhouses produced cooler environments, Gordon said. Students also discovered white painted boxes are cooler inside than darker colors or no color at all. Baby birds were gently taken from nests and tagged for further research. Tagging helps scientists estimate population sizes, see trends over time and learn about migration or movement patterns. Their data was submitted to Cornell University for a citizen's science watch on bird nesting. Information will be used to mitigate the effects of dangerously high temperatures inside Eastern Bluebird nest boxes. Knowing what type of environments to post boxes and in which direction will help nesting success and reproduction rates in the future. Stumpf will use a new grant to purchase WiFi video cameras and temperature loggers to put inside nest boxes this year. This will enable students to see the actual nesting process from an app on their cellphones. "This experience has been extremely rewarding," Gordon said. "Georgia College has certainly broadened my perspectives."



Dr. Katie Stumpf and biology major Haidee Martinez-Perez.



GCSU's Rural Studies Institute executive director lends expertise to CBS

Dr. Veronica Womack, executive director of Georgia College & State University's Rural Studies Institute, was interviewed by CBS Reports and predominantly featured in its documentary "40 Acres and a Mule." The piece aired Thursday, June 22, at 8 and 11 p.m. and is available for viewing at cbsnews.com/land. Womack was interviewed, as a noted scholar of the rural South. The CBS piece explored the ways Black Americans are reconnecting to their agrarian traditions, as well as developing ways to produce generational wealth through agriculture, land acquisition and ownership. While America was residence to a small number of free Black people, most were held in chattel slavery, a system that began while America was a British colony and continued until 1865. Immediately after Emancipation, Black leaders voiced a desire for land and on Jan. 16, 1865, General Sherman signed Field Order 15. It reserved 400,000 confiscated acres of land



Dr. Veronica Womack. for newly emancipated Blacks near the Southeast coastal areas of South Carolina, Georgia and Florida. The goal was to provide 40 acres of land, and in some cases, a U.S. Army mule. This plan became known as "40 acres and a mule." But the promise was short-lived and rescinded, as

President Andrew Johnson revoked Field Order 15 and returned the confiscated land to its owners, immediately after taking office due to President Lincoln's assassination in April of 1865. CBS reporter Skyler Henry—who formerly worked for 41NBC in Macon as multi-skilled journalist—interviewed Womack in May for the documentary. She's quoted as saying "Land has always been about freedom—political freedom, physical freedom, economic freedom." Henry asks, "So, land is power?" Womack responded, "Most definitely." The documentary explores Black agrarian traditions, like the "Pigford" decisions—which resulted from a class action lawsuit against USDA by Black farmers—as well as a history of violence and de facto and de jure discriminatory practices against Black farmers and landowners that resulted in a reported 326 billion dollars of lost Black American acreage.

Did you know? Dr. Kerry Neville, associate professor of English and coordinator for the Masters in Fine Arts and Undergraduate Creative Writing Program, was asked in early May to read her essay "Riverkeeper" on an Irish radio program. The essay was about mental health, hope and her time in Limerick, Ireland. Neville recorded the five-minute and 42-second reading from her home in Milledgeville. It broadcast to 250,000 listeners on the RTÉ Radio 1 Sunday Miscellany program. Its equivalent in the United States would be National Public Radio (NPR). The Shannon River is predominate throughout the essay, stirring up memories of being "alone in aloneness." Neville has written two short story collections, "Remember to Forget Me" and "Necessary Lies." The latter received the G.S. Sharat Chandra Prize in Fiction and was named ForeWord Magazine Short Story Book of the Year. Most recently, Neville was also a runner-up of the Red Hen Press Women's Prose Prize for her memoir, "Disappear, Reappear."

Herpetologist and students tracked snakes this summer on Jekyll Island

Dr. Dominic DeSantis, assistant professor of biology, and 12 students took their snake-sleuthing abilities to the coast this summer to get a better understanding of ways humans affect snake numbers on Jekyll Island. The group collaborated with the Jekyll Island Authority to especially study the movement ecology of Eastern Diamondback Rattlesnakes. Snakes have been individually tracked on the island for more than a decade. But DeSantis was asked to introduce his new technology that records where snakes go, when they strike, what they eat, how often they reproduce and how they interact. The group placed tiny accelerometers on snakes to measure vibrations or changes in motion. It's important to observe rattlesnakes, because entire ecosystems can break down without them.

"Our overarching goal for this research is to understand the movement and foraging behaviors of snakes," DeSantis said. "This includes how ongoing habitat management efforts—such as prescribed burning, brush removal and habitat corridor construction—might alleviate negative effects of human development and activity on the island." Students learned important skills, applying essential and emerging data collection techniques used in wildlife biology and natural resource jobs, like radio telemetry and accelerometry. They were also exposed to the ongoing habitat restoration project at Jekyll Island, which gave students a real-life look at many techniques discussed in class for wildlife management.



Dr. DeSantis holds a rattle snake inside a plastic tube.



What's going on in Bobcat Territory?

Visit frontpage.gcsu.edu/events

Tuesday

Wednesday

Thursday

Friday

Saturday

19 12 p.m. - Constitution Week luncheon discussion on "The End of Affirmative Action & Student Loan Forgiveness" in the Health Sciences Student Commons area. 5 p.m. - Constitution Week Usury Forum on Leadership discussion with the Honorable Peggy Walker, senior judge in Douglas County, Georgia, in Magnolia Ballroom. 7:30 p.m. - "SGP Trio" concert with guest flutist, clarinetist and pianist in Max Noah Rectial Hall.

20 10 a.m. - Constitution Week "Accounting Career Fair and Public Service Jobs" on first floor Atkinson Hall. A "Times Talk" will follow on "Climate & Politics" at noon on second floor of Ina Dillard Russell Library. 6:30 p.m. - Constitution Week Supreme Court Review Panel in the Arts & Sciences Auditorium. 6-8:30 p.m. - GCSU Soccer vs. USC Beaufort at Bobcat Soccer Field on W. Campus.

21 10-11 a.m. - GCSU Wellness is holding CPR training at Wellness & Recreation Center. Registration required. Call 478-445-5932. 12 p.m. - Constitution Week buffet luncheon discussion on "State Legislatures & Federal Elections" in library's Pat Peterson Museum Education room, 211. 6 p.m. - Constitution Week panel discussion on "Time for Changes in the U.S. Supreme Court?" in Peabody Auditorium.

22 2-4 p.m. - Paintings by T. David Downs, "Natural History Recomposed," on exhibit at GCSU Underwood Gallery, 102 Columbia Street. 7:30-9:30 p.m. Observatory open house at Herty Hall.

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