AUBURN UNIVERSITY

College of Forestry, Wildlife & Environment

Crooked Oaks: An Auburn tradition of learning, land and legacy

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Working with Nature for Society's Well-Being

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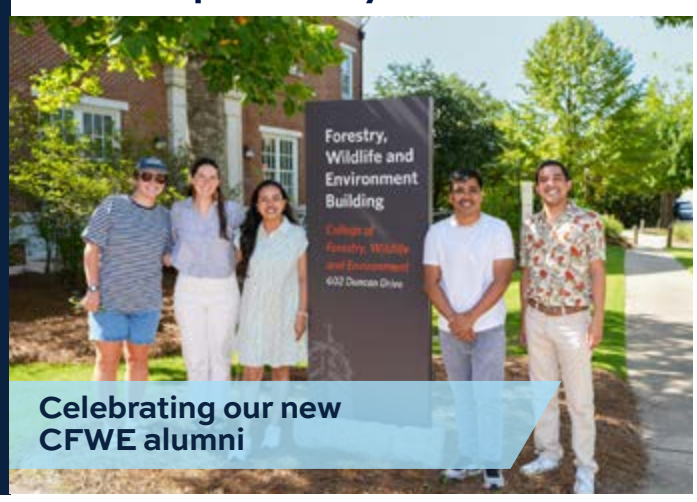
Gaining real-world experience, job training



Understanding wildlife management abroad

On Campus & Beyond

Visit our flickr site to view our photo gallery or cfwe.auburn.edu for more stories.



Celebrating our new CFWE alumni



Achieving milestones in research, graduate studies

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A message from THE DEAN



Dear Alumni and Friends,

As we begin another academic year, I am inspired by the momentum across the College of Forestry, Wildlife and Environment and grateful for the alumni, friends and partners who make our progress possible. This summer, we unveiled our Strategic Plan 2025-2035: *Growing Stronger, Rooted in Tradition.* Aligned with Auburn University's Strategic Plan 2035: *Grounded & Groundbreaking*, this ambitious roadmap builds upon our strengths in teaching, research and extension while positioning the college to become one of the nation's leading natural resources institutions.

That vision is already reflected across our mission. Our students are gaining career-ready skills through internships and innovative hands-on learning, while our faculty and graduate students are advancing research with far-reaching implications. From using drones and satellite technologies to better understand forests and ecosystems to developing AI-driven environmental models, improving southern pine nursery management and exploring the dynamics of greenhouse gases and urban wildlife, our researchers are addressing some of the most consequential natural resource challenges of our time. We are equally proud of our outreach through programs such as Alabama Extension's Professional Logging Manager program and the growing educational and community opportunities at Crooked Oaks.

This issue also gives us an opportunity to celebrate the people whose service and generosity form the foundation of our college. We congratulate Joel Martin and Nina Payne on their well-deserved professional honors, celebrate the establishment of the Bennie Vinson Family Endowed Scholarship and extend our deepest appreciation to Heather Crozier as she concludes more than two decades of extraordinary service to Auburn.

These achievements remind us that our greatest strength is our people. Together, we are honoring the traditions that have shaped our college while embracing new ideas, technologies and partnerships that will define its future. Thank you for your continued engagement and support as we grow stronger together.



Janaki R. R. Alavalapati, Emmett F. Thompson Dean

College unveils its ten-year strategic plan: *Growing Stronger, Rooted in Tradition*

By Jamie Anderson

In alignment with Auburn University's Strategic Plan 2035: *Grounded & Groundbreaking*, the College of Forestry, Wildlife and Environment (CFWE) has unveiled its ambitious Strategic Plan 2025-2035: *Growing Stronger, Rooted in Tradition.* Emphasizing four core goals and the key priorities to actuate the university's three-prong land-grant mission of teaching, research and extension, the 26-page plan will guide the college's operations and programs as it advances to become a top-tier natural resources institution in the country.

Growing Stronger, Rooted in Tradition is centered on four goals designed to advance excellence, innovation and impact across every facet of the college's mission. As its guide, the college will elevate the student experience through rigorous academics, expanded experiential learning and a supportive, engaging environment that prepares students for lifelong success. It will strengthen research and scholarship by investing in areas of distinction, expanding extramural research and increasing the reach and impact of discoveries locally, nationally and globally. Through engagement, extension and outreach, the college will deepen partnerships and deliver practical, innovative solutions to pressing social, economic, technological and environmental challenges. Supporting these efforts, the college will enhance operations, facilities and technology infrastructure to foster continued growth, innovation and excellence in teaching, research and service.

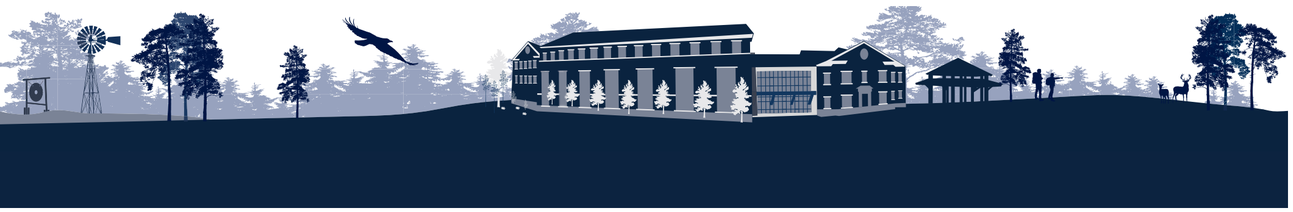
"Our four strategic goals establish an ambitious vision for the future of the college; our actions, performance measures and resources provide the pathway to achieve it," said Janaki Alavalapati, the Emmett F. Thompson Dean of the CFWE.

"By continually measuring our progress, aligning resources with priorities and adapting our approach, we can transform that vision into measurable and lasting impact."
– Dean Alavalapati

Led by the Strategic Planning Committee Chair Todd Steury, *Growing Stronger, Rooted in Tradition* was developed and refined with input from stakeholders, advisors, faculty, staff and students through multiple listening sessions, surveys and analysis. Committee members representing the college's leadership, faculty, staff and graduate students included Wes Anderson, Heather Alexander, Michelle Cole, Jessica Daniel, Paula Davis, Sebastian Gomez Maldonado, Latif Kalin and Carolina Miller.

The Strategic Plan 2025-2035: *Growing Stronger, Rooted in Tradition* is accessible via the college's website at cfwe.auburn.edu.

Visit our website to view online.



College of Forestry, Wildlife & Environment

CFWE NEWS • Summer 2026

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The CFWE newsletter is distributed to alumni and friends of the college. Inquiries and suggestions concerning the newsletter should be directed to the college's Office of Communications and Marketing at the address below.

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Seeing the forest above the trees: The future of natural resources management

By Jamie Anderson



The Auburn Deer Lab conducts a thermal drone survey in Camp Hill, monitoring wildlife as part of research in the College of Forestry, Wildlife and Environment (CFWE) at Auburn University.

Hovering above our forests, plains and waterways, drones give Auburn University researchers far more than a bird's-eye-view. Equipped with technologies such as thermal imagery, sensors and lidar, unmanned aerial systems (UAS) help gather important data about what is occurring in our atmosphere and across the landscape.

Faculty in Auburn's College of Forestry, Wildlife and Environment (CFWE) are using drone technologies in innovative ways to address challenges ranging from forest health, ecosystem monitoring and wildlife management to air quality and industrial emissions.

Zutao Ouyang, an assistant professor of ecosystem modeling in the CFWE, is performing various research studies using drones equipped with specialized sensors to detect and quantify methane emissions from landfills, oil and gas infrastructure, refineries and compressor stations.

"Using the sensor-equipped drones, we're currently capturing detailed measurements of methane emissions from a South Carolina landfill and validating those results against traditional atmospheric monitoring data," said Ouyang. "This work has the potential to enhance how communities and industries monitor and manage greenhouse gas emissions."

Ouyang is also using drone imagery to monitor land use and land cover change, including wetland dynamics, forest loss and recovery, settlement development and changes in vegetation health and productivity.

In forestry and natural resource management, drones provide unprecedented detail about the condition and structure of forest ecosystems. The Geospatial Analytics Lab, led by Lana Narine, associate professor of geospatial analytics, combines drone-based lidar, multispectral imaging and machine learning to map forest structure, identify tree species, estimate biomass and detect forest health threats such as brown spot needle blight with high accuracy.



A lidar-equipped drone rises to start a forest mapping mission.

Narine says UAS technologies are transforming the way people understand, manage and monitor ecosystems by providing unprecedented insights into the structure, composition and health of landscapes.

"Our research advances drone-based approaches that bridge the critical scale gap between traditional field inventories and broad-scale satellite remote sensing, enabling more detailed and timely ecological assessments."
– Lana Narine

Ultimately, these drone-based frameworks generate high-resolution digital models of forest ecosystems that improve ecological understanding, support sustainable management and provide essential data to validate satellite-based monitoring systems.

TECH-EMPOWERED DISCOVERY, STEWARDSHIP AND SERVICE

Richard Cristan, an Extension specialist and the Regions Bank Endowed Associate Professor of Forest Operations in the CFWE, has been using drones for his teaching, research and extension work since 2020.

On campus, Cristan incorporates drones into his course lectures and labs to teach students about their use in forestry and natural resource management. In his role as an Alabama Extension specialist, Cristan regularly gives presentations and demonstrations to forest landowners and agency personnel about drone applications and teaches about the regulations and requirements that guide their use within the U.S.

"As a research tool, drones have been incredibly useful for our team to evaluate hurricane storm damage, assess forestry best management practices and estimate soil erosion risks following timber harvests," said Cristan.

Marissa Jo Daniel, an assistant professor of forest operations, is helping industry to more accurately determine a mill's wood inventory within their wood yards and other storage facilities using various flight techniques equipped with technologies such as photogrammetry software and lidar.

"I am also using sensor-equipped drones to evaluate air quality following site preparation and prescribe fires," said Daniel. "We use the drones to collect emissions data such as particulate matter to determine potential risks in a 24-hour period following a burn."

At its 430-acre research facility, Stephen Ditchkoff's Deer Lab is advancing wildlife science research by testing the effectiveness of using drones to capture thermal imagery for estimating white-tailed deer populations.

"By analyzing the technology's precision and accuracy, the team is helping shape best practices for deer management and population monitoring," said Ditchkoff, the Alumni and William R. and Fay Ireland Distinguished Professor of Wildlife Ecology and Management in the CFWE.

"We're at the cutting-edge of drone use at the Deer Lab and anticipate the knowledge gained and disseminated to landowners, conservation groups and agencies will have long-term impacts for the white-tailed deer hunting industry."
– Stephen Ditchkoff

Across the many research disciplines within the CFWE, Auburn faculty are integrating AI-driven drone technologies to develop next-generation monitoring tools that enhance ecological understanding and support solutions.



Using a drone equipped with thermal imaging software, researchers conduct a thermal drone survey at the Auburn University College of Forestry, Wildlife and Environment Deer Lab.

"Our faculty are transforming how we study and manage natural systems, providing new opportunities to tackle complex environmental challenges," said Janaki Alavalapati, the Emmett F. Thompson Dean of the CFWE. "Their dedication to leveraging these powerful tools is driving innovation across our teaching, research and outreach missions, empowering us to deliver greater value and create lasting impact for students, stakeholders and communities across Alabama and beyond."

Staff Corner

Payne honored with ACF Public Service Award for Excellence in Forestry

By Virginia Johnson



Nina Payne is presented with the Public Service Award for Excellence in Forestry.

The Association of Consulting Foresters (ACF) recently honored Nina Dowling Payne, Southern Forest Nursery Management Cooperative research associate at Auburn University's College of Forestry, Wildlife and Environment (CFWE), as the recipient of the 2026 Public Service Award for Excellence in Forestry. Payne is a CFWE alumna, having earned a Bachelor of Science in Forestry in 1979 and a Master of Natural Resources in 2022.

This national award recognizes public-sector partners whose leadership, innovation and commitment advance the consulting forestry profession; all qualities Payne demonstrates through her work with students and forestry professionals across the region.

The ACF is a professional organization committed to serving independent consulting foresters who manage forests and market forest products for private woodland owners. Representing about 750 members in 37 states, the organization promotes the highest standards of professional practice and stewardship within the forestry profession.

Payne was recognized by the ACF during the 2026 ACF National Conference in Baton Rouge, Louisiana, for her instrumental role in building Auburn's Consulting Forestry course from the ground up and serving as its instructor. Through her leadership, Alabama Chapter ACF members became actively involved in the course, providing students with practical exposure to consulting forestry through real-world experiences and perspectives. She also has worked extensively to connect students with professional development opportunities, including continuing education programs, certifications, networking events and ACF activities, helping prepare them for successful careers in forestry.

As an ACF member, she works closely with consulting foresters across Alabama and the southeastern United States to grow their profession by exposing forestry students to the career field. Students in the class have identified interactions with practicing consulting foresters, many of whom are CFWE alumni, as among the most practical experiences of the academic program. Interest in the Consulting Forestry course garnered national attention for its approach to experiential learning and professional development. Auburn's program is increasingly viewed as a model for consulting forestry education at colleges and universities across the country.

"This class brings together two groups I especially enjoy working with: forestry students and ACF members," Payne said. "While I never expected to become a consulting forester, that experience showed me how the combination of my education, personality and working on my family's timberland came together to make consulting a perfect fit for me. I want to help students have their own 'light bulb moments' when they see how their own backgrounds, interests, education and skills can shape their future. Receiving this award while doing something I love makes the recognition sweeter."

ACF leaders praised her lasting impact, with President Gerald H. Grossman noting her "extraordinary contribution to the future of consulting forestry," and Executive Director Shannon McCabe highlighting her role in bridging students, universities and practicing foresters. Her dedication continues to inspire the next generation of consulting foresters, and her legacy will live with the students and communities she has impacted.

Martin named Conservation Educator of the Year by Gov. Ivey, AWF

By Virginia Johnson



Joel Martin (center) receives the 2026 Conservation Educator of the Year Award.

Joel Martin, director of Auburn University's Solon Dixon Forestry Education Center (SDFEC), has been honored as the 2026 Conservation Educator of the Year by Alabama Gov. Kay Ivey and the Alabama Wildlife Federation (AWF). The award was presented during the AWF Governor's Conservation Achievement Awards banquet, where conservation leaders from across the state gathered to celebrate individuals whose work strengthens Alabama's natural resources and conservation legacy.

For Martin, the recognition reflects a career defined by hands-on teaching, mentorship and a commitment to helping students understand the interconnected nature of forests and wildlife.

"It is absolutely a great honor to be recognized for this award," Martin said. "This job put me in a position to manage one of the greatest properties in the Southeast, and this award means that my staff and I have upheld the legacy of the Dixon Center. It means that we have continued to provide a place where wildlife biologists, foresters and many other natural resource professionals can come and see examples—hopefully positive examples—of management techniques for our natural resources."

Throughout his time at the SDFEC, Martin has helped shape the academic experience of every Auburn forestry graduate since 2006 and every wildlife graduate since 2012. His leadership has impacted more than 1,000 students who have learned to see land management not as a set of isolated practices, but as a system rooted in stewardship and long-term strategy.

Each year, the Governor's Conservation Achievement Awards highlight individuals whose efforts elevate conservation across Alabama, from forest stewardship to wildlife management. During the event, Gov. Ivey shared a personal message celebrating the 2026 recipients and the contributions they make to communities throughout the state.

Martin's leadership at the SDFEC has long been recognized within Auburn's College of Forestry, Wildlife and Environment (CFWE). His teaching emphasizes that forests are more than timber and that thoughtful management is essential to creating and sustaining wildlife habitats. Through field-based instruction, he encourages students to think critically, collaborate effectively and approach land stewardship with humility and respect.

"My goal for our students is to let them know that, regardless of whether their focus is forestry or wildlife, they can't do it alone," Martin said. "Both professions paint on the same canvas and decisions that either group makes will impact the other."

The SDFEC itself stands as a cornerstone of Auburn's commitment to immersive education. Under Martin and his colleague's direction, the 5,300-acre facility serves as a living classroom where students gain firsthand experience in forest operations, ecological monitoring, prescribed fire and wildlife habitat management. His ability to translate ecological concepts into practical, real-world learning has made the SDFEC a nationally recognized model for experiential education.

"Martin's recognition underscores Auburn's continued excellence in preparing future natural resources professionals and celebrates an educator whose influence will continue shaping Alabama's conservation community for years to come."

– Dean Alavalapati

"His work ensures that the next generation of Auburn graduates will carry forward a deep respect for conservation, building stronger communities and healthier landscapes across Alabama," said Janaki Alavalapati, the Emmett F. Thompson Dean of the CFWE.

From the ground up: grant supports innovative soils learning

By Cole Sikes



Yang Yang captures soil samples for research in a local Alabama forest.

At the core of all living plants, including trees, soils and root systems are fundamental components of a successful species. As one can imagine, unearthing these terrestrial ecosystems for study can be laborious and often requires time, travel and specialized equipment. A professor at Auburn University's College of Forestry, Wildlife and Environment (CFWE) is changing the way that students can learn about soil science, literally from the ground up.

Yang Yang, CFWE assistant professor of forest soils and biogeochemistry, says that traditional soil teaching methods heavily rely on textbook diagrams and field trips. In Yang's experience, there are more efficient techniques for instructing soil ecosystem classes by presenting soil composition in a different format.

To bring native Alabama soils into the classroom, Yang intends to preserve them using monoliths, vertical underground collections capturing layers, textures and colors of local earth. Maintaining the original mineral composition, roots and horizon colors, these tools are perfect for instruction, allowing for more frequent hands-on study of soil layers.

"While field trips provide valuable exposure, they often allow only brief observations of soil profiles and do not enable repeated study of soil horizons or structures," Yang said. "Providing opportunities for repeated, hands-on interaction with real soil profiles can greatly improve student comprehension and engagement."

Funded by The Daniel F. Breeden Grant, which supports teaching and learning projects directly benefiting Auburn instructors, the soil monolith initiative will provide meaningful and lasting benefits to the university's mission, according to Adam Maggard, CFWE associate dean for academic affairs and Harry E. Murphy Associate Professor of forest systems management.

"The project will directly support instruction in courses such as Introduction to Forest Nutrients, Forest Soils, Basic Soil Science and Soil Chemistry, which collectively serve more than 130 students annually," said Maggard. "The resulting monolith collection will become a long-term teaching resource that can be incorporated across courses and departments while supporting Auburn's commitment to experiential and inquiry-based learning."

Beginning in September 2026, Yang and a cohort of undergraduate students will select sample sites for the monoliths that will canvass two primary transects: a north-south transect showcasing meteorological contrast across Alabama and a wildland-urban transect showcasing land use and vegetation types, using the USDA Web Soil Survey to confirm accurate documentation of soil profiles.

"We aim to leverage the students' home areas for soil monolith collection to produce at least 20 soil monoliths," Yang said.

Each monolith will be approximately a foot long, 4 inches wide and collected at 2 to 3.5 feet in depth. After the samples are taken, each one will be preserved in a laboratory and carefully processed and labeled, ensuring longevity for display and instruction.

Yang adds that the impact of the soil monoliths on student learning will also be evaluated using a three-prong approach. First, students involved in the construction of the displays will complete hands-on learning surveys, while students unfamiliar with monoliths will be quizzed after two forms of forest soils education: one using only online diagrams and photos, and another using the monoliths paired with two weeks of related lectures. Thirdly, instructors using the displays will record classroom performance by documenting activity, engagement and overall success for each student group.

From under students' soles to being held in their hands during detailed classroom discussion, Yang is eager to complete this soil science initiative, providing new learning experiences for Auburn. Collectively, this will prove to be another example of the CFWE's commitment to quality instruction and student outcomes.

"This project represents an innovative approach to strengthening experiential and place-based learning at Auburn while creating a durable instructional resource that will benefit students across several natural resource disciplines."

– Adam Maggard

Yang is currently recruiting two undergraduate students for the fall 2026 and spring 2027 semesters. One student will focus on constructing monoliths while the other will work on various lab experiments to examine soil texture, nutrients, microbes and microplastics. Interested students should contact Yang Yang at yangy@auburn.edu before each semester begins. The monolith project is anticipated to be completed at the conclusion of spring 2027.



The completed soil monoliths will display many different soil types taken from unique locations.

Choosin' Auburn: Former Forestry student, country star Ella Langley, returns to the Plains

By Virginia Johnson



Ella Langley performs at Neville Arena in Auburn, Alabama, on Saturday, Aug. 29, 2026. Photo by Zach Bland/Auburn Tigers.

Country music superstar and former Auburn University College of Forestry, Wildlife and Environment (CFWE) student Ella Langley returned to the Plains Aug. 28-29, bringing her Dandelion Tour to Neville Arena for two sold-out performances. The shows served as a homecoming to Auburn where Langley studied forestry before making the decision to pursue her lifelong passion for music in Nashville, Tennessee.

Raised in Hope Hull, Alabama, Langley attended the CFWE from 2018 to 2019, majoring in Forestry. In 2019, she left Auburn and moved to Nashville to pursue a career in country music.

Reflecting on her time at Auburn, her academic advisor, Jodie Kenney, recently highlights Langley's deep connection to the college.

"Her heart was rooted here in the CFWE, our Auburn community and the values our college and university instilled in her," she said.

Langley's time at Auburn included balancing her forestry studies with her growing interest in music. According to a People magazine feature, Langley ultimately decided in 2019 that she wanted to leave school and move to Nashville. Her mother, Heather, supported the decision and encouraged her to view the move as another form of education.

"This is your college," Heather said in an interview with Audacy Music. "This is your schooling to move there." Seven years after leaving Auburn, Langley returned to campus as an established country artist. Her Dandelion Tour stopped at Neville Arena for performances on Friday, Aug. 28, and Saturday, Aug. 29. The tour came during a period of success for Langley, whose No. 1, RIAA Platinum-certified album, "Dandelion," has produced several successful singles. The album includes the four-time platinum "Choosin' Texas," which became the first song by a woman to simultaneously top the Billboard Hot 100, Hot Country Songs and Country Airplay charts, as well as the platinum song "Be Her," which became the fastest solo female song to reach No. 1 in country radio in the last decade.

For Kenney, Langley's return to Auburn represents more than a successful musician returning to campus. She described Langley as having "a deep love for two seemingly different worlds: the natural beauty of forestry, wildlife and the environment; and the soulful expression of her amazing music."

Langley has continued to speak publicly about her time at Auburn and her connection to the CFWE. Kenney wrote that Langley is "a big part of our Auburn family" and said her character and work ethic helped shape the path she has taken since leaving Auburn.

CFWE Student Life: *Beyond the Classroom* By Virginia Johnson

From Auburn to Yellowstone: Forman forges path in outdoor leadership



Max Forman is shown leading a group hike within Yellowstone this past summer.

Auburn University student Max Forman spent his summer guiding visitors through Yellowstone National Park during an internship with Yellowstone Hiking Guides. A Parks and Recreation Management major in Auburn's College of Forestry, Wildlife and Environment (CFWE), Forman gained hands-on experience in outdoor leadership, visitor engagement and recreation management.

Forman led guided hikes, managed group safety, prepared trip logistics and interpreted Yellowstone's wildlife and history. His responsibilities later expanded to kayak and van tours, providing experience with different forms of guided recreation.

His Auburn coursework in leadership, risk management and recreation planning, combined with student employment at Auburn Outdoors, prepared him to navigate Yellowstone's dynamic environment and adapt to guests' needs.

"I've had the opportunity to watch wolves feeding and even witnessed a bison give birth in Yellowstone," Forman said. "Moments like those have made every day feel different and reminded me just how incredible it is to work in such a unique place."

The internship also strengthened Forman's appreciation for the decision-making that happens behind the scenes, from adjusting plans around weather and wildlife to communicating with visitors from around the world.

"The most rewarding part has been helping guests experience Yellowstone in ways they'll remember for the rest of their lives," he said.

After graduation, Forman hopes to continue working in outdoor leadership and guiding, with the long-term goal of starting his own guiding operation.

Warren maps future through NASA internship

Auburn University College of Forestry, Wildlife and Environment (CFWE) graduate Sid Warren spent his summer applying geospatial technology to real-world conservation challenges through NASA's EarthRISE Developers Academy. Based at Marshall Space Flight Center in Huntsville, Alabama, Warren's team collaborated with conservation partners in Maui, Hawaii, to develop geospatial products supporting land management decisions.

Warren conducted literature reviews, researched the study area and explored geospatial techniques before working directly with stakeholders to identify products that could best address their conservation needs. The experience culminated in presentations to EarthRISE participants and delivery of the team's products to project partners.

"The most rewarding aspects of this role were team development and stakeholder impact," Warren said. "Discussing our work with end users and learning from their knowledge of the Maui landscape made the experience even more meaningful."

Warren said his Geospatial Information Science degree prepared him with a strong foundation in GIS software, remote sensing and spatial analytics, while his environmental coursework complemented the project's conservation focus.

The internship also strengthened Warren's interest in applied geospatial research and demonstrated how technical expertise can support communities, landscapes and resource managers.

Following his May 2026 graduation, Warren began working as a civil designer for an engineering firm in Birmingham, Alabama,



Sid Warren, shown second from the left, and the 2026 NASA EarthRISE Developers Academy cohort.

where he continues applying the technical skills, problem-solving abilities and real-world experience he developed at Auburn and NASA.

Growing her future: Padgett's summer in timber management

Auburn University College of Forestry, Wildlife and Environment (CFWE) student Matalynn Padgett spent her summer gaining hands-on forestry experience through an internship with Weyerhaeuser's Timberlands Office in Thomasville, Alabama. The experience provided insight into sustainable timber management and the day-to-day operations of a major forest products company.

Padgett's primary project focused on stream crossings, documenting and organizing data within Weyerhaeuser's ArcGIS system to support long-term monitoring and environmentally responsible timberland management. She also accompanied managers in the field, observing harvest operations and interactions with contractors and loggers.

"I found the ride-alongs and advice I received from the many managers at the office were the most beneficial," Padgett said. "I was able to see what a manager's workday is like."

Visits to mills and Timberlands' offices across the South further broadened Padgett's understanding of Weyerhaeuser's operations and forestry career opportunities.

Padgett credits her Auburn coursework with preparing her for the internship, particularly classes in ArcGIS and harvesting, which helped her navigate mapping systems and communicate effectively with forestry professionals.

"My internship sparked a high interest in land management and silviculture as possible future careers," Padgett said. "It has also made me think about pursuing a master's degree in some type of forest business."



Matalynn Padgett joins the Weyerhaeuser managers for a "ride-along" to learn from their field experiences.

Through the internship, Padgett strengthened her technical skills, gained professional confidence and discovered new possibilities for a career in forestry.

Innovation meets outdoors: Crumpton explores AI marketing



Harris Crumpton rides a tractor in a crop field during his internship.

Auburn University College of Forestry, Wildlife and Environment (CFWE) student Harris Crumpton spent his summer exploring how artificial intelligence could strengthen marketing through an eight-week internship with PRADCO Outdoor Brands. His work focused on practical applications of AI in customer engagement, product promotion and business operations.

Crumpton researched emerging AI tools and marketing trends, analyzed competitor strategies and reviewed customer feedback and product pages. Using those insights, he developed AI-driven marketing concepts for several PRADCO brands, including Moultrie, Whitetail Institute, Summit Treestands, Knight & Hale and Code Blue, before presenting his recommendations to company leadership.

"One of the most valuable parts of the internship was seeing how effective AI can be used as a practical business tool rather than just a passing trend," Crumpton said. "I also gained experience collaborating across teams and presenting ideas that were well received by leadership."

Crumpton credits Auburn's Wildlife Enterprise Management program with providing the marketing knowledge and understanding of outdoor consumers needed to develop relevant recommendations.

"My degree helped me connect marketing strategies to real outdoor consumers, which made my recommendations more relevant and impactful," he said.

The internship also strengthened Crumpton's interest in combining business, technology and the outdoor industry while reinforcing his long-term goals in real estate development and entrepreneurship. Through the experience, he applied classroom knowledge to business challenges while building skills in research, collaboration and strategic marketing.

Extension & Outreach

Extension Spotlight Meet Emily Nichols, extension specialist

Emily Nichols is an Alabama Forestry, Wildlife, and Natural Resources Team Extension specialist. Based on Auburn University's campus, she serves statewide audiences.

Nichols grew up in Birmingham, Alabama. She earned a bachelor's degree in environmental science from Auburn University, a master's degree in environmental management from Samford University and a doctorate in forestry from Auburn University. With more than two decades of experience in natural resources, education and outreach, Nichols develops and delivers programs that help youth, educators, volunteers and communities build knowledge and skills related to Alabama's natural resources. Her work includes leadership of statewide forestry, fish and wildlife and nature-based recreation initiatives, educator training and applied human dimensions research.

In addition to her work in Alabama, Nichols served as a Peace Corps Volunteer in West Africa, where she worked on coastal resource management and community development initiatives with World Wildlife Fund, the University of Rhode Island's Coastal Resources Center and local partners. These experiences continue to inform her approach to collaboration, education and community engagement.

"My favorite part of Extension is identifying needs and opportunities and then developing practical resources to address them. Whether through educator training, program development or applied research, I enjoy creating tools that strengthen natural resource education and expand opportunities for people to engage with the outdoors."

– Emily Nichols



Supporting Alabama's logging community through training and professional partnerships By Catherine Jackson



Herbicide demonstration for using drones for site preparation.

The Alabama Professional Logging Manager (PLM) program remains a steady, trusted resource for loggers across the state. As one of the state's leading industries, Alabama depends on a logging workforce that is not only skilled but also committed to responsible and sustainable practices. Through the Alabama Cooperative Extension System, the PLM program offers initial training and continuing forestry education (CFE) that helps loggers stay connected, informed and confident in their work.

The PLM curriculum aligns with the industry standards established by the Sustainable Forestry Initiative (SFI), which guides the program's core topics and expectations. The most recent SFI update in 2022 shaped the current version of the initial training, and while the curriculum remains stable, the program continues to grow through expanded CFE opportunities. Each year, Alabama Extension presents new speakers and timely topics that reflect what loggers and foresters are seeing on the ground. Richard Cristan, Alabama extension specialist and PLM program director, says this consistency has been key to the program's momentum.

"The Forestry, Wildlife and Natural Resources Extension Team does a really good job of hosting both in-person workshops and online webinars," he shared, noting that the team's commitment has helped increase participation since 2020.

PLM initial trainings draw a wide age range of participants, though the average remains in the upper 30s to early 40s. Cristan, who is the Auburn University Regions Bank Endowed Associate Professor of Forest Operations in the College of Forestry, Wildlife and Environment, acknowledges that attracting younger professionals to logging is an ongoing statewide challenge. Even so, he emphasizes, for those entering the field, the program's content remains deeply relevant to today's forestry landscape.

"Topics centered around best management practices (BMPs) for water quality protection, biodiversity, threatened and endangered species and forests with exceptional conservation value are very important within the SFI Standards."

– Richard Cristan

BMPs remain a central part of both initial and continuing education. Cristan often reminds participants that BMPs are one of the most effective tools loggers have for protecting water quality.

"If loggers follow the state's forestry BMPs, they are, in turn, protecting water quality," he explained.

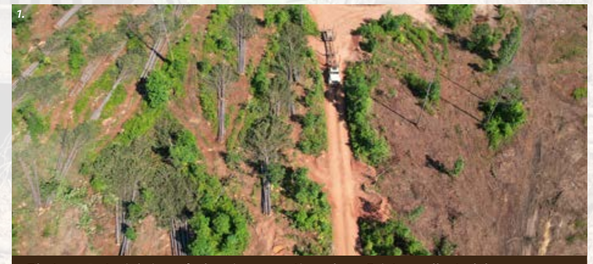
The curriculum also prepares loggers for encounters with terrestrial threatened or endangered species such as gopher tortoises, northern long-eared bats or red-cockaded woodpeckers. As part of the program, each participant receives a binder with all presentations and supplemental materials, giving them a resource they can return to long after the training ends.

The PLM program's impact is reflected in participant feedback. In 2025, attendees reported a 72% increase in sustainable forestry practice knowledge—up from 58% in 2021. Participants consistently describe the materials as clear, well-organized and valuable, with average ratings of 4.8, 4.9 and 4.7 out of 5. These responses highlight the program's strength: reliable information delivered in a way that supports real-world decision making.

Forestry remains one of Alabama's most important economic sectors, and the PLM program helps ensure that loggers have the tools, knowledge and community support they need to continue their work responsibly. Through steady curriculum delivery and a growing network of CFE opportunities, Alabama Extension remains committed to supporting the people who keep the state's forests productive, healthy and resilient.



Richard Cristan speaks at a field tour on forestry BMPs for stream crossings.



Photos 1-3. Aerial view of a logging operation where Cristan collected drone images and videos for Extension videos, publications and presentations.





CROOKED OAKS
EVENTS • LODGING • NURSERY

An Auburn tradition of learning, land and legacy

By Jamie Anderson, Virginia Johnson and Cole Sikes



Not far from the City of Auburn, Alabama, set among rolling hills, lush forests and green pastureland, lies Crooked Oaks, the former homestead of Auburn University's legendary football coach, Pat Dye.

As head coach from 1981-92, Dye is most famous for leading the Auburn Tigers to four Southeastern Conference (SEC) championships, winning SEC Coach of the Year three times, and being named National Coach of the Year in 1983.

STEEPED IN AUBURN HISTORY AND TRADITION

Dye's beloved 415-acre property, located in Notasulga, Alabama, is an idyllic setting offering the Auburn community, guests and visitors a meaningful connection to the university and the land he treasured through its timeless natural beauty, rich history and tradition and understated elegance.



Pat Dye and Nancy McDonald discuss plans for Crooked Oaks' Quail Hollow Gardens.

Dye began improving the property in 1998 with his partner, and now-retired Auburn nursing educator Nancy McDonald. Following McDonald's retirement in 2004, the couple established Crooked Oaks as their permanent residence, developing the property into a scenic retreat complete with gardens and an animal sanctuary.

Together, they continued to improve all aspects of the land, offering the site as a venue for weddings, and frequently hosting events that raised hundreds of thousands of dollars for Auburn scholarships.

After his passing in 2020, Dye's foundation donated the property to the College of Forestry, Wildlife and Environment (CFWE) through the Auburn University Real Estate Foundation in honor of Dye's legacy and desire to provide hands-on learning experiences for Auburn students.

"We both knew we would donate the farm to the CFWE and seeing the work the college's leaders have done since accepting the proposal, I could not be more confident that the land will be valued and held to the standard Pat and I always wanted to see. I feel his spirit in this, and I know what's happening is something he would be proud of."

–Nancy McDonald

AN IDEAL SPACE FOR OUTDOOR LEARNING

As a flagship institution for natural resources-based degrees, including forestry, environmental conservation, wildlife enterprise and parks and recreation management majors, the CFWE's leadership immediately recognized the immense value Crooked Oaks would bring to its students.

The college's expanding shooting sports program, which includes courses in pistol, rifle and archery, are among the CFWE's most popular experiential courses offered at Crooked Oaks. Through hands-on instruction, students gain practical skills in firearm safety, responsible use, marksmanship, ethics, leadership and conservation while also gaining greater awareness of the CFWE's academic programs.

The property also serves as an outdoor classroom for Auburn students enrolled in the Parks and Recreation Management Practicum, with plans in the works to develop a new hands-on Wildlife Enterprise Management (WLEM) Practicum that will reinforce classroom learning through applied projects, recreation planning, visitor experience assessment, resource management and field-based problem-solving.

"Our college is well-known for the student experiential learning opportunities we provide, and this property has not only allowed us to increase those offerings but has also helped us to engage with our broader community and the state. We are grateful to Coach Dye and Dr. McDonald for their generosity and for entrusting the legacy of Crooked Oaks with us," said Janaki Alavalapati, the Emmett F. Thompson Dean of the CFWE.



AN EVENTS VENUE THAT TRULY HAS IT ALL



Today, Crooked Oaks is best known as one of east Alabama's most desired lodging and special events venues, offering a distinctive and flexible setting for gatherings of nearly every kind. With a variety of indoor and outdoor event spaces, lodging options and experiences that can accommodate different group sizes, occasions and budgets, the property provides a memorable backdrop for everything from intimate celebrations and corporate retreats to weddings, reunions and large-scale special events.

Just minutes from Auburn, Crooked Oaks offers a welcoming home base for every season of the Auburn experience. From football weekends, alumni gatherings and university events to family celebrations, weekend getaways and year-round stays, guests can enjoy thoughtfully curated lodging, customized events and personalized service in a setting that feels both unmistakably Auburn and entirely its own.

Depending on the scale and type of event desired, the property boasts an impressive array of amenities, including a lighted, weather-proof 10,000-square-foot pavilion with a stone fireplace, formal ceremonial garden and lawn, a six-bedroom, open-concept lodge with a full-service kitchen, porches and green space, a pondside gazebo, fieldstone patio and fire ring, Dye's lake house and adjacent dockside cottage, numerous guest cabins and abundant parking.







The expansive pavilion, ceremonial garden and lawn can seat up to 350 guests, with amenities that include 50-inch round tables and chairs, 6-foot rectangular tables for catering and gifts, two bars, garden tables and chairs, a stage for entertainment, propane heaters and industrial fans and two large-screen TVs. Also available are on-site ice machines, linen rental, golf carts for guest shuttles and pre-wedding staging for engagements and photos.

As an all-inclusive lodging and event destination, Crooked Oaks can accommodate up to 28 overnight guests, making it especially well-suited for large groups, wedding parties, family gatherings, alumni weekends, retreats and other multi-day occasions. With lodging and event spaces located throughout the property, guests can gather, celebrate and connect while enjoying the convenience of staying on-site, with opportunities to relax and recharge between activities.

Whether hosting a wedding weekend, milestone celebration, family reunion, corporate or university retreat, or an intimate lakeside or garden gathering, Crooked Oaks offers the flexibility to create an experience tailored to each group and occasion. Its versatile spaces, overnight accommodations and distinctive setting allow hosts to bring people together at one memorable destination while creating an experience personalized to their vision.

"Crooked Oaks was the perfect venue for our wedding! The venue itself is absolutely breathtaking, particularly in the fall. There is so much room, and plenty of ways to utilize the space to suit individual needs."

–Ben Walker

"We were married in the meadow, with our reception in the event space. The venue staff had everything set up perfectly ahead of time, and the transition from the ceremony to the reception was perfect. Additionally, we were able to rent out all the lodging onsite, which worked out perfectly to house the wedding party. No one in attendance at our wedding had one negative thing to say. This was my second time staying here and I already cannot wait to go back," Walker said.

As a wedding destination, bridal parties and guests are encouraged to enjoy the property's calm serenity as time allows. During the weekend, they can gather on the lodge's front porch and lawn or arrange to host brunch in its open-concept living and dining space. They can also enjoy Crooked Oaks' green spaces, freely exploring the grounds, hiking the trails or taking in the expansive views and breathtaking gardens.

According to Katy Vincent, who married and hosted the couple's wedding party at Crooked Oaks, the all-inclusive wedding venue was everything the couple needed and more.

"The venue was beautiful and the staff were very helpful. We got married in the spring, so everything was blooming and it just made pictures that much better." My bridal party, my husband and I also stayed the entire weekend on the property and the lodging is excellent."

–Katy Vincent

OFFERING CREATIVITY AND CONNECTION

The Crooked Oaks staff, including Property Manager N.L. Hart, Land Manager Willie "Chico" Canady, Dye's lifelong friend and former employee, and Events, Hospitality and Client Services Coordinator Evelyn Roberson, are dedicated to maintaining the property in pristine condition while ensuring clients and their guests enjoy a flawless experience.

"I listen carefully because clients and event planners often emphasize what matters most to them," Roberson said. "When they feel supported and confident in the details, they can fully enjoy the event."

In her role, Roberson blends creativity, thoughtfulness and intentionality to expand and diversify event opportunities that combine creativity with meaningful connections.

"My day-to-day work blends strategy with execution, from building client relationships and guiding prospective guests through the booking process to managing the details that ensure each event runs smoothly," she said.

Like Dye, at the center of it all is Roberson's commitment to hospitality and creating experiences that reflect both the client's vision and the unique character of the property.

This philosophy echoes in the words of Auburn's beloved Coach Dye who once wrote of Crooked Oaks, "The good Lord created it, and then I just put a few touches on it, so I can enjoy it and appreciate it. Because no one can paint a picture like Mother Nature."

Wedding photography provided courtesy of Kristen Pugh Photography.

To learn more about hosting a wedding or other special event at Crooked Oaks, or to book a private tour, scan the QR code or visit crookedoaks.auburn.edu.

An Ever-Growing Legacy







Once the private garden of the legendary Auburn coach, Pat Dye, Crooked Oaks has become a place where a lifelong passion for Japanese maples continues to grow. Every tree, every companion plant and every garden path reflects decades of careful selection, propagation and dedication.

Visually spectacular during any season of the year, guests encounter numerous camellias, native azaleas, hydrangeas, boxwoods, gardenias, magnolias, oaks, pines, beeches, river birches and firs. Quail Hollow Gardens, a two-acre retreat adjacent to the nursery, is a natural oasis featuring a peaceful waterfall nestled among a wide variety of Japanese maples, other native plants and ornamental shrubs.

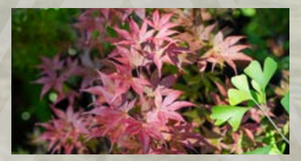
There is also a functioning nursery, where guests and bridal couples can purchase descendants of Dye's Japanese maples or other plants and shrubs as a souvenir for their home or for their wedding party.

Rayven Crowley, Crooked Oaks' garden manager, who once assisted Dye, says the nursery is presently offering numerous Japanese maple cultivars and *Camellia sasanqua*, *japonica* and hybrid cultivars for sale, with plans to diversify the inventory in the future.

"Whether you're looking to add a single Japanese maple to your landscape, explore a mature collection or learn the art of grafting, we invite you to take a piece of Crooked Oaks home with you."

–Rayven Crowley

Crooked Oaks is expanding its nursery operations to offer tours and hands-on seminars teaching propagation techniques they've used to preserve and expand Dye's exceptional collection, helping ensure the remarkable flora continues for generations to come.



From Alabama fields to everyday products: BRIDGES Engine reimagines rural innovation

Excerpt from story written by Mary Scott DeVault, Office of Vice President for Research and Economic Development

Backed by up to $160 million from the National Science Foundation, Auburn and partners will connect farmers, manufacturers and communities to create new markets, new jobs and new opportunities across Alabama and Tennessee.

Co-led by HudsonAlpha Institute for Biotechnology, Auburn University, the University of Tennessee, Volkswagen Group of America and AGgrow Tech LLC, BRIDGES brings together 85 additional partners from industry, government and academia.

Recently, the National Science Foundation announced the BRIDGES Engine as one of the winners of its nationwide Regional Innovation Engines competition. BRIDGES will receive up to $160 million over 10 years to address critical challenges facing the Southeast, where communities need stronger agricultural markets, economic diversification and quality job opportunities.

"This transformative investment from NSF, paired with the hundreds of years of combined expertise that the partners bring to the table, allows us to build something that hasn't existed before," said Steve Taylor, vice president for research and economic development at Auburn.

"For generations, the Southeast has exported agricultural commodities to others that create value-added products from them. In that system, our local or regional economies often don't get to share in the higher value created from those final products. BRIDGES gives us an opportunity to reshape the regional economy by creating new industries, new jobs and new markets rooted in our strengths, right here in our own communities."

BRIDGES aims to work with farmers in 45 Alabama counties and an additional 35 counties in Tennessee to convert low-performing or underutilized farmland into productive acreage for the grasses.

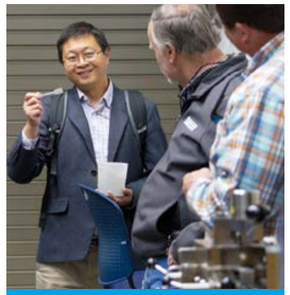
The BRIDGES Engine has a goal of establishing 50,000 acres of perennial fiber crops across Alabama and Tennessee, generating an estimated $30 million in direct farm income annually.

Once harvested, the fiber can be extracted and used in a variety of manufactured products. BRIDGES will initially focus on automotive, packaging and construction materials.

The goal is to manufacture those products in and around the rural communities where the grasses are grown, attracting an estimated $2 billion in private capital investment and creating more than 4,000 higher-paying manufacturing and supply chain jobs, representing an annual direct wage impact of approximately $280 million.

As work begins in the coming months, researchers from Auburn's colleges of Agriculture, Engineering, Forestry, Wildlife and Environment (CFWE), and Architecture, Design, and Construction, and National Center for Asphalt Technology will work alongside farmers, manufacturers and community leaders to undertake the ambitious task of strengthening rural economies.

As part of the BRIDGES Engine, Yucheng Peng, an associate professor of sustainable packaging and bioproducts in the CFWE, will work to turn fibers derived from switchgrass and miscanthus into bio-based construction composite materials and packaging products.



CFWE's Yucheng Peng is contributing to a transformative initiative that could reshape how we think about everyday products from packaging to construction materials.

"We are proud to be involved in this transformative initiative to promote the utilization of bio-based materials sourced locally in our communities," said Janaki Alavalapati, the Emmett F. Thompson Dean of the CFWE. "Creating sustainable alternatives to petroleum-based products while supporting regional economies will have significant benefits for Alabama citizens and those across the Southeast."

Auburn develops breakthrough solution for nutsedge controls in pine nurseries

By Virginia Johnson



Nina Payne sifts through soil looking for nutsedge nutlets.

A study led by Nina Payne, an Auburn University College of Forestry, Wildlife and Environment (CFWE) research scientist, is providing a long-awaited solution to one of the most ongoing and costly problems affecting southern pine nurseries: nutsedge control.

For years, nursery managers have struggled to control the aggressive weed, which competes with pine seedlings for nutrients and dramatically increases labor costs. Until now, no herbicide approved by the Environmental Protection Agency (EPA) could be used over the top of the pine seedlings without damaging them, forcing nurseries to rely on more time-consuming and labor-intensive practices.

Payne, a researcher with the CFWE's Southern Forest Nursery Management Cooperative (SFNMC), spent more than a decade working to change that under the leadership of former SFNMC Directors Scott Enebak and Annakay Newell.

For over 50 years, the member-based SFNMC has been at the forefront of advancing southern pine seedling production. Born out of a need to solve urgent pest and disease challenges, it has united nursery leaders from industry, state agencies and the U.S. Forest Service to pioneer practical, science-backed solutions.

Today, the SFNMC is advancing what might be its most critical discovery yet.

"Prior to this research, there were no herbicides available to industry that could safely control nutsedge in southern pine seedling nurseries," Payne said. "This weed is the most problematic and costly to control in bareroot nursery systems."

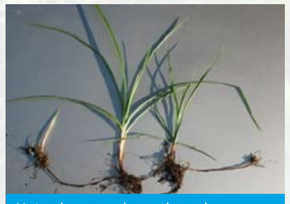
Building on decades of prior research dating back to the 1970s, Payne began testing new herbicide options in 2014. Over 12 years, she managed 26 field trials and evaluated 14 herbicides in operational nursery settings.

Through teamwork with industry partners, including Eric Reasor of PBI-Gordon, Payne identified two herbicides, Arkon™ and Vexis®, as safe solutions. Both products have the active ingredient pyrimisulfan, which was found to control nutsedge without harming pine seedlings.

Payne's discovery marks a major advancement for nursery operations in the Southeast.

In May 2026, PBI-Gordon began the EPA labeling process for Arkon, a key step that would allow nurseries to legally apply the herbicide in loblolly and slash pine seedling beds. The approval process requires coordination between the manufacturer, the SFNMC and state agriculture departments.

If approved, the herbicide could significantly reduce both the cost and labor demands for growers.



Nutsedge reproduces through underground rhizomes and nutlets. One nutsedge plant can produce thousands of nutlets in a growing season.

PARTICIPATING NURSERIES

- ArborGen Shellman Nursery
- Georgia Forestry Commission
- Flint River Nursery
- PRT Pine Hill Nursery
- PRT White City Nursery
- Rayonier Elberta Nursery
- Weyerhaeuser Pearl River Nursery
- Weyerhaeuser Quail Ridge Nursery

As of now, many nurseries depend on hand-weeding during peak infestations; an expensive practice made more difficult by ongoing labor shortages. Payne estimates that nurseries dealing with nutsedge could save more than $50,000 annually by adopting the new herbicide solution. Across SFNMC member nurseries, total savings could exceed $1 million per year.

Beyond economic benefits, the research also offers environmental advantages. By improving herbicide efficiency, nurseries will require fewer applications over time, which reduces the overall amount of chemicals applied to the soil. This leads to a more sustainable approach to producing high-quality seedlings for reforestation efforts.

"Bareroot pine growers will be able to more effectively control nutsedge while producing higher quality seedlings with fewer inputs."

– Nina Payne

The research effort was highly collaborative, involving efforts from five nursery partners that provided land, labor and operational support for field trials. Auburn's SFNMC staff members, along with CFWE students, conducted data collection and herbicide application methods, while College of Agriculture horticulture department experts assisted with regulatory processes.

To make sure the herbicide was safe for pine seedlings, Payne and her team tested pyrimisulfan at different rates and at six stages of seedling growth. Running these trials in real nursery settings helped them learn exactly when and how the herbicide could be applied without causing damage.



Loblolly pine seedlings grow during nutsedge trials.

Pyrimisulfan was originally created for rice production and is now used in turfgrass. The SFNMC often tests products from agriculture, turf and landscape horticulture when forestry-specific options don't exist. This approach has become an important way to find new tools for nursery managers

Richard Cristan, director of the SFNMC, said the success of the project reflects years of persistence and teamwork between academia and industry.

"The collaboration between Auburn and the SFNMC members was essential to moving this process forward to EPA review," said Cristan. "Once approved, these findings will represent a major step toward improving efficiency, sustainability and profitability in southern forest nurseries, while helping guarantee a steady supply of healthy seedlings for future forests."

Lepczyk co-leads study finding variations in urban parks influence avian biodiversity across U.S.

By Virginia Johnson



Cities house a wide variety of birds in their parks, including species like the anhinga (Anhinga anhinga). Photo by Christopher Lepczyk.

Urban parks are a major feature of modern cities, offering places not only for recreation but also relaxation and opportunities to connect with nature and wildlife. Walk through any city park, and you're likely to spot birds perched in trees, foraging on the ground, or even flying overhead. Beyond their value to people, a researcher at Auburn University's College of Forestry, Wildlife and Environment (CFWE) is asking a more complicated question: how well do these spaces support wildlife?

Does the size of a park have a greater impact on biodiversity, or is it more important to have ample vegetation or open spaces?

Co-led by Christopher Lepczyk, CFWE Alumni Professor of wildlife biology and conservation, and collaborators Frank La Sorte of Yale University, Bertrand Fournier of the University of Potsdam, Jeffrey Clark of the Natural Areas Conservancy and Myla Aronson of Rutgers University, the team set out to determine how different park features may affect the diversity of bird species across cities throughout the continental United States.

What they found challenges common beliefs. While larger parks do tend to support more bird species, size alone doesn't tell the entire story. Instead, biodiversity depends on a combination of features, such as tree canopy, layout and the surrounding landscape. Those needs can vary depending on the region and time of year.

"There is no one-size-fits-all in terms of the features of parks that support bird diversity across the entire U.S.," Lepczyk explained.

In fact, this study, recently published in Nature Cities, a rapidly rising journal within the prestigious Nature portfolio, was the first to examine park characteristics and biodiversity at this scale nationwide. It suggests that a network of different parks may be more effective than trying to design a single 'ideal' space. Some species may depend on dense tree cover, while others thrive in more open areas or smaller neighborhood parks.

"Different combinations of park features across multiple parks are needed to support all components of avian diversity across seasons," Lepczyk said.

These findings show cities exactly what they can do to support wildlife. Rather than focusing only on building larger parks, planners and land managers can consider how existing parks function together. Adding or maintaining features such as tree canopies, plant diversity, or water could make even smaller parks more valuable for wildlife biodiversity.

With this information, city planners can better judge if their parks are not only supporting recreational opportunities for residents, but also serving as functioning, healthy ecosystems for the wildlife that share these spaces.

"Beyond birds, biodiversity plays an important role in urban environments by contributing to healthier ecosystems and improving quality of life for residents," said Lepczyk, "Parks that support a wider range of species can also be more resilient to environmental changes."

As cities continue to grow, the study suggests that supporting wildlife doesn't require starting from scratch. With thoughtful planning and a mix of park types, urban areas may already have the tools they need to create spaces that work for both people and animals.

As cities continue to grow, the study suggests that supporting wildlife doesn't require starting from scratch. With thoughtful planning and a mix of park types, urban areas may already have the tools they need to create spaces that work for both people and animals.

Ouyang solves methane mystery, contributes to global data advancements

By Cole Sikes



Earth's atmosphere photographed from space.

At the beginning of the decade, one of the most important greenhouse gases in the Earth's atmosphere, methane (CH4), surged in volume, puzzling the global science community. Debates began on what the culprit was for this unexpected spike, making it a concerning topic of international discussion and further research. An Auburn University professor at the College of Forestry, Wildlife and Environment (CFWE) who participated in the worldwide study found that this flux in greenhouse gases occurred beyond the control of human intervention.

Atmospheric methane is naturally broken down in the atmosphere by reactions with hydroxyl radicals (OH) formed by ultraviolet radiation. These radicals act as a 'detergent,' cleansing the excess methane and regulating its levels. This relationship between the radicals and CH4 supports a more balanced atmospheric methane concentration, protecting the Earth and its life from climate warming. However, this balance was altered when, in 2020, it was found that methane, the second most important greenhouse gas just behind carbon dioxide, reached a peak increase of 16.2 parts per billion (ppb) per year and progressively dipped to an increase of 8.6 ppb per year by the end of 2023.

Amid the COVID-19 pandemic, the Earth's atmosphere experienced a dramatic slowdown in the emission of global air pollution. Fewer people were driving cars, and some industries scaled back production or stopped completely. The reduction of OH produced by these activities, which acts as the CH4 or methane cleanser, pushed atmospheric methane to increase during this period.

While this atmospheric chemistry shift was occurring above, back on Earth, other influences were contributing to this change. Meteorologically, the planet was also undergoing an extensive La Niña, making the climate wetter. This pattern brought heavier-than-normal precipitation, particularly in the tropic regions, flooding landscapes and creating more wetlands. These water systems hosted an influx of microbes that naturally produce methane. Some of the most affected areas included tropical Africa, Southeast Asia and arctic regions with warmer soils.

Zutao Ouyang, a CFWE assistant professor of ecosystem modeling, contributed geospatial science expertise to this project titled "Why methane surged in the atmosphere during the early 2020s," recently published in Science, one of the world's top peer-reviewed academic journals. His expertise in artificial intelligence (AI) models revolutionized the study by providing new, innovative ways to monitor global methane emissions.

"We trained an AI model using a large field-observed emissions dataset to simulate how much methane is emitted from rice paddies," Ouyang said. "This bottom-up estimate based on source emissions helps cross-validate sources inferred from top-down estimates derived from atmospheric measurements of methane concentrations, enabling us to arrive at the source of the likely origins."

The findings within the study, co-led by Ouyang, also pointed to a need for better data-farming tools, especially in remote and rapidly changing environments. Using the geospatial model created by Ouyang for monitoring methane emissions from rice agriculture, the research team was able to extract key data that explained the increased methane emissions experienced between 2020 and 2023.

"Both our AI models and others consistently show higher rice paddy emissions during 2020-2023 relative to 2019, strengthening our conclusion that rice production also contributes to the surge of CH4 during this period, beyond the reduction that would be expected from changes in the atmospheric cleansing processes," Ouyang said.

The necessity of cutting-edge data tools is at the forefront of today's scientific community. Auburn faculty such as Ouyang serve as an invaluable resource to the global science stage, creating the necessary tools for solving, quite literally, the world's issues.

"These next-generation geo-spatial emission models will integrate earth foundation models and physical constraints to conduct near-real-time monitoring of greenhouse gas emissions. We will be providing more timely and actionable information for policymakers and environmental management professionals."

– Zutao Ouyang

Celebrating Crozier's legacy of leadership and service at Auburn

By Virginia Johnson

After more than two decades of service, Heather Crozier concluded her chapter with Auburn University on Sept. 30, 2026, leaving a remarkable legacy of leadership, philanthropy and impact.

Crozier joined Auburn's workforce in 2002, serving in several roles within the Harbert College of Business and Samuel Ginn College of Engineering before joining the College of Forestry, Wildlife and Environment (CFWE) in 2011. For the last 15 years, she has served as director of development, leading the college's fundraising efforts through major and planned giving, annual giving, donor engagement and stewardship, special events and capital campaigns.

Throughout her time at Auburn, Crozier played a vital role in enhancing the CFWE's philanthropic success and strengthening relationships with alumni, donors and friends of the college. Under her leadership, the CFWE became the first college at Auburn to reach its goal in the Because This is Auburn capital campaign and ultimately exceeded that goal by 29%.

Her impact is perhaps best reflected in the college's recent fundraising initiatives. In 2025, the CFWE raised $6.8 million, the most successful fundraising year in the college's history. This year, the college has already raised $7.2 million with one month remaining in the fiscal year, putting the CFWE on track to achieve its best fundraising year ever. These accomplishments stand as a testament to Crozier and her team's dedication, vision and commitment to advancing the college's mission.

As she begins a new professional chapter, Crozier will serve as deputy director of development for The Nature Conservancy Southern Deltas Business Unit, supporting fundraising efforts across Alabama, Mississippi and Louisiana. She will lead a team working to advance conservation priorities throughout the region.

"I am excited to be bringing two of my passions together, which are my lifelong love for the outdoors and nature while building meaningful relationships through philanthropy in this area," Crozier said.

Her colleagues express their appreciation of Crozier's time at Auburn and share in support of her new endeavors.

"While Heather's leadership, enthusiasm and unwavering support for the CFWE will be missed, the college is grateful for the lasting impact she has made and the countless students, faculty, alumni and donors whose lives she has touched," said Janaki Alavalapati, the Emmett F. Thompson Dean of the CFWE.



A reception will be held on Oct. 13, 2026, in the Forestry, Wildlife and Environment Building in celebration of Crozier and all she has accomplished during her time at Auburn.

A legacy of generosity: the Bennie Vinson family endowed scholarship

By Virginia Johnson

Auburn University's College of Forestry, Wildlife and Environment (CFWE) is honored to announce the Bennie Vinson Family Endowed Scholarship. Created in June 2026 by Bennie F. Vinson Jr. and Amanda Vinson, this scholarship reflects the Vinson family's lasting commitment to Auburn students and their belief in the power of education to shape the future of the forestry and natural resources profession.

Bennie graduated from Auburn in March 1974 with a Bachelor of Science in Forest Management. He went on to work with Alabama Power Company for 34 years, rising to the position of chief forester. In that role, he oversaw the management of forest resources across thousands of acres surrounding the company's lakes and power facilities. As a registered forester and member of several professional forestry associations, Bennie has dedicated more than 50 years to advancing forestry in Alabama.

He also knows firsthand how important scholarships can be. As a student, Bennie received the Edward A. Hauss Endowed Scholarship in Forestry, which recognized his scholastic achievement and made it financially possible to complete his Auburn degree. This experience led him to give back to the CFWE with an endowed scholarship that aims to open doors for future students.

Awarded annually, the Bennie Vinson Family Endowed Scholarship will provide financial support to academically eligible Forestry undergraduate students within their junior or senior years. The scholarship helps ensure that recipients can dedicate their time and energy to learning, research and service experiences that prepare them to become leaders in conservation and natural resource management.

The Bennie Vinson Family Endowed Scholarship represents a lasting commitment to Auburn's mission as a land-grant institution. It strengthens the college's ability to prepare graduates who will care for forests, wildlife and natural resources. The Vinson family's generosity guarantees that Auburn remains a place where curiosity is encouraged and students are empowered to make a difference.

Help Shape the Future of the CFWE News!



How would you like to receive future issues of the CFWE News? As we look for new ways to keep our alumni and friends connected to the Auburn University College of Forestry, Wildlife and Environment, we're asking for your input.

While many readers value receiving a traditional printed newsletter, a digital magazine could offer new ways to experience CFWE news and stories, including convenient access to additional content, photo galleries, videos and other online resources from your computer, tablet or mobile device.

As we consider the best options for future issues, we want to know what works best for you:

- **Digital magazine only**
- **Both print newsletter and digital magazine**
- **Print newsletter only**

Your feedback will help guide how we deliver CFWE news, stories and updates in the future.

Scan the QR code and let us know how you'd like to stay connected!