Edition #09

NEWSLETTER

September 2025

NATURAL RESOURCES & ENVIRONMENTAL SCIENCES

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ALABAMA A&M UNIVERSITY

ALUMNI HIGHLIGHT - LYDIA JOY WILLIAMS

By Promise Johnson

Lydia Joy Williams, a 2023 honors graduate of Alabama A&M University with a B.S. in Environmental Science, has quickly surfaced as both a dedicated environmental professional and a community leader. During her time at AAMU, she distinguished herself through active student engagement serving in the Student Government Association, representing the university as an Echo Student Ambassador, and revitalizing the Environmental Science Club as its President. Under her leadership, the club was re-established and positioned for long-term growth as a thriving campus organization. She is also a proud member of **Alpha Kappa Alpha Sorority, Incorporated.**

Following graduation, Lydia launched her professional career with the U.S. Environmental Protection Agency (EPA) in Region 4, within the Laboratory Services and Applied Science Division. Specializing in groundwater collection and hazardous waste, she played a pivotal role in the Everglades Regional Environmental Monitoring and Assessment Program (REMAP), one of the agency's largest multi-media sampling projects. As sample custodian, she oversaw more than 1,500 samples, leveraging Scribe software to streamline environmental data management. The REMAP project delivers critical insights into surface water, soil and sediment, vegetation, and fish supporting restoration strategies, phosphorus control assessments, and the Comprehensive Everglades Restoration Plan (CERP).

Today, Lydia serves as an Environmental Scientist with the Materials and Management Section of the Alabama Department of Environmental Management (ADEM), contributing to statewide sustainability and environmental health initiatives. Beyond her professional work, she is deeply engaged in advocacy and civic leadership. She is a member of the Gulf South Coast Climate Justice Advocacy Cohort and serves on the Policy Committee of the Mayor's Young Professional Council under Mayor Steven Reed, where she works to advance innovative, community-driven policies in Montgomery.

Outside of her professional and civic commitments, Lydia enjoys volunteering, reading, and playing both piano and pickleball, pursuits that reflect her well-rounded passion for growth, creativity, and service.

NJIDEKA OGO ADENIYI WINS PRESTIGIOUS NSF EPSCOR SCHOLARSHIP

By Promise Johnson

Njideka Ogo Adeniyi, a committed and passionate researcher, has been awarded the prestigious NSF EPSCoR Graduate Research Scholars Program (GRSP) scholarship at Alabama A&M University. This highly competitive award, valued at $30,000 annually, will support her ongoing PhD research in Plant and Soil Sciences, enabling her to contribute to advancing sustainable agricultural practices and innovative solutions in plant science.

Njideka's passion for agriculture was nurtured from an early age in southeastern Nigeria, where her family engaged in subsistence farming. These formative experiences shaped her curiosity and determination to explore agriculture not only as a means of livelihood but also as a pathway for scientific innovation and global food security.

She earned her B.Sc. in Animal Science from the University of Calabar, Cross River State, Nigeria. Her undergraduate research focused on the nutritional comparison of beef and selected seafoods, reflecting her early interest in bridging the gap between traditional farming and modern nutritional science.

Building on this foundation, Njideka pursued her M.S. in Natural Resources and Environmental Sciences at Alabama A&M University. Her master's research was centered on organic agriculture, where she explored sustainable methods by combining grafting of tomatoes and the use of *Bacillus amyloliquefiscens* to alleviate soil-borne disease and crop production.

Currently, as a PhD student in Plant and Soil Sciences, Njideka continues to push the boundaries of agricultural research. Her doctoral work focuses on the application of low-temperature plasma in improving the performance of tissue-cultured turmeric (Curcuma longa) plants—a cutting-edge approach that combines plant biotechnology and sustainable agricultural techniques. This research, supported by EPSCoR, holds promise for enhancing plant resilience, improving yields, and contributing to the advancement of organic and climate-smart agriculture.

With a strong academic background, cross-disciplinary research experience, and deep personal commitment, Njideka Adeniyi exemplifies the next generation of scientists working to solve pressing global challenges in organic agriculture and food systems.

BAMIDELE KOLAWOLE JONATHAN WINS PRESTIGIOUS NSF EPSCOR SCHOLARSHIP

By Dr. Srinivasa Rao Mentreddy

Bamidele Kolawole Jonathan earned his Doctor of Veterinary Medicine degree from Ahmadu Bello University in Zaria, Nigeria, where he built a strong foundation in clinical practice and animal health research. Driven by a passion for food safety and infectious disease research, he has combined years of veterinary experience in Nigeria with advanced scientific training in the United States.

At Alabama A&M University, he serves as a Graduate Research Assistant under the supervision of Dr. Srinivasa Rao Mentreddy, Professor of Crop Science in the Department of Natural Resources and Environmental Sciences, and Dr. Tyeshea Farmer, Assistant Professor of Genetics in the Department of Biology. Dr. Kolawole is conducting pioneering research on the use of cold plasma as a non-thermal decontamination method to reduce microbial load and extend the shelf life of goat milk. Unlike traditional pasteurization, his work explores innovative ways to safeguard milk quality without compromising its nutritional value.

With a career spanning from hands-on veterinary practice in Nigeria to cutting-edge food safety research in the U.S., Bamidele is committed to advancing public health, agricultural productivity, and food security through scientific innovation. His EPSCoR award recognizes both his achievements to date and his potential to make significant contributions to these national priorities.

The NSF EPSCoR program aims to improve the research competitiveness of selected U.S. jurisdictions by building STEM capacity through investments in talent, infrastructure, and education. It seeks to position these regions as key contributors to national and global research. EPSCoR focuses on developing research, expanding STEM education and workforce pathways, promoting inclusion, and fostering long-term impact across academic, government, and industry sectors. We are exceedingly proud of these students for their accomplishments.

Dr. Mentreddy is a collaborator on the $20 million NSF EPSCoR-funded Future Technologies and Plasma Processing (FTPP) project, which is led by the University of Alabama in Huntsville. As the Campus Principal Investigator at Alabama A&M University, he oversees applications of cold plasma in agriculture. The NSF FTPP project at Alabama A&M promotes interdisciplinary cold plasma research across several departments, including Natural Resources and Environmental Sciences, Food and Animal Science, Biology, and Physics. This project also provides valuable training opportunities for graduate and undergraduate students, as well as high school students, in the field of cold plasma agriculture.

ESA ANNUAL MEETING 2025 – BALTIMORE, MD

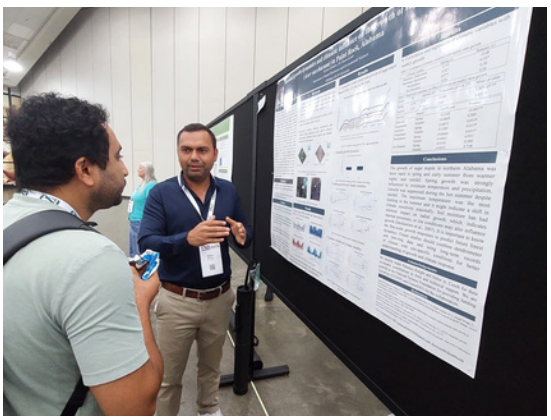
By Keshav Ghimire

I attended the Ecological Society of America (ESA) Annual Meeting in Baltimore, Maryland, from August 10 to 15, 2025. As a graduate student pursuing an MS in Plant and Soil Science at Alabama A&M University, I was excited to become part of ESA–the largest gathering of ecologists in the world. The meeting brings together thousands of students, educators, and researchers, providing a platform to share science, discuss challenges, and build connections in ecology, biodiversity, and climate change.

This was my first international conference. I presented a Proposed Project Poster entitled "Seasonal growth dynamics and climatic influence on the growth of sugar maple (*Acer saccharum*) in Paint Rock, Alabama." My research examined how tree growth responds to rainfall, temperature, and soil moisture. Using high-resolution automated dendrometers, I tracked the growth of five canopy-dominant sugar maple trees. The project explores how spring water availability promotes growth and how summer drought reduces resilience.

I received valuable suggestions on research design and data analysis. Throughout the conference, I attended talks, the career expo, poster sessions, and the exhibition hall. Meeting peers and mentors inspired me to refine my methods, build collaborations, and highlight the research being conducted in the Department of Natural Resources and Environmental Sciences (NRES).

Participating in ESA was a milestone experience–filled with inspiration and motivation. I encourage other students to seek out and attend conferences like this.



Photos By Keshav Ghimire

EVENTS

AG WEEK 2025 REFLECTS ON 135 YEARS OF LAND-GRANT LEGACY

By Rachel Stone

This September, Alabama A&M University looked back on two major milestones in its storied history: its own 150th anniversary and the 135th anniversary of the Second Morrill Act of 1890. That critical piece of legislation, signed by President Benjamin Harrison, created a path for the establishment of 1890 Land-grant Institutions–paving the way for HBCUs like AAMU to become leaders in agricultural education and public service.

To commemorate the occasion, the College of Agricultural, Life and Natural Sciences (CALNS) hosted Ag Week from September 15–19. The week featured events that celebrated the university's ongoing work in research, education, and community outreach–key pillars of AAMU's land-grant mission.

Rooted in the values of access and equity, the Second Morrill Act required states to provide Black students with opportunities in agriculture and technical fields, either through integration or the creation of separate institutions. For AAMU, this legacy remains central to its purpose, catalyzing change, innovation, and community advancement.

Ag Week 2025 kicked off with an inspiring lecture from Dr. Dionne Toombs, Deputy Administrator for Nutrition, Food Safety, and Quality with the USDA. Dr. Toombs emphasized the vital role agriculture plays in sustaining our world and encouraged students to see themselves as the next generation of leaders who will keep agriculture thriving. She reminded the audience that their contributions, whether through research, innovation, or community engagement, are essential to advancing food security, safety, and sustainability.

As an alumna of Alabama A&M University, where she earned her M.S. in Food Science, Dr. Toombs' return to campus was especially meaningful. She spoke with pride about her AAMU roots and shared how her time here shaped her career path in agricultural research and leadership. Her message was clear: agriculture needs passionate, dedicated individuals, and AAMU students are well-positioned to make a difference. Her words set an uplifting and energizing tone for the week's events, motivating students and faculty alike to embrace the opportunities ahead.

The second day of Ag Week 2025 highlighted the innovative research being conducted by students across the College of Agricultural, Life, and Natural Sciences. Representing the Department of Natural Resources and Environmental Sciences were two graduate students, Sowndarya Karapareddy and Evan Tenorio, who shared their work with faculty, peers, and guests.

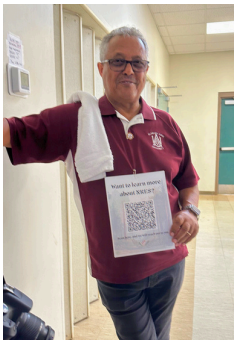
Sowndarya Karapareddy, a Ph.D. candidate in Plant and Soil Science under the advisement of Dr. Sripathi, presented her research on "Multiomic Approaches to Understand the Interaction Between Reniform Nematode and Cotton." Her study focuses on identifying key microbes and metabolites from resistant cotton genotypes, providing new insights into sustainable nematode management strategies that can protect yields and support healthier crops. Master's graduate Evan Tenorio, advised by Dr. Lemke, presented his research on remote sensing technologies, showcasing how drone-based hyperspectral and LiDAR sensors can be used to identify tree species and advance agricultural and environmental applications. Both presentations underscored the innovative contributions of NRES students and demonstrated how their work supports the future of sustainable agriculture and resource management.

Day three of Ag Week 2025 began on a high note with a commemorative walk/run honoring the 135th anniversary of the Second Morrill Act of 1890. Students, faculty, and staff from the College of Agricultural, Life, and Natural Sciences proudly marched together, showcasing both their school spirit and appreciation for the historic act that expanded access to higher education. Led by AAMU's ROTC, with the energetic beats of the drumline and the enthusiasm of the cheerleaders, the march was filled with excitement and pride as participants made their way to the Quad.

The celebration continued on the Quad, where each CALNS department set up tents to showcase their programs and engage with the community. Music filled the air, Food and Animal Science provided hot dogs, and attendees had the chance to meet Georgette, a live opossum brought by Dr. Stone. At the NRES table, visitors explored tree cookies, a soil monolith, a water testing station, and an art project, all of which highlighted the importance of conservation to the health of our planet. Despite the heat, CALNS showed up in full force to represent, celebrate, and connect. The day was a vibrant reminder of the college's unity, spirit, and dedication to carrying forward the legacy of agricultural education.

The final day of Ag Week 2025 took students out of the classroom and into the field with a visit to the Winfred Thomas Agricultural Research Station (WTARS). Spanning nearly 100 acres, WTARS serves as a hub for hands-on research and innovation in agriculture. Students were welcomed by station manager Dr. Monday Mbila, who shared insights into the wide range of projects taking place on the land and the station's role in advancing agricultural science.

Guided tours gave students the chance to experience WTARS up close, with stops at fields of sugar cane, miscanthus, and hemp, as well as a birding station where the group was lucky enough to spot one of the resident bald eagles. The tours also featured the livestock side of the station, with students meeting the goats and cows cared for by Animal Science. Between tours, students enjoyed a chance to cool off indoors, relax, and play games together. The day provided both education and camaraderie, offering students a deeper appreciation for the scope of agricultural research and the vital role it plays in supporting our future.



Photos by Rachel Stone, Meagan Markham, and Rong Xiao

CLUB ACTIVITIES

SCHOOL'S BACK IN SESSION—AND SO ARE THE CLUBS!

By Rachel Stone

With the new semester kicking off, campus is buzzing once again–and you know what that means: clubs are back in action! Beyond the classrooms and textbooks, student organizations are where friendships are made, leadership skills are built, and passions come to life.

Several clubs have already hit the ground running with their first informational meetings, giving students a chance to see what they're all about. The Environmental Science Club is ready to roll up its sleeves for another year of green initiatives and awareness events. The Forestry Club is bringing students together to explore the outdoors, sharpen field skills, and connect with professionals in the industry. And the Academic Afield Hunting Club has set its sights on combining responsible hunting practices with education, fellowship, and adventure.

These meetings not only introduce what the clubs stand for, but also give new and returning students a taste of the energy and excitement that comes from being part of something bigger than themselves. Whether it's preserving the environment, learning forestry techniques, or celebrating the culture of hunting, there's a place for everyone to get involved.

If you're looking to make new friends, expand your skills, or just try something new, now is the perfect time to join in.

After all, school isn't just about the lectures and assignments–it's about building your community, finding your people, and making memories that last long after the semester ends.

Environmental Science Club

Forestry Club

AAHC

ESC ATTENDS THE ALABAMA RECYCLING COALITION CONFERENCE

By Julia Mapp Williams

From September 10–12, the Environmental Science Club had the opportunity to attend the Alabama Recycling Coalition Conference as volunteers.

On the first day, volunteer Faith Wamble helped with guest check-ins and sat in on sessions filled with valuable insights from recycling industry experts. That evening, the club was invited to a networking event at the NASA U.S. Space and Rocket Center, giving members the chance to connect with professionals in a unique setting.

Day two brought even more opportunities for learning as Kiera Pierce, Camille McGowan, Endea Gant, Piper Staples, Karter Woods, Maddox Frazier, and Julia Mapp Williams joined an informational session and Q&A with experts in the recycling field. In the afternoon, the group toured two facilities: the Waste-to-Energy Plant and the Household Hazardous Waste Facility, gaining first-hand experience of how recycling and waste management systems operate.

On the final day, Alexis-Marie Parrish helped wrap up the conference by volunteering during the closing session, where ADEM presented award grants.

The conference was an inspiring experience for the Environmental Science Club. Members came away with knowledge about future career paths, a better understanding of the challenges, like securing funding, and a renewed sense of purpose in knowing that their efforts in recycling and sustainability can make a lasting impact on the future of our world.

On Friday, September 12, Environmental Science Club member and entrepreneur Aujuanea Lauren showcased her cosmetics business on the Quad as part of the DTLR Bulldog Welcome Bash. Fellow club members Piper Staples and Dillon Burns also volunteered at the event, representing DTLR and McDonald’s.

More pictures on page 11....

Photos from Julia Mapp Williams

COOKOUT WITH THE FORESTRY CLUB

By Elijah McCray

The Forestry Club cookout was organized for current members and students interested in joining. It provided an opportunity for students to connect, build friendships, and network with peers from different departments. The event also served as a welcoming space for new students to learn more about the club's mission, upcoming activities, and opportunities for involvement. By sharing food and conversations in a relaxed setting, students were able to strengthen relationships, promote collaboration across academic disciplines, and create a stronger sense of community within the College of Agricultural, Life and Natural Sciences.

Photos from aamuforestryclub

RESEARCH

RESEARCH VISITS TO DROUGHT AND CLIMATE EXPERIMENTS

Collaborative Research Project: ORCC – Investigating Drought and Cold Resilience of Northeastern US Trees
University of New Hampshire and Harvard Forest, August 17–24, 2025

By Keshav Ghimire

In mid-summer 2025, I had the opportunity to visit the University of New Hampshire (Durham, NH) and Harvard Forest (Petersham, MA) for research. The trip was part of the ORCC project, a collaboration between Alabama A&M University, the University of New Hampshire, and Smith College (Northampton, MA). The project investigates how trees in the northeastern U.S. respond to cold and drought, with the goal of improving ecological models and forest management.

At UNH, I visited the Terrestrial Ecosystem Analysis Laboratory and Thompson Farm. I observed drought experiment plots equipped with dendrometers and sap flow sensors to measure tree growth and water use. I also visited flux towers that track carbon and water exchange. A highlight was the turgor loss point demonstration, where I learned both the liquid nitrogen freeze–thaw and centrifugation methods. For the first time in my life, I even used a shotgun to collect leaf samples for the study. This was not only a new skill but also a memorable and enjoyable experience.

At Harvard Forest, I joined field tours, participated in tree coring, and met researchers studying belowground processes and the CLIFF drought experiment. The visit gave me valuable training in both field- and lab-based ecological research, and it strengthened my ability to design and replicate experiments. It also directly supports my ongoing MS research on tree drought responses, where I use tree rings and dendrobands at the Paint Rock Forest plot under the supervision of Assistant Professor Dr. Dawn Lemke.

I am deeply grateful to everyone who made this visit possible and productive, whether directly or indirectly.

Photos By Keshav Ghimire

LESSONS FROM THE FORESTGEO WORKSHOP IN KENYA

By Evan Tenorio






This past summer, I had the incredible opportunity to intern at Oak Ridge National Laboratory, where I continued my research on tree species identification using drone-based hyperspectral and LiDAR sensors. One of the highlights of my time there was participating in the two-week ForestGEO workshop in Nanyuki, Kenya–hosted annually by the Smithsonian's ForestGEO Network. This workshop brings together forest ecologists and ecosystem researchers from around the world for what I like to call one big professional study session. So much great science has come out of these gatherings, and I was fortunate to receive valuable guidance that ultimately led me to adopt a new machine learning model for my classification work.



Photos from Evan Tenorio

While in Kenya, I also helped collect terrestrial LiDAR scans at the ForestGEO plot located at the Mpala Research Centre. It was during those scans that it hit me: I was living out my childhood dream of being a scientist and collecting field data in remote parts of the world. Of course, as work-intensive as the trip was, we also made time for fun. We went on a safari where we saw zebras, elephants, giraffes, hyenas, and even witnessed the beginning of an elephant birth. We also did a half-day hike up Mt. Kenya, where we encountered baboons and monkeys along the way.

This was truly a once-in-a-lifetime experience, filled with both professional growth and unforgettable memories. I came back not only with new skills and insights but also with a great group of new friends.

AAMU STUDENTS AND FACULTY PARTICIPATE IN NATIONAL BROWNFIELDS TRAINING CONFERENCE

By Keyshawn Johnson

Eleven students and one faculty member from Alabama A&M University attended the National Brownfields Training Conference in Chicago, Illinois, August 5–8, through the University's ongoing partnership with the Alabama Department of Environmental Management (ADEM). The conference brought together CEOs, developers, students, and government officials to exchange knowledge on the latest technologies and strategies for cleaning up and redeveloping contaminated properties.

Ms. Charmagne Boyd, ADEM representative, presented an overview of the Brownfields Workforce Development Program, a collaborative initiative with Alabama A&M and Stillman College. Her presentation highlighted key insights into brownfields remediation and sustainable redevelopment efforts within Alabama.

Throughout the event, AAMU students deepened their understanding of brownfields and sustainable land-use practices while networking with government agencies and industry professionals. Their participation underscored the value of experiential learning and contributed to building the next generation of environmental leaders.
Participants included:

·Environmental Science: Keyshawn Johnson, Jaiden Ellington-Vassar, Elijah Nall, Dynasty Collins, and Kennedy Brown
·Community and Regional Planning: Karter Woods, Chanel Johnson, Alexa Williams, Camryn Cummings, Zyon Afanou-Flowers, and Daniel Olaborode
·Faculty Mentor: Dr. Elica M. Moss, Environmental Science Program Coordinator

Photos from Keyshawn Johnson

AAMU STUDENTS COMPLETE BROWNFIELDS ENVIRONMENTAL ASSESSMENTS ACROSS ALABAMA

By Jalen Whisenhunt



HUNTSVILLE, Ala. — During the summer of 2025, students from the Alabama Department of Environmental Management–Alabama A&M University Brownfields Workforce Development Program successfully completed Environmental Assessments and Phase I reports for Brownfields sites in Madison, Lauderdale, Limestone, Jackson, and Sumter counties.

The cohort included Environmental Science students William Garrett, Cristian Williams, and Jalen Whisenhunt, along with Community and Regional Planning students Karter Woods, Chanel Johnson, and Daniel Olaborode. Before beginning their fieldwork, the students participated in a Phase I Environmental Risk Assessment training, which introduced the reporting process and prepared them for on-site evaluations.

Students traveled to their assigned sites, conducted field observations, and collected photographic documentation. They then worked with Environmental Risk Information Services (ERIS) to access historical records and integrate the findings into comprehensive Phase I reports. Final reports were submitted to ADEM in August 2025.

This partnership provides hands-on training while addressing environmental priorities across Alabama. It equips students with valuable skills and helps prepare the next generation of environmental professionals.

The work not only strengthens workforce readiness but also supports community redevelopment, environmental protection, and public health. By assessing and documenting these Brownfield sites, students are helping lay the groundwork for safer neighborhoods, economic revitalization, and a more sustainable future for Alabama communities.

Photos from Dr. Elica Moss

WANT TO KNOW MORE?

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CONTACT NRESNEWSLETTER@AAMU.EDU FOR YOUR STORY TO BE SHARED!