

# School of Forestry & Wildlife Sciences



## FEATURE STORY

### Inspiring Global Change

Hanqin Tian traces his path to scholarly excellence from China to Auburn

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SFWS NEWS • Summer 2019

Working with Nature for Society's Well Being

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## Upcoming Events

Halloween Enchanted Forest, 10/24  
Awesome Amphibians & Reptiles, 11/1  
Ho Ho Ho Hike, 12/7  
Fall Graduation, 12/14



Dean's Regional Receptions



Golden Eagles Luncheon

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Spring Graduation Ceremony & Reception



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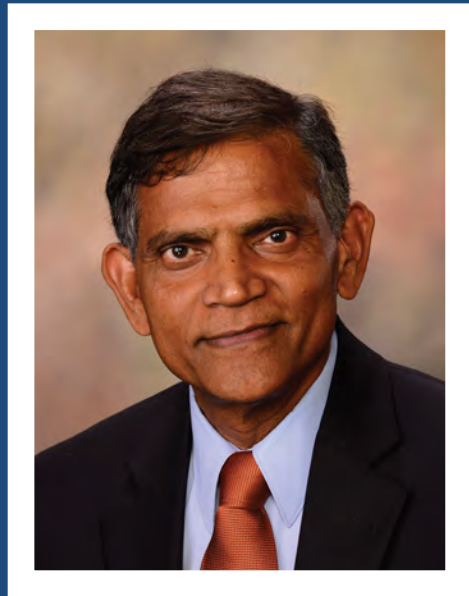
video



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## A Message from the Dean

Dear alumni and friends:

Greetings from the School of Forestry and Wildlife Sciences. As we move toward a new academic year, we are proud to reflect on the accomplishments of our faculty, staff and students; as well as our alumni and friends whose support assures the continued growth of our programs and abundant opportunities for our students.

Together, we are achieving our goal of becoming a top-ranked forestry, wildlife and natural resources program in the country.

We are transforming industry through innovative research that is producing solutions to costly problems, enhancing product performance and developing cost-effective and sustainable products, such as the new soy-based adhesive developed by the Forest Products Development Center at Auburn.

We are fueling emerging industries with the creation of new academic degrees and experiential learning opportunities such as the Forests, Environment and Wildlife Leadership Academy, that prepare the next generation of natural resource professionals with the knowledge and ability necessary to conserve and manage our natural systems for a sustainable future.

We are engaging stakeholders such as Five Star Preserve, who recently established the inaugural scholarship for wildlife enterprise management students, to invest in our new academic programs. Fostering this support is vital for assuring bright students have the financial ability to pursue higher education and industry has a pool of highly qualified job candidates to keep pace with market demand.

Finally, we are building capacities to bring our academic, research and outreach missions forward with the recruitment of world-class faculty, continued investment in cutting-edge research and delivery of superior educational programs that benefit students, society and stakeholders.

Together, we are poised for success.

War Eagle!

Best regards,

Dean Janaki R.R. Alavalapati

# Administration

## New degree programs showcased during Auburn's homecoming game

Each football season Auburn University selects outstanding and impactful academic programs to highlight on the field before home football games. The School of Forestry and Wildlife Sciences was recently recognized during the homecoming game against Kent State. Specifically, the school's new and innovative degrees in geospatial and environmental informatics, sustainable biomaterials, and packaging and wildlife enterprise management were the focus of a 30-second video spot on the Jordan-Hare Stadium jumbotron. Dean Janaki Alavalapati and professors Susan Pan, Mark Smith and Brian Via, were the on-field representatives for the school. In addition, a story was published in the football program and on the Auburn website, along with social media, and other communications and marketing efforts. The integrated multimedia campaign provided SFWS with significant exposure to a large audience, both at the game and online.



SFWS was recognized for its innovative new degrees as part of Auburn's on-the-field academic recognition program.

## Wildlife Extension Specialist and Professor James Armstrong retires as emeritus professor

James B. Armstrong began his career at Auburn University as an assistant professor in 1990 and retired as professor and extension wildlife specialist as of July 31, having served as extension coordinator of the Forestry Wildlife and Natural Resource program from 2009 - 2019. Armstrong was awarded the status of emeritus professor in recognition of his sustained meritorious service to Auburn University. He received a bachelor's from Freed-Hardeman College in Henderson, Tennessee, and a Master of Wildlife Biology from Abilene Christian University in Abilene, Texas. He then earned a Doctorate of Educational Research and Evaluation in wildlife science from Virginia Polytechnic Institute and State University in Blacksburg, Virginia. Armstrong's extension, research and teaching programs have focused on human-wildlife interactions. He also devoted his efforts to 4-H/youth natural resources education and wildlife damage management. Of his many significant lifetime achievements, Armstrong was recognized with the Alabama Wildlife Federation Governor's Award for Wildlife Conservationist of the Year in 2008 and Conservation Communicator of the Year in 2015.



SFWS celebrated the career and retirement of professor and extension wildlife specialist Jim Armstrong, who retired as emeritus professor as of July 31, during a reception this summer. Shown with Armstrong are daughter, Jami May, wife Shaliah and daughter Sarah Armstrong.

## Wildlife conservation pioneer, Daniel Speake, passes away

Daniel W. Speake, former assistant unit leader of the Alabama Cooperative Research Unit at Auburn University from 1955 to 1995, passed away this May in Huntsville, Alabama. Speake received his Doctorate of Wildlife Science from Auburn in 1967. His teaching and research duties spanned 40 years, with major contributions involving research on bobwhite quail, eastern wild turkey and eastern indigo snakes. He pioneered the use of radio transmitters on wild turkeys and other species, which resulted in improved wildlife practices and was the recipient of 19 wildlife awards, including the Wildlife Society Special Recognition Service Award presented at the North American Wildlife Conference and the W.

Kelly Mosley Environmental Award from Auburn University. He also established the first indigo snake captive breeding program for reintroduction studies in the United States. Speake is remembered fondly by many students and technicians that he trained during his career. Survivors include his wife, Mary Jane Speake, his sons David Neal Speake (Susan) of Tallahassee, Florida, and Richard Edward Speake of Auburn. His stepchildren are Kathleen Myles of Huntsville and Charles Kinzer of Farmville, Virginia. His grandchildren are Wade Speake (Kristine), Forrest Speake, Alice Speake Lagrone (Bryon) and great grandson, Vincent Lagone.

*\*Excerpt reprinted from Speake's obituary*

### Contact Us

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

Auburn University School of Forestry and Wildlife Sciences  
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602 Duncan Drive • Auburn, AL 36849  
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### Giving

Questions concerning the school's development program, including annual and corporate giving, planned gifts and estate planning should be directed to Heather Crozier, School of Forestry and Wildlife Sciences Building, 602 Duncan Drive, Auburn, AL 36849. Inquiries may also be made by email to vannhea@auburn.edu or by phone at 334-844-2791.



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## Women in Science and Engineering Institute

SFWS proudly hosted the Auburn University Office of Inclusion & Diversity Women's Initiatives Luncheon this spring in honor of the Women in Science and Engineering (WISE) Institute. Welcome remarks were given by Dean Janaki Alavalapati before Provost Bill Hardgrave and Associate Provost and Vice President for Inclusion and Diversity Taffye Benson Clayton led a discussion about the issues facing women faculty and graduate students at Auburn as well as the status and direction of women's initiatives on campus. SFWS Professor Lori Eckhardt, chair of the WISE Institute steering committee, provided concluding remarks.

## New Faculty & Staff

Please join us in welcoming new faculty and staff.

**Dr. Kelly Dunning**  
Assistant Professor of Conservation Governance

**Dr. Lana Narine**  
Assistant Professor of Geospatial Analytics

**Dr. Yucheng Peng**  
Assistant Professor of Sustainable Packaging Systems

**Dr. Janna Willoughby**  
Assistant Professor of Population and Conservation Genetics

**Todd Franks**  
Professor of Practice/  
Program Coordinator of Wildlife Enterprise Management

## Awards & Recognition

Congratulations to our faculty and students on their recent achievements.

**Alejandro Cardozo** – 3rd Place Poster, 73rd Forest Products Society Intl Conference (Maj. Prof. Brian Via)

**Diego Gomez-Maldonado** – 1st Place Poster, Annual Meeting of the Southeastern Society of American Foresters (Maj. Prof. Maria Soledad Peresin)

**Maria Celeste Iglesias** – College Award and the Outstanding International Student Award, Auburn Student Research Symposium (Maj. Prof. Maria Soledad Peresin)

**Katie Izenhour** – Fulbright Scholarship (Maj. Prof. Sarah Zohdy)

**Sam Bickley** – 2019 Garden Club of America Award for Coastal Wetland Studies (Maj. Prof. Chris Anderson)

**Benjamin McKenzie** – Outstanding Master's Student, Auburn University Graduate School (Maj. Prof. Sarah Zohdy)

**Mark Turner** – Best Student Presentation, Alabama Chapter of the Wildlife Society (Maj. Prof. Will Gulsby)

**Collin Sutton** – Outstanding Student Presentation, Annual Meeting of the American Geophysical Union (Maj. Prof. Sanjiv Kumar)

**Anna Tucker** – Outstanding Doctoral Student, Auburn University Graduate School (Maj. Prof. Conor McGowan)

**Southern Region Extension Forestry Awards:**  
**Award for Excellence** – Extension Publication (Prescribed Fire for Wildlife Poster (ANR-2408) – Jim Armstrong, Becky Barlow, John Kush, Adam Maggard, Bruce Dupree

**Award for Excellence** – Extension Publication (Alabama Stumpage Price Trends (2007-2016) – Adam Maggard and Becky Barlow

**Award for Excellence** (High distinction) – Journal Publication (Special Report: 2016 Cost and Cost Trends of Southern Forestry Practices) – Adam Maggard and Becky Barlow

# Extension & Outreach

## Woodland Wonders Nature Preschool

The Kreher Preserve and Nature Center has introduced the community to the innovative and revolutionary concept of nature-based, emergent learning with the first nature preschool in east Alabama. The newly established Woodland Wonders Nature Preschool launched this summer with its first class of 12 students.

"You may have heard of the nature preschool concept, a movement in innovative, child-led education sweeping across the United States," said Michael Buckman of the Kreher Preserve and Nature Center. "The idea was first put to practice in Scandinavian countries over a decade ago but is only now beginning to take hold in the U.S."

Today, there are estimated to be over 250 nature preschools across the country educating over 10,000 students annually.

Woodland Wonders, like all nature preschools, has one foundational principle to its organization: nature. All learning is done with and through nature, embracing the great outdoors as a classroom. Students will explore and uncover knowledge while immersed in the natural environment of the Kreher Preserve and Nature Center. Every rain puddle, butterfly, pine tree and blade of grass has stories to tell and lessons to be learned.

Woodland Wonders Nature Preschool is guided by an emergent curriculum which supports children's individual interests and voices while incorporating developmentally appropriate strategies through play-based and explorative activities. This innovative approach to education has been proven to support the child's whole development including increased attention, self-discipline, physical activity and motivation. All domains of growth are engaged and activated including cognitive, physical, social, emotional, aesthetic and spiritual...and all are paired with a strong environmental ethic.

"The importance of environmental awareness cannot be overstated as the human species is facing its biggest challenge thus far," Buckman said. "Yet, more and more children are growing up without that critical environmental literacy. Woodland Wonders aims to change that trend and ensure that its students start their lives with our precious and delicate environment in the forefront of their thoughts and aspirations."

This is the first year for Woodland Wonders Nature Preschool in Auburn. Plans include adding more students, more days per week and more hours per day for the 2020-21 school year.



The Kreher Preserve and Nature Center has launched its new Woodland Wonders Nature Preschool, an innovative and revolutionary concept of nature-based, emergent learning for preschool-age children in Auburn.



Media taps SFWS Regions Professor Tom Gallagher and State Forester Rick Oates to comment on concerns of a potential logger shortage

Story reprinted with permission of OA News author, Timothy Noordermeer

An Auburn University School of Forestry and Wildlife Sciences faculty member is collaborating with the Alabama Forestry Association to address a shortage of logging business owners and operators by promoting opportunities in the industry.

“There was a recent survey done by Timber Harvesting magazine that shows the average age of the logger, the business owner, is 54, and specifically, 49 percent of them are in the 60 and above category,” said Tom Gallagher, a professor in Auburn’s School of Forestry and Wildlife Sciences. “Then, you go to the operators, the guys running the equipment for them, and it’s not that different.”

The implementation of advanced mechanization has increased costs and decreased the number of employees, discouraging potential loggers and operators from pursuing a career in the industry, according to Gallagher.

**The problem**  
“It’s hard to get folks to invest the money it takes to put together a logging crew,” Alabama Forestry Commission forester Rick Oates said. “Thirty years ago, it was a chainsaw, an old pickup truck and cable skidder, and you could go into the business for \$100,000. Now, it’s half-a-million dollar investment, you’ve got headaches of employing people and truck drivers hauling timber.”

Gallagher said the disinterest to start or work in a logging business derives from a lack of insight and financial resources.

“The biggest hindrance to going into logging, in my opinion, is a lack of knowledge of the industry, but it’s mostly the money,” Gallagher said. “You’ve got to have a friend in the bank. He’s got to have equipment. That’s the stumbling block for a lot of loggers. There are opportunities to work with suppliers and middle men that will help you get that investment.”

Regulations and laws, including best management practices, the Endangered Species Act, the Clean Water Act, OSHA, fair labor standards and public safety in commercial driver rules could be deterrents in starting a logging business, Oates explained.



Harvesting operations at a Weyerhaeuser site in Tallapoosa County with Auburn University Regions Bank Professor of Forest Operations Tom Gallagher, Weyerhaeuser Harvesting Operations Manager Phil Tarver, and Tyler Slay, owner and operator of Slay Forest Enterprises LLC.

“The environmental laws and regulations you follow are certainly something people are concerned about,” he said. “We have some loggers here and there that get in trouble occasionally for not following those rules, and we work with various groups to teach folks how to correctly do it. We’ve got folks in the field that work directly with loggers to go out and inspect for best management practices.”

Oates said the problem could be generational perspectives for enduring hard work as descendants of logging business owners search for easier occupations.

“In the past, a lot of logging businesses have been passed down from a father to a son, but it’s been a family business,” Oates said. “I think a lot of young folks are watching their fathers struggle to do that job, and they realize there might be an easier way to make a living. It could be a generational change. Folks don’t want to go out there and do that kind of work.”

**The benefits**  
As for the logging industry in southeastern states such as Alabama, the days of wielding a chainsaw are a concept of the past, and Gallagher said the rewards in the logging industry are worth the arduous work and financial expense.

“A good logger can make a comfortable salary of \$60,000 to \$70,000 a year once it gets going,” Gallagher said. “Nowadays, an operator is going to start off with \$30,000, give or take. Once you show your worth, you can do better than that. If you get three guys together who can move a lot of wood, you can get bonuses. If you move 30 loads a week, you get paid. If you move 40 loads a week, you get an extra \$100 each.”

Gallagher said the work environment for operators is typically clean unless a machine requires maintenance, and most heavy equipment has air conditioning, heating and satellite radio to work in comfort.

“The equipment most loggers have is very comfortable,” Gallagher said. “There are comfortable seats on air-ride cushions that bounce up and down to absorb the shock. You are in seats that turn around, so when you have to back up, you don’t have to look over your shoulder anymore. If you are a clean freak, you can show up to work in white pants and go home without a stain on them.”

Utilizing the equipment, the fatality rate in the southeastern United States for logging operators has decreased significantly, Gallagher mentioned.

“I say that on a regional basis,” Gallagher said. “Logging, unfortunately, is still one, two or three, depending on what statistic you use, whether it is accidents or fatalities, but that’s mostly from the mountain states and the West Coast, where they do a lot of chainsaw work.”

Morse inducted into Global Teaching Academy

The Auburn University Office of International Programs recently inducted Wayde Morse, associate professor in the School of Forestry and Wildlife Sciences, into the Global Teaching Academy.

Each year, the organization selects a handful of faculty members who have made exceptional contributions in globalizing Auburn’s curriculum. Morse, who specializes in conservation social sciences, was one of four new members who were recognized at an induction ceremony in March.

“I’m honored to be recognized by the Global Teaching Academy,” Morse said. “The organization’s mission is to encourage and strengthen study abroad; and developing an understanding and awareness of how we all play a part in global conservation

issues has been a primary objective in my research and teaching career.”

Morse has studied, researched and taught in locations around the globe, beginning with a semester abroad at Lincoln University in New Zealand. After completing his master’s at Colorado State University, he joined the Peace Corps in Panama, where he worked in environmental education and interpretation in that country’s national parks.

He was then recruited into a National Science Foundation Integrative Graduate Education and Research Traineeship, or IGERT, program offered by the University of Idaho and the Center for Tropical Agriculture Research and Higher Education, in Costa Rica. He spent a year in that country investigating its ambitious conservation programs.

Since arriving at Auburn, Morse has taught classes on watershed services in Costa Rica, nature-based tourism in New Zealand, cultural tourism in Fiji and a pre-freshman

study abroad to Belize on sustainable tourism for the Office of International Programs.

“Dr. Morse’s contributions to international study have offered our students valuable opportunities to explore learning experiences far beyond Auburn’s campus,” said Janaki Alavalapati, dean of the School of Forestry and Wildlife Sciences. “His recognition by the Global Teaching Academy highlights the excellent contributions of our faculty.”

Jennifer Mason, director of International Program Initiatives, said the Office of International Programs prioritizes recognition of faculty members who, like Morse, are making a difference on campus and around the world.

“Our Global Teaching Academy inductees prepare our students to better understand the context of a globalized world while also serving as an example to colleagues of the many creative and impactful ways internationalization can be brought into the classroom,” Mason said. “I look forward to



Morse (bottom right corner) with students while touring the Dali Museum in Barcelona, Spain.

working with Wayde and the entire new class of the Global Teaching Academy to develop new ideas and programs in the years to come.”

The Office of International Programs created the Global Teaching Academy in 2014 to recognize and celebrate exceptional teaching in an international context. The academy’s members will be inducted into the Phi Beta Delta Honorary Society for International Scholars.

Visiting undergraduate students working with SFWS faculty gain valuable research and outreach experience through the NSF REU program

SFWS faculty hosted two undergraduate students this summer through the National Science Foundation’s Research Experiences for Undergraduates, or REU, at Auburn University. The program provides the opportunity for visiting students to develop valuable research skills under the guidance of faculty.

Cristina Garcia, an undergraduate student at Georgia Gwinnett College, worked with Associate Professor Chris Anderson, to examine the spatial patterns associated with periwinkle snails (*Littoraria irrorata*) in coastal Alabama and west Florida salt marshes. With Anderson’s guidance, Garcia performed field research to collect habitat data and measurements of the frequency, density, spatial distribution and biomass of the snails within eight coastal salt marshes.

Garcia’s results showed snail frequency and density varied between marshes with the highest occurrences detected at sites closest to the Gulf of Mexico. “Our research suggests that this species may be suitable as an indicator for the assessment and restoration of these salt marshes,” said Garcia.

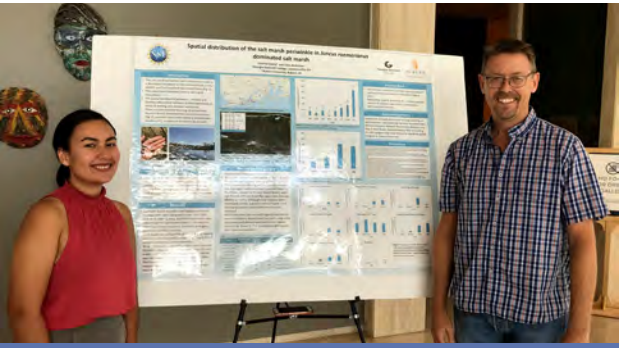
Diana P. Zurillo Riveria, an undergraduate from the University of Puerto Rico, worked with Professor Lori Eckhardt. Zurillo participated in research related to the disease, sudden oak death, caused by the oomycete plant pathogen, *Phytophthora ramorum*. The disease kills oaks

and other species of trees and has had devastating effects on the oak populations on the West Coast and in Europe.

Zurillo and Garcia both presented their research at the Jule Collins Smith Museum with other REU students. With the assistance of faculty and staff, Zurillo developed permanent educational signage about the disease that will be installed at the school’s Kreher Preserve and Nature Center. She also participated in a radio show to inform the public about the disease.

In addition to gaining valuable professional experience, Zurillo feels more confident about pursuing grant funding to support her graduate education. “I learned a lot of new techniques that are going to help me in my future as a researcher,” said Zurillo. “Also, I did love working in forestry so now I’m thinking of that option for grad school too.”

In an article published last year in the journal BioScience, researchers reported that college underclassmen who take part in summer research training programs—specifically, in this study, the National Science Foundation’s REU program initiative—are 48 percent more likely to pursue STEM-related doctoral degrees than demographically matched students who apply but are not selected.



Cristina Garcia, an undergraduate student at Georgia Gwinnett College, worked with Chris Anderson, associate professor, to present her research findings.



From left to right: Diana P. Zurillo, Lori Eckhardt, Jennifer Lolley and Michael Buckman, created educational signage regarding sudden oak death.

Five Star Preserve establishes the inaugural scholarship for wildlife enterprise management students

Alabama’s Five Star Preserve has established the inaugural scholarship in the School of Forestry and Wildlife Sciences for students who are pursuing the new multidisciplinary degree, wildlife enterprise management.

“We at Five Star Preserve are grateful to Auburn University for having given us this true privilege to contribute to such an innovative, four-year degree,” said Harry Pasisis, general manager of Five Star Preserve.

Approved in 2018, students in the new degree program will take courses in wildlife management, hotel and restaurant management, accounting and marketing, to name a few. In addition to earning the new bachelor’s, students will earn a minor in business.

Five Star is a 6,000-acre, private upland hunting preserve, nestled in between the Appalachian Mountains to the north, and the Southern Coastal Plains to the south in Coosa County, Alabama.

The scholarship was born from one of Five Star’s core principals to expose youth to wildlife conservation and education.

“Establishing the Annual Wildlife Enterprise Management Scholarship in the School of Forestry and Wildlife Sciences has not only inspired us, for we have always believed in higher education, but it has also motivated us because this new educational opportunity is truly filling a void in a rapidly growing business model,” said Pasisis.

Pasisis believes when passion for conservation efforts and wildlife management are coupled with a vibrant business model that attracts and retains clients, it becomes a greater force that will enable landowners, directors and managers to make better business decisions.

“It is this business longevity that will be crucial to sustain the ongoing conservation efforts for the future,” said Pasisis. “We know this program, driven by noble conservation efforts, will lead its graduates to become a force of leadership in the outdoors industry.”

Five Star Preserve was first settled by SZ Mitchell, who was one of the wealthiest men of the industrial age and one of the country’s most successful entrepreneurs. Mitchell built

the Ann Jordan Lodge on the property in the mid 1930s, where he would hunt and entertain with his family, childhood friends and acquaintances from around the globe.

Today, Five Star is one of the country’s most prestigious upland hunting clubs, offering 14 bird fields, two continental courses, bunker shoot, duck shoot, turkey and deer hunting. Sporting facilities include kennels, stables and clay shooting, as well as the Ann Jordan Lake, which is managed for trophy bass fishing. Five Star also boasts overnight lodging accommodations for up to 30 guests, including gardens, orchards, two dining rooms and a private wine cellar.

“The SFWS is delighted that Five Star Preserve has invested in this new program,” said Heather Crozier, director of development in the School of Forestry and Wildlife Sciences.



Five Star Preserve has established the annual scholarship in the School of Forestry and Wildlife Sciences for students who are pursuing the new multidisciplinary degree, Wildlife Enterprise Management.

“This support will assist in recruiting and recognizing high achieving students in this newly established major.”

Wildlife enterprise management students will be considered for the scholarship as part of the enrollment process. For more information about the degree, visit sfws.auburn.edu or email workingwithnature@auburn.edu.



Spring Graduation

SFWS celebrated its spring 2019 graduates with a ceremony and reception held on May 5. Graduate degrees conferred included: Ph.D., earth systems science, Rongting Xu; Ph.D., wildlife sciences, Anna Tucker; M.S., forestry, Jessica Ahl, Shrijana Duwadi, Marina Hornus and Simon Sanchez; M.S., wildlife sciences, Kent Keene. Undergraduate degrees conferred included: 29 forestry degrees, seven natural resource management degrees, 12 wildlife ecology and management degrees and six wildlife sciences pre-veterinary degrees. Cullen Anderson served as SFWS graduation marshal representative.



Auburn Research Symposium

SFWS Ph.D. students Maria Celeste Iglesias and Diego Gomez Maldonado presented research at the 2019 Auburn Student Symposium, as well as sustainable biomaterials and packaging undergraduate student Phillip McMichael, who presented a poster on the production and characterization of bleached and unbleached nanocellulose. Gomez Maldonado gave his presentation titled “Oriented beta-cyclodextrin/Chitosan polymer adsorption on nanocellulose surfaces and its use on capture of microcystin-LR”. Iglesias’ presentation on interactions between cellulose nanofibrils and wood adhesives for wood composite applications won her the College Award and the Outstanding International Student Award for the School of Forestry and Wildlife Sciences.



Documentary Spotlights SFWS

Alabama Public Television’s final episode focused on the School of Forestry and Wildlife Sciences’ research titled, “Environment & Society,” will air on Nov. 16 at 9 p.m. CT. In this episode, the documentary will explore the complex relationships between humans and the environment that influence our climate, weather, and the availability and quality of our natural resources. Viewers will learn how Auburn’s School of Forestry and Wildlife Sciences’ research and academic programs, in partnership with agencies, government and industry, are shaping policy and training the next generation to address and manage critical environmental issues to assure a sustainable future for our society.



# Inspiring Global Change

Hanqin Tian traces his path to scholarly excellence from China to Auburn

by Teri Greene



Auburn University Professor Hanqin Tian was named a 2019 Andrew Carnegie Fellow and will receive \$200,000 to support his research on how Asia — home to more than half of the world's population — can provide enough food for its citizens without causing detrimental effects on the environment.

Tian, who is the Solon and Martha Dixon Professor and University Alumni Professor in the School of Forestry and Wildlife Sciences, or SFWS, is one of 32 Carnegie Fellows nationwide selected from nearly 300 nominees by the Carnegie Corporation of New York, which awards grants to recipients for their high-caliber research.

Tian is director of Auburn's International Center for Climate and Global Change Research and also leads the Climate, Human and Earth System Sciences (CHESS) Cluster.

"Dr. Hanqin Tian's appointment as a Carnegie Fellow underscores the influence of his considerable work in the study of the effects of climate change and his search for solutions for populations to adapt and thrive in the midst of such change," said Janaki Alavalapati, dean of the School of Forestry and Wildlife Sciences. "The remarkable achievement not only establishes him as a leader in the field but also shines a light on the significance of his groundbreaking work at Auburn."

During Tian's fellowship, he will work to develop solutions to the impact that climate change will have on Asia's food production; a region where in recent years has been subjected to extremes in climate that have resulted in dwindling cultivable land. At the same time, inefficient use of the area's resources has resulted in a less productive and more expensive food supply.

## Auspicious beginnings

Growing up in what he calls a "doctoral village" in Southeast China, Tian dreamt of changing the world through science. His father was a teacher whose family had long emphasized the importance of advanced education. Among Tian's current family members, there are 15 teachers, working in arts, science and mathematics, at levels from kindergarten to university. That strong educational foundation led him to become an acclaimed professor and researcher.

Spelled out in Chinese characters, Tian's first name, Hanqin, translates to "man who works hard." Add his last name, and you get "man who works hard in his field." Tian said his parents expected him to live up to that name.

And he did. Tian earned a Bachelor of Science from Zhejiang University, a Master of Science from the Chinese Academy of Agricultural Sciences, in Beijing, and a Ph.D. in environmental and forest biology from the State University of New York College of Environmental Sciences and Forestry and Syracuse University.

He was trained in the field of systems ecology, an interdisciplinary field of ecology that takes a holistic approach to the study of ecosystem structure and functioning. Professor Charles A.S. Hall, a world-renowned scientist, was his advisor.

His scholarly work at Auburn centers on coupling human and earth system dynamics to bridge natural science, economics and social science with research across the globe to address some of the world's greatest challenges. He has published about 300 peer-reviewed journal articles, including six papers published in the highly prestigious scientific journals *Nature* and *Science*.

"We want to couple the human and natural environment to face today's challenges, like food security and environmental sustainability from multiple perspectives — from natural resources, technology and economics."

- Hanqin Tian

Tian has garnered an extensive list of national and international awards, including Auburn's Creative Research and Scholarship Award and SEC Faculty Achievement Award. Tian has presented keynote speeches on greenhouse gas emission and climate change at international conferences in Paris, Stockholm, Sweden; Beijing, China; Kobe, Japan; Scotland and Washington, D.C. Tian was also elected as a fellow of the American Association for the Advancements of Science, or AAAS, the world's largest scientific society.

## A study in perseverance

By the time Tian arrived at Auburn 16 years ago, he had learned that the road to success in research and education is full of alluring distractions.

"There are so many things that can change your trajectory," said Tian, who came to the U.S. with his family in the early 1990s. "To me, it is very important that you have a passion for science. Then, even if you have a difficult time, you can persist."

Tian cites his wife, Shufen "Susan" Pan, as a source of inspiration and support. He's known Pan since childhood; their families were close neighbors and friends in China, and they shared a passion for research and education. He and Pan, a fellow SFWS faculty member who specializes in geographic information systems, or GIS, now work together on multiple interdisciplinary projects.

"I want to thank my best friend, my favorite creative collaborator, my lifetime support — my wife, Susan," Tian said. "I'm so blessed to have Susan in my life."

During Tian's post-doctoral fellowship at the Ecosystems Center of the Marine Biological Laboratory, or MBL, in Massachusetts, he and Pan raised their two young children on his annual salary of \$27,000, as Pan struggled to pay her tuition for computer classes as an economist. The family of four had to live frugally, with just one small car to transport them all.

One day, a former doctoral classmate, one of many who veered from academics to pursue a career in industry, visited Tian. As the vice president of a company in New York, the classmate said he wanted to create a position in his company — just for Tian — that would pay \$135,000.

"It was so attractive to me," Tian said of the offer. "My family's economic situation would totally change."

But Tian and Pan talked about how, if financial success had been their aim, they could have stayed in China. In Beijing, they'd both held lucrative positions. The sole purpose of their move to the U.S. had been to advance in academics.

The next day, Tian turned the offer down, marking a critical juncture in his career.

## Dedication rewarded

Tian's postdoctoral research adviser was Jerry Melillo, former associate director for environment in the U.S. President's Office of Science and Technology Policy. Tian said Melillo had a major impact on his life.

Melillo, director emeritus of The Ecosystems Center at the Marine Biology Laboratory

and a member of the National Academy of Science, believed Tian could make great strides on a global scale. At that time, he also offered Pan a position in the GIS laboratory; believing the couple should work closely, in complementary fields. That led to Pan and Tian's frequent research collaborations, combining ecology, economics and GIS, a research process known as coupling.

Since the early 1990s, Tian and Pan have worked closely on coupled natural-human systems, combining their respective expertise in ecology and economics. Their first co-authored paper was published in 1991. Both worked on numerous projects, including the first and third U.S. National Climate Assessments.

Tian's Carnegie fellowship is focused on the concept of coupling human and earth systems.

"We want to couple the human and natural environment to face today's challenges, like food security and environmental sustainability from multiple perspectives — from natural resources, technology and economics," Tian said.

Pan added, "It's so important to apply a systems approach to studying the complex coupled system. It is essential to have a global perspective and international collaboration for ensuring global food security."

Tian, Pan and their teams developed the Dynamic Land Ecosystem Model, or DLEM, a world-renowned complex computer model of the land biosphere. Two decades in the making, the model simulates and predicts the ongoing dynamics including hydrological and biogeochemical cycles of the three major greenhouse gases: carbon dioxide, methane and nitrous oxide, across the land surface of Earth.

Over the years, Tian and Pan and their teams have conducted cutting-edge research in the U.S. and across the globe, particularly in Asia and Africa, to examine the ways climate change has impacted food, water and energy, and to strive for solutions.

## Life and work at Auburn

Tian came to Auburn after hearing great things about the School of Forestry and Wildlife Sciences, particularly its integrative study programs, combining forestry and wildlife studies with work from the Colleges of Math and Sciences, Agriculture and Engineering.

"Auburn really promotes excellence," said Tian, who added that he is grateful for the support the university has shown for his research endeavors. "A very critical thing for me is the promotion of interdisciplinary programs."

He cited the work and vision of SFWS Associate Dean of Research Graeme Lockaby, who headed the search committee that brought Tian and Pan to Auburn. The admiration is mutual.



Dr. Hanqin's family: son, Alex, wife, Dr. Shufen "Susan" Pan, and daughter, Dr. Tina Tian.

"It's so important to apply a systems approach to study the complex coupled system. It is essential to have a global perspective and international collaboration for ensuring global food security."

- Shufen "Susan" Pan

"The hiring of Dr. Hanqin Tian was a very bright day for the School of Forestry and Wildlife Sciences. We were very fortunate to be successful in enticing him to join us, particularly since he has turned out to be our finest researcher," Lockaby said. "Dr. Tian is an incredible scientist with a phenomenal international reputation and is also one of the nicest people you might ever meet. His contributions to our school, Auburn University and international science in general are unsurpassed in my experience, and we are very proud of him."

Aside from academics and research, Tian and Pan found Auburn's weather to be remarkably similar to that of Southeast Asia. Arriving for his first interview, he said, "It felt just like home." And the family is extremely pleased with Auburn City Schools, which did a stellar job in preparing their children for success.

Tina Tian, 27, is a resident in general surgery at the Boston Clinic after earning her medical doctoral degree from Tufts University. Her brother, Alex, 23, is a recent Samford graduate who founded and directs an online education program for students in underserved areas throughout Asia and Africa.

## Inspiring the next generation of world-changers

In the past decade, Tian and Pan have trained and prepared young scientists with more than 10 Ph.D. students and postdoctoral fellows who have become faculty members at several U.S. universities, including Iowa State University, Ball State University, Mississippi State University, San Diego State University

and the University of Illinois, among others.

"Professor Tian is an exemplary and visionary advisor who laid a great foundation for my career and is always my inspiration and role model," said Wei Ren, a former doctoral student and currently an assistant professor at the University of Kentucky.

Crystal Lu, a former postdoctoral fellow and current faculty member at Iowa State University, also said Tian has proved to be a formidable guide.

"During my eight-year stay in Auburn, Professor Tian not only taught me how to do outstanding research but also showed me how dedicated and persevering an outstanding researcher should be, which profoundly influences my career and my students," Lu said.

Both Tian and Pan said it is critical to inspire and encourage students to develop a big vision for their careers, recognizing that what they do is vitally important for society and the future of global development.

"We want to motivate them to develop their character, to work hard and have persistence," Tian said. "Global climate and environmental changes affect the nexus of food, energy and water securities and threaten human health and well-being. It is essential to prepare students to be the generation that solves the grand challenges in climate change and sustainable development facing society and humanity in this century."



China's agricultural heartland from space

A band combination of Landsat 8 satellite showing China's agricultural heartland. Blue, green, purple and yellow represents different crops, brown and red represents cities and villages.



Zohdy and fellow Auburn researchers publish new hypothesis explaining the connection between habitat loss and the global emergence of infectious diseases

Auburn University researchers have published a new hypothesis that could provide the foundation for new scientific studies looking into the association of habitat loss and the global emergence of infectious diseases.

They presented their research in the paper, “The Coevolution Effect as a Driver of Spillover,” in the latest issue of the scientific journal, Trends in Parasitology.

“We provide a new perspective about how habitat loss can facilitate the emergence of infectious diseases in humans,” said Sarah Zohdy, assistant professor in the School of Forestry and Wildlife Sciences and the College of Veterinary Medicine, who coauthored the study with Tonia Schwartz and Jamie Oaks, assistant professors in the Department of Biological Sciences in the College of Sciences and Mathematics.

Globally, scientists believe habitat loss is associated with emerging infectious diseases, or EIDs, spreading from wildlife to humans, such as Ebola, West Nile virus, SARS, Marburg virus and others. The Auburn team developed a new hypothesis, the coevolution effect, which is rooted in ecology and evolutionary biology, to explain the underlying mechanisms that drive this association.

Schwartz said the team integrated ideas from multiple aspects of biology, including disease ecology, evolutionary biology and landscape genetics, to develop the new hypothesis on why diseases are more likely to spill over from wildlife to humans in deforested habitats.

“We provide a testable hypothesis that we hope other researchers will try to test with their data, as we will be doing,” Schwartz said. “Whether or not these studies fully

support this new hypothesis, we anticipate it will provide a new perspective that other researchers in this field can use and build on, to ultimately push this field forward to understand disease spillover and prevent it.”

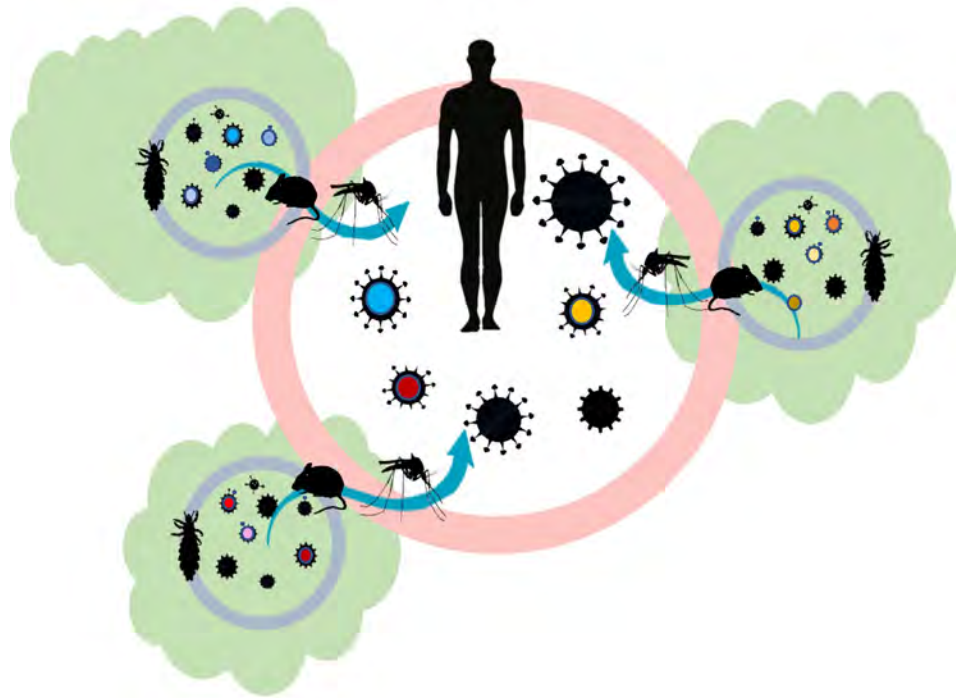
The field of disease ecology is heavily based on a hypothesis known as the dilution effect, which was released at the turn of this century. It is essentially the idea that biodiversity conservation can protect humans from emerging infectious diseases. Zohdy said the dilution effect highlights the critical role that wildlife conservation can play in protecting human health and has transformed the understanding of zoonotic infectious diseases.

However, until now, even after a wealth of research in the past few decades has explored that hypothesis and found associations between the loss of biodiversity and EIDs, there has been no explanation for where the microbes that cause EIDs come from and how they get to humans.

“Through our hypothesis, we propose that as humans alter the landscape through habitat loss, forest fragments act as islands, and the wildlife hosts and disease-causing microbes that live within them undergo rapid diversification,” Zohdy said. “Across a fragmented landscape we would then see an increase in diversity of disease-causing microbes, increasing the probability that any one of these microbes may spill over into human populations, leading to outbreaks.”

Oaks said he is encouraged that the research will impact the way these problems are perceived.

“Our paper introduces an evolutionary mechanism to explain the association between



Auburn researchers have published a new hypothesis, the coevolution effect, that could provide the foundation for new scientific studies looking into the association of habitat loss and the global emergence of infectious diseases.

habitat fragmentation and disease spillover into human populations, which we hope will complement the ecological perspectives on this global health challenge,” he said.

School of Forestry and Wildlife Sciences Dean Janaki Alavalapati said the paper’s findings are compelling.

“Dr. Zohdy and her fellow researchers provide noteworthy insights in the field of emerging infectious diseases and the driving forces

behind them,” Alavalapati said. “Their findings could result in a significant shift in the way the origins of these diseases are perceived.”

Funded by an Intramural Grants Program award, the research, from its inception, was a collaborative and fully integrative project, from acquiring funding to writing the manuscript and training students across disciplines.

Study reduces Southern pine seedling mortality

by Charles Martin

Auburn University research has helped lead to a new product to reduce Southern pine seedling mortality for the forestry industry.

“This is a major accomplishment that will allow forest tree nurseries to store their seedlings for longer time periods without detrimentally affecting the seedlings’ survival,” said Ryan Nadel, assistant research professor with Auburn’s School of Forestry and Wildlife Sciences.

The product from AgroFresh, trademarked as LandSpring, recently received EPA approval to include conifer seedlings after three years of testing by the Southern Forest Nursery Management Cooperative at Auburn.

The U.S. produces more than 1.2 billion forest tree seedlings for reforestation annually, with more than one billion produced in the Southeast. The majority of seedlings are conifers, produced as bareroot seedlings and grown in a similar manner to farming regular agricultural crops.

Seedlings are typically grown in native soil within open fields for about a year before they are removed from the soil during harvesting, or what is called lifting. They may be planted in areas that have been recently harvested or into fields, converting land back into forests.

Auburn research has shown the use of LandSpring increased the survival

rate by 10 percent, which would potentially yield the growth of an additional 1.2 million pine seedlings after outplanting—the process of lifting, packing, storing and replanting—as compared to non-treated seedlings.

“Outplanting is stressful for seedlings, and storing forest tree seedlings is a foremost challenge for forest nursery managers due to the short time frame between lifting and planting,” Nadel said.

Lifting usually occurs between late November and late February, the optimum time period to avoid increased mold and decay of the seedlings and decreased survival once replanted. The seedlings are packed in boxes, bags or bundles and placed in cold storage for two to three weeks before being shipped to the field where they are replanted in areas prepared for reforestation throughout the Southeast.

“Weather conditions are not always optimal for planting the seedlings once harvested from the nursery, requiring seedlings to be stored for longer periods than recommended,” Nadel said.

The Auburn University Southern Forest Nursery Management Cooperative is a regional multisector member organization that serves to develop technologies for the economical production and utilization of forest tree seedlings in the southern U.S.

Auburn University researchers Ryan Nadel and Scott Enebak of the Southern Forest Nursery Management Cooperative measure the height, or growth, of loblolly pine seedlings. They have developed technologies for the economical production and utilization of forest tree seedlings in the southern U.S.



Via obtains patent allowing soy flour to replace petroleum-based adhesives in wood component manufacturing

Soy flour could soon replace petroleum—at least in adhesives used in the manufacturing of particleboard.

Professor Brian Via of the Auburn University School of Forestry and Wildlife Sciences has obtained a patent that will allow soy flour to replace petroleum-based adhesives traditionally utilized to manufacture wood components in particleboard, an engineered wood product commonly used in indoor furniture.

This innovative method will provide a more cost-effective and ecofriendly alternative to commonly used petroleum-based products, thus lowering the amount of formaldehyde released from formaldehyde-based adhesives.

Via, who is also director of forest products at the school, worked with William G. Hand, research and development manager at Georgia-Pacific and a former graduate student in chemical engineering at Auburn, and Sujit Banerjee, professor emeritus at the Georgia Tech School

of Chemical and Biomolecular Engineering, on the research that led to the issue of the patent.

The binder, or glue, used in manufacturing these wood components comprises a large portion of the manufacturing price, so substituting a less expensive component such as soy flour could significantly reduce the product’s cost.

This shift is poised to add value to soybeans while saving money for companies that opt to use the newly introduced method. Improved air quality resulting from a reduction of the release of formaldehyde is a major advantage, as well.

Prior to this research, manufacturers considered soy flour-based adhesives to be ineffective for wood components because the soy thickened too quickly. Via and his fellow researchers found that heating the soy-adhesive mixture prior to application resulted in an adequate replacement for the petroleum-based adhesives.

The United Soybean Board sponsored the research that helped to collect data for



the patent, titled “the use of soy flour in resin formulations used to manufacture engineered wood composites” (patent number 10266694). The patent was filed in March 2016 and issued in April 2019.

The new patent could result in a major shift in this sector of wood manufacturing, said School of Forestry and Wildlife Sciences Dean Janaki Alavalapati.

“This patent, a result of the substantial research of Dr. Via and his team, presents a significantly improved method of wood component manufacturing,” Alavalapati said. “It has the potential to cut manufacturing costs, improve air quality and boost the region’s soybean industry. It is a breakthrough that provides major improvements on multiple fronts.”

Peresin Lab tapped to organize international nanocellulose conference in Japan

Maria Soledad Peresin, assistant professor of forest biomaterials in the Auburn University School of Forestry and Wildlife Sciences, served as co-chair of the scientific committee for the International Conference on Nanotechnology for Renewable Materials held this summer in Chiba, Japan.

The annual event draws professionals and students from around the world who are members of the Nanotechnology Division of the Technical Association of the Pulp and Paper Industry, or TAPPI Nano.

“This event is a great opportunity to get maximum exposure to innovations related to the utilization of bio-based materials, combined with nanotechnology to advance science on sustainable renewable materials,” Peresin said. “These areas are very relevant to Auburn’s undergraduate degree program, sustainable biomaterials and packaging.”

In addition, two of Peresin’s doctoral students, Diego Gomez Maldonado and Maria Celeste Iglesias, served as co-vice chairs of the student committee of the TAPPI Nano Division.

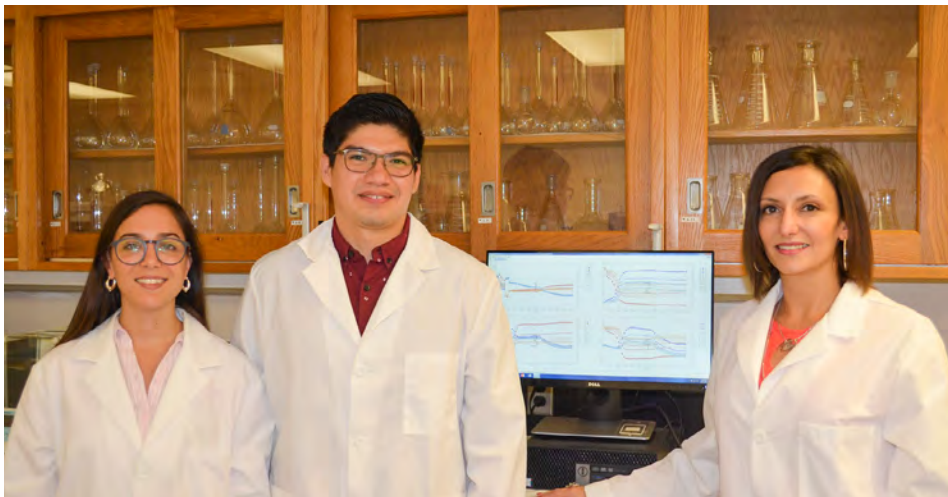
Peresin said the student committee is vital to the organization.

“The mission of the committee is to provide a forum for students to develop a global network, connecting students and young professionals to academia and industry,” she said. “The forum facilitates knowledge exchange and provides useful tools, advice and encouragement so that students pursue careers that advance the use of renewable and sustainable nanomaterials.”

Iglesias was not involved in the 2018 event but is enthusiastic about the opportunity to connect with her international cohorts.

“When I received an email invitation to participate in this year’s conference organization with the students committee, I immediately said yes,” Iglesias said, adding that student committee members in the U.S. meet regularly to organize their portion of the conference.

“For me, it’s really nice because you start getting in touch with these people. You know them and you can work with them. Students do not only go to listen. They are very involved.”



Auburn School of Forestry and Wildlife Sciences graduate students Maria Celeste Iglesias, left, and Diego Gómez Maldonado, center, and Assistant Professor Maria Soledad Peresin, helped to organize the International Conference on Nanotechnology for Renewable Materials held this summer in Chiba, Japan.

Renewable nanomaterials have increasingly earned significant attention as they are recyclable, appear to have few safety, health or environmental issues and can be produced in large quantities at a relatively low cost. Research shows they have unique properties that enhance the performance of consumer products and applications when used with other materials, TAPPI Nano reports.

“The involvement of Dr. Peresin and her students with TAPPI Nano increases the visibility of their work with sustainable, added-value products while enhancing Auburn University’s international network, extended opportunities for collaboration and access to a variety of key stakeholders to advance the program,” said Janaki Alavalapati, dean of the School of Forestry and Wildlife Sciences.



The Solon Dixon Forestry Education Center celebrated its 40th summer practicum cohort. Pictured are forestry and wildlife students gathered outside the historic Dixon home located at the heart of the center’s campus in Andalusia, Alabama.





Frank Walburn named 2018 Outstanding Alumnus

The School of Forestry and Wildlife Sciences recognized Frank Walburn, Regions Bank senior vice president of natural resources and real estate, as the 2018 Outstanding Alumnus of the Year during the school's recent awards ceremony. Walburn, a 1979 graduate, has worked in forestry and forest management for more than 40 years, including forest regeneration, timber and fiber procurement, strategic

planning, consulting forestry and the ground-up development of some of the state's first timberland investment funds. "During his four decades of service, Frank has solidified a reputation as a knowledgeable, ethical and hard-working forester and industry leader with a great heart and commitment to give back to his alma mater and the state's forestry community," said School of Forestry and Wildlife Sciences Dean Janaki Alavalapati. "Frank is truly a role model for our students." Walburn said he is honored by the recognition. "I've always given credit for much of the professional success I've had to the ability to network with other professionals, which began for me at Auburn University and continues to this day," Walburn said. "I'm humbled and proud to be selected as alumnus of the year—especially considering the sharp, dedicated professionals I know in our alumni ranks. "I feel blessed to know the people, the science and the application of good forestry practices that I acquired by attending Auburn's School of Forestry and Wildlife Sciences." Walburn was a member of the Alabama State Board of Registered Foresters for five years beginning in 2006, serving as

chairman of the board in 2009 and 2010. Additional contributions and leadership positions include chairmanship of the Alabama Forestry Association, and Alabama division chair for the Society of American Foresters, or SAF, with which he remains active on both state and local levels. As an advocate for the school, Walburn has worked on multiple fundraising campaigns and served on the school's advisory board. Most recently, he led Region's efforts at Auburn to promote forest products and forestry research with the funding of two endowed professorships, the Regions Professor of Forest Products and the Regions Professor of Forest Operations. Beyond his Regions-related support, Walburn has personally encouraged research at Auburn's Forest Products Development Center and its study of green chemicals and biofuels from forestry. This includes helping researchers locate specific supplies of wood fiber, pulp and other bioproducts for research and promoting the center's work with forestry and industry stakeholders. In 1981, after a post-graduation job with Selma-based Walter Mills Forestry Services, Walburn worked his way through the ranks at

Canadian forestry company MacMillan Bloedel Inc., eventually becoming director of the company's Woodlands Division from 1992-1999. He later served as a consulting forester, then joined AmSouth Bank in 2003 as senior vice president and timber fund manager. When Regions acquired AmSouth in 2007, Walburn was selected to lead the combined institution's timberland investment efforts and development of new funds. In 2017, he was appointed to his current position where he oversees the management of 4 million acres of timber and mineral resources across the United States. Walburn was nominated by Jim Bates, a 1997 School of Forestry and Wildlife Sciences graduate who now works for Regions in wealth management through natural resources. The School of Forestry and Wildlife Sciences recognizes outstanding alumni annually. Award recipients must not only be a graduate of the school, their careers must demonstrate a history of outstanding contributions to forestry or wildlife sciences within the state, nationally or internationally, while exhibiting exemplary character and integrity. Nominations for the 2019 Outstanding Alumni Award will be accepted beginning January 2020.

Bringing "Big Game" to Auburn

The School of Forestry and Wildlife Sciences is now home to a diverse collection of professionally mounted big game species thanks to Dan Moultrie, founder of Moultrie game feeders and cameras. The Moultrie Museum Collection consists of 26 free-range animals that represent most of the big game species found on the North American continent. Located throughout the School of Forestry and Wildlife Sciences building, the collection is a unique and important resource for understanding North America's natural heritage and includes species such as elk, moose and bear. Moultrie, a Birmingham native, who graduated from Auburn University in 1979 with a degree in business administration, has deep roots within the hunting and wildlife industry. While working for the Southern Company nearly 40 years ago, he began building his outdoor products line, first with the launch of the revolutionary Moultrie game feeders, and then later with the addition of its top selling game cameras. It was during this period that Moultrie grew his expansive collection. "Instead of taking customers on golf trips or Hawaii trips or whatnot, we went on hunting trips," said Moultrie. It was during those trips that Moultrie displayed the company's in-depth knowledge of game management.

"And so all of those years of doing the hunts was actually building the business, but in turn was showing them that we understood wildlife; we understood the pursuit of wildlife, how to grow wildlife, how to manage wildlife," said Moultrie. "One of the quotes I always used, when anybody would ask, 'Well, what are you hunting for now?' and I'd always say, I'm hunting for purchase orders, and they're hunting for animals." The school intends to utilize the expansive collection for instructional purposes in the classroom and outreach in the community. "The diversity and breadth of the animals will provide valuable opportunities for our students to learn species identification and to study varying aspects of morphology," said Janaki Alavalapati, dean of the School of Forestry and Wildlife Sciences. Pursuing a variety of North American species was intentional for Moultrie's team. Moultrie feels it is important that wildlife management students have opportunities to study accurate and high-quality representations of big game species, many of which are no longer open to hunting in some areas, such as the grizzly bear, mountain lion and caribou. "A lot of them have gotten very hard to get," said Moultrie. "Many places have closed hunting of the caribou because of the management. They didn't understand about how many animals should be taken



Dan Moultrie, donor of the Moultrie Museum Collection, is shown with a professionally mounted life-size white tailed deer, one of the 26 big game species in his collection recently donated to the School of Forestry and Wildlife Sciences.

or not taken or predator impacts, and that's all a curve that the wildlife community is going through and learning about." Moultrie has also served on various boards and committees throughout Alabama and the nation, including currently sitting on the State of Alabama Conservation and Natural Resources Foundation Board and most notably the State of Alabama Department of Conservation Advisory Board, where he served as chair from 2003 thru 2015. He was named chairman emeritus at the end of that term.

In recognition of Moultrie's leadership and service to the industry, the State of Alabama Conservation and Natural Resources Foundation established the Dan Moultrie Endowed Scholarship to support undergraduate and graduate education in the School of Forestry and Wildlife Sciences. "Our industry, the wildlife industry, has been so good to us and we're very fortunate to have been involved in it," said Moultrie. "If we don't give back some of that, I think we're making a huge mistake."

School hosts Woodlands & Wildlife Society annual dinner

This summer, the School of Forestry and Wildlife Sciences hosted its annual Woodlands & Wildlife Society Dinner in honor of the society members and their valued relationship with the school. The event held at Hodge's Vineyard in Camp Hill, Alabama, featured a wine tasting and gourmet meal by Ursula's. During the evening, guests were addressed by Dean Janaki Alavalapati who shared an update about the school's programs, as well as various new initiatives and his long-term vision for the school's future. The Woodland & Wildlife Society members represent the School of Forestry and Wildlife Sciences' most loyal donors, who give \$1,000 or more to the school annually. In celebration of their generous support, the school hosts the

invitation-only dinner each year. It is always a great time for the members to interact with each other and Dean Alavalapati in a private setting. If you are interested in supporting the school with an annual gift of \$1,000 or more this year, we welcome your attendance at the next dinner to be held in the summer of 2020. To learn more about the society, visit aub.ie/WWWS.



Shown are Ena Hunt, Steve Stewart, and Jerry and Lynne Schwarzwauer, who were part of the School of Forestry and Wildlife Sciences annual Woodlands & Wildlife Society Dinner.

SPOTLIGHT on alumni



RUSSELL MILLER '11

In this issue the School of Forestry and Wildlife Sciences spotlights young forestry alumnus and Compass Circle member, Russell Miller '11. Originally, from Cullman, Alabama, he currently lives in Auburn with his wife Carolyn and daughter Elizabeth. Miller is a specialist in forest systems management for Auburn. When asked why he chose to pursue a forestry career and degree at Auburn, Miller said, "I had an uncle who was in forestry and a few friends growing up in Cullman who all went into the forestry fields. Both my grandparents actually farmed full time, so I've always had an interest in the outdoors and agriculture. Auburn was the place to be for forestry in the state of Alabama, so it was an easy choice for me." Miller began his education in 2008 and graduated in 2011, but the Auburn community is what motivated him to make a permanent return to the university. "I enjoyed

living here," said Miller. "The main aspect of my job is the actual forest management of Auburn lands across multiple university departments. With this job, we have research, outreach, teaching and a financial benefit as well. Balancing all those needs can be difficult at times, but it presents a nice challenge," said Miller. "Just like with a private landowner, university departments have different objectives and goals for their properties so they aren't all managed the same way. I handle everything forestry-related from mapping timber stands, completing the inventory and putting a timber sale out for bid, to reforestation and everything in between." When asked to reflect on his career, Miller recalled some of the most impactful moments were learning from the people he worked with when he first started in the field. He said their

longtime experience in the industry helped him to gain a new perspective about the forestry industry and how it changes. He added he thinks the forestry industry will look completely different in the future with dimensional lumber and paper markets falling and being replaced by engineered wood products and cellulose materials as the main market drivers. He also said he believes the packaging side of the industry will continue to see big growth in the future. "The industry is definitely going to grow as we have to meet the demands of a changing world," said Miller. Russell Miller '11 shown with wife, Carolyn, and Sharon Tatum, SFWS development coordinator. To read more about Russell's inspiring story and his progress, visit sfws.auburn.edu/meet-alumnus-russell-miller.



Dean connecting with alumni and friends from across the state

by Blake Waddell

The Auburn University School of Forestry and Wildlife Sciences is reaching out to connect with its alumni and friends from across the state. Over the summer, the school hosted two special events in the cities and surrounding areas of Andalusia and Monroeville, Alabama, where Dean Janaki Alavalapati provided an overview of the school's activities and his plans for its future. The school's Development Director Heather Crozier envisions these events as a catalyst to increase alumni engagement with the school. "These events are excellent opportunities to connect with our alumni and friends while keeping them updated on the vision and priorities of the school. It also provides a valuable forum to ask questions, share opinions or give feedback," Heather said.

The reception, attended by 33 guests in Monroeville, was held at the Vanity Fair Golf Club and jointly sponsored by Harrigan Lumber Company and Ziebach and Webb Timber Company. The luncheon in Andalusia was attended by 25 guests and was hosted at the Andalusia Area Chamber of Commerce in the Martha Dixon Community Room and sponsored by First South Farm Credit. Crozier also has plans for more events in the future. "We will host an event in Montgomery this August and have plans to host events in Mobile, Birmingham, Huntsville and Tuscaloosa, as well as Atlanta," she said. If you are interested in attending and/or sponsoring one of these events, contact Heather Crozier at 334-844-2791 or sfwsdevelopment@auburn.edu.



First South Farm Credit recently sponsored an Auburn School of Forestry and Wildlife Sciences alumni and friends luncheon at the Andalusia Area Chamber of Commerce in the Martha Dixon Community Room in Andalusia, Alabama. Shown center is Dean Janaki Alavalapati with Hunter Grimes, left and David Padgett, right of First South Farm Credit.



Harrigan Lumber Company and Ziebach and Webb Timber Company recently sponsored an Auburn School of Forestry and Wildlife Sciences alumni and friends reception at the Vanity Fair Golf Club in Monroeville, Alabama. From left to right are event sponsors Patrick Harrigan and Elmo Ziebach of Harrigan Lumber Company and Ziebach and Webb Timber Company and Dean Janaki Alavalapati.

Compass Circle chair to serve on SFWS Advisory Council Executive Committee

The School of Forestry and Wildlife Sciences advisory council has approved the inclusion of the Compass Circle Young Alumni Giving Society chairperson as a member of the council's executive committee. This position provides a great stepping stone for young alumni to transition to a more prominent leadership role in the school.

The next meeting for Compass Circle will be held Nov. 1 at the Auburn University School of Forestry and Wildlife Sciences building. Compass Circle members will be invited to the Dean's Tailgate the following day, Saturday, on the Campus Green three hours prior to the Ole Miss game. For more information about joining the Compass Circle, visit sfws.auburn.edu/compass-circle.



Shown are members of the Compass Circle executive committee who meet annually with the dean and development staff for a roundtable discussion about the school's activities.



# Outstanding Graduate Student Anna Tucker is trailblazing research on migratory shorebirds

Anna Tucker, who received her Ph.D. from Auburn University’s School of Forestry and Wildlife Sciences, earned two significant recognitions before her commencement in May. She was named one of the university’s Outstanding Doctoral Students and was selected to serve as a graduation marshal for the Auburn University Graduate School.

“It was a real honor to be named one of the Outstanding Doctoral Students as well as a graduation marshal by the Graduate School,” Tucker said. “I’m proud of the work I’ve done at Auburn, and it’s wonderful to have the results of that hard work be recognized by the school.”

School of Forestry and Wildlife Sciences  
Dean Janaki Alavalapati commended Tucker’s academic and research achievements.

“Dr. Tucker is certainly deserving of her recent recognition,” Alavalapati said. “Her extensive research and academic accomplishments also shine a light on the outstanding work coming out of the School of Forestry and Wildlife Sciences, as well as the guidance of faculty to help develop the potential of our exemplary students.”

Tucker is currently working as a postdoctoral fellow with her Ph.D. advisor, Assistant Professor Conor McGowan, who is assistant unit leader and a research wildlife biologist at USGS, Alabama Cooperative Fish and Wildlife Research Unit. Their research aims to develop wildlife population models for endangered species classification and recovery decisions. She has been one of McGowan’s Ph.D. students since 2015.

“Anna has excelled in her academic career, raising the profile of my research lab and our school by winning presentation awards at international conferences and publishing her research,” McGowan said.

Her avid interest in migratory shorebirds began in her high school years.

“I knew I wanted to pursue some kind of

career that would let me study nature and help conservation efforts,” she said.

Growing up in New Jersey, Tucker often traveled from her hometown of Haddonfield to Delaware Bay, where she conducted some of her first field research. While studying at Auburn, she was able to return to that spot: McGowan had research connections in Delaware Bay, which is a globally important stopover site for migratory shorebirds.

“It’s kind of funny that I had to make it all the way down to Alabama to study birds back in New Jersey, but that’s life,” she said.

Tucker’s dissertation research focused on using a long-term mark recapture database for migratory shorebirds in the Delaware Bay stopover to evaluate ecological questions that have significant scientific and conservation value.

McGowan said the research is trailblazing.

“Her work will be the first in this system to consider multiple species responses to habitat and resource availability. She is developing new statistical models to analyze these data that heretofore the Delaware Bay research community lacked the skill to implement,” McGowan said.

He added that Tucker’s contributions to SFWS and Auburn go far beyond her commendable research, including her service as a graduate teaching assistant. A course she helped develop for the U.S. Fish and Wildlife Service on population assessment and predictive modeling has been offered three times in three different states to more than 70 students.

He said her leadership on campus is noteworthy as well.

“Within the school, Anna started and leads a group of grad students and post-docs called Quant Club, which meets weekly to discuss current literature and assist each other with analysis problems related to their graduate research,” McGowan said. “All participants in the group credit Anna for



starting the group and helping a number of students with their thesis and dissertation research. She has been a significant asset to our school’s graduate program.”

Graeme Lockaby, associate dean of research at SFWS was impressed by Tucker from the start.

“My first experience with Anna Tucker involved my research methods class where she proved to be startlingly adept at creative research ideas and science in general,” Lockaby said. “She is truly extraordinary in terms of her abilities and record of achievement, and we are very proud of her as a School of Forestry and Wildlife Sciences alum.”

Before coming to Auburn, Tucker earned her bachelor’s in biology at Loyola University Maryland, a liberal arts college that allowed her to pursue science as well as

the humanities — a priority for her — and then completed her master’s in ecology at Virginia Commonwealth University.

Tucker is pursuing a career in quantitative ecological research, with an emphasis on applied ecology related to conservation and management issues. In the short term, she is working as a postdoctoral fellow with McGowan and the U.S. Fish and Wildlife Service to help develop wildlife population models for endangered species classification and recovery decisions.

“At Auburn, I’ve been able to grow as an independent researcher and teacher,” she said. “Beginning in high school and through my Ph.D., I’ve had incredible mentors that have been instrumental along my entire journey so far.”

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### SFWS establishes new giving priorities

The School of Forestry and Wildlife Sciences is committed to enabling resources that allow the school to stay at the forefront of forestry, wildlife and natural resources education. While all gifts help enable the school to rise to new

levels of excellence, the school revisits its funding priorities periodically to allow it to adapt to the changing landscape of higher education. New funding priorities for the next three to five years include the creation of a named deanship, the funding of a Boone and Crockett Club Professorship, scholarships and program support for new majors, graduate support and fellowships, and planned and unrestricted gifts.

Visit [sfws.auburn.edu/sfws-priorities/](https://sfws.auburn.edu/sfws-priorities/) to learn how these funding priorities will impact faculty and student outcomes. For more information on how you can support these important efforts in the form of cash, securities and real estate, or for information on how to include the school in your estate planning, please contact the Office of Development at [sfwsdev@auburn.edu](mailto:sfwsdev@auburn.edu) or 334-844-2791.