

# School of Forestry & Wildlife Sciences

## FEATURE STORY

### “CAPITOLIZING” ON STUDENT SUCCESS

FEWL Academy members meet leaders, policymakers in Washington, D.C. pg. 6



## WHAT'S INSIDE

- New faces going places pg. 3
- One health, one goal pg. 4
- New degree goes green pg. 5
- Honor of a lifetime pg. 9
- Investing in the future pg. 11

SFWS NEWS • Fall 2019

## Working with Nature for Society's Well Being

### In This Issue

Administration	2-3
Academics & Learning	4-7
Research & Discovery	8-9
Outreach & Extension	10
Alumni & Friends	11
In the Spotlight	12

### Upcoming Events

- Student Awards Celebration and Dinner, 4/8
- Spring Graduation Ceremony and Reception, 5/3



[sfws.auburn.edu/giving](https://sfws.auburn.edu/giving)

Learn how you can support the SFWS.



[sfws.auburn.edu/newsletter](https://sfws.auburn.edu/newsletter)

Visit our website to read past issues and access digital content related to stories you see here. When you see one of the icons below, you know more content is available online.



slide show



video



related articles



2019 Homecoming Barbeque



2019 Graduate Student Research Symposium

**Online Exclusive Content** Visit [auburn.edu/sfws](https://auburn.edu/sfws) for more on these stories.



2019 Southern Forest Nursery Management Cooperative Short Course

NON-PROFIT ORG.  
U.S. POSTAGE  
PAID  
AUBURN, AL  
PERMIT NO. 9

602 Duncan Drive  
1161 W. Sanford Ave., Bldg. 8  
Auburn, AL 36849-0001

AUBURN UNIVERSITY  
SCHOOL OF FORESTRY  
AND WILDLIFE SCIENCES





## Mass timber on the rise

*Auburn receives funding, investigates opportunities with stakeholders to grow cross-laminated timber markets*

In June 2019, the Alabama State Legislature approved a funding allocation of \$890,125 to Auburn University to explore opportunities for growing cross-laminated timber markets and construction through research and outreach.

Cross-laminated timber, or CLT, features a unique layered engineering, which gives it steel-like strength, and it is light, easy to assemble, sustainable, fire-resistant and cost-effective—making it ideal for commercial construction. CLT offers structural simplicity needed for cost-effective buildings, as well as societal benefits such as reduced waste, improved thermal performance and design versatility.

“The funding will support initiatives to grow opportunities for the use of cross-laminated timber within the emerging high-rise building industry and potentially the residential sector,” said Janaki Alavalapati, dean of Auburn’s School of Forestry and Wildlife Sciences.

Because of its high strength and dimensional stability, it can be used as an alternative to concrete, masonry and steel in many building types. Due to its performance compared to conventional materials, it is also gaining popularity among residential builders.

This fall, the School of Forestry and Wildlife Sciences hosted a stakeholder meeting of academia, industry, agency and government organization representatives to discuss the future direction of cross-laminated timber.

Attendees included leaders from SmartLam North America and Woodworks Wood Products Council, and agencies such as the U.S. Forest Service, Alabama Cooperative Extension System and Alabama Forestry Commission, as well as faculty and staff from Auburn and Clemson University.

During the meeting the stakeholders outlined action plans, key participants and timelines for initial steps and progress to advance CLT. The group also identified gaps, challenges, needs and educational opportunities.

The meeting kicked off with presentations by Simon Siegert, of SmartLam North America, who presented on the progress of CLT and



*The John W. Oliver Design Building at UMass Amherst is the largest and most technologically advanced academic contemporary mass timber wood structure in the U.S. Photo credit: Alexander Schreyer.*

future directions for tall building and Jeff Peters of WoodWorks, who presented on growing the wood market for CLT.

Auburn faculty members Brian Via, Soledad Peresin and Adam Maggard provided an overview for roundtable discussions with presentations about CLT structures, materials, and adhesives research and capacity, Auburn’s sustainable biomaterials and packaging undergraduate degree, and extensions’ role in CLT education and awareness.

After the presentations, participants engaged in several hours of roundtable discussions focused on research and outreach needs and the integration of education into these initiatives.

Participants concluded by developing action items and next steps to determine where the strengths and abilities of Auburn overlap with stakeholder interests’ for the best approach moving forward.



**KPNC Staff Tour and Meeting**  
Dean Janaki Alavalapati hosted the annual SFWS staff meeting at the Kreher Preserve and Nature Center on Oct. 8, 2019.

## NEW FACES GOING PLACES

The School of Forestry and Wildlife Sciences has hired six new faculty members to expand and diversify expertise in each of their respective fields. The distinguished group will allow the school to take its innovative programs to the next level.

“During the past three years, the School of Forestry and Wildlife Sciences experienced a significant growth in size and excellence,” said Dean Janaki Alavalapati, noting that the school’s total graduate and undergraduate enrollment has increased by 50% in that time.

While it is unusual for a school of this size to hire a cluster of standout professionals concurrently, these are uncommon times. A wave of new academic programs launched by the

school, in partnership with several other colleges, demands such unprecedented action.

Those include three new undergraduate majors – geospatial and environmental informatics, sustainable biomaterials and packaging, and wildlife enterprise management. Add to that a new roster of online graduate certificates, including restoration ecology, forest finance and investment, one health and a Master of Natural Resources.

“In order to support these programs and build capacities to harness emerging opportunities in academic, research and extension relating to forests, wildlife and natural resources, this year we have hired six very talented faculty members,” Alavalapati said. “The addition of these new faculty

members will enhance the size and quality of our programs and advance our land-grant mission further.”

Associate Dean of Research Graeme Lockaby said the five new faculty members who specialize in forestry, geospatial and environmental informatics, natural resources management, and sustainable biomaterials and packaging will greatly expand research capabilities in natural resources, wood products and forest engineering.

“They bring new skill sets that complement our existing capabilities and allow the school to better address natural resource issues and problems that are crucial to society’s well being,” Lockaby said.



**RICHARD CRISTAN**  
Assistant professor and extension specialist of forest operations

Richard Cristan joins the School of Forestry and Wildlife Sciences as well as the Alabama Cooperative Extension System.

“His research will primarily focus on the environmentally-friendly use of heavy equipment in forest operations,” Lockaby said.

Cristan served as the lead scientist for the McIntire-Stennis Forest Research Center in the College of Agriculture, Food Science and Sustainable Systems Division of Agriculture and Natural Resources at Kentucky State University, where he was also an assistant research professor of forestry.

An accomplished researcher, Cristan has authored or co-authored several peer-reviewed articles that have been published in the international journal *Wetlands Ecology and Management*. In addition, Cristan and his colleagues have received multiple grants for their forestry and environmental research.

In 2016, Cristan earned his Ph.D. in forestry: forest operations and water quality from Virginia Polytechnic Institute and State University.



**TODD FRANKS**  
Professor of practice and program coordinator, wildlife enterprise management

With a 25-year background in the exotic hunting industry, Todd Franks has extensive work and research experience in the hospitality and luxury outdoor recreation industries.

His primary research area has been guest’s destination choice and the overall satisfaction at luxury hunting and fishing destinations.

Franks will coordinate Auburn’s wildlife enterprise management degree, one of only two such programs in the U.S.

The cross-disciplinary degree program is founded on the basic principles of wildlife management, hospitality services and business management, ensuring that graduates are prepared for employment at any of the thousands of hunting and fishing lodges, ranches, corporate retreat facilities and other consumptive use facilities worldwide.

Franks will teach classes, including hunting and fishing the world, sporting firearms and archery and advanced wildlife enterprise management.

He completed his doctoral studies in human dimensions of natural resources, focusing on nature-based tourism, at Colorado State University.



**YUCHENG PENG**  
Assistant professor of sustainable biomaterials and packaging

Yucheng Peng’s expertise is in the performance and durability of products and packaging.

“Dr. Peng will use wood to create new types of packaging and packaging markets, for a wide variety of products,” Lockaby said.

Prior to accepting this position, Peng was an engineer in packaging research at Coca-Cola, where he worked to develop environmentally-sound use and recycling of the brand’s packaging.

“My teaching and research goals are to prepare our students and communities for the demands of industries in the next generation of sustainable packaging using biomaterials, advanced technologies and our enthusiasm,” he said of his plans at Auburn.

“The outcomes of the teaching and research will be leveraged to serve the regional, national and international consumers and societies,” Peng said. “I’m targeting to create values from natural resources and provide social and environmental benefits to our communities.”

Peng earned a Ph.D. in fiber reinforced thermoplastic composites in 2012 from the University of Maine.



**KELLY DUNNING**  
Assistant professor of conservation governance

Kelly Dunning will focus on the relationships between local communities and natural resources and applying that knowledge to better manage and conserve scarce resources while sustaining local populations.

“My program at Auburn will expand on my 2018 book, *Managing Coral Reefs*, and will look at how communities and governments across scales collaborate to manage coral reefs in ways that benefit human well being,” Dunning said. “I am also interested in sportsmen-driven conservation programs. My teaching will focus on environmental policy, human dimensions of natural resources and conservation planning.”

Her research interests include biodiversity conservation and the human dimensions of natural resources, coral reef management, fisheries communities and institutions for common pool research management.

She has eight years of international development in Africa, Asia and the Pacific Islands, specializing in marine ecosystem management, climate change, governance of ecosystems and protected areas, spatially defined ecological modeling and land use planning.

Dunning earned a Ph.D. at the Massachusetts Institute of Technology, where her research won best doctoral dissertation, the U.S. Fulbright Award, the MIT Presidential Fellowship, a USAID innovation grant and an MIT Center for International Studies grant.



**LANA NARINE**  
Assistant professor of geospatial analytics

Lana Narine specializes in lidar, or light detection and ranging, remote sensing of vegetation structure and geographic information system, or GIS, and remote sensing applications in natural resources and forestry.

“Dr. Narine will use her expertise in conjunction with hydrologists, climate modelers, land use cover analysts and disease ecologists to examine the influence of spatial scale on critical societal issues,” Lockaby said.

Her teaching responsibilities will include classes such as GIS applications in natural resource and environmental informatics.

Narine earned a Ph.D. in ecosystems science and management from Texas A&M University. Her research will include utilization of remotely sensed data for vegetation studies with a focus on lidar data from sensors on airborne and spaceborne platforms.

She will also apply methods including machine and deep learning, to estimate vegetation biophysical parameters and work to develop innovative approaches for characterizing ecosystem structure through geospatial analysis using remote sensing and GIS.



**JANNA WILLOUGHBY**  
Assistant professor of population and conservation genetics

Janna Willoughby is an expert in molecular ecology and evolution, conservation genetics and genomics.

“Dr. Willoughby will address questions regarding genetic diversity in wildlife populations and how that diversity evolves and interacts with environmental stressors such as climate change and habitat degradation,” said Lockaby.

“In my research program, we use genetics to understand how wildlife populations interact with their environment with a focus on conservation of endangered species,” Willoughby said, adding that a specific project on Steller sea lions, a species that underwent a severe population crash in the 1980s, will be one such focus of her lab. Today, half of the population has recovered, but the other half is very small.

“Once I bring some students on board, we will start sequencing and analyzing whole sea lion genomes using bioinformatics,” she said.

“Ultimately, we will identify the underlying issues that are keeping some of the Steller sea lion population from recovering, providing insight into how to correct this issue and support recovery of this endangered species.”

Willoughby earned a Ph.D. in wildlife genetics from Purdue University in 2015.

## A Message from the Dean

Dear alumni and friends:

With the completion of the fall semester, the School of Forestry and Wildlife Sciences opens a new chapter in its history. Building upon its core curricula and research platforms, the school has undergone many changes that have ushered in a period of growth and expansion that is anticipated to continue into the next decade.

With the retirement of several key faculty, including Brenda Allen, James Armstrong, Art Chappelka and Larry Teeter, we have filled these vacancies and expanded our ranks with the hiring of new faculty members, Richard Cristan, Kelly Dunning, Todd Franks, Lana Narine, Yucheng Peng and Jana Willoughby. We thank our faculty, staff and students for their participation in the extensive search process and welcome our new faculty who will bring their vast knowledge, skills and experience to diversify and expand the school’s academic, research and outreach programs.

Finally, our new 2019-2024 Strategic Plan will guide the school forward to develop innovative new programs, strengthen and build new partnerships, and energize and engage our alumni, friends and stakeholder base to become the “go-to place” for forestry, wildlife sciences and natural resources programs in the Southeast, U.S. and beyond. We hope you will support our efforts to achieve the school’s mission to elevate the Auburn experience, pursue transformative research, engage stakeholders through impactful service and attain operational excellence.

Wishing you and yours a healthy and prosperous 2020!

War Eagle!  
Best regards,

Dean Janaki R.R. Alavalapati

## School of Forestry & Wildlife Sciences

### SFWS NEWS • Fall 2019

Dean ..... Janaki R.R. Alavalapati  
Associate Dean of Academic Affairs..... Scott Enebak  
Associate Dean of Research..... B. Graeme Lockaby  
Extension Coordinator .....Becky Barlow  
Managing Editor .....Jamie Anderson  
Contributing Writer ..... Teri Greene

Office of Communications and Marketing  
Project Manager ..... Mike Hales  
Editor ..... Megan Burmester  
Designer ..... Heather Jackson

### 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  
Office of Communications and Marketing  
602 Duncan Drive • Auburn, AL 36849  
334-844-9248 • sfwscom@auburn.edu

### 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](mailto:vannhea@auburn.edu) or by phone at 334-844-2791.



[sfws.auburn.edu](http://sfws.auburn.edu)

Auburn University is an equal opportunity educational institution/employer. Produced by the Office of Communications and Marketing, February 2020

## One Health, one goal

Among the newest graduate certificates offered, the One Health program prepares professionals to take on growing environmental health threats

Health-related interactions among people, animals and the environment have a profound influence on disease risk, transmission and prediction efforts.

One Health, a graduate certification program offered by the Auburn University School of Forestry and Wildlife Sciences, presents a new integration of human, veterinary and environmental sciences. The program is a partnership of the School of Forestry and Wildlife Sciences, the Auburn University colleges of Veterinary Medicine and Agriculture and the University of Alabama at Birmingham's School of Public Health.

"Experts in diverse fields have studied human-animal-environmental interactions for decades. But awareness of those linkages is now critical in the face of increasingly volatile factors such as climate change, population growth, land use and changes in disease vector ecology," said Graeme Lockaby, associate dean for research in Auburn's School of Forestry and Wildlife Sciences.

"Our One Health graduate certificate provides students with an understanding of the nexus among human, environmental and animal health which forms the basis of planetary health," Lockaby said. "Presently, health issues are very complex and often involve interactions among life cycles of pathogens and arbovirus vectors, human risk factors and environmental drivers."

The One Health initiative impacts society on multiple levels, including veterinary medicine, water and natural resource management, community planning, public health, and education and agricultural practices. The professional certification program requires 15 credit hours of online coursework in which students examine public health threats, including infectious diseases, and assess strategies for creating sustainable local and global ecosystems. These credits can also be applied to the pursuit of a master's degree.

Auburn Assistant Professor of Disease Ecology Sarah Zohdy said students seeking One Health certification will take on issues that are not just complex, but also extraordinarily time sensitive.

"The human population is rapidly growing and our reliance on natural resources is stronger than ever, although the resources themselves are finite," Zohdy said. "The most prevalent health problems humans face in modern times are heavily linked to environmental conditions and ecosystem health."

She said the One Health concept is groundbreaking in its proactive approach.

"In recent decades, the approach to mitigate diseases has been reactive, treating symptoms of disease rather than addressing the causes," she said. "By integrating a One Health approach we can proactively address human, animal and environmental health issues."

Janaki Alavalapati, dean of Auburn's School of Forestry and Wildlife Sciences, said the certification program is essential to provide professionals with the tools they need to take on environmental health threats.

"The Auburn University One Health online graduate program clearly represents an area of crucial need and importance within our state as well as nationally and globally," Alavalapati said.

An estimated 60% of human infectious diseases and 70% of emerging human diseases have their source in domestic or wild animals. These zoonotic diseases include rabies, West Nile virus, Rift Valley fever and brucellosis, among others.

Often, animal health can serve as a warning for human disease transmission, Lockaby said. For example, agents that determine risk of West Nile virus include environmental factors that favor reproduction of the Culex mosquito species, and bird habitats that serve as reservoirs of the disease.

Those determinants, combined with socioeconomic factors that render some people especially vulnerable to the disease, call for an urgent, wide-scale endeavor.

"It is crucial that people engaged in many types of activities—such as health specialists, city managers, stormwater managers and urban planners—understand the complexity and degree to which causal factors may be interrelated and act accordingly," Lockaby said.

Kelly M. Stevens, director of Infectious Disease and Outbreaks in the Bureau of Communicable Diseases at the Alabama Department of Public Health, or ADPH, said the issues One Health is taking on are highly prioritized because of the great number of infectious diseases in humans that are spread by animals.

"The ADPH recognizes that the health of our citizenry is connected to the health of animals and our environment," Stevens said. "ADPH strives to improve the health of our community through collaborative and multidisciplinary efforts to monitor and control public health threats."

Lockaby said the program is likely to expand as environmental threats grow.

"The need for training from the One Health perspective will become even more acute in the future, as climates shift and diseases emerge in new locations," Lockaby said. "Our goal is to provide a starting point for the One Health conversation that must continue indefinitely."

More information about the One Health certificate program is available by contacting School of Forestry and Wildlife Sciences Graduate Program Coordinator Rebecca Masic at 334-844-8027 or rbm0010@auburn.edu.

The One Health program is one of three online graduate certificate programs, along with restoration ecology and forest finance and investment, now offered by the School of Forestry and Wildlife Sciences. Details about all of these online programs are available at [sfws.auburn.edu/online-professional-graduate-certificate-programs/](http://sfws.auburn.edu/online-professional-graduate-certificate-programs/).

"The most prevalent health problems humans face in modern times are heavily linked to environmental conditions and ecosystem health."

- Sarah Zohdy



Auburn's School of Forestry and Wildlife Sciences is now offering a One Health online graduate certificate program for public health workers and educators. The One Health certificate program provides students with an understanding of the nexus among human, environmental and animal health, which forms the basis of planetary health.



Auburn University graduate student Benjamin McKenzie dips for mosquito larvae for molecular research including virus testing. He is part of a School of Forestry and Wildlife Sciences research team investigating the presence of the Zika-carrying *Aedes aegypti* mosquito in Alabama.

## Discovering Africa

Students get firsthand look at the role of forests in human livelihood and health in Africa

Students embarking on a recent study abroad course, The Role of Forests in Human Livelihood and Health in Africa, explored landscapes and interacted with people and wildlife in South Africa and Madagascar to examine emerging issues and witness the intersection of environmental and ecosystem health, public and animal health and economic development.

"Our study abroad program is fully interdisciplinary, and the students who have gone on the trip have become more aware of the fact that ecological solutions for a sustainable future rely on interdisciplinary collaborations," said Assistant Professor Sarah Zohdy, who led the program with Assistant Research Professor Ryan Nadel, her colleague from the School of Forestry and Wildlife Sciences.

For students, who represented a diverse set of science-based majors at Auburn, the course met its objectives. Some even came away with a new way of looking at the world.

"This trip has changed my entire perspective on forests, wildlife and human livelihood," said Kami Grochowski, an animal sciences/pre-vet and wildlife major. "You get the unique opportunity to learn about and interact with nature and the community around you while physically seeing how everything connects together for a greater purpose."

Wildlife ecology and management major Kate Norrid recently decided to minor in public health after a previous study abroad trip, which had an equal impact on her.

"Traveling to South Africa and Madagascar has opened my eyes to the immense role forests play in both human and wildlife livelihoods as well as shown me many new cultures," Norrid said.

In South Africa, the students learned about the country's cultures, people and ecosystems and the vital importance of trees in rural community livelihood and human health, Nadel said. That included visits to indigenous forests, savanna woodlands and commercial forestry plantations, where students met with business leaders to discuss their role in uplifting health, education and conservation in rural communities.

In Madagascar, students got an up-close view of the often shocking, but eye-opening, results of extreme poverty and deforestation, Zohdy said.

"Being immersed in a place and culture where these things are prevalent has really shaped the perspectives of students in the past," she said. "Witnessing obstacles like disease, drought and poverty really emphasizes



The students were able to meet primatology pioneer Patricia Wright, known as the "Jane Goodall of lemurs" who was featured in the film "Island of Lemurs."

the magnitude of these issues for students."

One standout experience in Madagascar was spending time with primatology pioneer Patricia Wright, known as the "Jane Goodall of lemurs" who was featured in the film "Island of Lemurs." Wright, who was Zohdy's doctoral advisor, established one of the first research stations to implement the pillars of human health, education and conservation.

"There really was no one better for the students to have met to highlight that conservation is a social process which must include human health and livelihood needs," Zohdy said.

Students spent time with the many lemurs living at Ranomafana National Park; while there, they sat with the last two greater bamboo lemurs. Sitting with these animals, the most endangered primates in the world, was transformative. Students recognized the intrinsic link between human and ecosystem health, realizing that to save the lemurs and other wildlife they encountered, they first must save the people who share their environment.

"Deforestation in Madagascar occurs out of necessity," Zohdy said. "People who rely on subsistence agriculture and having resources to feed their children and remain healthy should get priority over lemur conservation."

"However, these two issues, lemur conservation and human well-being, are one and the same. We hope that our students have the opportunity to see that."

## New degree goes green

Students, faculty aim to spur interest in new sustainable biomaterials and packaging

Auburn University students pursuing the new sustainable biomaterials and packaging degree have become a driving force behind the degree's visibility and growth.

"Younger generations have an increased environmental concern as well as awareness of the necessity of decreasing our impact on the planet," said Soledad Peresin, assistant professor in the School of Forestry and Wildlife Sciences. "Interest in green technologies as well as bio-based alternatives to reduce packaging waste is very appealing to them."

Professors Peresin and Brian Via are advisors for a new organization, the Sustainable Biomaterials and Packaging Society, co-founded by students Philip McMichael and Autumn Reynolds.

McMichael, the group's president, said the main objective is to heighten the visibility of the sustainable biomaterials and packaging, or BIOP, degree.

"Autumn and I founded the Sustainable Biomaterials and Packaging Society to raise awareness within the entire Auburn student body about our new and exciting major, as well as the various fields of study it encompasses," McMichael said. "We both felt that, as students, we are in a unique position to advocate for a better understanding of the potential of bio-based materials and sustainable packaging for our 21st-century world."

Launched last fall in the School of Forestry and Wildlife Sciences, the degree program prepares students for highly in-demand careers within bio-based industries, which is often cited as one of the nation's next areas of significant economic growth.

McMichael said society members can expect to hear industry leaders and experts speak on relevant topics, meet and collaborate with other students and faculty throughout the university, connect with people in both academia and the industry, and participate in a variety of biomaterials-related events throughout the school year. The organization will meet bi-weekly.

Scott Enebak, associate dean and professor in the School of Forestry and Wildlife Sciences, said participation in the degree program is on par with his first-year expectations: there are 10

"Younger generations have an increased environmental concern as well as awareness of the necessity of decreasing our impact on the planet."

- Soledad Peresin

students enrolled – two who transferred when the program opened, and eight who began this fall.

"New degrees are like a train sitting on a track: with all those boxcars, it takes a little time and a lot of effort to get the engine up to full speed," Enebak said. But as word spreads about the BIOP degree's relevance to society, manufacturing and natural resources, he said, student numbers will increase.

Enebak said today's students are highly aware of the need for sustainability, including the use of renewable natural resources in packaging consumer goods.

As consumer trends increasingly move away from traditional products such as plastic straws and cups, he said, this degree will focus on developing new technologies that replace single-use plastic products with biomaterials that are safer to the environment.

Janaki Alavalapati, dean of the School of Forestry and Wildlife Sciences, said the degree program, one of the only programs of its kind in the Southeast, is gaining momentum through its world-changing mission and the array of experts on hand to teach the courses.

"This degree program is taught collaboratively by world-renowned faculty from Auburn's School of Forestry and Wildlife Sciences, and the colleges of Agriculture, Business, and Architecture, Design and Construction," Alavalapati said. "Increasingly, companies are moving toward the use of sustainable forest biomaterial for everything from packaging, cosmetics and automobiles to appliances, pharmaceuticals and commercial construction. This shift is due to environmental concerns and evolving technologies."

Via said the BIOP degree's wide academic scope will broaden future career possibilities for majors.



SFWS students Autumn Reynolds and Philip McMichael founded the Sustainable Biomaterials and Packaging Society to raise awareness with their peers about the new and exciting major, along with the various fields of study it encompasses. As students, the pair felt they were in a unique position to advocate for a better understanding of the potential of bio-based materials and sustainable packaging for the 21st-century world.

"This degree covers a broad range of subjects from engineering to business, supply chain to life cycle assessment, and of course most importantly, sustainable products and processes," Via said. "So, students can work in a broad range of areas when they graduate, and they will be able to translate scientific and technical jargon into meaningful information for different audiences."

Autumn Reynolds, student and co-founder of the new BIOP organization, said the program's interdisciplinary nature is one of its most valuable aspects.

"I appreciate the fact that I am not subjected to any one particular college, so I have a chance to bounce ideas to and from professors coming from many different backgrounds and fields of study," Reynolds said. "This has helped me develop my own vision about what I can make of my career."

McMichael sees this development as just the beginning of a surge of support for the new degree program.

"I think that Auburn's BIOP program will create uniquely well-rounded students who will be poised to make a real impact on the future of the field of sustainable biomaterials and packaging," he said.



### Annual Fall Icebreaker welcomes new and returning students

Associate Dean of Academic Affairs Scott Enebak, Director of Student Services Jodie Kenney, Student Advisor Lisa Hollans and Student Recruiter Wendy Franklin, as well as the leadership of SFWS student organizations, hosted a great "Fall Icebreaker" event on Aug. 19, 2019, to welcome and encourage networking among the student body. More than 150 students, faculty, staff and Smokey the Bear attended the event.



### Career Fair helps connect students with employers

Dan Hammack, a senior in forestry, discusses perspective jobs with representatives from Resource Management Service. Over 30 forestry, wildlife and natural resource-focused employers attended the event to meet with School of Forestry and Wildlife Sciences students.



### First Chili Cook-off, a hot ticket for students and faculty

The Society for Natural Resources held its inaugural Chili Cook-Off on Nov. 18, 2019. Participants competed for prizes awarded for first, second and third place. This event welcomed students, faculty and staff of the school, as well as students of all colleges in the university to foster connection and fellowship.

“Experiential learning opportunities like this significantly enhance students’ personal development and leadership abilities.”

- Adam Maggard

# “CAPITOLIZING” ON STUDENT SUCCESS

“Overall, this opportunity was an amazing learning experience that showed us the complexity of leadership.”

- Marisa Juarez

North steps of the White House



## FEWL Academy members meet leaders, policymakers in Washington, D.C.

Members of the School of Forestry and Wildlife Sciences’ Forests, Environment and Wildlife Leadership, or FEWL, Academy visited Washington, D.C., in August, meeting with leaders from the U.S. Department of Energy, the Fish and Wildlife Service and the CEO of the Society of American Foresters.

The visit also included tours of the U.S. Capitol Building and White House, and a visit with staff from Sen. Doug Jones’ office. Faculty advisors Dean Janaki Alavalapati and Assistant Professor and Extension Specialist, Adam Maggard accompanied students and facilitated their discussions with the representatives.

These 12 students represent the first cohort to participate in the two-semester FEWL Academy, which prepares them with the leadership abilities necessary for critical problem-solving issues related to the management, utilization and stewardship of natural resources.

Maggard said the visit to the nation’s Capitol enriched the group’s understanding of what it takes to succeed on a high level in their field.

“Experiential learning opportunities like this significantly enhance students’ personal development and leadership abilities,” Maggard said. “This unique experience enlightened these students as they observed diverse perspectives about what leadership means, similarities and differences in leadership qualities among leaders and the complexity of issues faced every day by government officials, CEOs and policymakers.”

The group was excited to meet senior analyst and Defense Production Act coordinator Zia Haq of the Department of Energy’s Office of Energy

Efficiency and Renewable Energy (EERE).

“Haq talked about the attraction to working in public service – even though the pay is less, there is more impact for the greater good,” said FEWL member Joseph Contreras. “We learned from him the importance of being flexible. Leaders deal with human resources as often as they utilize the skills they learned in their degree.”

Students also spent time with Deputy Director of U.S. Fish and Wildlife Stephen Guertin, who presented a real-world perspective of what it takes to be a leader in the field.

“Guertin said that leaders must have the ability to listen to their employees and the public,” FEWL member Allison Gary said. “They must be flexible and adapt to situations as they occur and have the moral certitude to make hard decisions.”

Lenise Largo, associate chief of the U.S. Forest Service, shared the triumphs and disappointments she has experienced serving as the major oversight for more than 4,000 employees. Largo has worked for the U.S. Forest Service since 1989.

“Along the way, Largo found that adaptability was key, as her work force grew to encompass three generations,” said student Orum Snow. “Additionally, she learned that the best way to lead was to empower all of her employees, no matter their background, to be able to reach their full potential.”

Members of the group recalled that at least two representatives left a resonating message: that long after their studies were complete, these students would meet again in their respective fields.

“Engaging with professionals at this level in their fields offered them a wider view of the responsibilities that leaders in their fields regularly face.”

- Dean Alavalapati

“This trip not only helped us to gain a better understanding of what it means to be a leader in natural resources within public policy, but it also helped us form relationships with other students in similar majors,” member Gabrielle Ripa said.

Over a casual dinner, students met with Terry Baker, CEO of the Society of American Foresters.

“One key point that Terry Baker expressed to us was the importance of acting in an extroverted manner, even if you have an introverted personality,” FEWL member Marisa Juarez said, adding that this was one of just several overlapping themes the group encountered.

“We noticed a lot of trends among all the leaders we spoke to on the trip,” she said. “Overall, this opportunity was an amazing learning experience that showed us the complexity of leadership.”

Dean Alavalapati said this was an eye-opening excursion for the group.

“It was evident to me, and to Dr. Maggard, that the visit to the nation’s Capitol was enriching for this select group of students,” Alavalapati said. “Engaging with professionals at this level offered them a wider view of the responsibilities that leaders in their fields regularly face.”

Earlier this year, the FEWL students traveled to Montgomery to meet with Alabama Gov. Kay Ivey, as well as leaders of the Alabama Forestry Association and the Alabama Department of Conservation and Natural Resources.

Current FEWL Academy members are Joseph Contreras, Maurlan Dickerson, Will Dunnam, Allison Gary, Grace Holland, Marisa Juarez, Cal Logan, Phillip McMichael, Gabrielle Ripa, Noah Runyon, Orum Snow and Lexi Wiltfong.

They represent a wide range of majors, including forestry, pre-vet medicine, natural resources management, sustainable biomaterials and packaging, and wildlife ecology and management.

Each year, 12 to 15 applicants will be selected to participate. Qualified students in Auburn’s School of Forestry and Wildlife Sciences who are in good academic standing and interested in developing leadership skills are invited to apply.

The 2019 FEWL Academy program is sponsored by a private donation from Ed Sweeten, a 1979 Auburn graduate. However, the school’s long-term goal is to establish an endowment to fund FEWL. Those interested in this opportunity can contact the Development Office at 334-844-2791, or email sfwsdev@auburn.edu.



The students are shown with Zia Haq (far left), senior analyst and Defense Production Act coordinator of the Department of Energy’s Office of Energy Efficiency and Renewable Energy (EERE).



FEWL Academy students meeting with the CEO of the Society of American Foresters, Terry Baker.



During the trip, the students also met with Associate Chief of the U.S. Forest Service, Lenise Largo.



U.S. House Representative Gus Billrakis office



## KATIE IZENOUR

Auburn University doctoral student Katie Izenour has been awarded the prestigious Fulbright Scholarship. Izenour's major professor is Sarah Zohdy, SFWS assistant professor of disease ecology.

"Katie is a role model for the members of the lab and has been such an important mentor to undergraduate students."

- Sarah Zohdy

## Ful-filling her potential

SFWS Fulbright recipient to bring public health approach to human-animal interaction research in Egypt

Auburn University doctoral student Katie Izenour has been awarded the prestigious Fulbright Scholarship. Izenour's major professor is Sarah Zohdy, SFWS assistant professor of disease ecology.

"Katie is an exceptional student and scientist. She brings with her years of experience in the public health sector so her passion to merge her human health experience with a doctoral dissertation in veterinary medicine is very progressive," Zohdy said.

Izenour, who is pursuing a doctorate in the College of Veterinary Medicine's Department of Pathobiology, will spend a year in Egypt conducting research on human and animal interaction from the public health perspective.

The Fulbright Scholar program, an international exchange program sponsored by the U.S. government, is designed to build lasting connections between the people of the United States and those of other countries. Fulbright recipients are chosen based on their academic or professional achievements as well as their demonstrated leadership potential.

Early in her studies, Izenour said she was struck by the burden of infectious diseases around the world and found specific interest in zoonotic infectious diseases of domestic animals.

Before joining Auburn's College of Veterinary Medicine's Department of Pathobiology in May 2018 to pursue her doctoral studies, Izenour worked as a government contractor for several years at the Centers for Disease Control and Prevention, U.S. Navy and U.S. Air Force.

She said her decision to pursue her Ph.D. was the result of spending two months volunteering for animal rescue groups in Cairo, Egypt, a country and region about which she is passionate.

"I'm so grateful and thankful for this opportunity. I cannot say enough to express my gratitude to the governments of both The Arab Republic of Egypt and to the United States for working together to afford me this opportunity," Izenour

"I believe the Middle East is particularly underrepresented in international conversations about public health preparedness and response, and I hope that my research on zoonotic infectious diseases will fill valuable knowledge gaps and provide a platform for other organizations to collaborate with Egypt."

- Katie Izenour

said. "My research will be on the critical interface of human and animal interaction from the public health perspective.

"I believe the Middle East is particularly underrepresented in international conversations about public health preparedness and response, and I hope that my research on zoonotic infectious diseases will fill valuable knowledge gaps and provide a platform for other organizations to collaborate with Egypt."

Zohdy said that Izenour has provided invaluable support to her fellow Auburn students during her doctoral studies.

"Katie is a role model for the members of the lab and has been such an important mentor to undergraduate students," Zohdy said. "She is a kind and passionate human being and an inspiration to us all with her commitment to understanding and improving health conditions for humans and their animal companions."

## Honor of a lifetime

International forestry organization recognizes Zhang with scientific achievement award

School of Forestry and Wildlife Sciences Professor Daowei Zhang is one of 10 international scientists recognized by the International Union of Forest Research Organizations, or IUFRO, as recipients of its Scientific Achievement Award for 2019.

Zhang, who received the honor for his research in forest economics and policy, accepted the award at the opening ceremony of the IUFRO World Congress, held recently in Curitiba, Brazil. Established in 1892, IUFRO has more than 800 research organization members from more than 140 countries. Once every five years, the IUFRO honors 10 outstanding scientists who advance science and promote international cooperation in all fields of research related to forestry.

"I would like to express my appreciation to colleagues and students at Auburn University and elsewhere for their inspiration and support," Zhang said.

The IUFRO reports that Zhang has established himself as an authority on highly significant policy matters in North America and beyond, including the Spotted Owl issue, the U.S.-Canada softwood lumber trade dispute and the rise of institutional timberland ownerships.

The organization also cites Zhang as a pioneer in the realm of property rights, pointing out that he was the first to empirically show the impact of forest tenure on silvicultural investment, reforestation and forest sustainability.

"The IUFRO's Scientific Achievement Award offers further confirmation of Dr. Zhang's significant contributions through his research and accomplishments in forestry, which have resulted in vast improvements in policy on a global scale," said School of Forestry and Wildlife Sciences Dean Janaki Alavalapati.

"This recognition also shines a light on the significance of his work at Auburn."

Between 2007-2009, the Chinese government implemented Zhang's 2001 recommendations for forest tenure reform. His call for changing volume-based tenure to area-based tenure in British Columbia is steadily gaining public support, as well.

His book, "The Softwood Lumber War: Politics, Economics, and the Long U.S.-Canada Trade Dispute" (Resource for the Future Press, 2007) was described as "an accurate, thorough and comprehensive treatment of the long-running



Professor Daowei Zhang has been recognized for his work to advance science and promote international cooperation in all fields of research related to forestry. Zhang, shown center, is pictured visiting with community members near a village in Nepal, where he toured a community forest restoration project.

trade dispute" by the U.S. Congressional Research Service, suggested as "a required reading for every Canadian and U.S. politician" by the Vancouver Sun, and labeled as "the standard by which other books on forest trade policy are judged" by the Journal of Forestry.

"He has been a true innovator in the application of public choice theory in various forest policies and legislations," the IUFRO writes of Zhang. "He is also an authority on foreign direct investment in the forest industry, a subject he has studied since the late 1980s. His co-authored Forest Economics textbook has been

published in English, Chinese and Russian, is being translated into Spanish, and is used by more than 40 universities in five continents"

In addition to his teaching responsibilities, Zhang's current work involves delving into several significant research topics that will affect broad international policy implications. Among them are the economics of ecosystem restoration, payments for ecosystem services, and laws and regulations aimed at improving forest governance and reducing illegal logging in developing countries. To find out more about IUFRO, visit [iufro.org](http://iufro.org).

## Pinpointing drought

Kumar's breakthrough research fuels new product that forecasts long-term drought

Recently published climate research led by Sanjiv Kumar, a professor in the School of Forestry and Wildlife Sciences, has already provided the basis of a pioneering new outlook product that is capable of forecasting drought.

Kumar and his team published their findings in the May issue of the Journal of Climate Science. ([journals.ametsoc.org/doi/full/10.1175/JCLI-D-18-0540.1](http://journals.ametsoc.org/doi/full/10.1175/JCLI-D-18-0540.1))

In August, the Massachusetts-based Climate Impact Company introduced an innovative new forecasting product developed based on that research. An article and accompanying chart on the company's website now exhibits the most likely dry or drought-prone areas in North America for meteorological autumn, or September, October and November. The article cites the soil reemergence process as its source, breaking down the science behind it.

"It is striking to see the speed at which basic climate science research can deliver a practical solution nationally and internationally -- in this case, less than four months," said Kumar, who leads Auburn University's Climate, Water and Society, or CWS, Lab in the School of Forestry and Wildlife Sciences. "This development highlights the way in which basic climate research can fuel practical solutions world-wide."

The researchers based their pivotal findings on a process called soil reemergence. The idea is the memory of the land lies not just at its surface, but also beneath its surface; because of that, it can serve as a predictor of future water availability.

The Climate Impact Company, a meteorological and climate consulting organization that aims to change the way industry looks at the impact of weather and climate, is using a combination of deep- and shallow-layer soil moisture deficits as the basis of its new drought outlook product.

The collaborative research included Kumar's work at Auburn along with Matt Newman of the Boulder, Colorado-based NOAA Earth System Research Laboratory, or ESRL, and his colleagues Yan Wang and Ben Livneh, also at the University of Colorado Boulder.

Kumar, who joined the Auburn faculty in March 2017, began working on the project in 2016, when he was a National Research Council associate at NOAA ESRL in Boulder.

Puneet Srivastava, director of the Auburn University Water Resources Center and an expert in water resources and climate variability

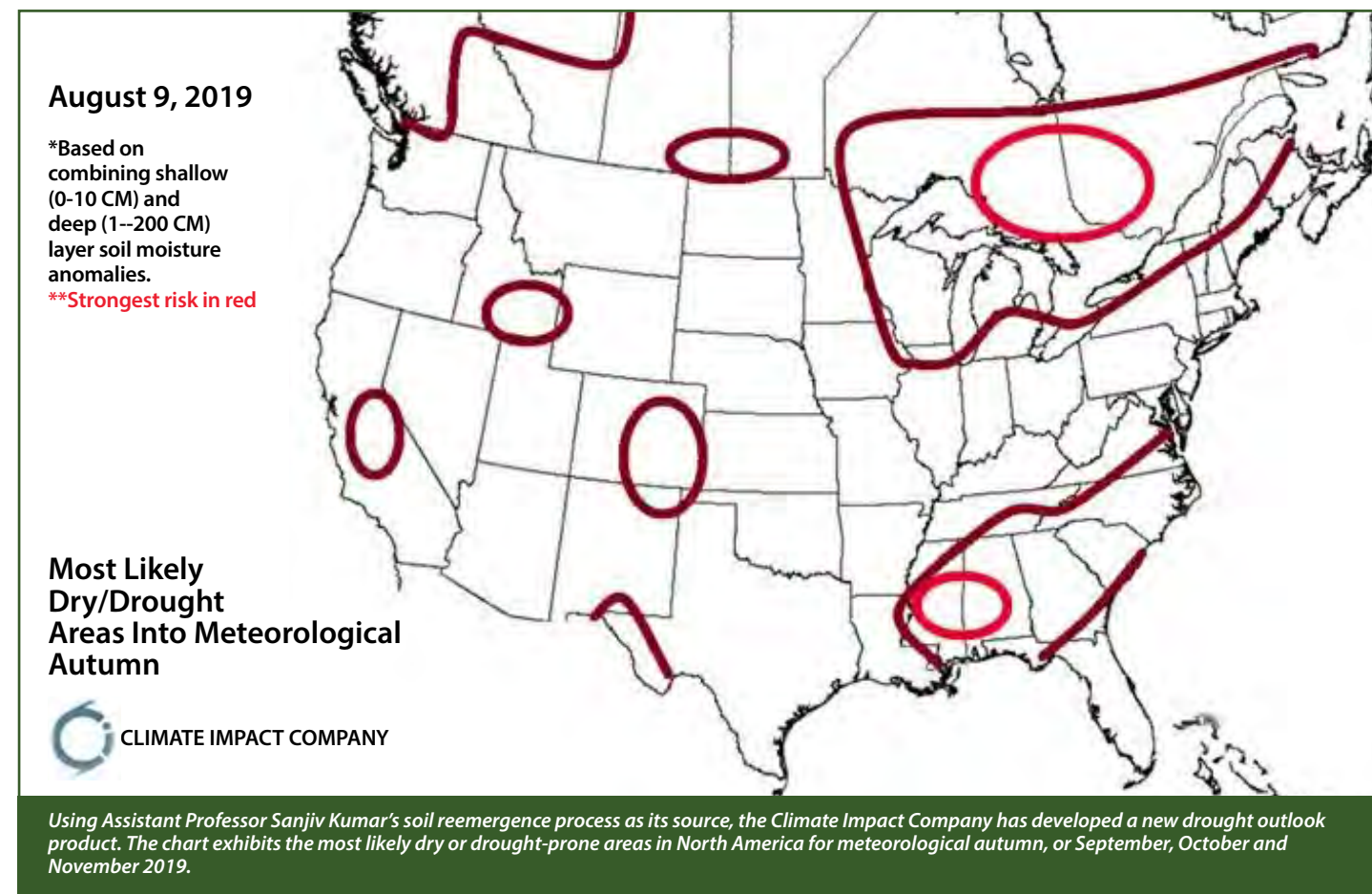
problems, said Kumar and team were the first to challenge the conventional thinking that root zone moisture anomalies last only a few months.

"They are demonstrating that greater memory, in the order of several months to over a year, in soil moisture anomalies exist in the layer immediately below the root zone, which has potential to enhance interannual-to-decadal variability in droughts," said Srivastava, who was not involved in the study.

School of Forestry and Wildlife Sciences Dean Janaki Alavalapati said the rapid development of a forecast product based on Kumar's research

affirms that the findings will significantly affect climate science in the years to come.

"The findings that Dr. Kumar and his team have made in this research represent a major breakthrough in terms of the role of the land in climate predictability science," Alavalapati said. "This could result in substantially improved predictability of drought, which could positively impact the lives of people affected by drought each year and affect the decisions of natural resource managers and policy makers."



## A tale of two rivers

Professors Tian and Pan receive major NSF funding to study the sustainability of two mother river basins

Three Auburn faculty members and their international co-researchers have received a major National Science Foundation grant to lead a study on climate and global changes that will affect the sustainability of food, energy and water, or FEW, resources for the rapidly growing populations in the United States, China and beyond.

Professors Hanqin Tian and Shufen "Susan" Pan of the School of Forestry and Wildlife Sciences and Professor Ruiqing Miao of the Department of Agricultural Economics and Rural Sociology in the College of Agriculture, along with their fellow researchers in China, received a \$1 million grant, jointly funded by the NSF and the National Natural Science foundation of China, or NSFC. The group will conduct research on both the Mississippi River Basin and China's Yellow River Basin.

The three Auburn faculty members are affiliated with Auburn University's interdisciplinary cluster program in Climate, Human and Earth System Sciences, or CHESS, directed by Tian within the School of Forestry and Wildlife Sciences' International Center for Climate and Global Change Research.

The U.S. and China, the two largest economies on earth, also share significant challenges in environmental sustainability, Tian said. The project, "Integrated systems modeling for sustainable FEW nexuses under multi-factor global changes: Innovative comparison between Yellow River and Mississippi River Basins," will examine increasing challenges in both locations, including limited natural resources and multifactor global changes, now and in the coming decades.

"The co-funded research project provides an excellent opportunity for the U.S.-China team collaborating on fundamental research that addresses the nexus of food, energy and water, or FEW systems, in the two mother river basins: the Mississippi River Basin and the Yellow River Basin," said Tian, who received a 2019 Carnegie Fellowship for separate research on Asia's food security and global environmental sustainability.

"We intend to develop and provide a systems solution for achieving the U.N. sustainable development goals, particularly associated with FEW sustainability and human health at both river basins, which play vital roles in global sustainability."

- Shufen "Susan" Pan

Pan said the project will have global implications.

"We intend to develop and provide a systems solution for achieving the U.N. sustainable development goals, particularly associated with FEW sustainability and human health at both river basins, which play vital roles in global sustainability," said Pan, who is director of Auburn's GIS and Remote Sensing Laboratory. "The U.S.-China joint program will test different FEW connections and form a quantitative modeling tool that is applicable to other intensively managed landscapes with similar FEW conflicts across the world."

Pan recently received two NSF grants, including another \$3 million award with the Auburn team of NSF Research Traineeship, or NRT, for a project titled "NRT: Addressing resiliency to climate-related hazards and disasters through data-informed decision making."

The U.S.-China research, together with the NRT project, will make way for further pioneering studies worldwide, Pan said.

"Both NSF projects are excellent testimonies of the interdisciplinary research that Auburn University's CHESS cluster promotes," Pan said.

"As members of the Auburn Family, we greatly appreciate NSF's support for both research and education at Auburn University and are very proud of the university's effort to promote and lead such important interdisciplinary projects."

The research team says the Mississippi River Basin, the largest river basin in North America, drains about 41% of the conterminous U.S. and most of the U.S. Corn Belt. The Yellow River Basin, China's second-largest river basin and the cradle of Chinese civilization, drains 11.5% of the land area in China and is a key food and energy-producing region, supporting 107 million residents.

Qiang Yu, the leader of the China-based team, said the joint project's aim is to understand and quantify the complex interactions and feedback within the FEW systems, toward the regional application of the sustainable FEW nexus model.

"It is clearly important to the human well-being of both nations and beyond," Yu said of this understanding and quantification. "The Mississippi River Basin in the U.S. and the Yellow River Basin in China are facing divergent FEW conflicts under different resource limitations and environmental stresses. "This project will

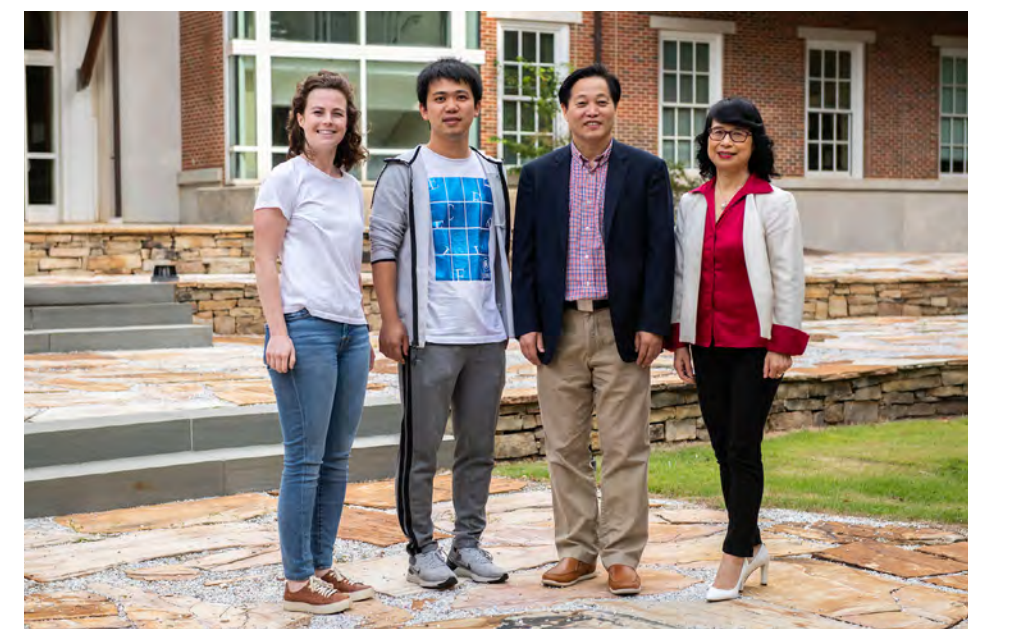
evaluate and predict multi-faceted impacts of global change on FEW systems and support people and our society in developing mitigation and adaptation strategies."

Miao said this is a first-of-its-kind undertaking, likely to make a significant scientific and human-level, impact.

"I am extremely excited about this project," Miao said. "It is a truly interdisciplinary collaboration that synergizes the team's expertise in ecology, economics and Big Data to tackle a problem of national and international importance."

Pan added that outcomes from the NSF/NSFC project will shed light on optimizing resource-use efficiencies and predicting FEW sustainability under multiple-factor global changes, with consideration of the spatial diversity that exists among the environmental and socioeconomic drivers.

Other collaborative institutions participating in this NSF/NSFC project include Iowa State University, Nanjing Hydraulic Research Institute, Institute of Soil and Water Conservation at the Chinese Academy of Sciences and the Northwest Agriculture and Forestry University.



Auburn University Professors Hanqin Tian, Shufen "Susan" Pan and Ruiqing Miao, along with fellow researchers in China, have received a \$1 million grant, jointly funded by the NSF and the National Natural Science foundation of China, to study the Two Mother River Basins of the Mississippi River in the U.S. and the Yellow River in China. Pictured are members of the Auburn research team, from left, Hannah Siegel, Naliquan Pan, and Professors Tian and Pan.

## Teaming up for trees

*Touchdowns for Trees, an off-field and on-campus success for Alabama students and businesses*

by *Avanelle Elmore*



Touchdowns for Trees enjoyed a successful inaugural season in Alabama this year.

The statewide tree planting campaign launched by Michelle Cole, an outreach program administrator within the School of Forestry and Wildlife Sciences, was created to foster a meaningful connection among sponsoring organizations and participating high schools and universities through community service.

The Touchdowns for Trees program sponsors donate one tree for every touchdown scored by the participating school's football teams during the regular season. Through their involvement in the project, Alabama students can experience the positive impact of community service and understand the significance of their on-field and on-campus success.

"I began the outreach initiative of Touchdowns for Trees to engage the students of my urban forestry class through service learning opportunities that are relevant to their course work and interests," said Cole.

From there, the project expanded to schools and universities throughout the state.

University arborists and campus planners select the locations of the plantings to ensure healthy tree growth. As an alternative, the trees may also be planted in nearby community parks as well as terraces and green spaces to provide erosion mitigation, shade and wildlife habitat.

University football teams assisted with plantings and connected with many volunteers from the Alabama Cooperative Extension System and the U.S. Forestry Service. Local city foresters and tree commission members also supported this year's Touchdowns for Trees planting efforts.

Sponsors included Toyota, the Auburn University School of Forestry and Wildlife Sciences, the Alabama Urban Forestry Association, Alabama Power and others.

"The tree planting offsets a company's carbon footprint by increasing the urban forest canopy and improving water quality on college campuses around Alabama," said Cole.

Cole is excited to have the opportunity to foster community service while increasing the urban forest canopy growth on local campuses.

"I am very much looking forward to offering more Alabama students hands-on tree planting experience through this initiative in the coming years," said Cole.

The results of this collaboration among educational institutions, companies and organizations have been extensive. To date,



*SWFS student volunteers, Auburn's Michelle Cole, City of Montgomery's Ethan Fowler and Auburn Arborist Alex Hedgepath at the Auburn Touchdown for Trees planting event in front of the SWFS building.*

participating schools and universities include Auburn University, the University of Alabama in Birmingham, Tallassee High School, Alabama A&M University, Jacksonville State University, Tuskegee University and the University of Alabama.

To become a sponsor or volunteer, contact Michelle Cole at (334) 844-1078 or at [coleden@auburn.edu](mailto:coleden@auburn.edu).

## Happy trails

*Faculty serve as visiting foresters at the Philmont Scout Ranch*

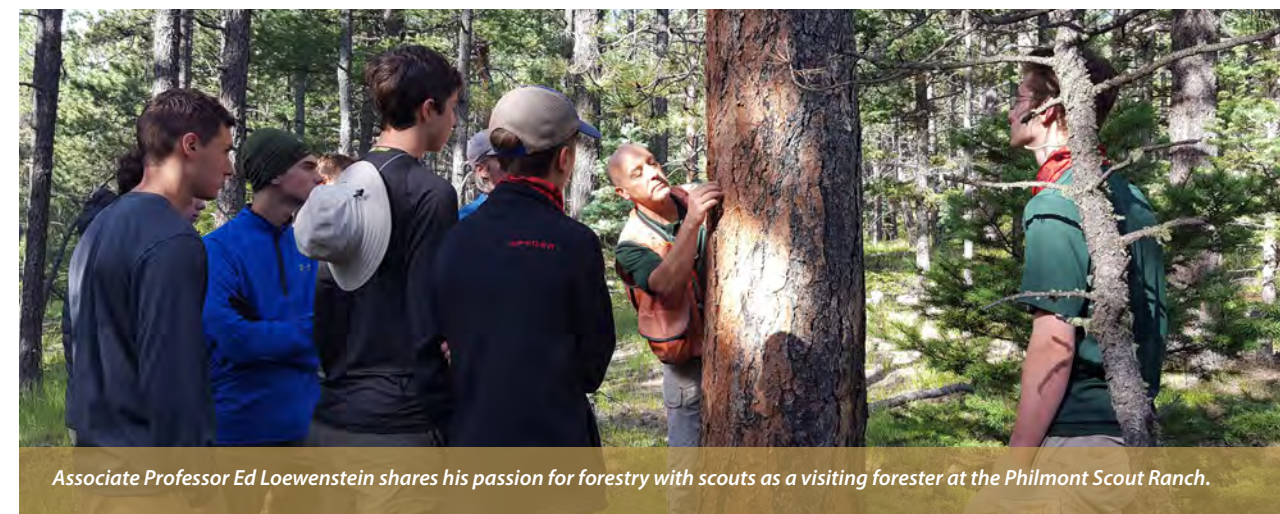
Each year, over 20,000 scouts look forward to trekking across the hundreds of miles of trails into Philmont Scout Ranch's rugged terrain in the Sangre de Cristo Mountains of northern New Mexico, a high adventure site operated by the Boy Scouts of America.

This is an outstanding opportunity to hone country skills and experience the western mountains. Local foresters realized it was also a good opportunity for scouts to learn about forestry, and established a demonstration forest highlighting sound silvicultural practices for the ponderosa pine forests that dominate the mid-elevations of Philmont.

Building on the interest in the demonstration forest, a visiting forester outreach program was initiated in 2010 to bring professional foresters on site. Working in pairs, visiting foresters volunteer for one week assignments throughout the summer.

This past summer, Drs. Ed and Nancy Loewenstein had the opportunity to serve as visiting foresters in the backcountry of Philmont at a staffed camp located at a major trail intersection.

The Loewenstein's engaged with a steady flow of scouts who came through the area, many of whom were happy for a place to sit and relax while chatting about forests and forestry. Information provided to the scouts was unique for each group



*Associate Professor Ed Loewenstein shares his passion for forestry with scouts as a visiting forester at the Philmont Scout Ranch.*

based on their interests and questions about what they had seen while on the trail.

"Most commonly, they wanted to know about the Ute Park wildfire that devastated a large section of Philmont in 2018," said Ed Loewenstein.

"With pictures, cross sections of trees with fire scars and the surrounding forest illustrating the fuels that might carry a fire through the woods, the scouts were able to learn about the history of fire suppression, basic fire ecology and the role of forest management in ecosystem restoration."

Loewenstein said some also learned how to use their high school geometry to measure the height and diameter of trees, also learning from the pair that the heat shields on the space shuttle were conceived based on the insulating capability of tree bark. The wide range of career options in forestry and natural resource management was another topic of discussion.

"All arrived with a love of nature; they left with renewed wonder and appreciation of forests and forest management," added Nancy Loewenstein.

## Moving the needle forward

*Group aims to increase diversity and inclusion*

In recent years, the African American alumni of Auburn University's School of Forestry and Wildlife Sciences have worked not only to advance diversity opportunities that exist for underrepresented students through the creation of endowments, but also to raise awareness among the public who can keep these endowments growing.

And the motivation comes from within: each member of this group faced challenges large and small before and during their studies—a dearth of fellow underrepresented students pursuing degrees in the field, for instance, or even an unawareness that such opportunities existed.

The history of an African American presence at the school goes back just over 40 years, when Ernest Boyd received his forestry and wildlife degree in 1976.

"As the number of minority graduates increases, a pool of resources for current and future students forms," said 1991 Auburn forestry graduate Kenneth Day. He and 1979 forestry

graduate Dana Little—with the help of 11 other alumni—spearheaded the establishment of the African American Alumni Endowed Scholarship, or AAAES.

"I think a way to increase minority enrollment is to utilize the successes that you've already had," said Day, a natural resource specialist with the U.S. Army Corps of Engineers in the Mobile, Alabama, District. "Your alumni base can be recruited. They have a sphere of influence that can be used to overcome some of the barriers that are associated with recruitment. They can be a source of getting accurate information out there. Certainly, they can support students financially and provide some great role models."

One major opportunity for prospective students is the AAAES, an annual award that was fully endowed in 2016 and has gone on to present opportunities for new students who, in some cases, might not have even considered pursuing a degree in forestry and wildlife. The purpose is to provide opportunities for African Americans



*Shown are members of the African Alumni work group who gathered recently to strategize efforts to increase diversity within the School of Forestry and Wildlife Sciences. From left to right: Phearthur Moore, Michelle Cole, Dana McReynolds, Otis French, Ken Day and Victoria Dotson David.*

and increase student diversity at Auburn University and in the School of Forestry and Wildlife Sciences. This year, student David Aguirre became the third beneficiary of the scholarship.

Another diversity initiative, the Minorities in Agriculture, Natural Resources and Related Sciences, or MANRRS, Endowed Fund for Excellence is in the fundraising process as well. This fund, which aims to sustain support of the Auburn chapter of MANNRS for its core operations and missions in the school, was

established in honor of the group's faculty advisor, Brenda Allen, a former extension specialist and assistant professor of urban forestry, upon her retirement in 2018.

To support or learn more about the African American Alumni Scholarship Endowment and the MANNRS Endowed Fund for Excellence, contact Heather Crozier, School of Forestry and Wildlife Sciences director of development, at 334-844-2791 or via email at [sfwsdev@auburn.edu](mailto:sfwsdev@auburn.edu).

## More than \$200k in scholarships and fellowships awarded for the academic year

The School of Forestry and Wildlife Sciences hosted its 2019 Scholarship and Fellowship Recognition Luncheon to honor benefactors and student awardees. Over 100 attendees, including donors, student recipients and administrators were present at the event which took place in the school's conference hall.

Dean Janaki Alavalapati provided opening remarks, including "We are fortunate to have so many generous donors who are willing to support the educational pursuits of our students.

Today we gratefully recognize the impact that legacy is having in our school and the lives of these young people."

The school awarded more than \$200k in undergraduate scholarships and \$30k in graduate fellowships. Many of the scholarships were awarded for the first time this year, including the Five Star Preserve Annual Scholarship, George E. (Eddie) Gibson, Sr. Endowed Scholarship, Hancock Forest Management Annual Scholarship and the Imogene Thornell Walker Memorial Endowed Scholarship.



*The School of Forestry and Wildlife Sciences hosted its annual Scholarship and Fellowship Recognition Luncheon to honor benefactors and student awardees. Shown are forestry student, Will Dunham; Emeritus Dean, Dr. Emmett Thompson; and Thompson Family Scholarship recipient, Josh Mullins.*



### Dean's Tailgate

*Members of the SFWS Woodlands and Wildlife Society socialized during the annual Dean's Tailgate where they gathered to support the Auburn Tigers.*



### Compass Circle Executive Committee Meeting

*Pictured from left to right: Gabrielle Ripa, Adam Maggard, Grace Holland, and Philip McMichael all of the FEWL Academy. Compass Circle members: Ben Simms, Brad Murfee, Skylar Clark, William Green, Brian Watts, Russell Miller, Leslie Grill and program manager, Sharon Tatum.*



### WKM Award recognizes Stan and Suzanne Wood

*The W. Kelly Mosley Environmental Award for Achievement in Forestry, Wildlife and Related Resources was presented to Stan and Suzanne Wood in recognition of their outstanding voluntary efforts toward the wise stewardship of Alabama's natural resources. Stan and Suzanne were recognized this past October at the 2019 Alabama Landowners Conference in Prattville, Alabama, for their efforts to educate and encourage countless numbers of landowners to take an active role in forest management on their own property. Pictured, from left to right, Dr. Mark Smith, executive secretary of the W. Kelly Environmental Awards Program, Suzanne and Stan. To learn more about the W. Kelly Mosley Environmental Awards Program, visit [sfws.auburn.edu](http://sfws.auburn.edu).*



### Extension empowers forest landowners to increase their bottom line

*School of Forestry and Wildlife Sciences Assistant Professor and Extension Specialist Adam Maggard addresses forest landowners at the Crenshaw County TREASURE Forest Association meeting on Sept. 24, 2019. Maggard spoke about forestry practices and alternative income producing activities for forest landowners.*



### Samuelson publishes Trees of Alabama guidebook

*Luce and Alumni Professor Lisa Samuelson, has completed her guidebook, "Trees of Alabama." The paperback book offers an accessible guide to the most notable species occurring widely in the state, "forming its renewable forest resources and underpinning its rich green blanket of natural beauty." The book is available for sale via Amazon and other online retailers.*

## Investing in the future

*Bodine makes first investment in Boone and Crockett Club professorship*

An initial gift toward establishing a Boone and Crockett Club professorship in the School of Forestry and Wildlife Sciences puts the school one step closer to becoming one of the select few across the nation to hold this honor.

Donor Chris Bodine, an avid outdoors enthusiast and sportsman, recently made a generous donation to help establish the professorship.

"In my view, Auburn's School of Forestry and Wildlife Sciences has provided the leadership, outreach and talent to ensure Alabama remains one of the premier states in the country in wildlife conservation and management programs," Bodine said.

The Boone and Crockett Club, established in 1887 by Theodore Roosevelt, promotes guardianship and management of big game and wildlife in North America, promoting standards of fair chase sportsmanship, habitat stewardship, landmark wildlife legislation and conservation initiatives.

In 1992, the club began collaborating with select universities to establish endowed faculty positions to ensure the growth of science-based wildlife management and conservation principles. Last fall, Boone and Crockett Club Chief of Staff Tony Schoonen presented a seminar at the School of Forestry and Wildlife Sciences. During his visit, Schoonen spent time with wildlife

faculty, students and key stakeholders and learned about Auburn's research and academic programs. Having experienced the school's nationally recognized wildlife program firsthand, Schoonen and other club leaders encouraged the school to pursue the professorship.

Bodine was thrilled to hear about the possibility of the professorship.

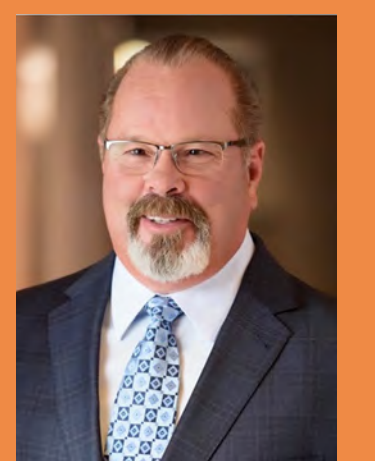
"After learning about the opportunity to elevate the program even further with the addition of a Boone and Crockett Professorship, I didn't think twice about providing my support for this initiative," Bodine said. "There are only a handful of these professorships nationally.

"I believe this affiliation with the Boone and Crockett Club organization will help ensure that Auburn remains in a leadership position in attracting the best and brightest students."

Dean Janaki Alavalapati feels that Bodine's investment will help to secure Auburn as a leader in wildlife research and outreach. "Mr. Bodine's generous contribution will maintain Alabama's status as one of the best states in the country in wildlife programs and resources for future generations," said Alavalapati.

"Having left the state and experienced what many other states had to offer, I developed a clear understanding of how special

*Chris Bodine of Alexander City, Alabama, provided the initial gift toward establishing a Boone and Crockett Club professorship in the Auburn University School of Forestry and Wildlife Sciences. The Boone and Crockett Club, established in 1887 by Theodore Roosevelt, promotes guardianship and management of big game and wildlife in North America.*



Alabama's natural wildlife resources are and how we have a special responsibility to protect and grow these resources," Bodine said.

"I encourage all of the Auburn Family and all our friends of our state's wildlife conservation efforts to support this important endowment"

To learn more about the Boone and Crockett Club professorship, contact Heather Crozier, director of the School of Forestry and Wildlife Sciences Office of Development, at 334-844-2791 or via email at [vannhea@auburn.edu](mailto:vannhea@auburn.edu).

## A broadened perspective: recent graduate's work in Alaska transforms his view of the effects of climate change



"My Alaskan experience taught me to look back at all these issues on continental scales, seeing how one region is connected to others."

- Cullen Anderson

Auburn wildlife graduate Cullen Anderson spent the summer with the U.S. Fish and Wildlife Service in Alaska as part of his graduate project research at Washington State University. Here he is shown taking a moment to explore the park with his camera.

Cullen Anderson, a recent graduate in wildlife ecology and management in the School of Forestry and Wildlife Sciences, has always enjoyed a special connection with the outdoors and hiking. It's what led him to the field.

Now a graduate student at Washington State University's School of the Environment, Anderson said his primary interest is predator ecology. But a summer stint as a biology intern for Alaska's Kenai National Wildlife Refuge opened his eyes to the potential impact he could have on his field, far beyond his chosen course of study.

"My graduate project looks at congeneric carnivore competition using brown bears and black bears as model species," Anderson said. "The base study is examining how brown bears influence the spatial distribution of black bears on the Kenai Peninsula, Alaska, using an occupancy framework, but there's potential to expand into estimating abundance and detection rates of hair snares."

Since the data he used was collected in 2010, he spent his two months at the refuge, which covers two million acres of the Kenai Peninsula, getting to know the landscape to provide context for the data he already had.

Here's a personal account of how the experience affected him.

"I cored trees, sampled both above-and below-ground arthropods, assessed land cover classification, sprayed weeds and surveyed invasive species. The work itself was a great

experience since it gave me a great overview of everything USFWS does on the refuge, and I built some solid skills.

However, what benefited me the most were the people I worked for and witnessing climate change first-hand.

My supervisor was brilliant, and he really helped me expand the scale of my thinking. Rather than focus just on refuge scale issues, he considered all of Alaska, North America and the world in his management philosophy. He looked decades and centuries into the future and made decisions that met current management objectives while taking into account what the refuge and world will likely look like in the future. A Ph.D. student I worked for on the refuge also taught me to look long term and think big picture.

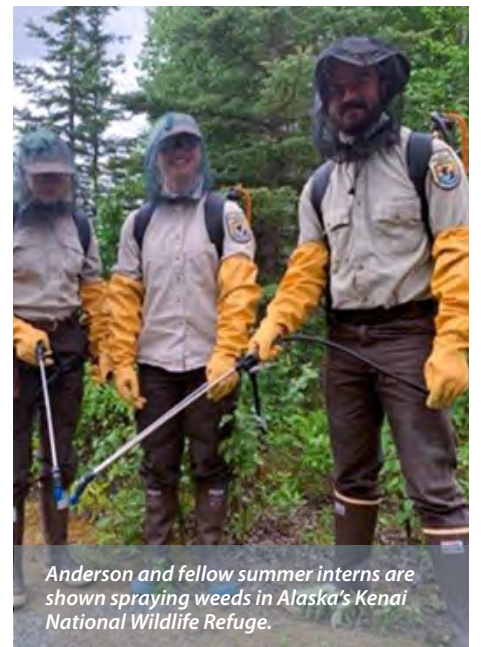
What solidified those lessons was being able to see climate change, a relatively long-term process compared to seasonal or annual cycles, in action.

For example, the Kenai Peninsula had its first recorded lightning-caused grassland wildfire in recorded history. This is because there weren't grasslands on the Kenai 40 years ago. Climate change is causing ecosystems to shift from forests to grasslands without direct human involvement now, which is an incredible process to see in person.

The southeast U.S. has a lot of issues that affect land and wildlife management, from numerous invasive species to habitat fragmentation to the various land use practices -- forestry,



One of Anderson's duties was to extract tree cores within the park.



Anderson and fellow summer interns are shown spraying weeds in Alaska's Kenai National Wildlife Refuge.

farming and urbanization to name a few -- all of which can mask connections to processes like climate change.

My Alaskan experience taught me to look back at all these issues on continental scales, seeing how one region is connected to others. It also taught me to think creatively, since the world in 50 years will look very different from what it looks like today, and I am now asking how management today can incorporate both the certainty of change and the uncertainty of what exactly that change will look like.

I'd like my future research projects to decrease that uncertainty and inform management now

and into the future on how best to conserve as many species and ecosystems as possible.

My experience has benefited my education and future career by solidifying my interests and opening me up to issues for which I was previously unaware.

A switch flipped in my head, and I know exactly what I want to contribute to the world, though I'm still unsure of how and where I'm going. I think my Master of Science will help answer those questions and give me the skills I need to pursue a meaningful career. I'm confident I'll continue to find the right people to steer me in the direction I need to go."

## Welcome new members!

### Woodlands and Wildlife Society

Mrs. Louisa Mann Baker  
Mr. Chris Bodine  
Mr. Daniel Crawford  
Dr. Lenore Thomas Ealy  
Five Star Plantation  
Mr. George Chandler Graham  
Mrs. Nicole Holler  
Deer & Deer Hunting  
Jasper Lumber Company  
Mr. and Mrs. Dan Moultrie  
Norbord Alabama, Inc.  
Osmose Utility Services, Inc.  
Stallworth Land Company  
Mrs. Beth Thorne Stukes  
Team Ag Marketing  
Mr. John T. Thomas  
Toyota Motor Manufacturing  
Wells Fargo Foundation



Learn more about the Woodlands and Wildlife Society online at [sfws.auburn.edu/woodlands-and-wildlife-society](http://sfws.auburn.edu/woodlands-and-wildlife-society).

### Compass Circle Young Alumni Giving Society

Ms. Marissa "Jo" Daniel  
Ms. Leslie Grill  
Mr. Will Liner  
Mr. Brad Murfee  
Mr. Joshua Thomas Smith  
Mr. Daniel Brian Tekulve



Learn more about Compass Circle online at [sfws.auburn.edu/compass-circle](http://sfws.auburn.edu/compass-circle).

## SHARE YOUR NEWS!

### Submit your news for the Alumni Corner!

New job? Got married? Received an award? The SFWS wants to know what you've been up to since graduation. Submit your personal and professional updates, photos and announcements to [sfwscom@auburn.edu](mailto:sfwscom@auburn.edu) to be included in an upcoming issue of the SFWS News.