Trees of the future

Warnell alums change forestry one seedling at a time

Distinguished Alumni:
Andy Stone and Dan Forster

Alumni on the Job
Ben Hornsby
It is now mid-June with the Georgia summer weather pattern firmly in place—a good time to reflect on the accomplishments of another strong year of research, teaching and outreach at the Warnell School.

Our talented and successful students continue to set the bar ever higher. Fisheries master’s student Guy Eroh received both the Udall Award and the Goldwater Awards. These are nationally competitive awards, and receiving both is truly a unique accomplishment. He will use the awards to further his graduate research. On the faculty side, James Beasley was selected for the Fred Davison Early Career Research Award—Warnell’s second year in a row for a faculty member to earn this recognition. Michael Yabsley received a Creative Research Medal for his impactful work with Guinea worms in Africa. Michael Tarrant received the Richard Reiff Internationalization Award for his leadership of our successful Discover Abroad program. Kim Coder was recognized with the Walter Barnard Hill Fellow Award—UGA’s highest award for public service and outreach. David Moorhead is receiving the Forest Landowners Association Extension Forester of the Year Award this month.

Thanks to our generous supporters and matches from the senior administration, we also endowed two professorships this past fiscal year. A gift from Laura Devendorf made possible the John Porter Stevens Distinguished Professorship in Water Resources that will be held by Rhett Jackson. The Terrell Professorship in Wildlife was made possible by income from the Charles Terrell property given years ago, and Michael Chamberlain will be the inaugural holder of it.

You will soon hear of new faculty searches underway as we take steps to fill positions of key members who have or will soon retire. Jon Caulfield retired after 2018’s spring semester and Tom Harris has similar plans before the year ends. Dave Moorhead and Ben Jackson have announced January 2019 retirement dates. Larry Morris and Karl Miller are considering later 2019 dates. Each will be missed—but they leave lasting legacies as well. I am meeting with the faculty in each discipline group this summer to do some visioning and discuss our options to strongly position us for the future in research, teaching and outreach as we hire new faculty.

This fall we will offer a newly revised outdoor recreation major now named parks, recreation, and tourism management, as well as a new curriculum in community forestry and arboriculture under our natural resource management and sustainability major. Stakeholders in both of these areas have shown great interest in these curricula and helped launch them by assisting with field courses and offering student internships. We will be aggressively marketing these and our other majors to recruit talented students. As always we appreciate your directing promising students to us when you can.

Change is inevitable—but we get to decide how we respond to it. With your continued support, together we will adapt to changes in ways that will further strengthen our top programs and grow some other strong ones alongside them. We look forward to hearing from you and seeing many of you this fall when you visit campus.

Go Dawgs!
Technology has changed how forest owners grow trees, and two Warnell alumni have been at the forefront of these new, improved seedlings. Illustration by Wade Newbury

On the Cover: Two Warnell alumni are at the forefront of how technology is changing forestry

Student clubs dominate at conclave competitions

Warnell honors two alumni with distinguished honors

April McDaniel steps into alumni director role

2017 Annual Report

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A changing of the guard: Bringolf, Jackson step into new roles at Warnell

Dr. Robert Bringolf and Rhett Jackson are finding themselves in unfamiliar territory these days. Both have stepped into new positions at Warnell that will help shape undergraduate and graduate education at the school.

Bringolf is now the new associate dean for academic affairs, taking over for Dr. Steven Castleberry, who has opted to return to teaching and research. Bringolf had been serving as Warnell’s graduate coordinator—a position Jackson will now take over.

Bringolf said he’s thrilled about his new position at Warnell. “I’m humbled and grateful to have the opportunity to serve the Warnell School in this role,” Bringolf said. “It’s truly an honor and a blessing to be a part of a community of faculty, staff and students that excel in so many ways. I look forward to the new challenges and doing whatever I can to maintain and enhance our strong trajectory.” Bringolf plans to stay connected with students by remaining active in teaching and research, though in a limited capacity.

Jackson said the graduate program is already running so well he’s very pleased and optimistic about his new position. “The graduate program administrator, Kate DeDufour, and her assistant, Shira Hersomsky, both manage the graduate program so well that I’m hoping I will just be a cheerleader and figurehead!”

Bringolf, professor of fish biology and ecotoxicology, has been with Warnell since 2008, and took on the graduate coordinator job in 2015. Jackson, the John Porter Stevens Distinguished Professor of Water Resources, joined Warnell in 1997.

Center, classroom dedicated in Harley Langdale Jr.’s honor

The Warnell School formally dedicated a classroom and the Center for Forest Business in honor of renowned alumnus Harley Langdale Jr. in March. A gift in Langdale’s estate and pledge from his foundation combined for a $5.6 million gift to Warnell. Attending the dedication were family and foundation board members (left to right): Greg Miller, Jim Langdale (in the back), Larry Fudge, Wesley Langdale, and Donnie Warren.

Warnell professors win prestigious honors

Dr. James Beasley and Michael Yabsley were both recognized for their outstanding contributions to research. Dr. Puneet Dwivedi was honored by the Office of Sustainability, and Dr. C.J. Tsai was just one of three UGA professors named Fellows of the American Association for the Advancement of Science. And Dr. Kim Coder was honored for his outreach work.

Beasley, assistant professor in the Savannah River Ecology Laboratory and Warnell, is the 2018 Fred C. Davison Early Career Scholar Award winner. He incorporates modern field techniques to study the spatial ecology and population dynamics of vertebrate wildlife in human-altered ecosystems. His research at Chernobyl has been recognized among key scientists within the radiocology community. Since 2014, he has served as the International Atomic Energy Agency’s sole wildlife adviser to the Fukushima Prefecture government in Japan, in response to the 2011 tsunami and nuclear accident.

Yabsley, professor in Warnell and the College of Veterinary Medicine, won the very prestigious Creative Research Medal in Natural Sciences and Engineering. He discovered an unexpected pathway of infection for dracunculiasis, also known as Guinea worm disease (GWD), which has caused widespread suffering in West Africa. In 2013, after a successful campaign to reduce human infections, GWD infections were found in a new host—dogs—with further potential for transmission to people. He hypothesized that dogs acquired GWD infections by ingesting aquatic hosts, possibly fish or frogs, which carried the parasite in their tissues.

Coder, professor of tree biology and community forestry in the Warnell School, was chosen as the 2018 recipient of the Walter Barnard Hill Award, which is UGA’s highest award in public service and outreach. Since coming to UGA in 1985, Dr. Coder has been recognized internationally for taking complex academic research materials and making them understandable to a lay audience. His work has helped arborists, urban foresters, tree health care providers and property owners take better care of their trees.

Dwivedi, an assistant professor of sustainability sciences in the Warnell School, was named the 2018 UGA Outstanding Faculty winner by Sustainable UGA. The Office of Sustainability each year recognizes those who “go above and beyond to demonstrate dedicated efforts to conserve natural resources, advance sustainability initiatives and improve quality of life, both on and off-campus.”

Tsai won an honor bestowed by their peers for “scientifically or socially distinguished efforts to advance science or its applications” when she was named an AAAS Fellow. She was honored for pioneering research contributions in forestry biotechnology and genomics. Tsai holds a joint appointment in the Warnell School and the department of plant sciences in the Franklin College of Arts and Sciences.

Tsai, a plant biologist with a passion for trees, focuses on creating high-yielding trees for use in biofuel. She dissects the molecular mechanisms that affect tree fitness and biomass productivity, searching for ways to create better-growing trees by making them more resistant to stresses like extreme temperatures, disease and drought. Tsai pioneered the application of CRISPR genome editing technology to forest trees, and her team demonstrated unprecedented efficiency in generating transgenic null mutants.
Elizabeth Benton

Current Position: Forest Health Outreach Specialist

Education:
BS, University of Mobile
MS, University of South Alabama
PhD, University of Tennessee

Outreach Topics:
Forest insects and diseases; Insecticide policy, toxicology, and environmental risk; Pollinator habitats and health

Personal Info:
I enjoy most outdoor activities, including hiking, camping and especially gardening. I’ve been married for 16 years and have two children, Violet, 12, and Russ, 10.

You also look at the environmental risks of pesticide use. Are there major problems in hemlock forests because of the insecticide being used?

Environmental risks of imidacloprid use are very low, so it is a responsible management choice. Insecticide movement in the soil, canopy arthropod communities, and soil arthropods have all been studied. I did a study on aquatic insect communities in the Smokies, and the insecticide use for hemlock conservation had no negative impact on stream communities. The risk for pollinators has not been determined, but I have a research project assessing pollinator risks in North Georgia hemlock forests. It is also important to remember that hemlocks are keystone species, and their presence in forests conveys many environmental benefits. The loss of hemlock results in cascading environmental effects in our forests, from canopy habitats all the way down to stream communities.

What is your favorite project you’re working on right now?

That’s the “Trees for Bees” project, a collaborative project between the UGA College of Agriculture and Environmental Science and Warnell. We developed outreach materials to promote pollinator habitats in urban and suburban forests. Materials included extension bulletins, newspaper articles, a YouTube video, banners, coloring sheets for kids, a hands-on pollinator nesting box activity, and a PowerPoint presentation for county agents. Now we are getting to see all the pollinator events that county agents are conducting throughout Georgia. The real aim of this project is to empower citizens to make positive environmental changes to our urban and suburban forests.

As a forest health outreach specialist, what has been the best part of your job?

I really like interacting with the resource community, from individual citizens to forestry companies and state agencies. Understanding what is important to them gives me direction for relevant, practical outreach and research. Shortly after starting with UGA, I knew that I needed to research pine tip moth management. Young pine stands are getting damaged, and growers need more options to manage this pest. There are newer control options that can help Georgia growers, and research is now underway to develop new management tactics for pine tip moth. The research will feed directly into my outreach material, so the work does not just stay in a journal. I get to help research-based forest management tactics go from the journal to field implementation.

As a forest health outreach specialist, what is the most important piece of advice you would give to Georgia landowners about forest health?

Keep an eye on your forests and manage them properly. Often the forest health issue is very progressed by the time a landowner seeks help. If they can get a management plan and follow it, many forest health issues can be avoided. 😊
Two new professors are joining the Warnell faculty: Drs. Jesse Abrams and Dan Johnson will join the faculty beginning in fall semester 2018. Abrams will be assistant professor of natural resource policy and sustainability, and Johnson will be assistant professor of forest ecology and tree physiology.

Johnson earned his PhD from Wake Forest University and has most recently been assistant professor at the University of Idaho, where he taught dendrology, woody plant physiology, and other forestry classes.

Abrams earned his PhD from Oregon State University. Most recently he was a research associate at the University of Oregon’s Institute for a Sustainable Environment. He currently conducts research with UGA faculty Cecil Jennings, Robert Bringolf and Jean Williams-Woodward to maximize hatch success of walleye eggs. His awards include the Rocky Mountain Elk Foundation Wildlife Leadership Award, Stamps Foundation Scholarship, Phi Kappa Phi Honor Society and Xi Sigma Pi Forestry Honor Society. He was one of three UGA students to receive a Goldwater Scholarship this spring. Abrams will be assistant professor of natural resource policy and sustainability of the world’s fish populations and their habitats.

Johnson earned his PhD from Wake Forest University and has most recently been assistant professor at the University of Idaho, where he taught dendrology, woody plant physiology, and other forestry classes.

Dr. Tiffany Vidal, who recently earned her PhD from Warnell, and her major professor Dr. Brian Irwin were honored with the Warnell Robert L. Kendall Award Paper in the Transactions of the American Fisheries Society for 2017 for their paper, “Using Variance Structure to Quantify Responses to Perturbation in Fish Catches.”

Kristen Lear, a student in the Integrative Conservation doctoral program, has been named a recipient of a P.E.O. Scholar Award.

The scholarship will help fund Lear’s work involving the endangered Mexican long-nosed bat, which is under threat of extinction in part because of human harvesting of their main food source of agave plants. Through her doctoral research, Lear is working to raise awareness of the issue among rural Mexican communities while creating and implementing bat-friendly agave management programs.

“Through my undergraduate degree and previous research in the U.S. and Australia, I learned firsthand that conservation is not just about the animals or plants we are trying to protect, but also about people,” said Lear. “There are tremendous opportunities to connect people to the natural world through conservation research that considers the needs of both nature and society. It is at this nature-society interface that I am working to develop conservation actions that are beneficial to both wildlife and people.”

The Warnell School honored three staff members at 2017’s Homecoming festivities with the annual Alumni Staff Awards. (Left to right) Research Professional Vanessa Kinney-Terrell, Maintenance Foreman Josh Tucker and Senior Accountant Christie Miller were all recognized for their contributions to the school. This award is given to three staff members each Homecoming who have demonstrated dedicated service and commitment. He is currently pursuing a doctorate in biological science with an emphasis in molecular genetics and fisheries science, with the long-term goal of improving the recovery and sustainability of the world’s fish populations and their habitats.
New name, new area of emphasis for Warnell majors

Some changes are afoot at Warnell, and our curriculum won’t be the same starting with the fall semester. The natural resources recreation and tourism undergraduate major is not only changing names to better reflect its focus, but Warnell is also shaking up the curriculum to make sure it’s meeting both student and employer needs.

Starting fall semester 2018, the old NRRT major will be called parks, recreation, and tourism management.

The new name better represents the major, said Dr. Steven Castleberry, and is more identifiable by students and employers.

“The name change, along with revisions to the curriculum, will make our program more competitive with peer programs and increase the number of students in the major,” Castleberry said.

This change to the NRRT major follows a similar revision last year to the former water and soil resources major. Warnell changed the name to natural resource management and sustainability and converted water and soil resources to an area of emphasis under the major. An area of emphasis in geospatial information science was also added.

This year, community forestry and arboriculture was added as an area of emphasis under natural resource management and sustainability.

The new area of emphasis will focus on the management of individual trees and forests growing in urban and suburban areas. Students who graduate with this area of emphasis will have the skills to become community forest managers, arborists and tree health care providers.

“It is important that we regularly evaluate our programs to ensure we are meeting the needs of our employers and that graduates are prepared to succeed as natural resource professionals,” Castleberry said.

Warnell alumni who come back for a visit will be missing a familiar face now. Emily Saunders, who is not only a Warnell graduate herself but also a longtime staff member, has taken a job with another department at the University of Georgia.

But don’t think of this as a farewell, she says. “As a Warnell alumna, I’m committed to our alma mater, and I look forward to continuing my service as a volunteer!” she said.

Saunders, who started out as a student worker before moving into the student and career services coordinator position, spent the last six years at Warnell as the school’s director of alumni relations. She is now the training and development senior manager with UGA Human Resources, where she creates and delivers programming focused on leadership and career development for University of Georgia faculty and staff.

Saunders said she’s proud of the many accomplishments she achieved while at Warnell, including increasing alumni engagement and annual giving, strengthening Warnell’s alumni boards and volunteer engagement, creating and teaching a professional development class for natural resources students. She also created the Alumni Compass Project, which has worked with around 300 alumni to provide compasses to incoming professional students and pairing them with alumni mentors.

“My career at Warnell enabled me to discover my passion for helping people achieve their dream careers,” Saunders said. “I love seeing where our alumni go and how they are making a difference in the world, and nothing has been more meaningful to me than helping a student or alumni attain their dreams job. It’s an honor to have been part of that journey for many Warnell alumni, and I’m excited to use what I’ve learned to benefit my local community—University of Georgia faculty and staff.”

New digs on campus: Emily Saunders says farewell to Warnell, joins UGA training staff

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Farewell Dr. Jon Caulfield: professor retires

Dr. Jon Caulfield has finished his long career in forestry at Warnell. The Hargreaves Distinguished Professor of Forest Finance retired at the end of the spring semester after two years at Warnell and a quarter of century in the TIMO industry.

Caulfield’s retirement ends his second stint at Warnell—the first time from 1996-2000—but in his time here he focused his research on how macro drivers and trends impact forestry globally, nationally and regionally, international timberland investments, and timberland as an asset class.

Dean Dale Greene said a search to replace Caulfield will launch in the upcoming academic year.

Caulfield graduated with a bachelor’s degree from SUNY College of Environmental Science and Forestry in 1975, and earned his master’s degree in 1981 and his PhD in 1984 from NC State.

In addition to teaching at Warnell, Caulfield also taught at Auburn University from 1984 to 1992. In 2016, he and wife Didi celebrated their 40th wedding anniversary and 20 years in Athens.
Warnell researcher Gino D’Angelo has studied and published a paper on what is believed to be the first conjoined deer fawns to have reached full-term and then be delivered by their mother. Found in Minnesota, the stillborn fawns were clean, dry and appeared recently deceased.

The only other examples of conjoined twin fawns have been found still in utero, said D’Angelo. “It’s amazing and extremely rare,” D’Angelo said. “We can’t even estimate the rarity of this. Of the tens of millions of fawns born annually in the U.S., there are probably abnormalities happening in the wild we don’t even know about.”

The results of this rare study were published in the science journal American Midland Naturalist.

Researchers conducted a full necropsy, and also did a 3D computed tomography—or CT scan—and a magnetic resonance imaging at the University of Minnesota’s Veterinary Diagnostic Laboratory. They found that the fawns—which were does—had two separate necks and heads, but shared a body. They had normal fur, normal heads and legs, and even “almost perfect” spot patterns running up their necks, D’Angelo said.

Lab tests of the lungs confirmed the fawns never breathed air and were delivered stillborn, and the necropsy found that the does had a malformed, shared liver, extra spleens and gastrointestinal tracts, and two hearts that shared a single pericardial sac.

“Theyir anatomy indicates the fawns would never have been viable,” D’Angelo said “Yet, they were found groomed and in a natural position, suggesting that the doe tried to care for them after delivery. The maternal instinct is very strong.”

Conjoined twins are not unheard of in animals or humans, D’Angelo said, although most do not survive after birth. Only two cases of conjoined twins have been found in white-tailed deer, but both were fawns that had not yet been delivered.

Healthy twin fawns are the rule rather than the exception, D’Angelo said, because most adult does give birth to twins.

The conjoined fawns will be on display at the Minnesota Department of Natural Resource’s headquarters in St. Paul, Minnesota, while a skeletal display will be housed at the University of Minnesota Veterinary Anatomy Museum.

A new Warnell study is revealing current trends in the logging industry in Georgia and South Carolina. The result, published recently in Forest Science, was authored by Warnell’s Joseph Conrad and Dean Dale Greene, and Patrick Hiel of Paul Smith’s College. Logging business owners and managers have been surveyed every five years since 1987 in Georgia, and since 2012 in South Carolina, to document trends in logging businesses and how they respond to changing timber markets.

Their survey shows that logging businesses have changed considerably over the past three decades: chainsaw systems are largely gone from both Georgia and South Carolina, while feller-buncher/grapple-skidder systems are dominating. Emerging wood-energy markets have seen the rise of chippers being used over the past decade, the survey shows.

Weekly production was up “substantially” compared to 1987, and owners invest almost three times as much capital in equipment than those in the US Midwest, increasing labor productivity by 65 percent since 1987. Importantly, the study says, logging businesses in Georgia and South Carolina “are the most productive in the nation, and their efficiency contributes to the lowest delivered timber prices in the United States.”

However, the survey also showed some “problematic” results, particularly in demographics. Around one-third of business owners in both Georgia and South Carolina are older than 60, while of “greater concern” is that only a small percentage are in their 30s and 40s.

“The present trend toward fewer, larger, and more productive logging businesses shows no signs of abating,” the authors concluded. “Consequently, fewer logging business owners will be needed in future years, but future business owners will require skills in managing complex multimillion dollar businesses. Timber transportation is an emerging challenge confronting most logging businesses. Rising truck insurance rates, rising driver wages, truck driver shortages, and modest haul rates make this segment a challenge for logging business owners and the entire wood supply chain.”
Warnell researchers discover novel clade of parasite in turkey vultures

Warnell researchers studying New World vultures have discovered a novel clade of parasite. Warnell’s Dr. Michael Yabsley was lead author of the study, published recently in Malaria Journal. It describes this novel clade of Haemospora, which was found when researchers studied blood and tissue samples of 162 turkey vultures and 95 black vultures in six states.

Researchers identified the parasites, discovering none in the black vultures but finding that 24 percent of turkey vultures were positive for *Haemoproteus catharti*.

New World vultures are found throughout the Americas, made up of seven species in five genera. Turkey vultures and black vultures are the most widespread, and although they are ecologically similar they have differences in morphology, physiology and behavior. Three species of the parasite order Haemospora have been found in New World vultures to date, including *H. catharti*. Knowledge about the species that infects vultures is still very limited, the study says.

In this study researchers found that *H. catharti* is closely related to a yet unidentified haemosporidian from wood storks in the southeastern US and northern Brazil, MYCAMH1. Using morphological and molecular methods, researchers studied the epidemiology and evolution of haemosporidian parasites of the vultures, and their results “challenge the placement of *H. catharti* in the genus *Haemoproteus*, and instead suggest that these parasites represent a novel evolutionary lineage of haemosporidians, possibly meriting a separate genus.”

Property tax analysis reveals Georgia not competitive with neighboring states

A new analysis by Warnell researchers shows that annual property taxes on timberland remain one of the top concerns of forest landowners—and that despite legislative attempts to ease that burden, ad valorem taxes on Georgia timberland are still not competitive with surrounding states.

Bob Izlar, director of the Langdale Center for Forest Business, said it’s hard to compare property taxes on timberland across states because they are determined by many factors, including a community’s reliance on property taxes for public services, the level of community services, and a range of criteria based on how a tract of timberland is valued (like its soil productivity, location, market accessibility, and sometimes the types of forest on the land).

“If, data on timberland property taxes are not readily available in many southern states,” Izlar explained. But a study conducted by the

Study: People volunteering for conservation travel do it to help and for “hedonic pleasure”

Do the young adults signing up to go on trips to save the planet really care about the cause, or are they just looking for a good time? A new study that looked at conservation volunteer tourism suggests that many of the “voluntourists” want to help, but they also want that “enjoyable hedonic experience.”

Published recently in Tourism Management, the study is co-authored by Warnell’s Dr. Kyle Woosnam. The researchers surveyed young adults attending a large public university in the southwestern US, asking them about their environmental views, their intention to travel for conservation volunteerism, and what’s in it for them to volunteer to travel for altruistic purposes.

Conservation volunteer travel has been receiving attention for helping with global environmental problems, but these same trips allow young adults to engage in the pleasurable travel experiences they desire. “It appears that conservation volunteer travel is viewed as an exciting and interesting activity for these young adults,” the study concluded. “This has implications for those who coordinate conservation volunteer projects in terms of promotion and recruitment criteria. Perhaps participants in these projects are not necessarily looking for an opportunity to ‘save the environment’ and are more skeptical about the actual contribution of their efforts to nature conservation. Instead they desire an enjoyable experience.”

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John Pait was attending a small liberal arts college in Kentucky when he took a job at its science library. One day while shelving books, he came across a Society of American Foresters book on careers in forestry and started flipping through it.

“I was just totally blown away,” he says.

Finding that book in the returns pile may have been completely random, but it put Pait down a path that took him to the University of Georgia and ultimately a career at the forefront of changing how forest landowners grow trees.

In the past couple of decades, improvements in technology—and a shift in forestland ownership—has seen the rise of genetically improved tree seedlings, giving landowners more options than before in forest management.

Pait’s not the only Warnell alum who has watched over this change in the forestry landscape—Wayne Bell also had a fortuitous path to Warnell, and these two alumni have had instrumental roles in the seedlings industry in the Southeast.

But if you ask Pait, he’s just been in the right places at the right times, saying, “I’m probably one of the luckiest guys I’ve ever met.”

Lucky Alumni, Fortuitous Starts

Wayne Bell was sitting in his high school’s agriculture class back in the 1960s, down in Ashburn, Georgia, when his teacher focused that day’s lesson on forestry. Those lessons were fun, he said, and it was the first time he’d really seen how attractive forestry could be as a career, especially “because in the late 60s we didn’t have as many options as people do now.”

Bell went to Abraham Baldwin Agriculture College first, but transferred to UGA in 1969. After a one-year National Guard tour, he graduated in 1972, and his forestry career began in earnest—first for the now-gone St. Joe Paper Company. It was there that Bell got his first exposure to working in a tree nursery. After a couple of years there, he moved on to International Forest Company.

At the time, Bell said, it was owned by a Swedish corporation called Hilleshög, who wanted to expand the company into the nursery and genetics business. By 1983, they’d built their first nursery in Alabama, but by the ’90s their Swedish owners decided to exit the forest business.

So Bell and two others bought it, and in 1990 he became president and part-owner of a company that by 2003 grew 140 million seedlings and revolutionized growing them in containers instead of the ground.

When they sold IFCO in 2003—and Bell became the chief operating officer—they began to penetrate the market even more with 110 million containerized seedlings. By 2017, they added another 120 million bareroot seedlings. “We became the second largest player in the nursery business in the South,” Bell said.

Who’s the first? ArborGen. And that’s where Pait works.

Pait and Bell have been friends for decades, first meeting when Pait was a rookie at his first job out of college. Bell bought the new forestry grad lunch, and the two have had a comradery ever since.

Pait’s forestry story begins in that science library. After telling his dad about what he’d found, the elder Pait set up a meeting with someone he just happened to know at UGA—Dr. Reid Parker, one of Warnell’s most renowned professors. Parker easily swayed Pait to UGA, and the young college student came for his undergraduate degree and then stayed for his master’s.

Story by SANDI MARTIN
Cover Story

Along the way he was a student worker at Whitehall Forest making $2.77 an hour, helped renovate Whitehall Mansion, worked as a dendrology teaching assistant, and met his future wife.

It was his first job at Container Corp when he met Bell, and it was there that he got his first taste of what it was like to work in the changing forest industry. Taking that job over working on a PhD at Mississippi State, Pait never regretted joining the workforce instead. Over the next few years, he rose through the ranks, starting out as a research forester and then ultimately overseeing a million acres and working in silviculture and applied genetics.

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Changes on the horizon

When Bell first started, he said, paper companies had a real interest in growing better trees, “but private landowners didn’t have access to those improved genetics.”

Wall Street may have changed that, Bell said, basically telling the paper companies—which historically owned the nurseries—that they’d stop selling their stocks “because you’re not giving us enough returns to recommend it.”

That, Bell said, got them thinking about how to be more attractive to Wall Street. And the landscape changed. Companies started selling their lands, and investors snapped it up because of rising land values and potential timber sales. Pait said Georgia Pacific “took the first big experiment” in what became widespread across the industry when it took its lands and put them in a public company.

Pait and Bell watched it all happen—and they also saw the technology develop. “We started seeing opportunities in genetics where you could improve the genetics on your planted trees, combined with silviculture,” Bell said. “That sort of revolutionized productivity. It doubled what we could produce on an acre of land.”

Improving tree genetics isn’t new—planting based on desirable traits has been around for a century, with the US Forest Service documenting their own tests in the early 1900s—with increased interest throughout the following decades.

By the early 1980s, dozens of private companies, state agencies and forestry university programs were engaged in forest genetics research. But it was the technology of the late 20th century—coupled with forest industry corporations divesting their land holdings to real estate trusts (REITs) and timber investment management organizations (TIMOs)—that transformed forest genetics research.

Bell was at IFCO when this started, and said that once they got into the nursery business, they had to get into genetics. “That’s what’s driving people to forestry,” he said. “They want the highest quality genetics. There weren’t any companies out there working on that. We weren’t paper companies until my company and ArborGen came along.”

In 2002, Pait began working for CellFor, a tech company he’d worked with while at Georgia Pacific.

They were focusing on taking cloning technology and applying it to pine trees, he said, which “was the Holy Grail of genetic improvement.” Over the next decade, Pait was in the midst of this genetic work when ArborGen bought CellFor in 2012. And now he’s watching ArborGen grow more than 400 million seedlings as the largest producer in North America, with operations in Brazil and New Zealand.

Pait is excited about what’s on the horizon.

ArborGen has multiple nurseries, deep technology that focuses on pine and eucalyptus, and a “full array” of genetically improved seedlings. It can take 15 years to do a full cycle on a new product, Pait said, from testing to breeding to seedlings. They’re doing advanced research using 50,000 to 60,000 genetic markers to identify genes for good growth and other desirable traits to rapidly develop the next generation of high quality seedlings, he said.

“We’re now ready to come out with our first genome-based product that is resistant to disease,” he said. “That’s never been done in pine before. We use genetic markers to test for rust resistance.”

Genomics is the kind of genetics research that sequences, assembles and analyzes the function and structure of genomes, then identifying all the genes in an organism. This technology helped spur this fundamental shift in forest genetics improvements.

Pait said it’s only going to get better from here. “I think in the near future we’ll see a greater application of genomics science to more rapidly improve the rate of development of elite trees,” he said. “Compared to when I started my career, we are looking at trees that grow three times as fast. We’ll look at the next levels, which would be doubling of pine productivity and wood quality.”
James Talkin

How did you find Warnell?
I knew I wanted to get involved with water conservation, so I started looking around online for universities in the area with a degree that would fit. Warnell seemed to be the best fit.

Post-graduation plans:
I am going to try to do water conservation. I don’t know what exactly, but I hope it has a heavy dose of field work.

How’d you choose your field?
During that drought we had back around 2006, I learned how precarious our fresh water situation was. I tried to do what I could to reduce my water use. That is when I decided that I would like to do something more to preserve our freshwater resources. When I took my first GIS class a decade later I felt like I found an interesting field that could be helpful in managing water resources and so I went with it.

What research are you passionate about?
I haven’t started any research yet, but I hope to be involved with something soon.

What is your best UGA memory?
I look forward to creating many great memories, but so far my greatest moment was receiving the letter accepting me into Warnell’s professional program.

Annalise Wershoven

How did you find Warnell?
After graduating from college, I was working as a marine turtle specialist at a nature center in Florida. Teaching others about sea turtles and marine conservation was one of the best parts of my job, so I began looking for a graduate program that could allow me to incorporate my passion for environmental education into my program of study. I started doing some research on natural resources programs, and the PRTM program stood out to me. Once I found Warnell, I knew I didn’t want to go anywhere else.

Post-graduation plans:
Ideally, I would like to create and implement environmental education programming for a nature center, aquarium, or government agency.

How’d you choose your field?
Growing up in South Florida, I was fortunate enough to have amazing outdoor experiences. I was snorkeling and SCUBA diving on local reefs, kayaking and fishing in the Everglades, and exploring natural areas near my home. It wasn’t until I started volunteering at my local nature center that I realized just how lucky I was, since so many people didn’t have the opportunities that I did. I want to be able to serve the community by bringing positive outdoor experiences to as many people as possible, and I feel that environmental education is the best way to do that.

What research are you passionate about?
My thesis research project assesses changes in environmental literacy before and after two different types of sea turtle conservation lessons. I will be working with Sandy Creek Nature Center and their environmental summer camp in order to conduct this research.

In one of my classes, Foundations of Environmental Education, we are working with Howard B. Stroud Elementary School in Athens to revitalize their on-site nature trail. We are creating videos and lesson plans that the teachers can use in accordance with the Georgia state standards. It’s a really large project and a lot of fun.

What is your best UGA memory?
I’m a teaching assistant for an introductory marine biology lab. One of the coolest labs we do is an invertebrate lab, and the students get to observe and touch all of the critters. The best part about this lab is watching students who were previously afraid or unsure about some “creepy” marine life get really excited about holding spider crabs and sea cucumbers and upside down jellyfish. It made the whole lab worth it just to see their reactions.
Students score big at Wildlife Society, Forestry conclaves

Warnell students competing in the 2018 Wildlife Society and Forestry conclave competitions scored well, with the student chapter of The Wildlife Society taking first place for the third straight year—and the ninth time in the last 10 years they’ve come home with the championship.

The UGA Timberdawgs placed seventh at conclave, with a number of students placing in the top three in various events.

“We all know that Warnell has great students, and they demonstrated it (at the 2018 Southeastern Wildlife Conclave),” said Dr. Steven Castleberry, faculty adviser to the wildlife club.

Dr. Bronson Bullock said the UGA Forestry Club faced some tough competition at their conclave, which was held at Abraham Baldwin Agricultural College in Tifton. “Our hosts at ABAC did a wonderful job putting on the forestry conclave, and everything was handled in a very professional manner,” he said.

The Wildlife Society Student Chapter

Overall – 1st Place

1st Place:
Team Field Competition
Quiz Bowl – Nathan Wilhite, Ben Thesing, Colleen Piper and Seth Cook
Landscape Photography – Sergi Picas
Fly casting – Tony Purnell
Painting – Tony Purnell

2nd Place:
Team Field Competition
Radiotelemetry – David Sisson
Archery – Hunter Pruitt
Cervid Calling – Jonathan Pritchard
Poetry – Colleen Piper

3rd Place:
Lab Practical – Nathan Wilhite

UGA Forestry Club Timberdawgs

Overall – 7th Place

1st Place:
Photogrammetry – Harrold Wheeler

2nd Place:
Wildlife Identification – Logan House and Cameron Walters
Pole Felling – Ryan Roeder

3rd Place:
Pole Climb – Anthony McCall

6th Place:
Technical Events

All photos courtesy of the Forestry Club and Wildlife Society

Student News

Summer 2018
Visitors get sky high view of the Warnell “experience”

For the first time since Warnell’s open house festivities began seven years ago, visitors got to experience the school from an all new height—figuratively, of course. The excited crowd of parents and alumni who came for the Warnell “experience” also got to see how the school is taking its classroom to the sky with a demonstration of its new drones course.

Dr. Tripp Lowe showed off how drones are going to change how forest management is done, and how Warnell students will be some of the first to apply this new technology to natural resources.

Warnell Weekend, which has grown in attendance each year, kicked off with the 87th annual Spring Awards Banquet, but then festivities began in earnest the next couple of days with tours, class lectures, and field labs, Warnell Night at Southern Brewing Company, and the Young Alumni Sporting Clays Tournament.

Check back at warnell.uga.edu for a schedule of events for next year’s Warnell Weekend.
Ben Hornsby

Name: Ben Hornsby
Education:
AS ’01, Abraham Baldwin Agriculture College; BSFR ’03, MS ’06, Warnell
Occupation/Title:
Fire Technology Transfer Specialist with the U.S. Forest Service, Southern Research Station, Center for Forest Disturbance Science in Athens
Hometown:
Quitman, Georgia
Personal:
I am a proud UGA alumnus and Athens resident, married to my wonderful wife Carey Brown Hornsby and loving parenthood raising a daughter named Ruby Leigh Hornsby. We love to spend family time together in the great outdoors playing, swimming and cooking. I look forward to introducing Ruby to my personal hobbies of hunting, fishing and motocross as she grows up.

How did you end up with the U.S. Forest Service?
Upon graduation I went to work as a seasonal wildland firefighter spending summers in Montana fighting fire for the Forest Service, and winters in Georgia prescribed burning with the U.S. Fish and Wildlife Service. After a few years as a seasonal I got a permanent senior firefighter position in Central Florida at Merritt Island Wildlife Refuge. When the opportunity to work for the Forest Service with the fire team at the Center for Forest Disturbance Science in Athens came up I knew I had to submit an application. I got the job and here I get an opportunity to help bridge the gap between cutting edge science and operational fire management.

What’s a typical day like for you?
Typical days don’t exist due the dynamic nature of research and fire. I could be in the office planning, writing, analyzing data, performing administrative duties—or I could be on a wildland fire in either an operational or research capacity. I also spend a significant amount of time teaching classes, giving lectures and presentations to both students and managers.

Is there a particular project you’re working on right now that really excites you?
We have been working on a variety of projects that will restructure the way fuels and fire behavior are understood and predicted in the South. These projects will lead to better tools for managers who are operating proactively in a prescribed fire environment as opposed to situations where you are reacting to a wildfire environment.

How did you get drawn to your career?
I got the fire bug early on when I realized that a career in fire required discipline, communication skills and the ability to solve complex problems on the fly. The icing on the cake was that I could go anywhere in the country to work in fire, and the job involved working with lots of cool things from amphibious vehicles to helicopters.

How did your experience at Warnell prepare you for what you’re doing now?
My experience at Warnell was instrumental to giving me the skills needed to do my job today. Communication and discipline were directly applicable to the fire world but the analytical skills were essential to bridge the gap between fire and the research world.

What advice would you give current students who’ll soon be looking for jobs?
Don’t set your expectations too high right out of the gate. In my experience your first job will not be your last so stay focused, work hard and commit to learning something new every day. To use a metaphor I can say that my education and experience at Warnell was like getting a full array of tools, but did not mean I was ready to build a house. Hiring the job market hungry and eager to learn helped me figure out the best way to utilize those tools, find my stride and carve out a niche that exploits my strengths.

How have you stayed connected to Warnell?
I have stayed connected to Warnell by working closely with assistant professor Dr. Doug Aubrey and adjunct faculty member Dr. Joe O’Brien to coproduce the new fire class which just had its second successful group of students. I lead the basic wildland fire training curriculum, certify students with a red card and serve as crew boss for the spring break field trip to the Savannah River Site where students get hands on experience performing operational prescribed burns with the U.S. Forest Service. I also got the opportunity to give two guest lectures for the Forest Health and Protection class this year on wildland fire suppression and management.
Amazing Dawg season sweetens Homecoming victory

Warnell Dawgs who came back to Athens already had a feeling that the 2017 football season was off to something amazing, and our Georgia Bulldog’s run to the National Championship only made the victory against Missouri an even better memory.

And coming back home to Warnell didn’t hurt either. The 2017 Homecoming festivities kicked off with its annual golf game Friday morning and ended with the tailgate Saturday before the game, giving attendees a taste of the great Dawg season.

Hosted at the Harbor Club at Lake Oconee, the annual Parker Memorial Golf Tournament raised more than $54,000 for the Young Alumni Undergraduate Scholarship. Friday night, alumni moved to Flinchum’s, drawing a large crowd that honored three staff members and our two Distinguished Alumnus winners (see Page 30).

Details about the 2018 Homecoming festivities can be found on Warnell’s website: Warnell.uga.edu/homecoming. The golf tournament will be coming back to the University of Georgia Golf Course, and there will be a limited number of football tickets available.

We also still plan to cheer on hopefully another winning season with a tailgate the day of the game, so please make plans to join us. Throughout the year, the website will be updated with more information about events, transportation, and online registration.

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- **Friends of the Tournament**
  - Warnell NRRT Alumni
  - James H. Langley
  - James W. Buddie

- **Friends of the Tournament**
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  - James H. Langley
  - James W. Buddie
It was double the fun at Homecoming last year, as the Warnell School honored two alumni with its highest alumni honors.

Dan Forster (BSFR ’86, MS ’88) and Andy Stone (BSFR ’74) were each awarded the 2017 Distinguished Alumnus Award. This award is given annually to alumni who have made outstanding contributions to the natural resources fields and have remained strong supporters of the Warnell School. Award winners are nominated by colleagues and other alumni.

Usually just one alumnus is honored with this award each year, but 2017’s nominations for the recognition led to double honorees.

“These two alumni members remain outstanding leaders and will leave legacies that impact their disciplines in a positive manner for years to come,” said Warnell Dean Dale Greene.

Forster has been the director of government relations for the Archery Trade Association since 2016. Forster assumed this position after retiring with 27 years of service from the Georgia Department of Natural Resources’ Wildlife Resources Division, serving as its director for the past 12 years.

As director of the wildlife resources division, Forster served in a variety of regional and national leadership positions while increasing the agency’s land conservation base by 120,000 acres, adding a shooting sports facility at Georgia Southern University, and for the first time in 24 years launched an initiative to increase Georgia’s fishing and hunting license fees, gaining the support of 90 percent of the licensed public.

As director of government relations for the Archery Trade Association, Forster works with state wildlife agency directors and other partners to implement policies and strengthen recruitment, retention and reactivation programs. He also works to expand archery and bowhunting in the U.S.

“I have great respect and admiration for Warnell and have been extremely proud to call myself a Double Dawg,” Forster said. “To be honored by the school in this way is most humbling and one of the highlights of my professional career.”

Stone is the current president of Superior Pine Products in Fargo, Georgia, where he helps manage 211,000 acres of forestland and oversees operations in blueberry production and real estate.

He is a previous president of Stuckey Timberlands in Eastman, Georgia; as well as the Georgia Forestry Association and Georgia Forestry Foundation. Stone was inducted into the Georgia Foresters Hall of Fame in 2012. He has been an enthusiastic supporter of the Warnell School, chairing the Warnell Alumni Steering Committee in 2004 and serving on the UGA Langdale Center for Forest Business—which is housed in Warnell—since 2008.

Stone has been instrumental in establishing at UGA the Stuckey Timberland Professorship in Forest Economics and Taxation; the Superior Pine Products Forest Economics and Taxation support fund; and the Stone Family Endowment, which benefits the Center for Forest Business.

“It is an honor to have been selected as a distinguished alumnus considering the many talented and supportive graduates of the Warnell School,” Stone said. “The education received at Warnell and the relationships begun at Warnell have been the foundation for my career. Also, thanks to my family, the Stuckey family of Eastman and the Williams, Knight and Lawrence family owners of Superior Pine Products Company, for allowing me the time to give back to my school. I encourage all members of our forest industry to allow fellow graduates the time and support to keep Warnell as a leader in forestry and natural resources school.”

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Spring Awards Banquet celebrates student achievement

Since 1931, the Spring Award Banquet at the Warnell School has been one of the highlights of the year. Almost 300 of Warnell’s students, parents, faculty, staff, donors, supporters and friends gathered at the Classic Center one evening this past spring to celebrate the achievements of students and faculty and to recognize the generosity of donors. Support from donors over the past decades has created scholarships and endowments that in 2018 awarded more than $200,000 to 100 students through 54 separate scholarships. These scholarships assist students with tuition, living expenses, travel, professional development, and more. Students and faculty members earning achievement awards were recognized as well.

Student recipients expressed gratitude for the scholarships made possible by Warnell’s generous donors.

“Thank you so much for giving me an opportunity through this scholarship to succeed and do work to my fullest potential. I am so thankful for people like you because I am so passionate about the natural world, and it is because of people like you that I get to see my dreams come true. I hope to someday be in your shoes and change a student’s life when it comes to their future and career goals.”

– Cat Chapman

“Thank you so much for showing your support for the students at Warnell through generous donations! Your support means a lot to early career professionals in the natural resources field such as myself. Knowing that there are people who care about the development and success of students at Warnell is extremely encouraging. Your donation makes it possible for me to attend conferences and workshops that will prove vital to my professional development, and I cannot be more grateful!”

– Angela Hsiung

“New” face at Warnell: April McDaniel takes on alumni director job

By APRIL MCDANIEL

I was thrilled to accept a position a year ago with development and alumni relations at Warnell and recently was honored to move into the position of alumni director. I’ve been able to meet many of you in the past year and hope to meet many more of you soon. My family are all UGA graduates, but my younger sister was the first to choose Warnell. I was drawn to the school after being so impressed with her experience and the education she received.

In the time I have spent at Warnell, I have fallen in love with the mission of the school and the “Warnell family.” I look forward to building relationships with you and supporting the outstanding teaching, research and outreach being done here.

Although one of the smallest schools on campus, we are proud to call Warnell #2 in percentage of alumni participation in giving to school or college. Even more than other accolades, this reinforces the number of Warnell alumni who feel a strong attachment to our special school.

The piece that makes Warnell special is you. The dedication and passion for the school that our alumni and supporters demonstrate continues to inspire me.

Change is an opportunity for new beginnings, and as our alumni staff undergo transitions, I invite you to do the same. If you’ve never been involved before, make this the time. Attend an event, give me a call, or reconnect with a classmate. Share your thoughts with me, a Young Alumni Committee member, or Alumni Steering Committee member. We are fortunate to have the leadership of these two committees who make decisions and help coordinate events such as the Parker Golf Tournament, Sporting Clays Tournament, regional alumni events, and more.

We’re always open to new ideas and would love to hear about the things you enjoy or what you would like to see done. Each of you are part of the “Warnell family,” and I hope you feel that connection.

I also invite you to recommit your support of the school. There are many reasons to give back, but I’d like to think people give to Warnell because they believe in the work being done at the school.

Recently I spoke with an alumnus concerned about the future of coldwater fish. He donates to the scholarship fund for students studying coldwater fisheries in the hope that perhaps one day, one of those scholarship recipients will be in a position to address those concerns.

Gifts to the Warnell School Fund are our most needed and address schoolwide issues, but we have many other scholarship funds and endowments you can support. Find one that aligns with your passion. The students and research you support today will be what makes a difference in our state and world tomorrow.
1970s
David (BSFR ‘71) and wife Connie Waller were honored by Newton County for their dedication to improving and protecting the environment. The couple were awarded the R.O. Arnold Award by the Covington-Newton County Chamber of Commerce in March. Connie Waller was director of Keep Covington-Newton County Beautiful for 28 years, and David retired as director of the Wildlife Resources Division of the Georgia Department of Natural Resources.

1980s
Lawrence “Larry” Gering (PhD ’85) was awarded the 2017 Carl Alwin Schenck Award by the Society of American Foresters, honoring him for a career of excellence in forestry education. This award is the SAF’s highest teaching award. Gering is an associate professor in Clemson University’s forestry and environmental conservation department.

1990s
Roger Bryant (BSFR ’90) and Kristin Scholemmer Bryant (MED ‘08, SEd ’13) welcomed their first daughter, Rowan Joy Lila Bryant on March 6, 2018. She was born in Pensacola, Florida, and weighed 7lbs, 3 oz. Roger, Kristin, Rowan, and their two fur kids, Coal and Maggie, live in Smyrna, Georgia.

2000s
Uniyor Raychaudhuri (MA ’03, PhD ’06) is now the executive director of global learning at Cornell University. Cornell created a new Office of Global Learning that integrates services for students and faculty engaged in global education activities. The office will bring together two groups that currently support students, faculty and colleges in international learning: Cornell Abroad and the International Students and Scholars Office.

Caroline Belcher (PhD ’08) has been named the new Marine Fisheries Chief for the Georgia Department of Natural Resources’ Coastal Resources Division. Dr. Belcher has been with the state since 1996, serving first with CRD, then with the UGA Marine Extension Service, returning to CRD in 2006 where she has served as a program manager for research and surveys. Most recently she has been acting chief but the position became permanent on May 1, 2018.

In this new position, Carolyn will be responsible for daily supervision and administrative oversight of the Marine Fisheries Section, which conducts marine life/saltwater angler surveys, collects seafood harvest statistics, constructs fish habitat, and develops/maintains boating and fishing access along the coast. She will also be involved in interstate and federal fishery management through participation in the Atlantic States Marine Fisheries Commission and the South Atlantic Fishery Management Council.
Jackie Sherry (BSFR ‘11, MNR ‘14) has been promoted to vice president of research at Forisk Consulting. Since joining Forisk in 2015 as director of forest operations research, Shawn’s work supported the growth of the Forisk Research Quarterly, which is now used by firms that account for nearly 100 million acres of timberland and nearly 200 million tons of wood use per year. As vice president of research, Shawn will lead Forisk’s entire research portfolio in addition to continuing his forest operations research in the US and Canada.

Katie Antczak (BSFR ‘10) and husband Niklaus Antczak welcomed daughter Kaylee Evelyn Felege on Jan. 29, 2018. She weighed 6 lbs, 12 oz. and was 19.5 inches long. The family live in North Dakota.

Dana Bloome (MFR ‘14) and Michael Hare welcomed daughter Lana Michelle Hare on Dec. 20, 2017. Dana says Lana “loves spending time outdoors and is already fascinated with trees.” Dana is a procurement forester at International Paper in Eastover, South Carolina.

Danielle (BSFR ‘12, MFR ‘13) and Daniel (BSFR ‘12, MFR ‘13) Atkins welcomed their first son on Jan. 16, 2018. William Clyde Atkins was born in Brunswick, Georgia. “He is doing well and is happy and very healthy at a whopping 13 pounds at 11 weeks!” Danielle said.

Harrison Hood (MFR ’12, PhD ’14) and wife Jeannie welcomed daughter Selby Sadler Hood on Jan. 30, 2018. “Both mom and Selby are healthy and doing well,” Harrison says.

Shawn Baker (PhD ’15) has been promoted to vice president of research at Forisk Consulting. Since joining Forisk in 2015 as director of forest operations research, Shawn’s work supported the growth of the Forisk Research Quarterly, which is now used by firms that account for nearly 100 million acres of timberland and nearly 200 million tons of wood use per year. As vice president of research, Shawn will lead Forisk’s entire research portfolio in addition to continuing his forest operations research in the US and Canada.

Jackie Sherry (BSFR ‘11, MNR ‘14) in the new Water Conservation Program Education Specialist for the Athens-Clarke County Public Utilities Department. Jackie previously worked as the Program Manager at the Dunwoody Nature Center overseeing field trips, nature classes, camps, and community events. She’ll be doing similar work for the Water Conservation Office, but will focus the educational programming to water-related topics.

Dana Bloome (MFR ‘14) and Michael Hare welcomed daughter Lana Michelle Hare on Dec. 20, 2017. Dana says Lana “loves spending time outdoors and is already fascinated with trees.” Dana is a procurement forester at International Paper in Eastover, South Carolina.

Katie Antczak (BSFR ‘10) and husband Niklaus Antczak welcomed daughter Kaylee Evelyn Felege on Jan. 29, 2018. She weighed 6 lbs, 12 oz. and was 19.5 inches long. The family live in North Dakota.
In Memoriam

Obituaries

Brian Fosgate

Brian N. Fosgate, long-time writing instructor in the Warnell School of Forestry and Natural Resources at the University of Georgia, died April 4, 2018, of heart failure. He was 62.

During his 20 years as a teacher—first at Cedar Shoals High School, where he taught graphic arts, printing, and photography from 1971 to 1974. He graduated from Clarke Central High School, where he taught graphic arts, printing, and photography from 1983 to 1987—and later at the Warnell School, where he was writing instructor for 17 years, Fosgate was a student favorite.

He often described himself as writing coach rather than instructor because of his positive, encouraging approach to teaching. He said that working with students was his favorite part of his job, and that they constantly inspired him with their desire to bring about positive environmental change.

Born on Dec. 3, 1955, in Watertown, Wisconsin, Fosgate was the son of Grace and Olin T. Fosgate, who constantly inspired him with their desire to bring about positive environmental change. When he retired from Warnell in 2016, Fosgate left a home at the Warnell School. Teaching was Fosgate’s passion, and he found a place in the Warnell School. Joining the staff in 2008, he worked tirelessly to develop a scientific writing program. He said it was charged with preparing Warnell School graduates for entry into the workplace with writing skills that would allow them to succeed and advance in their chosen fields.

In his first year in 2000, Fosgate held 170 conferences and critiqued 324 papers, often meeting multiple times with students to help improve a particular assignment. By the time he retired in June 2016, Fosgate had added teaching assistants that allowed the program to expand to serving some 233 students a semester and critiquing more than 576 papers.

When he retired from Warnell in 2016, Fosgate left behind many friends and an enduring legacy. Fosgate is survived by his wife, Helen Hines Fosgate; his brother, Kevin Fosgate; and sister Heather Fosgate.

Jack Culpepper

Jack D. Culpepper (BSFR '96, MFR '98) of Chesterfield, South Carolina, died April 21, 2018. He was 59. Culpepper enlisted in the U.S. Navy after high school, serving honorably for five years. Culpepper graduated magna cum laude from UGA in 1996, and earned his master’s degree in forest resource management and business two years later. Since 2003, Culpepper had been employed by the U.S. Fish and Wildlife Service. For the past 11 years, he served as forester for the Carolina Sandhills National Wildlife Refuge in McBee, South Carolina, and the Pee Dee National Wildlife Refuge in North Carolina.

Catalino Blanche

Catalino Advincula Blanche (MS ’79) died Jan. 29, 2018. He was 71. Born in the Philippines, Blanche was the oldest of six siblings. He earned his bachelor’s and master’s degrees from UP Los Banos, and met his wife, Fe Celeste Bayta. They married in 1975.

After earning a master’s degree from UGA, Blanche earned a PhD from Mississippi State University, and later took a faculty position at Southern University. Blanche later worked for the U.S. Department of Agriculture’s Agriculture Research Service as a staff scientist. Ultimately, Blanche became the USDA’s National Institute of Food and Agriculture’s national program leader, managing the McIntire-Stennis program and other projects.

Amber Peacock Yates

Amber Yates (BSFR ’03) of Alexander City, Alabama, died Nov. 11, 2017. She was 36. Born in Miami, Florida, Yates was a dedicated and loving mom to Ryleigh, devoted sister and daughter, wonderful friend to everyone, and an avid Bulldog fan. She was a Georgia alumnus and earned a Varsity Letter from the Equestrian team. Her family said Yates had a heart for all animals which lead to her being a successful business owner surrounding herself with pets.

Fred Crosby

Fred Crosby (BSF ’61) of Panama City, Florida, died on Dec. 26, 2017. He was 82. After graduating from Waycross High School in 1953, Crosby earned an associate degree from Berry College before attending UGA. At UGA he was a member of Xi Sigma Pi, and after graduating he joined the U.S. Coast Guard Reserves, serving for eight years.

Crosby spent his career in the forest industry, retiring from South West Forest Industries in Panama City, Florida, in 1989.
### 2017 AT A GLANCE

**Total Grant Funds Awarded**: $13,662,964

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Research/Outreach Grants Awarded</td>
<td>114</td>
</tr>
<tr>
<td>Undergraduate Professional Fall 2017 Enrollment</td>
<td>181</td>
</tr>
<tr>
<td>Undergraduate Degrees Conferred</td>
<td>99</td>
</tr>
<tr>
<td>Graduate Fall 2017 Enrollment</td>
<td>193</td>
</tr>
<tr>
<td>Graduate Degrees Conferred</td>
<td>61</td>
</tr>
<tr>
<td>Number of Courses Taught</td>
<td>210</td>
</tr>
<tr>
<td>Number of Continuing Education/Short Courses</td>
<td>397</td>
</tr>
<tr>
<td>Number of Refereed Books, Chapters or Journal Publications</td>
<td>208</td>
</tr>
<tr>
<td>Number of Other Publications (Non-Refereed Tech Reports, Newspapers, etc.)</td>
<td>198</td>
</tr>
<tr>
<td>Number of Presentations Made (To the public, at conferences, seminars)</td>
<td>659</td>
</tr>
</tbody>
</table>

*Grants, gifts, and funding on a fiscal year (July 1, 2016 – June 30, 2017) basis; all other measures on a calendar year (2017) basis.*
Warnell spent $25.44 million in FY17 in support of its teaching, research and outreach functions. This is approximately $1 million more than FY16 which is mostly due to increases in state appropriations and departmental sales and services and conference revenues.

### 2017 Fiscal Year Summary

<table>
<thead>
<tr>
<th>Revenue Category</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>State Appropriations (GA Legislature)</td>
<td>$9,919,334</td>
</tr>
<tr>
<td>Tuition &amp; Fees</td>
<td>$1,996,495</td>
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<tr>
<td>F&amp;A Return</td>
<td>$1,491,089</td>
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<tr>
<td>Departmental Revenue &amp; Conferences</td>
<td>$881,835</td>
</tr>
<tr>
<td>Grants &amp; Contracts</td>
<td>$8,098,462</td>
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<tr>
<td>Cooperative Dollars</td>
<td>$742,308</td>
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<tr>
<td>Forest Lands</td>
<td>$1,055,576</td>
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<tr>
<td>Rental Income/Leases</td>
<td>$121,837</td>
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<tr>
<td>Foundation Investments</td>
<td>$1,135,906</td>
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</tbody>
</table>

**Total Revenue:** $25,442,841

### Expenditures

<table>
<thead>
<tr>
<th>Expense Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries &amp; Benefits</td>
<td>$14,462,677</td>
</tr>
<tr>
<td>Assistantships</td>
<td>$2,556,916</td>
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<tr>
<td>Scholarships</td>
<td>$187,640</td>
</tr>
<tr>
<td>Operating Expenses, Travel &amp; Equipment</td>
<td>$8,235,608</td>
</tr>
</tbody>
</table>

**Total Expenditures:** $25,442,841

Extramural funding for FY2017 increased by 20 percent compared to FY2016. External funding per research/service EFT was $341,737. For every dollar of state funds provided, Warnell produced $1.38 in external funding for our programs.

### Extramural Funding History

- **2013:** $16,000,000
- **2014:** $14,000,000
- **2015:** $12,000,000
- **2016:** $10,000,000
- **2017:** $8,000,000

### Extramural Funding by Sponsor

- **Federal**
- **Private**
- **State**
- **Other**
ENROLLMENT BY DEGREE
FALL 2017

CLASS OF 2017
CAREER OUTCOMES

*Based on exit interviews of spring and fall 2017 graduating students
Warnell’s alumni participation is 2nd on campus. In FY17, 14% of Warnell alumni gave a gift to support the University. Alumni giving to specifically to Warnell is steady at 9%.

Capital Campaign update as of June 30, 2017

**UGA Goal**
$1.2 billion (74%)

**Warnell Goal**
$12 million (97%)

**Commit to Georgia Campaign**

- **UGA Alumni** 68%
- **Friends** 12%
- **Corporations** 16%
- **Organizations** 4%

**Total Giving**
$3,699,113

**New Warnell Classroom Namings**

- **Alumni Legacy Room**
  - Sandra and Steve Keadle

- **Keadle Lumber Conference Room**
  - Sandra and Steve Keadle

- **Bleckley County Alumni Classroom**
  - Warnell Alumni from Bleckley County, Georgia

- **Norris Family Classroom**
  - Tom Norris and Family

- **Wilson & Greene Student Lounge**
  - Dr. Jeanna Wilson and Dean Dale Greene

Weyerhaeuser Golf Tournament
September 15, 2017, Georgia Club
Raised more than $95,000 for the Harley Langdale, Jr. Center for Forest Business. This effort has raised more than $1 million in nine years since it was started by Plum Creek in 2009.

Warnell School of Forestry and Natural Resources
Jay Parker Memorial Golf Tournament
October 13, 2017, Harbor Club
Raised more than $54,000, including generous match from the children of Reid and Cynthia Parker, to support Warnell Young Alumni Undergraduate Scholarships. 97 golfers participated.

Capital Campaign update as of June 30, 2017

**UGA Goal**
$1.2 billion (74%)

**Warnell Goal**
$12 million (97%)
ANNUAL REPORT 2017

86th Annual Spring Awards Banquet
With record attendance, 45 scholarships awarded nearly $200,000 to 100 Warnell students.

Regional Events of 2017

Endowments: new in FY 17
Young Alumni Undergraduate Scholarship
Georgia Coastal Soil and Water Conservation District Scholarship
Cherry Graduate Support Fund
Clarence “Mutt” Rhodes Fellowship
Martha and Ed Newsom Cooper Graduate Fellowship
Stuckey Timberland Professorship in Forest Economics & Taxation
Robert J. Warren Fellowship

Alumni by the Numbers

5,522 living alumni
738 alumni gifts to Warnell
1,250 young alumni (graduates of the last decade)

Be a PROUD Steward of a Beautiful, Profitable Forest
Get Seedlings & Support to Help You Make the Most of Your Family’s Land

1. Contact Your Reforestation Advisor
   Set your goals and create a customized seeding plan utilizing your RA’s extensive forestry experience

2. Prepare Your Land & Plant Your Seedlings
   Feel secure knowing your reforestation partners are here whenever you need us

3. Feel Proud and Confident
   Watch your family’s beautiful forest and future profits grow!

ArborGen
The Reforestation Advantage
ArborGen.com
855.894.1702
Warnell's online job postings can put you in touch with the talent and skill you need.

email your job posting to Wjobs@uga.edu