

Fall 2012

The Log

An Alumni Association Publication
Warnell School of Forestry & Natural Resources
The University of Georgia

Take our survey for
a chance to win football tickets!
See inside for details



Dangerous Crossings

Black bears threatened
by road project?

In memoriam: Claud Brown, Carolyn Warnell Bryan

Meet our new alumni and development team

ANNUAL WILDLIFE SUPPER

Hosted by the UGA Student  Chapter of the Wildlife Society

April 27, 2013

Social Hour 4-6 p.m.

Dinner at 6 p.m.

Tickets \$8, children 5 and under free

Contact Steven Castleberry at scastle@uga.edu

Continue Your Education with Warnell

GPS Research in Natural Resources

Date: October 31, 2012

Instructor: Pete Bettinger

Course summary: The course will introduce the basic features of satellite-based navigation systems, discuss the sources of error and the common methods used to assess data quality in forested conditions, and discuss other pertinent research results.

Introduction to ArcGIS

Date: November 19-20, 2012

Instructor: Pete Bettinger

Course summary: Introduces the basic vector-based features of ArcGIS and teaches techniques for addressing a number of basic natural resource management applications

Advanced ArcGIS

Date: November 20-21, 2012

Instructor: Pete Bettinger

Course summary: Introduces raster-based features of ArcGIS and teaches techniques for addressing a number of advanced natural resource management applications

Estate Planning for Forest Landowners

Date: November 28-29, 2012

Instructor: Harry Haney

Course summary: The program facilitates choosing an effective organizational structure for management and intergenerational transfers of unique forestry assets.

Timber Income Tax

Date: December 3, 2012

Instructor: Harry Haney

Course summary: This course offers strategies on timber-tax issues that will help landowners reduce their taxes

Deer Ecology and Management

Date: December 5-6, 2012

Instructor: Karl Miller and Brian Murphy

Course summary: Focuses on providing an overview of white-tailed deer ecology and provides guidelines toward the application of sound principles for the managing deer on private lands in the Southeast.

GPS for Beginners

Date: December 6, 2012

Instructor: Pete Bettinger

Course summary: Briefly introduce the basic features of satellite-based navigation systems, discuss the sources of error and the common methods used to assess data quality in forested conditions, and provide experience with GPS data collection using consumer-grade and mapping-grade GPS receivers

For more information visit conted.warnelluga.edu

MIXING IT UP WARNELL'S SUPPORTING STAFF SEES EXCITING NEW CHANGES



Full 2012 has brought a number of important and exciting staff changes here at Warnell. We have completed the hiring of a new development director — Ms. Lauren Newsome Bush. Lauren comes to us from the Georgia Forestry Commission where she was responsible for lobbying and community forestry with GFC. Many of you know Lauren — as a graduate of our programs (MFR 2006) and as a large family forest landowner, she has been involved in championing forestry for many years here in Georgia. We are excited about having Lauren join Warnell. Welcome Lauren!

Our alumni relations person, Emily Nuckolls, recently left us to pursue an adventure abroad — moving to Sweden with her fiancé. We wish Emily well in her future endeavors and will miss her. Moving into an expanded role with both alumni relations and student placement responsibilities is Emily Saunders. Emily has been at Warnell for several years now and has done an outstanding job managing students services and student activities. She has some innovative ideas on how we can better integrate student services for current students with alumni relations for those who have graduated. Emily is also a Double Dawg; she earned her BSFR in 2005 and MNR in 2010. We are pleased that Emily will be continuing in an expanded role here at Warnell.

Taking over some of Emily Saunders' responsibilities will be Ami Flowers — also a Warnell graduate with both a BSFR in 2008 and MS in 2012. Ami brings a great understanding of Warnell to our programs and is in the process of learning the student advising “ropes” here at UGA. Welcome Ami.

Last but certainly not least, we have a new student recruiter — Nicki Pinnell. Our longtime recruiter Emily Lakemaker moved to Atlanta with her husband and decided that the commute was a little challenging. We were quite pleased that Nicki, also a two-time Warnell graduate (BSFR '10, MNR '12) had just completed an internship in Alaska and was moving back to Athens. With substantial experience in environmental education, she is a perfect fit to help us expand our recruiting efforts here at Warnell. Welcome Nicki.

I am really pleased with the new and expanded roles these individuals have in helping make Warnell the best forestry and natural resources program in the country. All of the folks have degrees from Warnell; they are natural resources professionals with a desire to see our programs prosper and grow. So please, take a minute and introduce yourselves to them and find out how lucky we are to have them as part of our school.

On another note, we are dedicated to making sure that we provide you with an alumni magazine that serves your needs and provides you with the information about the Warnell School you want. That is why we are conducting a readership survey — to find out what you think about *The Log*. As a thank you for completely filling out the survey, you will be entered into a drawing for a chance to win two Bulldog home game football tickets. We hope you'll let us know how we're doing, and good luck to all who enter!

Mike Clutter



FEATURES

10 Modeling Alligators: New Warnell study could change how alligators are harvested in three states

11 More money for cleaner fuel: Warnell professor gets \$1.5 million biofuels grant

12 Walk it off: Survey finds walking is top outdoors activity

13 Dry future: Rainfall exclusion project looking at a dryer forest

14 Why did the bear cross the road? A new road widening project in Middle Georgia will cut through a black bear habitat

24 Alumni on the Job: Landus Bennett helped rebuild the Georgia Theatre with some unique restoration techniques

In the middle of this magazine, you will find a **brief survey** that will help us serve you better. We hope you will consider sending it back in, and as a reward, you will be entered into a drawing to win **two Georgia Bulldog home game football tickets!**

In compliance with federal law, including the provisions of Title IX of the Education Amendments of 1972, Title VI of the Civil Rights Act of 1964, Sections 503 and 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, the University of Georgia does not discriminate on the basis of race, sex, religion, color, national or ethnic origin, age, disability, or military service in its administration of educational policies, programs, or activities; its admissions policies; scholarship and loan programs; athletic or other University-administered programs; or employment. In addition, the University does not discriminate on the basis of sexual orientation consistent with the University non-discrimination policy. Inquiries or complaints should be directed to the director of the Equal Opportunity Office, Peabody Hall, 290 South Jackson Street, University of Georgia, Athens, GA 30602. Telephone 706-542-7912 (V/TDD), Fax 706-542-2822.

IN EVERY ISSUE

4 School News

8 Faculty Q&A: Neelam Poudyal

18 Student News

24 Alumni News

27 A Word from the Alumni & Development Office

28 Class Notes

31 Obituaries

ON THE COVER:
A black bear is pictured in a corn field. The proposed widening of State Route 96 will cut through the Middle Georgia black bear population, which is already one of the most isolated in the state. A new Warnell study seeks to find out how this will affect those bears. Photo by Joseph Hinton

TABLE OF CONTENTS PHOTO:
A group of students throw pies at Dean Mike Clutter this past spring during the annual Xi Sigma Pi Lumberjack Ball. Photo by Sandi Martin

THE LOG MAGAZINE STAFF:

Editor/Writer
Sandi Martin

Contributing Writer
Scott Merkle

Senior Graphic Designer
Wade Newbury

HOW ARE WE DOING?
We welcome letters to the editor and feedback from our readers. Submit news items, questions or address changes to:

thelog@warnell.uga.edu

THE LOG

Warnell School of Forestry and Natural Resources
180 E. Green St.
University of Georgia
Athens, GA 30602

THE LOG is an Alumni Association publication. It is published twice a year in the fall and spring.

WARNELL ON THE WEB:

www.warnell.uga.edu

WARNELL SCHOOL OF FORESTRY AND NATURAL RESOURCES ADMINISTRATION

Mike Clutter,
Dean

Sarah Covert,
Associate Dean of Academic Affairs

Jim Sweeney,
Associate Dean of Research and Service

Lauren Bush,
Director of Development

Emily Saunders,
Director of Alumni Relations

Bob Izlar,
Director of the Center for Forest Business

Anuj Sinha,
Director of Finance and Administration

Mike Hunter,
Lands and Facilities Director

Toxic algae kills local cows; spurs outreach clean-up work

When Bill Atkinson's veterinarian told him that filthy pond water likely killed his four cows, the cattle farmer followed some good advice and called UGA for help. Researchers at the Warnell School confirmed his fears: A toxic algae bloom in his Dacula pond produced *Microcystis*, a very potent liver toxin. It killed his cows, and Warnell took on the task of clearing up the bloom as one of the many outreach projects the school does each year.

It prompted a public service warning from researchers to pond owners: Be vigilant about keeping livestock and pets out of water that has become discolored or opaque. "While an example this extreme is relatively uncommon, pond owners should be mindful of the risks associated with toxic algae and take proper management steps to prevent or lessen the formation of an algae bloom," said Dr. Rebecca Haynie, a toxicologist who works with Warnell's Dr. Susan Wilde. "However, there are numerous species of common algae in the Southeast that are capable of producing toxin. So just because you have a bloom doesn't mean you have something toxic in the water."

Atkinson's call to UGA for help was ultimately routed to Wilde, who has been extensively studying another cyanobacteria that she believes is the cause of a number of American bald eagle deaths across the Southeast in the past decade. When her team arrived on site at Atkinson's cattle farm, they quickly determined that the toxin levels in his pond were off the scale. Atkinson had allowed his cattle to graze in a pasture near the pond and drink its water for more than 40 years without any

problems until this past May. That's when the first of four heifers died, the last on June 5. Haynie and other researchers went to work, taking water and fish samples and treating the pond with algicide. Algae are a naturally occurring phenomenon, but typically flares up and clears on its own. But not in Atkinson's case. Haynie said a "perfect storm" of conditions created his toxic situation: Warmer than average temperatures and drought, leading to increased water clarity, and an influx of nutrients from the surrounding pasture created ideal conditions for an algae bloom.

Answering calls for help is pretty standard for Warnell. The public service and outreach department focuses on assisting the public and local community on many issues that affect them, including land management, urban forestry, wildlife issues, and water quality. Warnell's outreach programs are fully integrated with its teaching mission, is supported by research, and crosses all disciplines and majors. Warnell faculty work with private cooperations and foundations, public agencies, private landowners, and residents on natural resources management and use. Faculty also teach several classes each year that are open to the general public, either for general knowledge, professional development or for required certifications. Pond management is one such class. For more information, visit warnell.uga.edu. 🍀



PHOTO BY SANDI MARTINI

Unusual challenge funds dissertation research

Strangers online help Ph.D. student pay for turtle project

When doctoral student Sean Sterrett needed some money to pay for his research project on freshwater turtles, he ended up getting funding help from an unusual place: Complete strangers who pitched in online. Sterrett competed in the SciFund Challenge, an experiment in crowdfunding for scientific research founded by two ecologists, Jai Ranganathan and Jarrett Byrnes, to explore the possibility of individuals pooling donations to support research. Sterrett raised a total of

\$5,688 for his dissertation research — nearly \$700 more than his goal — to demonstrate that the conservation and management of freshwater turtles is significant for aquatic ecosystems.

"My impetus for doing this type of fundraiser was not because I had extra time on my hands," Sterrett said. "Over the last three years, I've submitted about 25 grants with very little success. Needless to say, it's becoming much tougher to find even small pools of money for research when funding is decreasing, and there are so many people needing it." As part of the challenge, Sterrett included details about his dissertation and created a video that discussed how freshwater turtles contribute to an aquatic system's health. Sterrett's project involves estimating densities of the turtles and assessing their diets using natural tracers and fecal samples. He then plans to determine which types of nutrients — and at what rate — are redistributed into habitats through turtle waste.

"I enjoyed putting together the proposal," Sterrett said. "Filming and editing the movie was especially novel for me and I enjoyed the creativity that it offered. After the proposal and movie were all done, I was only half way through the battle. Most of the work went into promoting my site and why I needed money. Overall, it was an incredible success. I raised the most money of 75 scientists across the world. I can't say enough about the generosity of complete strangers, colleagues, friends and family." 🍀



PHOTO COURTESY OF SEAN STERRETT
ILLUSTRATION BY WADE NEWBURY

Dr. Joseph Dahlen joins the Warnell School

Dr. Joseph Dahlen has joined the Warnell School faculty as a wood quality professor. Dahlen was most recently a postdoctoral research associate at Mississippi State University, where he also received his Ph.D. in forest resources in 2010 and master's degree in forest products in 2006. Dahlen has a bachelor's degree in wood and paper science from the University of Minnesota.

At MSU, Dahlen also taught a course on physical properties of wood and researched the mechanical evaluation of lumber and environmental compliance for the forest products industry. Dahlen said one of his research interests focuses on developing a better understanding of how tree growth impacts the physical and mechanical properties of wood, and how new tools and techniques can be used to help measure those properties. Expanding the understanding

of wood properties, he said, will help landowners, foresters and mill managers better utilize forest resources and make more informed decisions. Prior research at MSU also focused on emission testing, biodeterioration, lumber manufacturing, and wood drying and yard practices. He has also worked in the private wood manufacturing industry.

"I am extremely excited to join the faculty at Warnell in the area of wood quality," Dahlen said. "Warnell has been instrumental in developing a better understanding that wood quality is not frozen in time and can sometimes drastically change. By understanding these changes, we can better manage one of our most precious natural resources." 🌲



PHOTO BY SANDI MARTIN

New faces means exciting new changes

They work behind the scenes, and alumni don't see them very often. But Warnell's student services support staff are instrumental in recruiting new students, helping them navigate through the often complex course sequences, giving career guidance, steering them to internships, and assisting with many of the extracurricular student clubs. Warnell's student support staff is changing. "Our new undergraduate student services team has the expertise and personal skills to provide outstanding support on all of these fronts," said Sarah Covert, associate dean. "Warnell has always prided itself on the quality of its student services, but the recent reorganization of staff duties will allow us to more effectively integrate our recruitment and outreach efforts, our academic advising and career advising, and our student services and alumni services."

Ami Flowers

Ami Flowers is a Double Dawg, having earned two degrees from the Warnell School. Flowers (BSFR '08, MS '12) traveled to South Africa after earning her bachelor's degree, and worked as a safari guide in the prestigious Kruger National Park. After returning to the U.S., she worked as a biological science technician for the National Park Service at Cowpens National Battlefield in South Carolina. But she ultimately came back to Warnell, earning her master's in forest resources, focusing on scientific illustration and the role of art in

environmental education. Flowers, Warnell's new student and career services coordinator, will advise pre-professional undergraduates, assist students in developing professional resumes and cover letters, maintain the Warnell job board, help students with career placement, and facilitate outreach events. "I am delighted to be joining the Warnell Student Affairs Team — giving back to the school that has given me so much," Flowers said. "Through my experiences as a student and natural resource professional, I hope to help students design the right academic plan that will lead them to a successful natural resources career."



PHOTO BY SANDI MARTIN

Matthew Head

Matthew Head (AB '99) has been with UGA for 16 years, and with Warnell for the last 12. So virtually every Warnell undergrad since 2000 sat in front of him at some point to hear what classes they needed to take to get the degree they wanted. But now he's taking on a new position with some intriguing new responsibilities. As the new faculty and academic support coordinator, Head will work with Dean Mike Clutter and our associate deans on special and recurring projects. He will develop and maintain student and instructor databases; prepare activity, enrollment and performance reports to evaluate Warnell's progress; and provide curriculum support. But he'll still be heavily involved in

academic advising. His new role means he will coordinate all undergraduate academic advising and administer parts of our undergraduate program, including the professional program admissions, graduation certification and course scheduling. "Over the past 12 years that Warnell has been my home, I've appreciated how amazing our faculty, staff and students are," Head said. "I'm excited that this new position will not only give me some new challenges, but still allows me to have the refreshing interactions I've come to love from my Warnell family."



PHOTO BY SANDI MARTIN

Nicki Pinnell

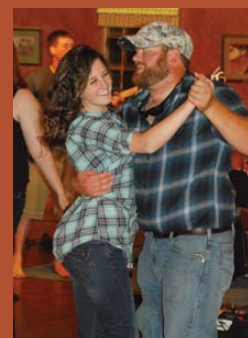
Nicki Pinnell (BSFR '10, MNR '12) grew up in the deserts of New Mexico. After moving to Braselton, Ga., Pinnell saw a whole new kind of outdoors, but was no less enthralled with the natural world. She took her first internship with the Georgia Sea Turtle Center while at Warnell, and "it was an experience that further solidified my passion for inspiring people to take an active role in the conservation of our natural resources." Later an internship at the Alaska Wildlife Conservation Center and an assistantship at the

Athens-Clarke County Water Conservation Office only made that feeling stronger. The Double Dawg hopes that she can inspire similarly like-minded people to attend UGA as our new student relations and outreach coordinator, recruiting a new crop of Warnell Dawgs. "I've been given the opportunity to inspire young minds and expose them to careers they may have never before considered," Pinnell said. "I'm ecstatic to start meeting potential students who will become the future leaders of our field. I'm so glad I came back to Georgia, to my community in Athens, and to my Warnell family." 🌲



PHOTO BY SANDI MARTIN

Lumberjack Ball 2012



Dean Mike Clutter was all too happy to pay for the pies thrown at his colleagues at the 2012 Lumberjack Ball this past spring — he very nearly succeeded in emptying out the supply of whipped cream before it was his turn to sit in the chair. Alas, Xi Sigma Pi organizers bought more, so Warnell's dean also got pied in the face (see *Table of Contents* picture). Also pied was Center for Forest Business Director Bob Izlar (pictured in circle) and a couple of other professors, all before the rest of the festivities: Outdoor endurance contests, dancing, and of course, the lumberjack competition. The next Lumberjack Ball is set for Spring 2013. 🌲

PHOTOS COURTESY OF WARNELL STUDENTS AND STAFF



Neelam Poudyal

Current Position:
Assistant Professor

Education:
B.S. (Forestry)
M.S. (Geography)
Ph.D. (Natural Resources)

Teaching:
Ecotourism & Sustainable Development, Resource Management & Entrepreneurship, Social Science Methods & Techniques in Natural Resources, Freshmen Odyssey Seminars

Personal:
Wife Durga; two son, Lucas and Logan

5 Questions with Neelam Poudyal

an activity. Extreme weather incidences (storms, hurricanes, heat) could make a day less favorable for an outdoor enthusiast interested in hunting or ocean surfing. Similarly, rising stream temperature could mean less fish, which could translate to a decline in angling.

How has climate change influenced your research decisions?

Addressing the many ways CC could impact our society could be a challenge for the next generation of resource managers. It could lead to a gradual decline in demand for a recreation activity or a geographical shift in activities to places favoring such activity. The social and economic impacts of all this could have enormous effects, such as loss of public appreciation of natural resources, loss of license revenue for natural resource agencies, decline in economic activities, etc. So, understanding recreationists' knowledge, risk perception, and behavior could prove useful in suggesting adaptation as well as mitigation strategies for future.

One project you are working on is determining how climate change is affecting recreational trout fishing. What are your results telling you?

We are just looking at the preliminary results. However, one clear observation is that the Georgia anglers show a varying level of awareness and concerns over the potential impact of climate change on trout population and their angling experience. Some believe that more research and mitigation programs should be in place while others think the concern about climate change is unwarranted. Nevertheless, anglers in

general expect to take fewer fishing trips to North Georgia streams if trout there decline due to increase in stream temperature.

You and Dr. Nate Nibbelink are also looking at how the human footprint in the United States will expand in different climate change scenarios. How is that going?

We observed that communities located in various parts of the nation may see a disproportionate burden of CC. We located some clusters of counties — including many around protected areas — that will see higher than average increases in temperature, population growth, loss of natural land, biodiversity, etc. We collectively call such clusters “hotspots” of human footprints, which may need more attention and a higher priority in conserving resources, managing growth, and ensuring sustainability. One of the unique aspects of the protected areas is that they remain undeveloped, so excessive development could threaten the ecological integrity and sustainability of these unique landscapes.

How do you engage students in research projects?

I believe in strongly engaging graduate students in research and also think we should provide some exposure and basic skills to undergraduates as well. I work with students in a variety of ways to engage them in ongoing research. I have observed that brainstorming together with students over some issues can help develop new ideas, as they comment on my findings from a variety of perspectives. 🍄

Your current research seems focused on how climate change (CC) is affecting how people spend their time outdoors. What is your prediction for natural resource recreation if temperatures continue to soar?

Nature-based recreation is primarily outdoor activity, and it depends on climate and quantity as well as quality of natural resources. We can expect CC having mixed effect in outdoor recreation. Fluctuating weather conditions can reduce the favorable hours to play outdoors, and also decrease the amount and quality of resources that support



2013 Timberland Investment Conference

Photo by John Kinsey

FEBRUARY 27 - MARCH 1, 2013

NOW AT
The Ritz-Carlton, Amelia Island, Florida

FEATURED SPEAKERS

Danielle DiMartino, Dallas Federal Reserve Bank and Dr. Kermit Baker, Harvard Housing Study

Will the recession EVER end? Get an economic forecast update from experts at the Fed and Harvard. Gain insights on managing in troubled times from industry investment, consulting and academic leaders on operating efficiently. Network with peers.

Achieve investment efficiency in a market-oriented system. Learn to make the most prudent timberland investment decisions involving the process of purchasing, management and divesting a tract of timberland.

Please visit our website

www.ugacfb.com

contact Bob Izlar at (706)542-6819 or bizlar@uga.edu

The Center for Forest Business getting sociable

The Center for Forest Business has recently hit the social scene. Be sure to connect with them on LinkedIn and check out the new CFB Blog, a great spot to stay up-to-date on the various things going on — from professors opining about the future outlook for the timber industry to student updates on various trips and experiences. There's always something new coming to the CFB Blog.

www.ugacfb.com



New model could help set alligator harvesting rules



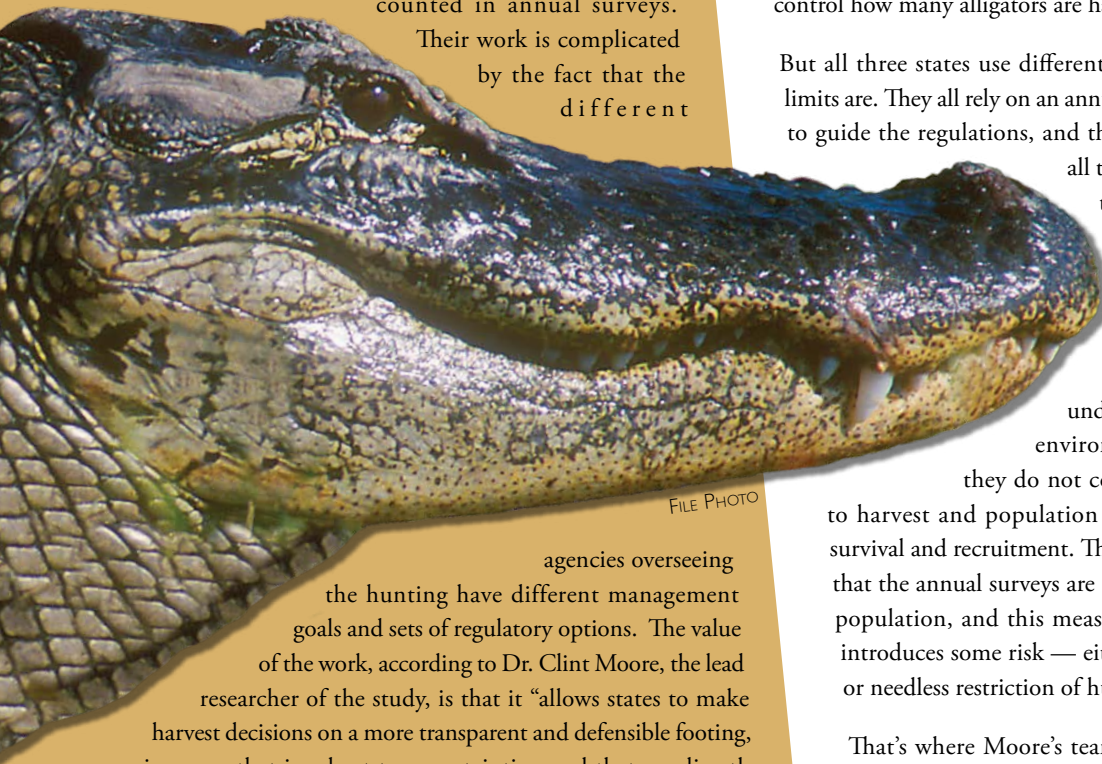
A new Warnell School research project could improve how three states handle the public harvesting of alligators. Researchers specifically hope to develop a population model the states can use to make decisions about how many alligators can be harvested based on how many are counted in annual surveys.

Their work is complicated by the fact that the different

nuisance ones that could pose dangers to humans. The Florida Fish and Wildlife Conservation Commission allows up to two alligators per permit, while South Carolina and Georgia's departments of natural resources limit hunters to one. The number of hunting permits is limited by each state to control how many alligators are harvested.

But all three states use different methods to determine what the limits are. They all rely on an annual measurement of the population to guide the regulations, and they all track harvesting data. And all three use statistical models to make these harvesting decisions. The problem, Moore says, is that these models sometimes fail to predict observations that don't follow the historic trend, perhaps because they don't account for underlying biological mechanisms and environmental conditions. Essentially, they do not consider how populations respond to harvest and population density through their effects on survival and recruitment. They also do not account for the fact that the annual surveys are an imperfect measure of the larger population, and this measurement error, if not recognized, introduces some risk — either endangerment of populations or needless restriction of hunter opportunities.

That's where Moore's team comes in. They want to devise a dynamic control model that will include those elements. Then it "might be able to predict a real population response induced by harvest," he said. "By building the model around biological mechanisms, managers would be able to consider impacts of a harvest rule under different hypotheses about how the alligator population responds to hunting. A special feature of the dynamic control model is that it can be analyzed to provide harvest recommendations that account for how the population may grow or decline in the future. In this way, harvest management takes a long-term view of population sustainability." Once the common model is developed, he said, it will be tailored to each state. 📍



FILE PHOTO

agencies overseeing the hunting have different management goals and sets of regulatory options. The value of the work, according to Dr. Clint Moore, the lead researcher of the study, is that it "allows states to make harvest decisions on a more transparent and defensible footing, in a way that is robust to uncertainties, and that are directly evaluated on the basis of population sustainability."

Moore, who has a dual role as Warnell faculty and a scientist with the U.S. Geological Survey, has a \$30,000 grant from the USGS and a Ph.D. stipend support from Warnell for the 4-year project, slated to begin in late 2012. The goal is to develop tools that can be used to set annual regulations for the public harvest of alligators in Florida, Georgia and South Carolina. All three states allow alligator hunting as part of their management programs.

Alligators are native across the south, ranging from Texas to the tip of North Carolina. The carnivores can reach weights of 800 pounds or more, and can be more than 10 feet in length. Harvesting is allowed to properly manage the alligator population and remove

Warnell researcher wins \$1.5 million grant to study biofuels

If C.J. Tsai's team is successful, we'll one day have faster-growing and more drought-resistant trees that can ultimately be used for biofuel. Tsai, a Georgia Research Alliance Eminent Scholar and professor in the Warnell School, recently won a nearly \$1.5 million grant from the U.S. Department of Energy as part of the ongoing search for a cleaner, renewable energy source. Tsai is one of UGA's leading biofuel researchers.

Her team is going to study the importance of plant proteins called tubulin, which plays critical roles in many basic plant functions. Tsai's lab is particularly interested in how tubulin affects the development of *Populus*, a genus of woody plant that includes species like poplar, aspen and cottonwood trees. Tubulin proteins are thought to regulate the wood development, and, based on recent findings, plant water use. So if Tsai's lab can modify tubulin levels, they may be able to accelerate wood growth and make the trees more drought resistant.

Tubulin may help regulate the deposition of cellulose, an organic compound that accounts for up to 50 percent of poplar biomass. If Tsai's team uncovers the ways that tubulin influences the accumulation of cellulose, they may find ways to manipulate the genetic makeup to create trees that produce more cellulose, and therefore yield more biofuel. This would make it possible to make poplar easier to process into products like ethanol. "It would be great if we could increase biomass, but we think tubulin manipulation is more likely to affect cell wall properties," Tsai said. "If we understand the system better, it might have the kind of properties that make it more amenable to biomass deconstruction."

But tubulin also plays a significant role in controlling the movements of a special class of

cells known as stomatal guard cells. As the name implies, these cells guard the tiny holes, or stoma, on the surface of plant leaves. The opening and closing of the guard cells allows the plant to take in carbon dioxide and expel oxygen, a byproduct of photosynthesis. During drought, stomatal guard cells close off the openings on the leaf to prevent loss of water to the atmosphere, and the process of photosynthesis slows. Tsai's lab found that modification of tubulin proteins could alter the behavior of guard cells to allow photosynthesis to continue at high rates even when they do not receive optimal amounts of water. "This could translate into more biomass from trees grown in stressful environment, like the persistent drought many parts of the country is experiencing," Tsai said.

Ultimately, stress tolerance will be equally, if not more important than wood properties for developing perennial crops like poplars for bioenergy use. "Tubulin offers a rare opportunity for us to tackle both traits at the same time," she said. Other collaborators on Tsai's project include Scott Harding of Warnell, Michael Hahn at the UGA Complex Carbohydrate Research Center, Shawn Mansfield at the University of British Columbia and Gary Peter at the University of Florida. 📍



PHOTOS BY WADE NEWBURY

Walking #1 outdoors activity

New survey is shaping state rec plan

Some people go rafting. Others might set up a campsite. But for most people across Georgia, walking is the best thing about being outdoors, new survey results show. When polling people across the country for the National Survey on Recreation and the Environment, walking was the most popular outdoors activity. This most likely has to do with the fact that walking does not require any specialized skills or equipment, said Robyn Albritton, an MNR student working on the survey. “The most popular activities are the ones that are most user-friendly,” she said.

Albritton, working under Dr. Gary Greene, is helping put results

from the NSRE phone survey into the new Statewide Comprehensive Outdoor Recreation Plan (SCORP), a federally-mandated report that outlines how Georgians are using the outdoors and what policies should be in place for budgeting and future use. The SCORP will cover what Georgians like to do outside, where they are engaging in recreational activities, and what the state could do to improve residents’ use of the outdoors. It will be used by state legislators to allocate funding and form policies regarding state parks, outdoors-based recreational activities and other services. The SCORP is updated every few years, and the new one will be in effect from 2014 to 2020. The NSRE shows some interesting trends emerging in Georgia, including a rise in minority groups in the U.S. and Georgia, which means the state might want to consider this rise in future planning. For instance, dual-language signs might be a needed addition in parks.

Albritton said she was not surprised walking was

the most popular outdoor recreational activity. Walking for pleasure, she explained, is also the most popular activity in neighboring states and across the U.S. What they do find disconcerting, she said, is the continued drop in use of state parks, which has been declining in recent years. The big push for this new SCORP, Albritton said, will be to get users back in state parks. So DNR officials are scouring the survey results to find out what people are doing instead of going to state parks. Are they going to county-run parks? Or are they staying home as part of an ever-increasing sedentary lifestyle that is becoming common for many Americans? Or, is people’s lack of visitation a result of the continuing recession?

“Outdoor recreation is my passion, and it breaks my heart to think there are people who just don’t enjoy being outdoors,” Albritton said. This is especially troubling, she said, when it involves children, who will one day be the stewards of our natural resources. “How can they be charged with caring for the environment if they don’t love it?” she said. 🌲

OUTDOOR RECREATION POPULARITY





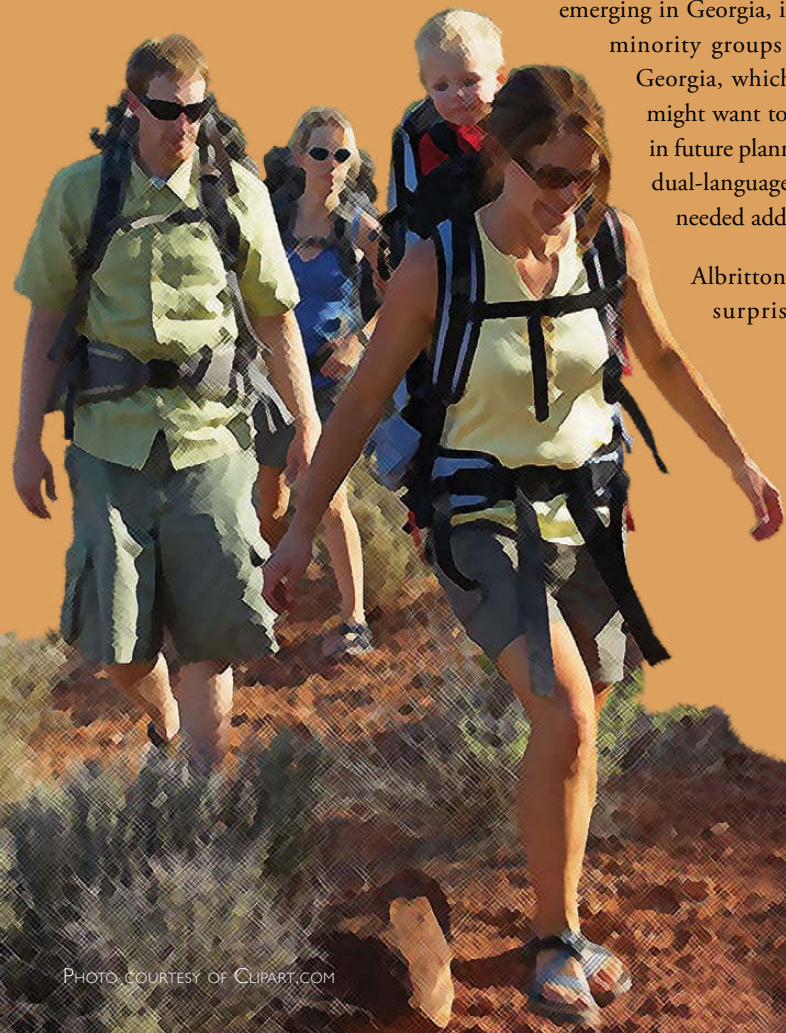
-  **Walking For Pleasure – 82.3%**
-  **Attending Family Gatherings – 74.3%**
-  **Gardening/Landscaping – 65%**
-  **Visiting Nature Centers – 56.4%**

PHOTO COURTESY OF CLIPART.COM



Rainfall exclusion project may predict climate change effects

Weather and climate are variable. Both the last glacial maximum and last summer’s drought make that clear. Currently, increasing atmospheric concentrations of carbon dioxide may also contribute to that variability. Regardless of what changes our weather – nature or humans – we need to be better able to adapt to those changes and mitigate any negative impacts on our natural resources. Researchers are in the midst of experiments that span the Southeast Region that might shed some light on these potential changes and possible solutions, and one project is focusing on the possibility of less rainfall in the future.

Ji “Jill” Qi, a graduate student at Warnell, is already collecting data for the project, which is part of the Pine Integrated Network: Education, Mitigation and Adaptation (PINEMAP) program. Her experiment is one of three projects that are part of a much larger research study approved by the U.S. Department of Agriculture’s National Institute of Food and Agriculture Climate Variability and Change Program in 2011, and it focuses on the 20-million acres of planted pine forests managed by private landowners in the Atlantic and Gulf coastal states from Virginia to Texas, plus Arkansas and Oklahoma. PINEMAP’s overall goal is to show southern pine landowners how to use their forests to increase carbon sequestration, improve the efficiency of fertilizer use, and improve forest resilience and sustainability under variable climates.

That last one is key to the part of PINEMAP Qi is working on — rainfall exclusion. She has been working with project leaders to reduce precipitation by 30 percent in four locations to see how the areas fare with less water. Scientists say the region may experience less rainfall as a result of climate change, Qi said, and they predict the southeast U.S. will have warmer and dryer summers in the coming decades. “This might have a large effect on soil water available to pine trees, particularly during critical months of the growing season,” Qi explained. “Soil carbon might also be affected by these changes if trees have to grow roots deeper to get more water. That might actually be good

for storing carbon from the atmosphere deep in the soil. We need to be better informed so we can adapt forest management approaches, maybe through more drought tolerant genetics or through silviculture such as changing tree density or time of fertilization.”

The USDA awarded Warnell researchers two major grants for the concurrent studies — an \$880,000 grant for biofuel feedstock production and \$1.3 million to study climate adaptation and mitigation strategies. Qi’s PINEMAP project falls into the latter category, and she’s working with project leaders Drs. Michael Kane, Dehai Zhao, Robert Teskey, and Daniel Markewitz. A consortium made up of other schools, professors and graduate students in the Southeast Region are also collaborating on the five-year study.

Qi is based at the Georgia site in Taliaferro County. She has set up a network of soil moisture sensors through 10 feet of soil in all 16 experimental plots to measure how plant water use reacts to reduced rainfall or added fertilizer. “We will probably have to wait for a few years before knowing if there will be any changes in soil carbon,” said Qi, “but my soil water measurements this year demonstrate that we definitely succeeded in drying the soils in the exclusion plots relative to the controls, at least in the upper eight inches.” 🌲



Jill Qi takes moisture readings outside of Washington, Ga.

PHOTOS BY SANDI MARTIN



Black bears threatened by road project?

Story by SANDI MARTIN

KATHLEEN, Ga. — It's still fairly early in the morning, but it's already hot and muggy as Mike Hooker drives down a rough dirt road. He's following another graduate student through the thick, overgrown forest in the Oaky Woods Wildlife Management Area below Bonaire, Georgia. Sitting beside Hooker is another fellow grad student, Casey Gray. They're looking for bears.

"We haven't caught any in about three weeks," Hooker comments, as up ahead Josh Sylvest pulls to a stop. Sylvest hops out, and everyone falls silent in the truck as he quietly treads through the trees. After a brief couple of minutes, Sylvest emerges from the treeline and shakes his head. "Oh well," Hooker says. "Maybe the next one."

And that's how it went for this team of Warnell graduate students this past summer. Stationed in one of the cabins at the Wildlife Management Area, they diligently checked their bear traps twice daily. Sometimes they got lucky, and some days the bears didn't fall for the bait that tried to entice them into the snares. By the time the summer was over, they'd snagged 36 bears for GPS tagging, hair samples, blood samples, and den monitoring. It was the long, hot start to finding out what these Middle Georgia bears are up to — and if a coming road widening project will threaten their population. "The bear population in Middle Georgia is among the most isolated populations in the southeastern U.S., so it is particularly susceptible to changes in land use and human activities," said Dr. Michael Chamberlain, who is lead investigator on this project. "To ensure sustainable management of this bear population, it is critical to keep tabs on patterns of survival and reproduction, and to assess how environmental factors influence this sustainability."

The black bear team was awarded \$798,000 in state and federal grants for the project. The goals for the project are to:

- Determine the size of the bear population;
- Calculate their survival rates;
- Investigate their reproductive patterns;
- And evaluate whether widening an 8-mile stretch of State Route 96 through their habitat is going to affect their movements.

The three-year project is being funded by the Georgia Department of Natural Resources' Wildlife Resources Division for \$421,000, and by the Georgia Department of Transportation for \$377,000. The DOT already knows the bears are crossing S.R. 96 — 10 of the 20 confirmed black bears killed by collisions with vehicles between 2003 and 2009 were along this stretch of road. But the Wildlife Resources Division is concerned that the bear population might suffer from the widening, particularly because no one really knows how many bears there are in this area, and a wider road means a lot more pavement to cross.

THE BEARS

When Bobby Bond first heard that S.R. 96 had been tagged for future widening, he called the DOT to ask if they knew what kind of impact that was going to have on the bears in that area. A senior wildlife biologist for the DNR in Region IV, Bond was already concerned about them. Previous studies had only scratched the surface on the possible problems with the bears wildlife managers may have to contend with, including an increasing isolation and the possibility that they are all too closely related. But no one really knows for sure because a full genetics study has never been done. "That would be an awesome research project down the road," Bond said.

But for now, all they can do is speculate about genetics although it does seem likely, particularly because at least a portion of the population is cut off by a triangle formed by S.R. 96 and Interstates 16 and 75. That genetics study will have to come later, though. For now, Bond really just wants to know how many of those bears there are. "That's the piece of the puzzle that we're still missing," he said. "We're kind of hanging our hat on around 300, but it could vary. We base that on the last population study and old marker data, but since this bear population is kind of isolated, we really do need data done to a finer degree than what we have now."

The Middle Georgia bears are just part of a larger problem: Black bears around the U.S. are down to just 10 percent of their historic range, and the populations overall are very fragmented. Most black bear populations are found on public land, and Georgia has three distinct bear populations: In the Appalachian Mountains, near the Ocmulgee River drainage system, and near the Okefenokee Swamp. Chamberlain's team is focusing on those within the Ocmulgee River region, including the ones on private land in Twiggs, Houston, Bibb, Bleckley and Pulaski counties.

In addition to the overall goals of the project, the research team will also be monitoring dens during the winter. Chamberlain said the den monitoring study is designed to assess:

- Basic denning ecology, such as cub production and site selection;
- Cub survival;
- And potential recruitment of cubs into the fall population.

"We are putting standard VHF collars on every female we catch, primarily to estimate annual survival rates," Chamberlain said. "Survival of adult females is a primary factor driving population increases or decreases in black bears. With the potential of loss of females on the highway, as well as the harvest of females by hunters, it is important to monitor female survival."

Finding out how many bears there are is particularly important, Bond said, because after a public commenting period last year the DNR approved a one-day hunt of the bears, and if the

population isn't as large as wildlife managers think, then the agency will need to rethink the harvesting. A second one-day hunt is set for mid-November.

Last year, hunters killed 34 black bears — more than a tenth of the estimated population — from the Central Georgia zone, equally split between male and female bears, although most were killed in Twiggs County. The current harvesting rules call for one bear per person per one-day season. It is open countywide in Twiggs, Bibb and Houston counties, with no permits other than a valid hunting license necessary. Hunters cannot bait the bears, and because two were caught doing just that last year DNR plans to step up the law enforcement presence this year.

The harvest did not escape media attention, and some wildlife advocates questioned the wisdom of the hunts, noting that previous harvests saw far fewer bears killed and that the DNR once set a maximum number of bears that could be bagged by all hunters. Complicating the debate is how much of the wildlife management area has fallen into private hands and hunting clubs inviting hunters in for the harvest — even from out of state. Bond said the DNR operates on a two-year regulation cycle, and the next vote on how to manage the Middle Georgia bears — including the hunts — will come up next spring. He hopes to have some preliminary data to show DNR leaders so they can better make a decision about how to properly manage the bears.

After he started asking the DOT questions about S.R. 96, Bond said, it prompted a presentation to transportation officials, where he pointed out the success of wildlife underpasses in Florida. DOT officials quickly realized they needed to know more about where those bears are crossing. Those discussions spurred the joint project, and the two agencies turned to the Warnell School to do it.

THE ROAD

For a secondary highway in a moderately populated part of Georgia, S.R. 96 gets a lot of traffic. Sometimes drivers aren't particularly good at sticking to the speed limit, particularly if they're using it as a shortcut between I-16 and I-75. The two interstates eventually meet in Macon, but before then getting from one side of the central and southern part of the state to the other means a lot of back roads with two lanes and lower speed limits. The DOT projects that traffic on S.R. 96 will increase from an average of 11,000 vehicles daily in 2016 to 17,000 by 2036. "It's also about 10 percent trucks, so it's high truck volume," said Jeremy Busby in the DOT's Office of Program Delivery.

What's good news for drivers isn't good news for the black bears, however. The bears have already found it troublesome to cross — 10 dead from 2003 and 2009 trying to cross it — and widening S.R. 96 from two lanes to four will just increase how much road the animals have to cross. The DOT's widening plans calls for more than just making it four lanes — S.R. 96 will also have all new bridges, medians separating the opposite lanes of traffic, and turning lanes at intersections. It will widen 11 miles between I-75 and Old Hawkinsville Road, and another 17 miles from to I-16. Eight miles of S.R. 96 falls into the study area, between S.R. 87 and Old Hawkinsville Road. "It's also a danger to humans, Bond points out. "A lot of these bears come to the edge of the road, and they stay there and wait, and they mistime their crossing," he said. And when a car collides with a bear, they can slam into an animal that can reach more than 400 pounds, he said. Busby said it's possible that the widened road might prove to be too much of a barrier. "We are concerned that the widening of the road will divide the population, and they won't cross at all," Busby said. "But we do want to eliminate any conflicts between bears and drivers."

When Bond pointed out the pitfalls of widening the road and the success of wildlife underpasses, the DOT

took note. The DOT hopes the project will show them the best places to put seven underpasses that will provide bears — and other wildlife such as deer — crossings that are safer for them and drivers. Chamberlain's team has tagged 20 of the bears they trapped this summer with GPS collars, and they are now monitoring the movements of those bears to see where they go and where they cross S.R. 96. The DOT can then use this data to place those underpasses in the ideal places for the bears, and then possibly place fencing along the road to funnel them to the safer crossings.

For the bears isolated by these three roads, S.R. 96 seems to be the road the bears chance the most. Bond said just one bear was killed on I-16 in the past year, although another one was killed on Interstate 475 in south Macon just past where I-75 splits off from the brief merger with I-475.

Once the study is done and the underpasses are finished, a proposed second project phase calls for assessing the effectiveness of the underpass. "We're monitoring bear movements before the installation of the underpasses to determine the most suitable locations and therefore optimize their efficacy," said Dr. Karl V. Miller, a co-investigator on the project. "If successful, the underpasses likely will save lives — both human and bears, but also provide some connection for portions of this population that appear to be somewhat isolated by these roadways." 📍



PHOTOS COURTESY OF JOSH SYLVEST

The project will study the area between Interstate 16 and Interstate 75 (map). Project leaders are using Google Earth to track the movements of bears outfitted with GPS collars (map inset).

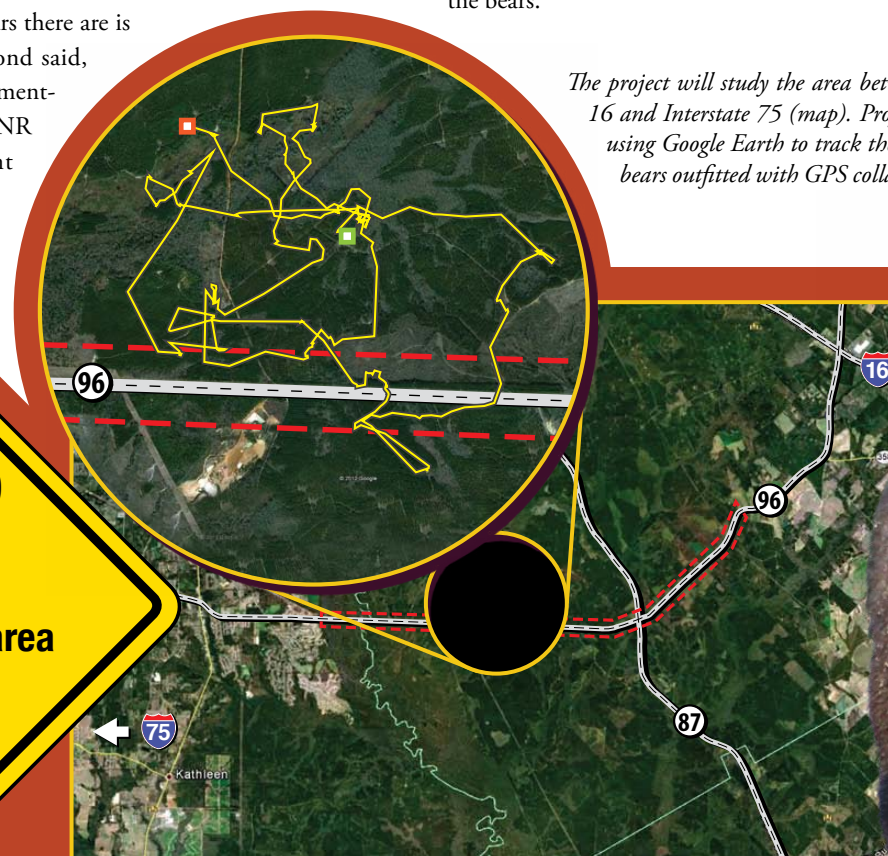


PHOTO BY JOSEPH HINTON

One bear was caught on video overturning the baited snare and then running away (top right). Josh Sylvest examines hair samples caught in baited snares (bottom right).



PHOTO COURTESY OF JOSH SYLVEST



PHOTO BY SANDI MARTIN

MAP LEGEND

- Bear Paths
- Proposed area for road expansion

GraduatePROFILE

Casey Gray

Casey Gray certainly isn't a pushover. But standing in the woods in Middle Georgia this past summer, just two feet from a timber rattlesnake, she might have "squealed like a little girl," she admits. "It was not my bravest of moments."

But Gray's allowed a little bravery slip up every now and again. Gray has backpacked up the western coast of Peru and Ecuador, and she volunteered at an animal refuge in the latter country. She likes to fly fish and duck hunts. She's fascinated by large mammals, because according to her mother, "it's because I like to make her nervous and study things that can eat, maul or otherwise badly injure me." And that's what she did this summer. Gray was part of a small team of students and researchers who spent weeks in the muggy, tick-infested Georgia woods trapping black bears for Dr. Mike Chamberlain's big project (see cover story on Page 14). "I love the excitement of studying these large animals," Gray said. "There's an exhilaration in it that just can't be fully explained. They are just such fascinating creatures to me."

Gray's duties on the project included checking hair snares, assisting in trapping, sedating the bears, conducting field surveys and tracking down sows and cubs for the future survival studies. Gray knew Chamberlain from her time as an undergraduate at Louisiana State University, where he was teaching at the time. His black bear work intrigued her then, she said, so she kept in touch. "When I got serious about applying for graduate school he

had a position studying the reproductive ecology of the Central Georgia black bear. It didn't take much to convince me to come over. I have been given a really great and rare opportunity here," she said. She didn't come here immediately, however. Gray took some time off after she graduated to explore. And she's definitely seen a lot. In the past few years, Gray has either traveled to or worked in Wyoming, Alaska, Florida, Colorado, South America, Australia and New Zealand.

Gray grew up in Baton Rouge before her family moved to Katy, Texas, when she was a teenager. But as a child, her family had a couple of acres that she roamed around — "usually barefoot" — exploring the woods and fishing in neighbors' ponds. Her mom, Mary, is a teacher, and dad, Jon, an outfitter in his college days, passed on both a love of learning and the outdoors. And she's turned that love of the outdoors into a job, working as a waterfowl research technician in Colorado, serving as assistant director for the Green River Outreach for Wilderness Foundation, working with ecologists in the Estaurine Fisheries Department at LSU, and even a stint at Disney's Animal Kingdom Park in Florida.

When in Alaska, she also worked at the Alaska Sealife Center, educating the public about marine mammals. "I also have some interest in the human side of conservation, such as public relations and would love to work internationally. I'm not sure where this will take me yet, but I'm excited about the journey to get there." 🍄

PHOTO BY SANDI MARTIN

UndergraduatePROFILE

Erik Biang

Erik Biang hadn't given much thought to forestry when he first started college. The Pike County native fully intended to become a mechanical engineer, but it was a chance encounter with some Warnell School student ambassadors at Gordon College that changed his mind. Visiting his first school to talk about Warnell's programs, the student ambassadors must have been very convincing: Biang not only transferred to UGA two years ago, but now he's one of our most active undergraduates. The senior — Biang expects to graduate in December — is a student ambassador himself. He was president of the UGA Forestry Club. He helps teach at the biannual Boy Scouts Advance-a-Ramas Warnell hosts. He calls himself the "most loyal unpaid member of The Wildlife Society," is in the Xi Sigma Pi honors society, goes to fisheries club meetings and helps out at as many school events as he can. "My first 2 ½ years at school I kept to myself. I went to class, I went to work, and I went home. Before I transferred to Warnell, I decided I will be part of this school, and what better way than to jump in head first?" he said. "I enjoy being part of our school and helping with anything I can."

The hard work doesn't stop with Warnell. Biang has worked on the side while attending college classes, first as an aircraft mechanic while at Gordon College, then at the UGA Trial Gardens, and now at the U.S. Forest Service office on campus. He also just took on another job as a lab teaching assistant for Dr. Richard Daniels' forest mensuration class. But he and classmate and roommate Carl Della Torre (a Warnell fisheries student) are also renovating the house they're living in "mostly for fun." And he does all that in between classes and his extracurricular activities. "I only have a few years of my life here so I want to make the most of it," Biang said. "I hope to do everything I can here and hope to leave an impact on future students. Many students attend class and that's as far as their involvement goes. That's just not me."

Biang, 23, is interested in wood harvesting and quality, and he hopes to one day be a private consultant, working with



PHOTO BY SANDI MARTIN

harvesting operations to produce high-quality wood products. "Spending the amount of time in the outdoors that I did as a child helped me to appreciate the outdoors and what we can take from it," he said. "I have always been one to take things apart to find out how they work — which led me towards the engineering field — but when I found out that most of my time would be spent sitting behind a desk punching in numbers I felt like there might be a better career choice out there for me. My father always told me to do something you enjoy. I remember being in the woods with him as a child just able to walk helping tote firewood to the truck and watching him with a chainsaw bucking up the trees. Those have been some of my favorite memories. My parents taught me to enjoy and respect the outdoors. I think this has played an important role in my career choice."

Biang might be one of Warnell and forestry's biggest boosters. "I am passionate about my school and I am passionate about forestry and what lies before us in these changing times," he said. "At orientation all of the club officers told us to 'get involved.' I did, and it has been a very rewarding decision between the life-long friends I have made here and the potential employers I have met along the way. My words of advice to prospective or new students has been 'get involved' and to be the person that wants to know more and do more than the 8 to 5 lifestyle." 🍄

Warnell Weekend 2012 a huge success

**New open house
happening again next year**

They came for Warnell Weekend and stayed for the Lumberjack Ball. A few parents and alumni became part of the class last April with our first-ever Warnell Weekend, a new open-house that gives visitors a first-hand look at Warnell. And we're doing it again next year, with tours, class lectures, exotic food and an awards ceremony. The second Warnell Weekend is set for April 25-27, 2013, and will coincide with the Spring Awards Banquet and the Wildlife Supper, both notable annual events that honor students with scholarships and awards, and the latter with some interesting food that benefits the UGA student chapter of The Wildlife Society.

The 2012 Warnell Weekend brought parents and alumni into the small classes, state-of-the-art labs and vast research forest that distinguish us from other colleges at UGA. Parents can come see for themselves what their children are learning, and alumni can see how their alma mater has evolved since they graduated. Everyone is invited to attend class lectures and field labs, but there will also be an opportunity for some recreation with the Wildlife Supper.

"Every graduation, parents tell me how much they enjoyed hearing our student speaker talk about the 'Warnell experience,' and how they would have liked to do something similar when they were in school," said Emily Saunders, alumni director. "Alumni speakers often remark about how some things — like technology and diversity of classes — have changed, but many things, like our great faculty and field experiences, have stayed the same. Warnell Weekend is our solution — it provides a great opportunity to showcase our school and the profession. Parents can learn alongside their students, and alumni can reconnect with Warnell and see how we've grown and changed." 🌲



PHOTOS BY SANDI MARTIN
ILLUSTRATION BY WADE NEWBURY

THE WARNELL SCHOOL OF FORESTRY AND NATURAL RESOURCES
PRESENTS THE



Please join us as we celebrate the Warnell Experience!
Alumni, students and parents are invited to attend classes, labs
and the famous Wildlife Supper.

APRIL 25

Spring Awards Banquet
at the Georgia Center

APRIL 26

Attend class lectures,
tours and field labs

APRIL 27

The Wildlife Supper,
featuring some
exotic dishes

For more information, please contact Emily Saunders
esaunder@uga.edu or 706.542.1465

Bad Night in the Mountains



Grad student recalls dangerous storm

PHOTO BY SANDI MARTIN

Until early July, Kevin Fouts thought the worst of his summer was over. Earlier in the season, while in Tennessee sampling salamanders for a Warnell project, the 27-year-old graduate student had slipped and dislocated his shoulder, chipping bones in the process. He chalked it up to bad luck, and continued on with his project near the Abrams Creek campground in the Smoky Mountains. But what happened later “really put my injury in perspective,” Fouts said. In early July, unusually high temperatures helped create a freak storm in the park that ended in injuries and death. And Fouts was caught in the middle of the chaos that ensued.

“I was just lucky to be alive,” Fouts said months afterward. But at the time, he said, the storm and its aftermath were heart-stopping. Fouts and a National Park Service seasonal worker were returning to the Abrams Creek ranger station when the storm started churning. Fouts, who was driving, spotted a tree about to come down. “So I slammed on the brakes and said, ‘I think that tree is about to fall,’” Fouts recalled. “Right when I said it, it did. It

snapped and fell 12 feet in front of the truck.” So Fouts put the truck in reverse and floored it, just as more trees started to come down in front of them. He and Danielle Crocker ultimately pulled into an open field where they could listen to their park radios in relative safety. The reports were frightening: Trees were coming down all over, blocking roads and falling onto cars. Then they heard that people were trapped under a tree in a nearby creek. “Danielle and I looked at each other and said, ‘we can’t just sit in the truck anymore. We have to go help them.’”

So they headed back and found the road blocked by trees. Emergency workers couldn’t get by, so they ran ahead on foot, coming up on the crisis: Seven people — a family of five and two women — had tried to get far away from the falling trees by wading into the creek. But they didn’t move far enough out, and a massive tree toppled over on them. When Fouts ran up, one woman was being given CPR on the creek bank, a child had already been pulled out from under the water, but a man was still trapped underneath. Fouts ran back and brought back paramedics on foot,

and they set to work freeing the trapped man, using a child-sized raft to minimize damage to what turned out to be broken vertebrae in his back. Unfortunately, the woman on the bank had been declared dead. Fouts helped move her body out of the way of rescue workers, then helped paramedics retrieve equipment, opened up the ranger station for the survivors, and helped carry people out of the campsite to the ambulance that still couldn’t get through the blocked roads.

In the days following the storm, similar accounts from different parts of the park trickled out, as others told of how suddenly the storm brought danger. He flashed back to when the trees were coming down in front of his truck, he said, and how if he hadn’t moved it he and Danielle likely would have been badly injured. But it pales in comparison to what the others suffered, he said, and he was amazed at how the family — grandparents, a daughter, son and granddaughter — rallied around the child, despite how the others suffered more serious injuries. It was a sobering day, Fouts said. “I felt really bad for that family.”

Spring awards banquet recognizes, honors outstanding students

Every year, the Warnell School of Forestry and Natural Resources recognizes dozens of promising students with awards and scholarships at the Spring Awards Banquet. Generous donations from individuals, alumni, friends of Warnell, and support organizations make this educational assistance possible, even during trying economic times. Every dollar donated to the Warnell School’s scholarships and assistantships helps a future natural resources leader.

The 2012 scholarship and award winners are:

**Earl D. and Wanda Taylor Barrs
Entrepreneur and Leadership Scholarship**
Becky Clay

**Judith Fitzgerald Brooks Memorial
Scholarship**
Michelle Jennings

E.L. Cheatum Award
Kerrie Anne Loyd

**Forestry Alumni Scholarships:
New Freshman**
Emily Jolly & Mary Reuter

New Professional
Valerie Navarro, Clay Stroud,
Rebekah Tuck & Michelle Webber

**Georgia Forestry Association/Georgia
Forestry Foundation Fellowship**
Ethan Robertson

**Earl Jenkins/Gladys Beach
Memorial Award**
Joel Owen

Fred W. Haeussler Scholarship
Gordon Grizzle

Hogan Graduate Support Scholarship
Devon Baker

Fredrick William Kinard, Jr. Scholarship
Matthew Walter

**Charles A. & Rose Lane Leavell
Scholarship**
Adren Anderson & Ryan Pawlikowski

**Arnett C. and Ruth Mace Memorial
Scholarship**
Evan Johnson

Martha Love May Memorial Scholarship
Annie Davis, Jane Diener, Inez Hein,
Joyce Huang & Brianna Williams

Robert Goodling McAlpine Scholarship:
Michael Bordeaux

Arlene C. & Tilden L. Norris Scholarship
Christian Harris

**J. Reid Parker Memorial Merit
Scholarship**
Courtenay Conring

Archie E. Patterson Scholarship
Andrea Fritts, Angela Mech & Ani Popp

**Robert W. & June C. Porterfield
Memorial Scholarship**
Daniel Watrous

**N.E. Georgia Quail Unlimited
Scholarship**
Seth Sofferin

Ernie E. Provost Scholarship
Carl Della Torre

William Tyler Ray Scholarship
Emily Ansley, Matt Atkinson, Alex Bond,
Rachel King & Michelle MacKenzie

**Gerald B. & Charlotte Alexander
Saunders Scholarship**
Daniel Atkins & Ramesh Paudyal

**Society of American Foresters
Georgia Division Award**
Erik Biang

**Stoddard-Burleigh-Sutton Award
Excellence in Ornithology**
Clark Jones

**C.M. & Bernice C. Stripling
Scholarships**
Hayley Glassic & Alex Butler

Superior Pine Products Scholarship
Duncan Wilder

William N. Thompson Scholarship
Caleb Skipper

**Trout Unlimited Cold Water Fisheries
Scholarship**
Seth Sullivan

**Warnell School Study Abroad
Scholarship**
Lauren Austin, Amanda Mercer &
Chandler Wood

Gordie J. Yancey Scholarship
Laura Burns

**Young Alumni Scholarship for
Leadership and Training**
William Burge & Cody Seagraves

AGHON
Skilor Gay & Noah Shealy

Blue Key Honor Society
Annaliese Ashley, Andrea Fritts &
Danielle Hernandez

Outstanding Senior in Forestry
Daniel Atkins

Outstanding Senior in Wildlife
Annaliese Ashley

**Outstanding Student in Natural
Resources Recreation and Tourism**
Joel Adair

Rotoract Student Service Award
Daniel Atkins

Warnell School Faculty Award
Aaron Mathys

**UGA Graduate School Three Minute
Thesis Competition**
1st Place – April Conway
2nd Place – Liz Gleim

**UGA Outstanding Graduate Teaching
Assistant Award**
Anna Joy Lehmicke & Rachel Mahan

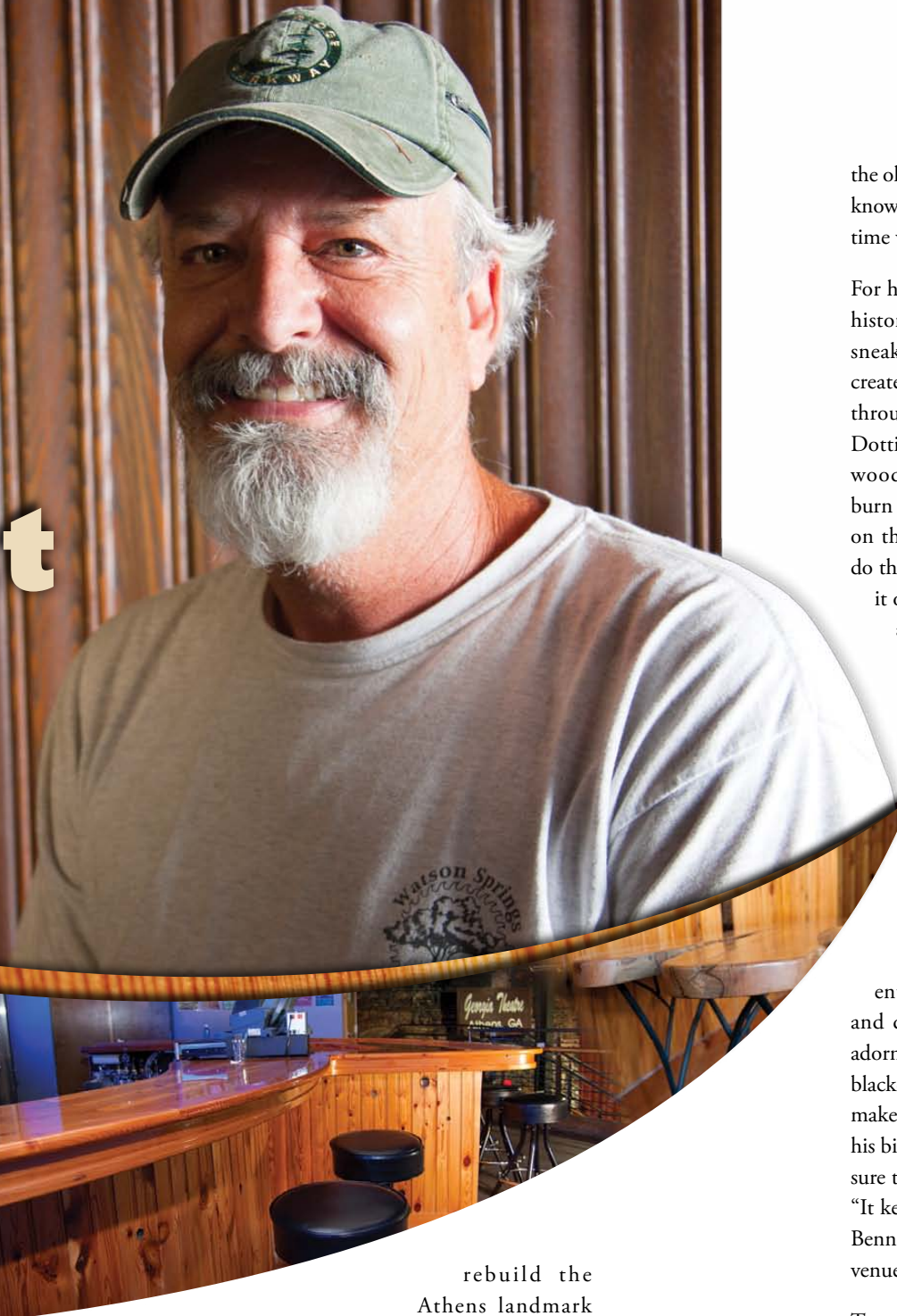
**Warnell School Outstanding Teaching
Assistant Award**
Ami Flowers & Andrea Fritts

Warnell School Ambassador of the Year:
Rebekah Tuck

**Warnell School Outstanding Student
of 2012**
Jane Diener

ALUMNI ON THE JOB

Landus Bennett



Pictures from the renovated Georgia Theatre. Photos by Sue Smith.

By SANDI MARTIN

For weeks after the Georgia Theatre was gutted by fire, owner Wilmot Greene and others would go to the carnage and sift through the rubble, unsure of what they would — or could — do. Shellshocked after the 2009 fire, Greene said he didn't know if he was going to rebuild or not, and he was being approached by a lot of people offering different services. "It was a really confusing time," he said. Ultimately Greene did

rebuild the Athens landmark by putting the old with the new, salvaging charred wood and beams from the destroyed Theatre to create an "authentic" atmosphere when it reopened. And a Warnell alumnus played a key part in reconstruction.

Landus Bennett (BSFR '97), co-owner of Watson Springs, was introduced to Wilmot Greene by chance by a former classmate and local singer, Nancy Byron. It didn't take them long to click: Greene impressed by Bennett's know-how and ideas, and Bennett by Greene's desire to reuse whatever they could from

the old Theatre to build the new one. "Landus struck me as very knowledgeable and friendly," Greene said. "And friendly at that time was just as important as knowledgeable."

For his part, Bennett was eager to help, based on the Theatre's history in Athens and fond childhood memories of his sister sneaking him in side doors to see movies. What he helped create was an unusual concert venue with detailed woodwork throughout the three levels that practically boasts of the fire: Dotting the pine and chestnut wood are charred areas and burn holes. "My hat's off to Wil on this, because he wanted to do the right thing and not haul

"We were picking through the ashes to get the wood out."

it off to the dump," Bennett said. "The idea of reusing wood appealed to him." So that's what they did. They pulled charred beams from the wreckage. Any wood they could salvage, they grabbed. "We were picking through the ashes to get the wood out," Bennett said. They even discovered wood salvaged from the old office was pre-blight American chestnut. The now-devastated tree that once adorned the American countryside had been used for paneling when the theater was remodeled in the 1930s.

Bennett took it all. He used the precious American chestnut and pieced together a stunning wood-paneled entryway. He fashioned reclaimed heart pine into the bars and drink rails around on the second and third levels. He adorned the walls with wainscoting scorched by burn holes and blackened with soot streaks. The charred evidence, Greene said, makes the woodwork in the theater "so authentic." Greene said his biggest worry when construction was underway was making sure the Georgia Theatre had the same "vibe" as before the fire. "It kept me up at night," he said. His worries were for naught. Bennett's workmanship, he said, is one of the reasons the music venue has that welcoming, "homey feel" that he desired.

Turning something headed for the landfill into something worthy of display is one of Bennett's specialties. He thinks the best wood is "either in somebody's yard or the loggers left it out in the woods." When he was tasked with creating a large wood medallion to be set in the floor of the Russell Library at

UGA, Bennett carved up a gigantic oak tree that had fallen in a storm in Atlanta. Then he left it to cure on his dining room table for months before it was even ready for him to start preparing for placement. He and partner Richard Shrader installed the medallion in mid-July, finishing up months of patient work and waiting.

Originally from Oconee County, Bennett has been a woodworker most of his life, originally learning the craft as a teenager "for a need for money." He started out as a painter and learned on the job, then worked in construction throughout the area and didn't come to Warnell

until much later in life. "It was funny," he said. "I just decided to go back to school. It was a personal thing." That was in the mid 1990s, when he was 36. He earned his bachelor's degree in timber management, then studied wood utilization under Dr. Tim Faust in the late 90's working on his masters in wood utilization prior to Dr. Faust's death. Learning how to cure and dry wood led him to build his own kiln. Afterwards he worked for J.M. Huber Corporation as a research scientist of engineered wood products. "I was their most prolific inventor while there," he said. "I authored the patent for the Zip System, one of Huber's most successful products. But the corporate world isn't my cup of tea, so I started focusing my creativity on my own business. The money is not as great, but the satisfaction of what I do makes it all worth it."

That's what led him and Shrader to opening up Watson Springs — a small craftsmanship company that creates wood products utilizing urban and recycled wood. "Having our own business allows us to take on all kinds of projects," says Bennett. "I've been fortunate to get to do what I love and I've always loved wood. The reason Richard and I formed Watson Springs was to create a wood products business by building a kiln, focusing on recycled and urban woods, using the profits and lumber from our kiln to support creating fine furniture and architectural pieces. It means a lot to us that the wood we use has some history or a story behind it and that we can create, from that wood, something special that people would be proud to hand down for generations. That, I hope, will be our legacy." 🌲



PHOTO BY SANDI MARTIN

Preserve the Future



Without alumni and friends like you, we would not be able to provide our students and faculty with outstanding academic programs and opportunities. Consider supporting the Warnell School of Forestry and Natural Resources. We have giving opportunities to fit your needs and would love to guide you to the opportunity which suits you best. Learn more online at warnell.uga.edu/giving or contact the Office of Alumni Relations and Development. Giving back to Warnell is exciting and rewarding, and your gift will make a difference!

Lauren Bush, Alumni Relations and Annual Giving
lbush@uga.edu

MEET OUR NEW ALUMNI AND DEVELOPMENT TEAM

Who better to lead the Warnell School's alumni and development team than two of our own? Two Warnell alums are taking over as our new alumni and development directors, and they hope that they can inspire some new enthusiasm in our alumni base. New Alumni Director Emily Saunders (BSFR '05, MNR '10) and new Development Director Lauren Bush (BSA '03, MFR '06) definitely have some insight into what it means to be a Warnell School graduate, and you might already know them.

Saunders is not only a Double Dawg, but she is also one of Warnell's biggest boosters. She has been the school's student and career services coordinator since 2007, and for years she organized school events, helped with recruitment, and oversaw scholarship applications. She was the person students went to for resume, interview and job placement help. Now she's going to transition into a new role — working with alumni. Saunders will keep some of her previous duties as part of her promotion to alumni services director — organizing graduations and the Spring Awards Banquet and supervising student ambassadors — as part of an overall restructuring of the student and alumni services support staff. These duties align closely with alumni services, Saunders said. "I've loved working with students as they begin their careers, and I look forward to helping them reconnect with their alma mater," Saunders said. "Warnell students have many advantages that aren't available to students of other programs, and these benefits are often the result of our generous alumni. Whether it is supporting a scholarship, serving on a committee or hiring a Warnell student or graduate, each individual alumnus can make a very big difference! I am thrilled to have the opportunity to help our alumni identify ways to get involved and improve the life of a student or the natural resources profession."

Bush is taking over as Warnell's director of development, but she is already a familiar face to our many alums. Bush will focus on increasing Warnell's endowments and oversee the school's giving opportunities. With declining state support, she said, it's

important that the Warnell School seek private funding to continue the excellent educational programs offered to our future natural resources leaders. Donations from alumni and friends of Warnell help support school activities and fund scholarships, research projects, and facility maintenance. Bush is well prepared for this task, coming from the Georgia Forestry Commission, where she worked for six years as stewardship outreach coordinator and public affairs staff forester. A 2003 graduate from UGA's College of Agriculture and Environmental Sciences with a BSA in agriculture education, Bush earned her MFR in forest resource policy from Warnell in 2006. Bush is a native of Monticello, Ga., and currently lives in Tyrone in Fayette County with her husband, Thomas; daughter, Charlotte; two dogs, Hank and Shelby; two cats, Marvin and Butterbean; eight chickens; four horses and Isabel the donkey. "I am incredibly excited to be back at Warnell!" Bush said. "I look forward to continuing old friendships and making new ones as I serve forestry and natural resources in this new role."

Dean Mike Clutter is excited about the strong new alumni and development staff. "We are excited about having Lauren join our staff here at Warnell, and with Emily taking on new responsibilities of working with alumni," he said. "Lauren has extensive lobbying experience, having been the staff support for the natural resource subcommittee at the Georgia Legislature and then the lobbyist for the Georgia Forestry Commission. Add to that a MFR from Warnell and she has the experience to make her a real asset to our school. Emily is one of our own and has the type of contagious enthusiasm for Warnell that we need to fire up our alums. I cannot think of anyone more suited to these roles than Lauren and Emily." ♦



*Lauren Bush,
Development Director*



*Emily Saunders,
Alumni Director*

CLASS NOTES

1950's

J. Hubert "Colonel" Langley (BSF '55) says his granddaughter, Angel Fouche, is a UGA student and might follow his footsteps into forestry.

Louie F. Deaton (BSF '59) received the "Volunteer of the Decade" award this year from the Cochran Mill Nature Center in Chattahoochee Hill Country, Ga. He is on the board of directors and chairman of the building and grounds committee.

1960's

John C. Sherrod (BSF '60) says he spent 43 years with the U.S. Forest Service on seven national forests in six northwestern states before retiring in 2003. "I would do it all over again. It was a wonderful career."

Pleas M. Glenn (BSF '61) worked for the U.S. Department of Interior in three states — Oregon, Georgia and New Mexico — for 21 years as a forester, engineer and outdoor recreation

planner. He also worked for the New Mexico State Land Office for seven years as a commercial land manager and assistant state land commissioner. Glenn also worked for Jacobs Engineering Group and Landmark Environmental Consultants for four years as an environmental scientist in Albuquerque, N.M., and at Los Alamos National Lab in Los Alamos, N.M. He also spent four years as the parks and recreation director for the city of Albuquerque. Glenn retired several years ago and in March 2012 won the Elbert County Chamber of Commerce "Native Citizen for 2012" award. He lives in Albuquerque.

John Mixon wins Wise Owl Award

John Mixon (BSF '61) won the Wise Owl Award at the 2012 Georgia Forestry Association Annual Conference in Savannah this past summer. The former State Forester was recognized for years of continuous service and dedication to the forestry industry in Georgia. Since 1980, GFA has given the Wise Owl Award to an individual who has made countless outstanding contributions to the forestry community. It recognizes not only forestry advocacy, but also an uncommon passion to improve the industry for all landowners and forestry related businesses.

From 1983-1995, Mixon served as the director of the Georgia Forestry Commission, and he also served as the 69th president of the National Association of State Foresters in 1991. In an address to the 101st Congress in 1990 to recognize Mixon as the President of NASE, former Georgia U.S. Senator Wyche Fowler gave tribute to his dedication to sustain the heritage of

the forestry community. "I want to take this opportunity to praise John Mixon for his strong commitment to the forest industry," Fowler said. "His work and devotion has helped to make timber the No. 1 industry in the state of Georgia. He has created jobs and economic opportunities for many Georgians in his career. At the same time he has been a noted leader in the protection and preservation of our natural resources."

While working for the GFC, Mixon was influential in the establishment of programs such as the Urban Forestry Program, the Conservation Reserve Program, the Flint River Nursery, the Howard E. Bennett Forestry Museum, and the 1992 Prescribed Burning Act. Also, in 1986 Mixon's reforestation campaign set a world record in the forestry community by planting more than 650,000 trees in one year.

He has continued his wood promotion efforts today by serving as the chair of

the Forestry Commodity Committee for the Georgia Farm Bureau and GFA's Wood Promotion Task Force. In these positions he provides the necessary leadership to have Georgia timber products used in the construction of schools and hopes to eventually convince the Georgia Department of Transportation to use treated wood in the construction of highway sound barriers.



Tom Norris named chairman of FRA



Thomas "Tom" Norris (BSFR '71) is now the chairman of the Forest Resources Association and will serve a two-year term. The national organization promotes the interests of forest products industry members in the economical, efficient and sustainable use of forest resources to meet the needs of the wood fiber supply chain through private enterprise. Norris is the vice president and general manager of the

timber division of Interstate Resources Inc., where he is responsible for sales, marketing, manufacturing and transportation for the company's lumber and timber operations. Prior to his 19 years with Interstate, he worked for Union Camp and Continental Forest Industries in a number of upper management positions. He has also served in several other industry association leadership posts, including serving on the Warnell School's advisory board.

Norris outlined his priorities for his two-year term as FRA chair: Recruitment of new members — particularly among wood suppliers and biomass consumers — and obtaining a workable alternative to the administration's revision of the H-2B visa rules governing foreign employees of treeplanting contractors and other guest workers. Norris has also placed a priority on re-examining FRA's dues structures and on providing an orientation to recently appointed FRA board members.

1970's

N. Alexander Nixon (BBA '78, BSFR '82) of Nixon Land Co. recently celebrated 30 years in the consulting forest and land brokerage business.

1980's

W. Andrew Tomlin II (BSFR '85) is vice-president of commercial banking with Synovus Financial Corp. in Huntsville, Ala. Andy received his MBA in finance from Mercer University in Macon, Ga., in 1992. He and his wife have four sons, two of whom are in their freshmen year at Young Harris College.

1990's

Tommy Peagler (BSFR '93) is a forestry instructor at Okefenokee Technical College in Waycross, Ga., and a timber dealer and owner of Peagler Land & Timber in the same city. He and wife Jennifer have two sons, Parker, 12, and Henry, 8. He says his hobbies include coaching his sons in sports and spending time with his family at Amelia Island, Fla.

Jeffrey Lawrence (BSFR '98) has been named the senior manager of business development with Rayonier. Lawrence will be responsible for the development and operational implementation of new

business opportunities within the U.S. Forest Resources footprint of resources by focusing the team on four key areas: expanding timber demand, managing the minerals business, supporting operational excellence, and providing market intelligence and analytics. Lawrence has been with Rayonier since 1998, earning higher positions of responsibility throughout his career.

Ross Reiley Pritchett (BSFR '99) and Andrea Dombrowski Pritchett (ABJ '99) welcomed son Charles Michael Pritchett on April 5, 2012, at 11:35 a.m. Charlie weighed 6 pounds, 10 ounces and was 20 inches long.

2000's

Jenny (Brown) Reville (BSFR '00) and husband David had a daughter, Sophia Grace, on Nov. 21, 2011. Sophia is the granddaughter of Lewis Brown (BSFR '63). Jenny is the vice-president of Brown and Brown Forestry Consulting Co. and the owner of Reville Realty in Washington, Ga.

Thomas Barrett (BSFR '01) and **Red White Barrett** (BSEd '03) welcomed their first child, Bradlee Thomas Barrett on May 2, 2012. He weighed 6 pounds, 1 ounce, and was 18 inches long. The family resides in Soperton, Ga., where Thomas is a forester for the Georgia Forestry Commission.

Carol Guy (BSFR '02) and husband **Seth Stapleton** (MS '05) welcomed their first child, Jonah Kai, on Sept. 3, 2011. Carol is an environmental consultant at PRIZIM Inc., a subsidiary of Hitachi Consulting. Seth is a Ph.D. candidate researching polar bear population ecology in the Canadian Arctic through the University of Minnesota. He also manages the Jumby Bay Hawksbill Project. They reside in St. Paul, Minn.

continued next page

2000's *(continued)*

Robert Tiner (BSFR '03, MFR '05) lives in Cedar Springs, Ga., with wife Haley and daughters Sutton, 22 months, and Copper, 7 months.

Heather Fleming (BSFR '05, MFR '08) married Ben Fleming. Daughter Asa Quinn Fleming was born Aug. 17, joining his excited big sister, Esther Alma Fleming, age 5. The family has moved to Dahlonega, but Heather is still working part-time for the Gwinnett Environmental and Heritage Center as a programmer.

Tyler Cochran (BSFR '06) joined the National Wetlands Research Center as a contractor in 2007 and completed her master's degree in ecology and evolution with an emphasis in environmental toxicology in 2011. She currently works as an avian ecologist within the spatial analysis branch of the U.S. Geological Survey, where she works on remote bioacoustics monitoring of birds and anurans in wetland ecosystems.

Kirk Stodola (PhD '11) married Alison Price (MS '08) on April 30, 2012. He is employed by the University of Illinois as a postdoctoral research associate. Alison is employed by the Illinois Natural History Survey as a mussel biologist. The couple resides in Urbana, Ill.



Correction

The 1972 edition of the *Cypress Knee* yearbook inadvertently switched the portraits of two professors, Ernest Provost and James Rice. Unfortunately, this mistake was repeated in the spring 2012 edition of *The Log*, when we printed the photo mistakenly identified as Dr. Provost with his obituary. We apologize for the error.

Scott Jones makes 40 under 40

Scott Jones (BSFR '95) was named to the University of Georgia Alumni Association's 40 Under 40 this year. Jones, who is CEO of the Forest Landowners Association, said, "I am honored to represent the Warnell School and demonstrate the diverse nature of the forestry profession in receiving this recognition for the UGA Alumni Association."



The 40 Under 40 program, created last year, recognizes alumni under the age of 40 who demonstrate commitment to the University of Georgia and who have made an impact in business, leadership, community, educational and philanthropic endeavors. Recipients for the award are nominated by their peers, and an external selection committee reviews those nominations and chooses the new class of 40 Under 40.

Jones has been the CEO of the Forest Landowners Association since 2003. Previously he worked on government affairs issues with the Southeastern Lumber Manufacturers Association and the Georgia Forestry Association, and spent five years with Smurfit Stone in procurement and land management in North Florida. An SAF-certified forester and Georgia registered forester, Jones was recognized by the Warnell School in 2002 as the Distinguished Young Alumnus and is the past president of the Warnell Alumni Steering Committee. Scott lives in Mableton, Ga., with his wife, Deborah and their two children.

Remembering Carolyn Warnell Bryan



Former Dean Arnett Mace is pictured with Carolyn Warnell Bryan in 2010.

One of Warnell's most generous supporters died recently. Carolyn Warnell Bryan died on Sunday, Oct. 21, 2012. She was 97. The Warnell School is named after Mrs. Bryan's father, Daniel B. Warnell, and she and her late sister Dorothy had a long history of support for the school, including donating the land for what is now the Dorothy Warnell Research, Education and Demonstration Forest in Effingham County in 1998. The Mary Kahrs Warnell Forest Education Center was established within the forest later and named for Carolyn's mother. Mrs. Bryan was one of the foremost Cooperative Extension Home Economists, serving in this role for more than 25 years, during which time she positively impacted so many lives. She was also a very generous donor to the Warnell School and 4-H Foundation.

"Carolyn Warnell Bryan was one of the most gracious, charming, astute, committed and generous people I have known," said Arnett Mace, former dean of the Warnell School. "Sitting in her home conversing over a cup of coffee was a memorable experience, for I was impressed with her accomplishments during her career, including her passion for 4-H. The University of Georgia and the Warnell School of Forestry and Natural Resources have lost an outstanding retired employee and major supporter."

Born on Feb. 23, 1915, in Groveland, Mrs. Bryan graduated from Bryan County High School before attending the University of Georgia, where she graduated with a degree in home economics in 1937. Mrs. Bryan and her family remained committed to UGA. In 1977, Mrs. Bryan became a member of the President's Club of the University of Georgia. In 1988, Mrs. Bryan was named an honorary alumnus of the Warnell School for her longtime support. Her family's legacy began with her father, who served in the Georgia House and Senate in the 1930s. One of Daniel Warnell's greatest contributions was a gift of pine trees to a university researcher, Dr. Charles Herty, for an experiment on whether pine could be used in the manufacturing of paper pulp. Herty's findings led to the rise of a paper industry based on Southern yellow pines and, in-turn, resulted in a need for more educated forest resource professionals.

In honor of their parents' interest in education and investments in natural resources in Georgia, Carolyn and her late sister Dorothy made many contributions to the Warnell School. Their combined gifts were so significant that in 1991 the school was officially dedicated and renamed the Daniel B. Warnell School of Forest Resources (which was then changed to add "and Natural Resources"). After Dorothy's death in 1996, Carolyn established the Dorothy Warnell Research, Education and Demonstration Forest in Effingham County. Today, the Mary Kahrs Warnell Forest Education Center boasts of a state-of-the-art indoor classroom, a large outdoor deck, forest exhibits, and hiking trails. The research forest is home to some of Georgia's most incredible unique habitats. The center provides programs about forest ecosystems and sustainable forest management, and focuses on educational programming for schoolchildren.

"Mrs. Bryan was adamant that the gifts be named for her father, mother and sister," said Mace. "This is a testament of her giving and naming for those she loved so dearly and not for herself. Carolyn, I miss you and cannot thank you enough for the major impact you have made on my life and the lives of so many through your teachings and generous contribution of time and resources. All of us who had the opportunity to know you have become better people by our association with you. God Bless and rest in peace my dear friend." 🌿

Calling all Warnell grads!

Tell us what you're up to these days, and we'll send you a free Warnell School bumper sticker. Don't forget to include your address!

Alumni Office

Warnell School of Forestry & Natural Resources University of Georgia
Athens, Georgia 30602

Fax: (706) 542.8356 e-mail: thelog@warnell.uga.edu

The University of Georgia
WARNELL
SCHOOL OF FORESTRY & NATURAL RESOURCES

In Memoriam: Dr. Claud L. Brown

By SCOTT MERKLE

Warnell lost one of its most outstanding scientists and teachers in May. Dr. Claud L. Brown was formerly professor of botany and an Alumni Foundation Distinguished Professor of Forest Resources. Dr. Brown earned degrees in forestry and botany at the University of Georgia and went on to receive a Ph.D. in biology from Harvard. After serving on the Faculty of Texas A&M University and working with the Western Gulf Tree Improvement Program in Texas, he joined the faculties of Botany and Forest Resources at UGA in 1960. He retired from UGA in 1985, the same year he was inducted into the Georgia Foresters Hall of Fame.

Dr. Brown was one of the most innovative and productive scientists I have ever known. He was conducting forest biotechnology research before the term “biotechnology” was even coined, and his research accomplishments in our field were legendary. His research on tree physiology and genetics was so ingenious and groundbreaking that it appears as examples of classic work in textbooks on tree physiology and plant development. Dr. Brown and Dr. Robert Lawrence invented the very first defined tissue culture medium for growing pine cultures, and, along with Dr. Harry Sommer, he was the first scientist in the world to propagate pine trees in tissue culture. Even now when I attend forestry research meetings, scientists from all over the world, when they find out I am from UGA, still ask if I know him.

But pioneering research is not all that Dr. Brown did for Warnell. In the 1980s, he established the Thompson Mills Forest near Braselton, the land for which had been donated by Mr. Tom Thornton, largely in gratitude for Dr. Brown’s help to him and his mother decades previously. Dr. Brown obtained tree seeds from all over the world, germinated them and, with Mr. Bill Lott’s assistance, planted the trees out in the arboretum, which was designated the State Arboretum of

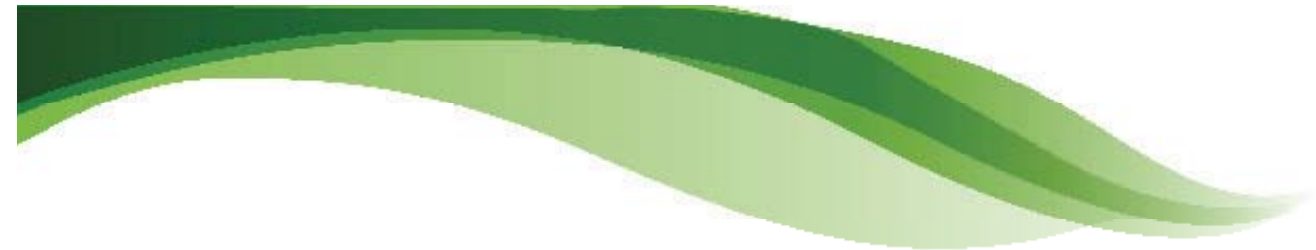


Georgia by the Georgia General Assembly in 1991. During the same period, Dr. Brown co-authored a book with Dr. Kay Kirkman, “Trees of Georgia and Adjacent States,” which they revised and published with Dr. Don Leopold as “Native Trees of the Southeast” in 2007. We have been using these books, with their excellent photographs and species descriptions, as the main texts for Dendrology lab at Warnell for several years.

Even though he retired in 1985, Dr. Brown continued to conduct and publish research for years afterwards, working in a laboratory he set up in the basement of his house. Though he was battling health problems for the past several years, he still loved to talk science whenever former students or colleagues would visit him at his home in Watkinsville. Dr. Brown’s accomplishments and contributions to Warnell were recognized in 2010, when he was presented with the Distinguished Alumnus Award. Dr. Brown’s wife, Billie Kinsie Brown, passed away in 2010. He is survived by his son Scott Brown, of Houston, Texas, his daughter, Claudia Parr of Richmond, Virginia and granddaughters Nicole and Tiffany Brown. 🌲



Access multiple markets with the FlexStand® System.



Get the highest return possible on sawtimber, pulp, paper and biomass markets with the FlexStand® System from ArborGen.

Superior Pine genetics from our open pollinated seedlings, MCP® Seedlings and Varietal Seedlings help you get more wood per acre. By growing trees for various products on the same land, you’ll bump up your bottom line and conserve resources.

Call us today to find out how the ArborGen FlexStand System can help reap top profits. Or, contact your ArborGen SuperTree Nursery.

888-888-7158
www.arborgen.com



Buy 1
Get 2 Free!

For every Varietal seedling you buy,
you’ll get 2 OP seedlings free!
Offer available while supplies last.



The University of Georgia

Warnell School of Forestry and
Natural Resources
The University of Georgia
Athens, Georgia 30602-2152

Return Service Requested

Non-Profit Org.
U.S. Postage
PAID
Permit No. 1176
Stone Mountain, GA

Printed on elemental chlorine-free, 25 percent post-consumer recycled paper from well-managed forests.

LOOKING FOR GREAT EMPLOYEES?

SEARCH NO FURTHER!

**Warnell's online
job postings can put you
in touch with the talent
and skill you need.**

**email your job posting to
ami@uga.edu**

