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AUBURN UNIVERSITY COLLEGE OF AGRICULTURE
AGillustrated

Lighting Up LIFE

Horticulture Senior Wins Miss Homecoming Title with Personal Story of Adoption

by JAMIE CREAMER

LOVING LIFE At left, horticulture senior Molly Anne Dutton is all smiles amid the spectacular flowers on the grounds of the Biltmore Estate in Ashville, N.C. Dutton, who got hands-on horticultural experience as an intern at the storied estate during the summer of 2013, was elected Auburn University's Miss Homecoming 2013 in early October. Her campaign platform, "Light Up LIFE," aimed to raise awareness of adoption as a positive alternative for women in crisis pregnancies and was based on her own personal story of adoption. Above, Dutton and supporters take a break from campaigning on the Concourse in the week leading up to Homecoming Saturday.

NOBODY HAD TO TELL MOLLY ANNE DUTTON that she was adopted; that was pretty obvious. Her parents were white, and she wasn't. Neither were three of her five siblings, none of whom were blood relatives.

But it wasn't until she was 12, maybe 13, that she heard for the first time the details of her extraordinary story—how a California woman had become pregnant following a rape, how the woman's angry husband had demanded she either abort or face divorce, and how, instead, the courageous woman had chosen life for the unborn child, relocating to Birmingham, Ala., finding refuge in and support from an agency called Lifeline Children's Services, and, two days after delivering the baby girl, placing the infant into a loving home through adoption.

"When my mom told me my story, I was overwhelmed with joy," says Dutton, a senior in Auburn University's Department of Horticulture. "I never once felt shameful because I realized I was so blessed that my birth mother made that decision, that she'd had Lifeline as a resource, and that I had been given a wonderful, loving family."

"I never once felt shameful because I realized I was so blessed that my birth mother made that decision, that she'd had Lifeline as a resource, and that I had been given a wonderful, loving family."

This past fall, Dutton made her personal story of life and joy known across the Auburn campus through "Light Up LIFE," the adoption-awareness platform she ran on as one of five finalist in Auburn's 2013 Miss Homecoming competition.

"I felt like the campaign was an opportunity to share my story and try to create a movement for adoption as an alternative in a crisis pregnancy and to raise money for Lifeline" through T-shirt sales, Dutton says.

Her message struck a resounding chord with the student body, and though she entered the Miss Homecoming competition with a major disadvantage—nominated by Auburn's student chapter of the Professional Landcare Network, or PLANET, she was the only non-Greek candidate in the running—the vivacious-yet-sincere Dutton won the hearts and the votes of enough Auburn students to win the title of the 2013 Miss Homecoming.

The announcement came in Jordan-Hare Stadium as the five candidates stood at mid-field during halftime of Auburn's homecoming game against Western Carolina. Dutton was escorted by a woman she describes as "a vessel of love": her mom, Peggy.

Mrs. Dutton and her husband at the time were volunteers and members of the board of Lifeline 22 years ago when a distraught pregnant woman who had traveled from California showed up at the Birmingham-based Christian adoption agency in search of support, counseling and acceptance. The Duttons were the parents of five children, two biological children who were in their teens and three minority children—then ages 4, 5 and 6 and none of them blood relatives—they had adopted through Lifeline. Molly Anne became Dutton child number six when she was 2 days old.

"I was of mixed ethnicity, and our family was a mixed family," says Dutton, whose birth mother was white and whose biological father was Jamaican. ("When I was little and they'd give us forms where we had to mark our race, I'd just go through and check any I thought were applicable," she jokes.)

Dutton was 3 when her parents divorced.

"My mom became a single parent with six kids, and she had to work a lot of jobs when we were young," Dutton says. "But she was called to be a mother; she is a vessel of love."

Dutton graduated from Jefferson County's Gardendale High School in 2010 and arrived at Auburn that fall as a business major, because . . . well, just because.

"I wanted to have a major when I came here, so I chose business because I thought, 'Well, I may not be passionate about it, but I'll be able to get a job with it,'" she says.

It didn't feel quite right, though, so, as she so often does, she relied on her faith.

"I started praying for passion, that I would find what I was passionate about, and I started thinking how my mom loves plants, and I love plants and people, and then somebody said I should talk with somebody in horticulture over in the College of Agriculture," she says. She did, and one visit with horticulture associate professor Carolyn Robinson was all it took.

"I remember thinking, 'I have no idea what I'm getting into'—the College of Ag—but I changed my major to horticulture, and that decision has been confirmed in all that's happened since," Dutton says. "I love my professors and my classes and everybody in the college."

She also loved every minute of her summer 2013 horticulture internship, in which the elegant gardens at the Biltmore Estate gardens in Asheville, N.C., were her classroom.

"It was an unbelievable experience," Dutton says. "I worked in the estate's Walled Garden, mostly in the rose garden there, but we got to help with other things, like planting and pruning and watering the plants on the grounds. I learned so much, including how to drive a stick shift."

Dutton is on track to graduate with her horticulture degree in May 2014, and though her goal is to have her own retail nursery and garden center one day, she first plans to go for her master's in horticulture. At Auburn, of course.

As a child, Dutton knew that she and three of her siblings were adopted, "but I never asked my mom any questions or tried to find out any

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AUBURN AGRICULTURE
www.ag.auburn.edu

View from AGhill

As another year comes to a close, I am reminded of how investments today in the College of Agriculture and the Alabama Agricultural Experiment Station can have such deep, long-term impacts on our state and region.

Fall semester 2013 began with the official opening of one of the region's leading high-tech research facilities, the Mike Hubbard Center for Advanced Science, Innovation and Commerce. We are grateful to Speaker of the House Mike Hubbard for securing more than $14 million in state matching funds that helped make this excellent facility a reality for Auburn and for the state's agricultural industry. The 84,000-square-foot facility, CASIC, is located in Auburn's Research Park and is now the hub of much of our AAES research activity.

Within its walls, researchers are tackling some of our leading agricultural, economic and societal issues, such as bioenergy, water resources, food safety, genomics, irrigation and more. I believe that in the next decade, the research currently underway in CASIC will lead to major progress for the state in the form of a renewable energy program, growth in crop production and new technologies that will help build new industries.

I believe we can expect a similar type of impact through advancements recently made for our Biological Engineering Research Laboratory. Three-quarters of the funding for the extensive renovation of this 65-year-old facility came through a competitive grant from the National Science Foundation. As a result, the faculty and students of our Department of Biosystems Engineering now have new capabilities and advantages in their research.

Their research focuses on a variety of issues, such as safe and healthy food-processing techniques, biofuels, environmental preservation and improved management of natural resources. I am confident that the excellent research facility in which they are now working will help recruit more of the best and brightest students and faculty to Auburn.

But these excellent faculty, students and researchers are only partially to credit for the solutions and the advancement and progress that is coming from these research facilities. Progress like this—progress that ultimately impacts our entire state, region and world—begins with people like you. It begins with people who believe these local and global issues exist, who believe new solutions are needed, who believe in the impact of great research and who believe in the students and faculty of Auburn University.

Your generosity and your influence are at the root of every success and every step forward. Thank you for all you do, and may we all continue to work together in 2014 toward greater solutions and discoveries.

Bill Batchelor
DEAN, COLLEGE OF AGRICULTURE
DIRECTOR, ALABAMA AGRICULTURAL EXPERIMENT STATION

Auburn Ag Alumni Group To Honor Five Difference Makers

The Auburn University Agricultural Alumni Association will pay tribute to five individuals for the significant contributions they have made to the state's agricultural industry during its 2014 Alabama Agricultural Hall of Honor banquet, set for Thursday, Feb. 13, at the Auburn Marriott Opelika Hotel and Conference Center at Grand National, located at 3700 Robert Trent Jones Trail, Opelika. Registration will begin at 5:30 p.m., followed by the banquet at 6:15 p.m.

Jimmy Sanford

Lester Killebrew Sr.

Albert McDonald

James Collins

Dale King

Three of the five honorees will be inducted into the association's Hall of Honor, including Jimmy Sanford of Prattville, representing production agriculture; Abbeville businessman Lester Killebrew Sr., the honoree from the agribusiness sector; and Albert McDonald of Huntsville, recipient in the education/government category.

Sanford, a member of the Auburn University Board of Trustees and chairman of the board of HOME Place Farms LLC., is a fourth-generation cotton producer on land his great-grandparents began farming in 1881; he also is chairman of the Auburn Research and Technology Foundation and the Alabama Cotton Commission and is a member and leader in numerous agribusiness and business organizations at the local, state and national levels. Killebrew is chairman of the tri-state John Deere dealership SunSouth LLC and is president and CEO of Henry Farm Center Inc. and ValCom Wireless and CCS Technology Centers. McDonald is a veteran Madison County cotton farmer who served as an Alabama state senator from 1974 to 1982 and as Alabama Commissioner of Agriculture and Industries from 1983 to 1991.

Also during the banquet, the association will recognize the late James Collins of Cusseta and the late Dale King of Opelika as recipients of its 2014 Agricultural Pioneer Awards, given posthumously to individuals who played a role in shaping Alabama agriculture. Collins was a successful cattleman and a leader in the state's beef industry, and King was an Auburn Department of Poultry Science head, professor and researcher and was responsible for introducing the concept of laying cages to the state's poultry industry.

Tickets to the 2014 Hall of Honor banquet are $50 per person; opportunities for corporate sponsorships at the platinum, gold, silver and bronze levels also are available. Ticket and sponsorship reservation forms are online at www.ag.auburn.edu/alumni/hall-of-honor/. For more information, contact Amanda Martin at 334-844-8900 or Amanda.martin@auburn.edu.

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$28.8 Million CASIC Will Advance Scientific Research at Auburn

Five years after a small group of College of Agriculture and Alabama Agricultural Experiment Station administrators and staff, on short notice, beat a deadline to apply for a substantial federal grant that would pave the way for a new, highly advanced research facility at Auburn University, that facility—the Mike Hubbard Center for Advanced Science, Innovation and Commerce—is now officially open.

Located in the Auburn Research Park, the $28.8 million, 84,000-square-foot facility, known as CASIC, is designed to foster multidisciplinary research, advance the university's academic mission and generate economic development in the state. With 20 high-tech laboratories, a super computer, seminar rooms and outside features such as two 5-ton cranes for biofuels work, CASIC is expected to enhance Auburn's scientific research in bioenergy, water quality, food safety and engineering, genomics, information science and ecosystem health.

In addition to researchers from the College of Agriculture, scientists from Auburn's colleges and schools of Engineering; Sciences and Mathematics; Architecture, Design and Construction; and Forestry and Wildlife Sciences will be housed in the building.

RESEARCH HUB The newly completed 84,000-square-foot Mike Hubbard Center for Advanced Science, Innovation and Commerce is located in the Auburn Research Park off South College Street. The center has the potential to bring in millions of dollars in research grants and contracts annually, which can result in several times that amount in amplified economic impact per year.

It was in late 2008 that then–College of Ag Associate Dean for Research and AAES Assistant Director John Liu put together a team that, in less than two weeks' time, wrote a major funding proposal that resulted in a $14.5 million grant from the U.S. Department of Commerce's National Institute of Standards and Technology as cost-share support to build a state-of-the-art research facility at Auburn. Construction began in late 2011.

In June 2012, the Auburn University Board of Trustees voted to name the center after Alabama House Speaker Mike Hubbard, R-Auburn, who helped secure $14.1 million in state matching funds to accompany the federal grant. Auburn University and the Alabama Agricultural Experiment Station provided the remaining support and will fund the operation of the center.

The center has the potential to bring in millions of dollars in research grants and contracts annually, which can result in several times that amount in amplified economic impact per year.

"As our global population grows and societies change in many ways, we are facing new challenges across the agricultural landscape," Bill Batchelor, dean of the College of Agriculture and director of the Alabama Agricultural Experiment Station, says. "It is critically important that our researchers have the tools and resources they need to discover real solutions to these challenges, and that is what CASIC is offering. This is a valuable facility for Auburn and for the agricultural industry as a whole."

Lab Facelift Strengthens Biological Engineering Research at Auburn

A newly renovated and highly modernized Biological Engineering Research Laboratory that will significantly enhance the research infrastructure of Auburn University, the state and the region officially opened on campus Thursday, Nov. 21, during a ribbon-cutting ceremony that included university, College of Agriculture and Department of Biosystems Engineering administrators.

The $6 million renovation, funded by a $4.6 million National Science Foundation competitive grant and $1.6 million from the Alabama Agricultural Experiment Station, marks the first substantial improvements to the 22,800-square-foot lab since its construction in 1948.

"The new facility has contemporary laboratories that give us new capabilities to address engineering problems in biological systems, with specific emphasis on critical societal needs for producing renewable energy, maintaining clean and abundant water, providing safe and healthy foods, improving natural resource management and preserving the environment," says Steve Taylor, Department of Biosystems Engineering head and professor.

The Biological Engineering Research Lab, more commonly known as BERL, is located directly behind the Corley Building. The renovation included replacing long-outdated mechanical, electrical and plumbing systems and the installation of air conditioning and crucial safety features, such as fume hoods.

"We now will have controlled-environment rooms and cold rooms where we can conduct research on food and other biological materials, and we have labs for chemical analysis, biomaterial characterization, food engineering, the advanced study biological systems and high-bay labs for biomaterial processing and conversion," Taylor says.

EXTREME MAKEOVER A $6 million renovation of the Biological Engineering Research Lab, located behind the Corley Building on the Auburn University campus, is expected to enhance research capabilities and help attract extramural funding and top-notch faculty and students to the Department of Biosystems Engineering.

Additional features of the lab facility include a high-bay work area for the fabrication of research equipment and flexible, open high-bay spaces that allow multiple graduate students to work on a wide variety of problems.

"It has space to encourage students to collaborate and brainstorm on research questions," Taylor says.

The updated facility, which will be used by biosystems engineering faculty and graduate students as well as their collaborators in other units on campus, should help increase extramural funding at Auburn and help biosystems engineering recruit the "best and brightest" graduate students and faculty, Taylor says.

Biosystems engineering research to be conducted in BERL ranges from the development of new techniques for processing and pretreating biomass used to produce liquid fuels or electrical power to the refinement of food processing and packaging techniques that extend the shelf-life and ultimate safety of food products.

2014 Brings New Online Environmental Science Master's Program

An online master's degree program in soil, water and environmental science at Auburn University has gained final approval and will officially launch spring semester 2014, giving working professionals in fields related to natural resource management the opportunity to further their education and build their expertise via distance education.

The fully online program, which the Alabama Commission on Higher Education approved in September, is a multi-institutional and multidisciplinary program offered through the Agriculture Interactive Distance Education Alliance, or AG*IDEA, a consortium of universities offering distance education programs and courses in agricultural disciplines. In addition to Auburn, participating AG*IDEA institutions include the University of Georgia, North Carolina State University and Texas Tech University.

Through the consortium, students interested in the soil, water and environmental science master's degree choose a home university where they apply and register for courses and from which they are awarded their degrees, but the required and elective courses they take are taught online by top faculty from all of the participating institutions.

The master's program has a thesis and a non-thesis option; both require successful completion of 36 semester hours, including 15 credit hours in core courses. Students who complete the thesis option will receive a Master of Science degree; non-thesis students will be awarded a Master of Agriculture.

All core and elective courses in the program are offered through the Department of Crop, Soil and Environmental Sciences.

Prospective students should submit their applications to the Graduate School at Auburn at least 45 days before the first day of class of the semester they want to begin graduate study. Summer semester 2014 begins May 16. Tuition for the program is one set price—$485 per credit hour—regardless of which home university a student chooses.

For more about the new degree program, including the application process, go to www.ag.auburn.edu/students/distanceeducation/IDEA/index.php or contact Megan Ross at mhr0001@auburn.edu or 334-844-3201. For more about AG*IDEA, go to http://www.agidea.org/.

Student Spotlight

Twist of Fate

UF Grad in Nonprofit Studies Sees Brighter Future in Turfgrass

by JAMIE CREAMER

If a car pulling a boat trailer hadn't bumped into Jared Nash's mother's vehicle in Melbourne, Fla., a couple of years ago, Nash would not be pursuing his second bachelor's degree—this one in turfgrass management—at Auburn University today.

He might still be searching for a decent-paying job in which he could make use of the B.A. degree in nonprofit studies he received from the University of Florida in May 2012, but he wouldn't be in the turfgrass program at Auburn.

"This all happened, literally, by fate," he says.

And that does seem to be the case, if you consider (a) that Nash was home for the summer between his junior and senior year at Florida and jobless, (b) that the traffic accident even occurred, (c) that Mrs. Nash and the lady driving the other vehicle struck up a conversation and (d) that the other driver happened to mention that she knew someone who knew someone who owned a Melbourne golf course and was looking for seasonal employees.

"I hadn't had any luck finding a job that summer, so somehow in their conversation, I think mom wound up telling the lady that if she could help me get on at the golf course, they'd call the wreck a wash," Nash says. "Anyway, mom came home and said, 'Call this place now because they're hiring, and you need a job.'"

That phone call was the beginning of something big in the younger Nash's future.

"I'd always liked golf, but I guess I'd never thought about how somebody had to keep the course in shape and looking good, and how there were people who actually did that for a living," Nash says. "I went to work there, and that was the best job I had ever had. I loved it."

So much so that when he returned to Gainesville that fall, he went straight to faculty in Florida's turf science program to change his major. But because the turf science curriculum was vastly different from that for nonprofit studies, the faculty advised Nash to go ahead and finish his degree in the not-for-profit realm and then go for a second degree.

It made sense to him and, eventually, it did to the parents of the college senior.

"They weren't too upset that I wanted to go back to school for another degree in something totally different," Nash says. "Really, they were glad I had found something I really wanted to do."

Even as he worked to complete his bachelor of arts degree as a Gator, Nash was investigating turf management programs at universities nationwide, including the one in Auburn's Department of Crop, Soil and Environmental Sciences.

A RANGERS KIND OF SUMMER Auburn turfgrass management major Jared Nash, right, and co-workers disperse a drying agent on the field at Rangers Ballpark in Arlington following a heavy rain that fell a couple of hours before a Texas Rangers baseball game. Nash spent the summer of 2013 interning with the Rangers' sports turf management team.

"I'd heard the program here was really strong, so I came up to visit that summer," he says. "It was the right fit, and I knew it."

And this time, it's the right major, even if he *is* swamped with all the science and ag-related classes that were not required for the nonprofit studies major at Florida.

"I'm loving it," says Nash, who started at Auburn fall semester 2012.

With the help of turfgrass management professor Beth Guertal, Nash landed a summer 2013 internship with the Texas Rangers turf team, and since spring, he's been a student worker with Auburn's athletic turf and grounds crew. (Yes, he was inside Jordan-Hare, on duty and right there on the field, the evening of Saturday, Nov. 30, when the play of 10 dozen millennia led the Auburn Tigers to a 34-28 victory over the Crimson Tide.)

During his high school years, Nash had been involved in numerous community service activities with charitable organizations, so when he entered Florida as a freshman in 2008, nonprofit studies had seemed to be as good a major to declare as any other. But as early as his junior year there, he had begun to realize that, in the field of nonprofits, good job opportunities might be hard to find.

His career future looks a lot brighter with degree No. 2, which he expects to receive in 2015.

"With this turfgrass management degree, you can go work in any turf field you want, even doing research," Nash says. "I'll have a great career, and I'll be doing something I really enjoy."

Two Young Ag Alums Named Top Achievers

College of Agriculture alumni Soren Rodning and James Farmer III are among 10 Auburn University graduates who have been named winners of the Auburn Alumni Association's 2013 Young Alumni Achievement Awards.

Rodning earned his bachelor's degree in animal sciences in 2002 and went on to graduate from the College of Veterinary Medicine in 2006. He is now an associate professor in the Department of Animal Sciences and a member of the U.S. Army Reserve.

Farmer, a 2004 horticulture graduate, is a Southern gardener, landscape and interior designer, cook, farm-to-table lifestyle expert and author of five books, including "A Time To Plant," which was a Wall Street Journal best-selling gardening book, and, most recently, "A Time To Cook."

The association created the award to recognize extraordinary accomplishments by members of the Auburn family who are under the age of 40. Rodning and Farmer were selected for significant achievement in their professional lives and/or for distinguished community service.

Auburn's College of Ag Draws Many Out-of-Staters

When Steve Heath started thinking about college, he didn't have any particular school in mind. All he knew was that he was ready for a radical change.

"I wanted to have a new beginning," Heath says. "I wanted to go some place totally different than what I was used to."

He found what he was looking for in Auburn University, and this past August, he left his family, his friends and his childhood back in sunny Sacramento and moved 2,400 miles eastward to enroll in Auburn's College of Agriculture as a freshman in agricultural economics.

Heath is among the almost 27 percent of the College of Agriculture's 2013 freshman class who hail from out of state, but he has the distinction of being the farthest from home, followed closely by Katherine Mosteller, an animal sciences/equine science major from almost-as-far-away Manhattan Beach, Calif.

Heath says Auburn made his choice of schools easy.

"I had never in my life been to the South before I came to visit the Auburn campus, but when I visited, I loved the lifestyle and Southern hospitality," Heath says. "I am actually the first person in my family to leave the West Coast and go to school in the South."

Unlike Heath and Mosteller, the majority of the college's out-of-state freshmen hail from the Southeast: 15 are from Georgia, seven from Florida, five from Tennessee and four from Louisiana. But fifth on the list is New York, with three.

Other states represented among College of Agriculture freshmen include Illinois, Texas, Maryland, Kentucky and North Carolina, all with two students each; and West Virginia, Indiana, Ohio, Colorado, Connecticut and Virginia, with one apiece.

In terms of areas of study, almost half of the out-of-state freshmen in the college are animal sciences majors, including 25 on the pre-vet track and eight in equine science, followed by ag business and economics, the major of choice for Heath and five others.

"I chose ag economics because I felt like it would give me the best opportunity in the job market after college," Heath says. "You can do a variety of different things with this major."

Heath says he's adjusted well to the culture shock that you'd expect to accompany a move from California to Alabama.

"I mean, I miss California, definitely, but I wouldn't say I've been homesick," he says.

Longtime Agronomy Teacher, Mentor Passes Away

Joseph Hood

Joseph Talmadge Hood, a College of Agriculture faculty member who taught, advised and mentored more than 10,000 students in his 51-year career on Ag Hill, passed away Nov. 15. He was 89.

Hood came to Auburn in 1949 as an assistant professor in Alabama Polytechnic Institute's Department of Agronomy and Soils. He officially retired in 1986 but continued teaching until 2000 and then for several years volunteered his time and services to his department and the college.

Memorial contributions may be made either to The Mercy Committee at Auburn United Methodist or to the Joseph T. and Nona S. Hood Endowed Scholarship Fund in the College of Agriculture, with checks made payable to the Auburn University Foundation and sent to the college at 107 Comer Hall, Auburn, 36849, ATTN: Development Office.

HIGH HONORS Conner Bailey, left, professor in the Department of Agricultural Economics and Rural Sociology, accepts Auburn University's 2013 Creative Research and Scholarship Award from Carl Pinkert, former associate vice president for research at Auburn, during this year's university-wide faculty awards ceremony. The award honors faculty who have distinguished themselves through research, scholarly works and creative influence in their fields. Bailey's expertise is in the sociology of natural resources, particularly the impact of technology on resources and the people who depend on them.

Auburn College of Ag, AAES Honor Top Faculty, Staff for 2013

Fifteen Auburn University College of Agriculture/Alabama Agricultural Experiment Station scientists who collectively brought in more than $5.84 million in extramural research funding in 2013 were among the more than two dozen faculty and staff members honored during the recent college/AAES awards ceremony.

Faculty recognized for academic excellence were animal sciences associate professor **Dale Coleman**, the 2013 Dean's Award for Advising Excellence winner, and horticulture professor **Joe Eakes**, recipient of the 2013 Dean's Award for Teaching Excellence. Biosystems engineering associate professor **John Fulton** received the 2013 Excellence in Extension and Outreach Award among junior faculty members, and **Walt Prevatt**, agricultural economics and rural sociology professor, received that award at the senior level.

The 2013 AAES Director's Research Awards for Senior Faculty and Junior Faculty went to biosystems engineering professor **Oladiran Fasina** and fisheries assistant professor **Eric Peatman**, respectively.

Peatman also was among the 14 Dean's Grantsmanship Award recipients, recognized for bringing in grants totaling $250,000 or more during the year. Others included **Patricia Curtis**, Auburn University Food Systems Institute director; animal sciences associate professor **Christy Bratcher**; professor and department head **Steve Taylor**, professor **Puneet Srivastava** and associate professor **Sushil Adhikari**, all in biosystems engineering; entomology and plant pathology professors **Henry Fadamiro**, **Joseph Kloepper**, **Kathy Lawrence** and **Edward Sikora**; **Sam Fowler**, Water Resources Center director; and, from fisheries, aquaculture and aquatic sciences, professor **Allen Davis**, associate professors **Terry Hanson** and **Carol Johnston**, and assistant professors **Bill Walton** and Peatman.

Walton and two colleagues at the Marine Research and Extension Center in Dauphin Island—natural resources program manager **Scott Rikard** and adviser **Glen Chaplin**—were presented the 2013 Project Team Award for their collaborative efforts in developing an off-bottom oyster culture industry on Alabama's Gulf Coast.

Curtis Jolly, professor of agricultural economics, was recognized as recipient of the 2013 High Impact Paper of the Year Award; biosystems engineering professor **Kyung Yoo** won the 2013 Richard L. Guthrie Award for Achievement in International Agriculture; and student services coordinator **Amanda Martin** received the 2013 Outstanding Commitment to Diversity Award.

Among staff members, winners of 2013 Employee of the Year Awards included **Barney Wilborn**, Lambert-Powell Meats Lab manager, in the professional/managerial category; **Kathleen Dowdell**, lead administrative assistant in the Department of Agricultural Economics and Rural Sociology, in the administrative support arena; **L.B. Cox**, ag technician at the E.V. Smith Research Center, in the service/maintenance/skilled worker division; and entomology and plant pathology research associate **Jennifer Parker** in the teaching/research/outreach professional category.

Each award recipient was presented a plaque and a cash award.

Student Accomplishments

Department of Crop, Soil and Environmental Sciences senior **Joshua Carter** has received the $1,000 J. Fielding Reed Scholarship from the American Society of Agronomy, the Crop Science Society of America and the Soil Science Society of America. Carter, a student in his department's accelerated B.S./M.S. program, will receive his bachelor's in agronomy and soil science in May 2014. He will graduate in May 2014 and then continue graduate work studying drought stress in peanuts under the direction of professor Charles Chen.

Horticulture major **Britton Garrett** was selected one of seven students nationally to serve as a 2013 Student Ambassador for PLANET, the professional landcare network. In that role, he assisted at the 2013 Green Industry Conference, a major landscape industry education and networking experience in October in Louisville, Ky.

Two August 2013 College of Agriculture master's graduates were among six Auburn grad students named as winners of the Graduate School's 2013 Master's Thesis Awards. **Zach DeVries'** master's in entomology thesis, "Respiratory Physiology of Urban Insects," focused on the respiration physiology of three types of insects—bedbugs, firebrats and silverfish—to determine how they can survive extended periods of starvation. **Stefanie Christensen**, rural sociology, won with her thesis, "Surviving the spill: stakeholder perceptions of the commercial seafood supply chain in Alabama and Mississippi after the Deepwater Horizon disaster." Christensen won in the Social Sciences, Business and Education category, and DeVries in the Life Sciences category.

Faculty and Staff Accomplishments

Auburn plant pathologist and Distinguished University Professor **Rodrigo Rodriguez-Kabana** received special recognition for 50-plus years of outstanding service in the field of nematology during the Organization of Nematologists of Tropical America's annual meeting this fall in La Serena, Chile. Since joining the Auburn faculty in 1965, his research has focused on the study of biological control of crop-destroying nematodes and other soil-borne pests, the development of cropping systems that allow for sustainable production with sound economic and ecological bases and the development of replacements for the ozone-destroying soil fumigant methyl bromide.

Zhanjiang "John" Liu, a researcher and professor in the School of Fisheries, Aquaculture and Aquatic Sciences since 1995 and College of Agriculture associate dean for research and Alabama Agricultural Experiment Station assistant director since 2007, is Auburn's new associate vice president for research and associate provost. In that position, which he assumed Dec. 1, Liu will connect the university's administration, the colleges and schools, the AAES and Extension and help faculty campus-wide find external funding, with the goal of strengthening the quality and visibility of Auburn's research programs.

David Weaver, professor in the Department of Crop, Soil and Environmental Sciences, has been named a 2013 Fellow in the Crop Science Society of America. He was selected based on his achievements in teaching, research, leadership and service to the society and to his profession and the university. This is Weaver's second such honor: In 2009, he was named a Fellow of the American Society of Agronomy.

Department of Poultry Science head and professor **Donald Conner** and **Henry Fadamiro**, alumni professor in the Department of Entomology and Plant Pathology, have been accepted into the Fall 2013 Food Systems Leadership Institute, a two-year executive development program that equips scholars in higher education, government and industry with leadership and organizational-change skills and a broad interdisciplinary perspective of food systems.

Retirements

Five long-time College of Agriculture faculty members and one veteran AAES outlying research unit director have announced their plans to retire, effective Dec. 31. The retiring faculty and the number of years they have been with the College of Agriculture include, in animal sciences, professor **Keith Cummins**, 34 years, and Extension specialist **Robert Ebert**, 28 years; in horticulture, professor **Fennechiena Dane**, 28 years, and professor **Bill Goff**, 31 years; and, in poultry science, professor and Extension specialist **John Blake**, 34 years. Also retiring will be Brewton/Monroeville Agricultural Research Unit director **Randy Akridge**, after 36 years of service.

Two other faculty members will retire on Jan. 31, 2014, including Department of Crop, Soil and Environmental Sciences department head and professor **Joe Touchton**, after 33 years at Auburn, and animal sciences professor **Tom McCaskey**, 46 years. **Kyung Yoo**, bioengineering professor, will retire from 30 years on the faculty March 31, 2014.

Relevant Research

Caught on Camera

Fish Pathogen Remains Viable in Biofilm, Auburn Study Shows

by JAMIE CREAMER

A team of Auburn University College of Agriculture researchers studying the development of biofilm formed in aquaculture settings by the highly contagious fish pathogen Flavobacterium columnare has taken the first-ever microscopic image of the biofilm—a photograph fascinating enough to make the cover of the scholarly journal Applied and Environmental Microbiology.

Credit for the image, which accompanied an article in which the scientists reported their findings, goes to team member Wenlong (Colin) Cai, a graduate student in Auburn's School of Fisheries, Aquaculture and Aquatic Sciences. Cai, fisheries professor Cova Arias and Auburn plant pathology assistant professor Leonardo De La Fuente conducted the biofilm investigation.

"We were the first to look at how different chemical parameters affect biofilm formation, with the idea of finding conditions that will prevent or limit the development of biofilm in aquaculture settings," Arias says.

In freshwater fish species, particularly farm-raised catfish and tilapia, the bacterium F. columnare causes columnaris, a devastating disease to the aquaculture industry and the second leading bacterial disease in commercial catfish operations in the Southeast. The disease is characterized by lesions on a fish's skin, fins and gills. As the infection and resulting necrosis worsens in the gills, the fish's oxygen supply is cut off.

Biofilm is a layer of bacteria that forms on, coats and colonizes inert surfaces and in closed aquaculture systems is considered the source of F. columnare contagion for farmed fish. Through their project, the Auburn scientists documented the formation of and changes in biofilm under static and flow conditions and examined the effects that water temperature, pH, salinity, hardness and sugars have on the ability of the biofilm to attach to surfaces.

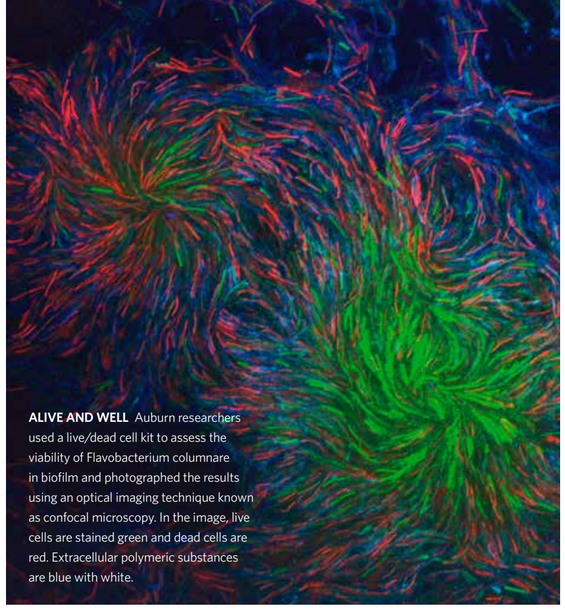
While F. columnare can survive in lake and pond water, it becomes less virulent over time. A key finding of the Auburn study was that F. columnare in biofilms retains its potency. The researchers found, too, that high water temperature and salinity inhibit biofilm formation, while high water hardness encourages it.

"Maintenance of hardness and salinity values within certain ranges could prevent biofilm formation by F. columnare in aquaculture systems," Arias says.

The researchers acknowledged that the parameters of water temperature, salinity and hardness are difficult to control in commercial catfish ponds.

"But they can be maintained in hatcheries, where columnaris disease can cause more than 90 percent mortality in catfish fingerlings," she says.

The journal article and photograph were published in the September issue of Applied and Environmental Microbiology, volume 79, number 18.



ALIVE AND WELL Auburn researchers used a live/dead cell kit to assess the viability of Flavobacterium columnare in biofilm and photographed the results using an optical imaging technique known as confocal microscopy. In the image, live cells are stained green and dead cells are red. Extracellular polymeric substances are blue with white.

Study Shows Earthworms Help Destructive Nematodes Get Around

by JAMIE CREAMER

Auburn University plant pathologist Kathy Lawrence was a bit mystified a few years back when research in her lab revealed that soil-dwelling, crop-destroying nematodes spread significantly farther and deeper at a much faster rate than long had been assumed.

Now, five years later, another discovery by a graduate research assistant of hers is shedding new light on that earlier finding, offering the first scientific evidence that disease-causing nematodes can and do hitchhike to other parts of a field, not only on farm equipment but also on—or, rather, in—earthworms.

"What we wanted to know in this study was whether earthworms pick up nematodes as they move through the soil, whether plant-parasitic nematodes are present in earthworm castings in Alabama cotton fields and whether they're present in the gut systems of earthworms," says Ph.D. student David Bailey, who is working under the direction of Lawrence and entomology associate professor David Held.

And the answers were Yes, Yes and Yes.

"The results we got suggest that nematodes and earthworms have a mutualistic relationship, one where both species benefit," Bailey says. "As earthworms travel through the soil, they feed on organic matter and roots, and they consume plant-parasitic nematodes in the process. The nematodes pass through the earthworm's gut system, uninjured, and are transported to new locations, emerging in the castings alive and active."

The Auburn findings contradict results from a 2001 study in which nematodes were found in dissected earthworms' pharynxes and esophagi but not in the crops and gizzards. That led scientists to posit that nematodes could not survive passage through earthworms' digestive tracts, and a later study indicating that high earthworm populations in peat meadows corresponded to low nematode numbers appeared to support that conclusion.

"What was most surprising in David's work was that, in the earthworms he dissected, he found not only live nematodes but nematode eggs as well," Lawrence says.

The earthworm-nematode project was spawned by sheer curiosity on the part of Bailey, who earned his master's in entomology from Auburn in December 2012 under Held's guidance with research on mole crickets' tunneling behaviors.

"I was in a cotton field one day and noticed there were a lot of earthworm castings on the surface, and I started wondering whether there were in nematodes in the casts," says Bailey. "This whole side project has sprung from there."

For the study, Bailey collected earthworms and earthworm castings—excrement the worms deposit on the surface—from nematode-infested cotton fields located at Auburn University's E.V. Smith Research Center in east-central Alabama and the Tennessee Valley Research and Extension Center in Belle Mina. The E.V. Smith fields are farmed using conventional tilling practices, while those at the TVREC are no-till fields. The number of nematodes, both crop-damaging and beneficial, was significantly higher in the no-till samples.

Further research also is needed to determine whether live nematodes that earthworms cast on the surface or in the soil proceed to infect cotton seedlings, Bailey says.

Reniform and root-knot nematodes are serious pests in cotton and other row crops, but they also can cause significant damage in turfgrass, and entomologist Held says he believes golf course superintendents will have a great deal of interest in Bailey's findings.

"On golf courses, because the greens are mowed so closely, earthworm casts cause aesthetic problems, dull mower blades and gunk up the rollers," Held says. "David's work showing that castings contain live nematodes could mean that if the mower isn't cleaned before moving from one green to the next, it could be transplanting nematodes from an infested area to a nematode-free spot."

CASTING LOTS Tiny mounds of earthworm castings abound on the surface of this turfgrass plot. Auburn researchers have found that crop- and turf-damaging nematodes ingested by earthworms as they travel through the soil survive passage through the worms' digestive tracts and re-emerge, alive and active, in the earthworms' excretions.

Wearable Computers Could Be Boon to Crop Producers

A wearable computer described as "a smartphone for your face" has the potential to help row-crop farmers operate more efficiently and profitably, two Alabama Agricultural Experiment Station researchers at Auburn University say.

Greg Pate and John Fulton base their optimism on their experience testing out the yet-to-be-released device—called Google Glass—in cotton fields at Auburn's E.V. Smith Research Center. Pate is director of E.V. Smith, located off I-65 between Montgomery and Auburn, and Fulton is Extension specialist and associate professor of biosystems engineering at Auburn.

THROUGH THE GLASS Greg Pate, director of the E.V. Smith Research Center in Shorter, surveys his cotton field using Google Glass. Pate says the device could be a significant

Bruce Rasa, a farm technology consultant and one of 8,000 people worldwide whom Google has commissioned as Glass Explorers to test the device and gain a better understanding of its uses, traveled to E.V. Smith to introduce Pate and Fulton to the device, which is a pair of glasses with a tiny computer mounted just above the right eye. "A smartphone for your face that enables hands-free use," Rasa says.

Such wearable technology could make row-crop farming more mobile, efficient, profitable and environmentally sustainable and also could help producers capitalize on the growing volume of farm data generated by precision farming equipment, Fulton said. In addition, he said, the visual, textual and other data uploaded on the go via Google Glass will be available for future reference and also can be shared on a real-time basis, better enabling farmers to make spot decisions in the field.

"I can use one of these devices to capture in-field information that can be stamped by time, date and GPS coordinates and that also can be automatically archived," Fulton says. "In the blink of an eye or a tap [of the Google Glass], I've made a screen capture of an item that could be of critical importance later in the crop season."

Pate, who used Google Glass to inspect a cotton field, said that wearable computers could prove useful in many facets of farming, particularly crop consulting.

"We have lots of farmers who receive data compiled by a scout [crop consultant] and question it or dismiss it as someone's opinion," he says "Now, with Google Glass, all a consultant has to do is to pull up the data that was compiled automatically and say, 'Here it is.'"

Uploading data into a cloud where it can be retrieved for future reference is especially appealing to Pate, who is ultimately responsible for every facet of the farming operation at the 3,816-acre E.V. Smith Research Center. He was an early convert to precision farming and is always searching for labor- and cost-saving technology to offset rising costs and lean budgets.

As a practice, Pate spends time with his laptop, familiarizing himself with what variety was planted in what field, but still, his memory occasionally fails when he's standing in the middle of a field.

"We plant so many varieties, and when I'm in a particular field, I need to know instantly what variety I'm standing in versus what was planted 20 feet away, because these are going to be managed differently," he says. "With Google Glass or some other wearable device, you have the potential of knowing this instantaneously."

The immediate recordkeeping Glass affords also could allow producers to compile a crop-year record never before conceived, one that will help them demonstrate to consumers that the crops were raised not only according to the safest production standards but also in an environmentally sustainable manner, Fulton says.

Google has said Glass will be commercially available in 2014, but the corporation has not indicated what the price tag will be.

Mask Named to New Role as Auburn Agriculture, Extension Liaison

Paul Mask

Paul Mask, a 31-year veteran of the Alabama Cooperative Extension System, has been named assistant director for agriculture, forestry and natural resources programs and assistant dean for Extension at Auburn University, effective, Jan. 1, 2014, College of Agriculture Dean/Alabama Agricultural Experiment Station Director Bill Batchelor and Alabama Cooperative Extension System Director Gary Lemme have announced.

Mask's appointment to the two-year, limited-term position follows an internal search for an individual who will bring into alignment the visions and directions of the college and Extension. The position will be located in the College of Agriculture, with Mask reporting to both Batchelor and to Paul Brown, associate director of the Extension system.

"Paul Mask's background and experience with both the College of Agriculture and the Alabama Cooperative Extension System make him an ideal fit for this new position," Batchelor says. "The college and Extension are both vital to the agricultural industry of our state and region, and Dr. Mask's service will help ensure that both units grow and advance strategically together."

Mask, who since 2003 has served in the assistant director role for Extension, arrived at Auburn University in 1982 as an Extension agronomist specializing in grain crops and silage. In 1988, he added the title of assistant professor in what today is the College of Agriculture's Department of Crop, Soil and Environmental Sciences. He was promoted to associate professor in 1991 and full professor in 1999.

As Extension assistant director, Mask will continue providing leadership for the development, delivery, evaluation and reporting of Extension programs to the citizens of Alabama. In the new assistant dean for Extension role, he will be responsible for the coordination and integration of Extension programs in the college, serving as a liaison between the College and ACES and representing the dean on Extension issues.

(Lighting Up LIFE, *from page 1*)

information, really, because I just wasn't' that interested in knowing," Dutton says. "I never asked to know my story."

It wasn't until she was in the attic one day, digging and giggling her way through boxes of old family photos, that she came across her adoption papers, and suddenly, curiosity reigned.

"I ran downstairs and said, 'Mom, guess what I just found,' and she immediately sat down and told me everything, and I'd ask questions, and she'd answer," Dutton recalls. "I guess I didn't expect her to be so open.

"She did that with me and my adopted siblings," Dutton says. "Mom didn't force our stories on any of us; she let us get to the point where we were ready to talk about it."

Since Oct. 13, Dutton's story has spread far beyond the confines of Jordan-Hare: She shared it in a live interview on "Fox and Friends" the week after winning the title and has been interviewed by writers from national and international publications; it became an Internet sensation; and it is having the impact Dutton so wanted when she launched "Light Up LIFE."

"Molly Anne's 'Light Up LIFE' campaign has raised awareness and support for adoption," says Lifeline Children's Services development director Krisha Yanko. "We've seen her story impact peoples' understanding of adoption and recognize that there is hope in the midst of what can be seemingly a tragic situation.

"Molly Anne has life and has it to the fullest, and that's a beautiful thing," Yanko says. 'Light up life' is exactly what Molly Anne does, and I pray this story continues to shed light on the gift that life is."

Unlike many adoptees, Dutton has never had the desire to search for her birth mother. She's accepted that she'll likely never know the woman's name, where she is today, the kind of life she's had or whether there's a resemblance. And that's OK.

"I have always been blessed with an internal perspective that washes me in peace," Dutton says.

Given the media's fascination with the Auburn University 2013 Miss Homecoming's story, Dutton can't help but wonder whether, somewhere out there, the woman who brought her into the world 22 years ago has made the connection.

"That would be amazing, for her to know how inspired others can be by her selflessness," Dutton says. "Light Up LIFE' wasn't about being pro-life, or anti-abortion; it was about spreading the positive message that there are adoption services like Lifeline, that there is hope."

RECORD ROUNDUP A winning Auburn football season and cloudless blue skies helped make the Auburn Agricultural Alumni Association's 2013 Fall Ag Roundup and Taste of Alabama Agriculture one to remember. Crowds flocked to Ag Heritage Park prior to the Auburn Tigers' homecoming game vs. Western Carolina on Oct. 13 to be a part of the biggest tailgate party on campus and feast on all manner of food products grown and/or produced in Alabama. This year's Roundup was a record setter, with 1,671 adults paying the $5 entry fee and tens of dozens of vendors, student workers and kids 6 and under also enjoying the event. Ticket sales totaled $8,355, the live and silent auctions brought in about $8,300 and corporate sponsors John Deere, TriGreen and Snead donated a total of $7,000. Ag Roundup proceeds are used to fund College of Agriculture scholarships.

York Lecturer to Talk Translating Science to the Masses

New York Times columnist and critically acclaimed lecturer Carl Zimmer will deliver the latest installment in the E.T. York Distinguished Lecturer Series Tuesday, Feb. 25, at 4 p.m. in the Auburn University Student Center ballroom. His lecture, "Communicating Science to the Public," will be free and open to the all.

Carl Zimmer

An author and Yale University lecturer in scientific writing, Zimmer is known for his ability to translate cutting-edge scientific developments into easily understood and fascinating descriptions and has been awarded by numerous national and international organizations for doing so. Zimmer's work has been featured in The Wall Street Journal, National Geographic, Time magazine, Scientific American and others.

The E.T. York Distinguished Lecturer Series at Auburn University was established in the College of Agriculture in 1981 through an endowment from E.T. York and his wife, Vam Cardwell York, both native Alabamians and Auburn graduates. York was head of the Alabama Cooperative Extension Service from 1959 until 1962 and had a long, successful career, retiring in 1980 as chancellor of the State University System of Florida. He passed away in April 2011.

For more information on the Zimmer lecture or the York Lecturer Series, contact Amanda Martin at Amanda.martin@auburn.edu, or visit the website at www.ag.auburn.edu/yorklecture.

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Recipe File

Gulf Oysters

If You Can't Roast 'em, Bake 'em

Bill Walton is on a big-time oyster-roast kick these days, and as head of a fruitful project to develop an off-bottom oyster farming industry off Alabama's Gulf Coast, the School of Fisheries, Aquaculture and Aquatic Sciences assistant professor is never lacking for a bushel or two of the fresh-from-the-Gulf mollusks.

That's the sole ingredient needed for an oyster roast, says Walton, who, with Auburn University Shellfish Lab colleagues Scott Rikard and Glen Chaplin, received the College of Agriculture's 2013 Project Team Award (see story, Page 5) for their work in launching a new, sustainable Gulf oyster-culture industry that will create jobs, boost the economy and preserve a working waterfront.

"Oyster roasts are a Carolina tradition that really should be adopted here," Walton says of the outdoor events. "They are so easy, and so delicious."

But if you're looking for an easy and delicious *indoor* oyster recipe, Walton suggests this oven-baked dish that he borrowed from Chris Nelson, vice president of Bon Secour Fisheries Inc. and a frequent industry collaborator with Walton's team's research and extension work.

Gramma Byrne's Scalloped Oysters

1 pint Alabama Gulf oysters, undrained
½ cup stale bread crumbs
1 cup cracker crumbs
½ cup melted butter
2 tablespoons half-and-half
Salt and pepper, to taste

Drain oysters well, reserving 4 tablespoons liquor; set aside. In a bowl, mix bread and cracker crumbs together; stir in butter. In an 8- x 8-inch baking dish, layer a third of the crumb mixture, half the oysters, 2 tablespoons oyster liquor, 1 tablespoon half-and-half and salt and pepper. Repeat to create a second layer. Top with remaining third of crumbs. Bake at 450 degrees for 30 minutes, or until golden brown.

Note: May be doubled or tripled, but only make two layers per dish.