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Arthur Temple College of Forestry and Agriculture
Some of the most innovative and exciting advancements in the field of natural resources are made here at the Arthur Temple College of Forestry and Agriculture. Our faculty and staff share not only a passion for scientific progress, but a commitment to fostering the next generation of natural resource professionals.

One of the most recent developments, and the feature story of this newsletter, is making ripples throughout the field of invasive species management. Dr. Shiyou Li and his team of researchers at ATCOFA’s National Center for Pharmaceutical Crops have invested more than three years of research and development into a concept that has the potential to completely alter our struggle against the South’s most devastating invasive species. Endogenous biocide, or endocide, has proven to be an effective, species-specific method of controlling giant salvinia, the South American aquatic fern responsible for devastating waterways and wildlife habitat globally.

This summer also marked a significant change to one of the college’s foundational courses – field station. To benefit our students, the course will now take place during the summer following their sophomore year, ensuring they have the skills, ability, and time to pursue valuable internships and jobs during the summer prior to graduation. I extend a hearty congratulations to our faculty and staff members for executing two field station sessions this summer!

As always, I encourage alumni and friends to be a part of the growth occurring at ATCOFA as we march toward the dynamic future of natural resource research and management. Together we will achieve great things.

Axe’em, Jacks!

-Steve Bullard
The SFA Sylvans team clenched the championship title for the second consecutive year at the 57th annual Southern Forestry Conclave hosted by the Virginia Tech Forestry Club. SFA finished first in both technical and physical events out of the 15 schools competing. Clemson finished a full 56 points behind SFA in 2nd place while Louisiana Tech finished 3rd.

“The team we have right now is motivated, talented, and very intelligent,” said faculty sponsor Dr. Jeremy Stovall. “I am looking forward to seeing what they can do next year at Mississippi State.”

### 2014 Conclave Win

**Technical Events:**
- Dendrology: 1st place, Conor McInnerney
- Timber Estimation: 1st place, Brian Blades
- Compass and Pacing: 1st place, Cade Smith
- Wood Technology: 4th place, Chelsea Lopez
- Photogrammetry: 7th place, Courtney Williams
- Wildlife: 7th place, Chelsea Lopez and Brant Day
- DBH Estimation: 8th place, Paul Patterson

**Physical Events:**
- Underhand Chop: 1st place, Ryan Assenheimer
  
  Assenheimer also beat all other southern regional competitors in the Stihl Timbersports Collegiate Southern Qualifier Competition.

- Women’s Bow Saw: 1st place, Chelsea Lopez
- Log Birling: 1st place, Mike Hartford
- Jack and Jill Crosscut: 1st place, Chelsea Lopez and Tim Hoffpauir
  
  Lopez and Hoffpauir’s time of 7.30 seconds was the best time at Conclave.

- Pole Climbing: 1st place, Mike Hartford
- Archery: 2nd place, Garret Lindsey
- Knife Throw: 2nd place, Conor McInnerny
- Men’s Crosscut: 3rd place, Tim Hoffpauir and Cade Smith
- Men’s Bow Saw: 4th place, Barrett Raabe
- Chain Throw: 4th place, Brian Blades and Conor McInnerny
- Women’s Crosscut: 4th place, Chelsea Lopez and Courtney Williams
- Axe Throw: 7th place (tie), Brian Blades
- Log Rolling: 8th place, Barrett Raabe and Garret Lindsey
- Pole Fell: 15th place, John Burns

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Researchers at the National Center for Pharmaceutical Crops (NCPC) are making waves in the field of invasive species control through the development of a low cost, species-specific method for eradicating one of the South’s most costly and destructive invasive species: giant salvinia. See article on page 20.
The latest addition to SFA Gardens enables visitors to participate in environmental education programs despite the oftentimes fickle East Texas weather. The Ina Brundrett Conservation Education Building, located at the Pineywoods Native Plant Center on Raguet Street, was dedicated on January 27, 2014. Since then, it has hosted over 25 special events with more than 1,500 participants, not including the numerous afterschool programs, tourists, and special visitors.

“We’ve had plenty of rain and cold, so having this warm, spacious facility has been great,” said Dr. David Creech, professor emeritus of agriculture and associate director of SFA Gardens.

The facility’s construction was funded by private donations and is named after Ina Brundrett, an avid gardener and philanthropist who serves on the SFA Gardens and Native Plant Center boards of advisors.

The energy-efficient design of the building is also augmented by a solar array on the roof of the structure, the result of a $30,000 donation from the Green Mountain Energy Sun Club. The solar array is anticipated to offset as much as 80 percent of the building’s energy use. Creech says this is an asset for SFA’s electricity bills and serves as a great teaching tool for SFA Gardens.

SFA Gardens Opens New Environmental Education Facility to the Public

Lanana Creek Corridor Growing by Leaps and Bounds

The Lanana Creek streamside management zone (SMZ) planted in December 2009 is flourishing. So much in fact, the growth rates have exceeded the expectations of SFA Gardens staff.

“It’s mind boggling how fast they’ve grown,” said Dr. David Creech, associate director of SFA Gardens. “We have good 6-inch diameter trunks in two and a half years.”

The approximately 700 bald cypress connecting the Pineywoods Native Plant Center and the Mast Arboretum are a mix of new clones and superior seedlings from breeding programs across the South.

Creech said the biggest challenge after planting was ensuring the saplings weren’t washed away by fast moving flood events before establishing a healthy root system. To prevent this, a team from SFA Gardens stabilized each tree with T-post on the upstream side. The saplings were also equipped with a drip irrigation system to combat drought events during the first critical years of establishment. They also survived numerous bouts against beavers and feral hogs.

At this point, the trees are established enough to withstand Lanana Creek cresting its banks without reinforcement.

“The creek may move, but the trees will stay there,” said Creech.

The cypress corridor not only adds aesthetic appeal, but increases biodiversity, improves stream health, and prevents erosion.

See the cypress in action during a flood event by visiting Dr. Creech’s YouTube channel at: www.youtube.com/watch?v=66xW5Uq6vus
Dr. Brian Oswald Addressing Growing Wildland Fire Threat in the Netherlands

Joe C. Denman Distinguished Professor Dr. Brian Oswald is assisting agencies in the Netherlands with the growing threat of wildland fires faced by the country.

“They’re estimating they’re getting an increase in the number of fires and in area about 4 percent a year, and they’re also the part of Europe showing the greatest increases in temperatures and climate change,” Oswald explained.

The relationship began at the 2010 Human Dimensions of Wildland Fire Conference in San Antonio when Oswald saw a presentation given by a member of the Regional Organization for Public Safety of North and East Gelderland (VNOG), an emergency preparedness agency from the Netherlands. Historically, the country has not experienced many wildfires, nor have they traditionally used fire as a management tool. These two factors result in an extensive lack of information regarding fire behavior and how to prepare for future fire events.

Since then, Oswald and six ATCOFA students have worked in the Netherlands and England collecting the needed ground data for fire-spread computer models. While there, Oswald said ATCOFA students serve as ambassadors for the use of fire as a management tool, sharing their knowledge with agencies and local media.

The next component of the partnership will be addressing the public perception of fire and eventually developing an initiative similar to the U.S. Fire Wise program.

ATCOFA Fire Ecology Program Receives Certification

ATCOFA’s Fire Ecology program was recognized by the Association for Fire Ecology (AFE) as a Certified Wildland Fire Academic Program. According to the AFE website, the certification distinguishes programs which prepare future fire professionals to meet current and future challenges of workforce development, analysis, and sound decision-making in the field of fire ecology. ATCOFA is among seven other programs in the nation to receive this accreditation.
Study Abroad in Sweden

This summer marked ATCOFA’s first study abroad trip to Älvdalens Educational Center in Älvdalen, Sweden.

Sierra Gibbons, an environmental science graduate student, was one of five ATCOFA students who participated in this year’s first Maymester study abroad course. She said the trip was a great combination of fun, adventure, and education.

Associate Dean Hans Williams said though Älvdalens Educational Center is not a four-year university, SFA students still profit immensely from what the program offers.

“They are not as learned in theory; it’s more the technical side. Whereas, our students are learned more in the theory of forestry and not so much the technical, so it’s just a different approach,” said Williams.

While in Sweden, students had the opportunity to operate logging equipment, explore forest management practices, and learn about Swedish culture.

Sixteen students and faculty members from Älvdalens will visit SFA next spring to learn about East Texas forestry and history. While here, students will attend classes and spend time at the Piney Woods Conservation Center.

Greater Yellowstone Summer Research

From July 14 through 24, thirteen ATCOFA students conducted research on behalf of Yellowstone National Park and the Bridger-Teton National Forest Buffalo Ranger District. The trip, led by Dr. Pat Stephens-Williams, is designed to provide undergraduates with leadership experience through hands-on field work and direct communication with a variety of natural resource management agencies.

Participants met with Katy Duffy, Yellowstone interpretive planner; Linda Young, chief interpreter; and Sarah Haas, science program coordinator, to discuss park management issues and research goals. While in Yellowstone, students collected observational data at key visitation sites regarding visitor wayside use and commercial tour operations.

Week two found students in the Teton Wilderness conducting a wilderness campsite inventory for the Buffalo Ranger District. Prior to beginning the assessment, students spent time with Tom Matza, district ranger, and Boyd Logan, recreational planner, to review safety techniques for hiking in bear country and discuss a wide range of topics related to forest management.

Students are currently analyzing the data collected and developing reports to provide feedback and recommendations for both agencies.
Dr. Dale Perritt
Chair of the Department of Agriculture
Dr. Dale Perritt was named Texas A&M Agrilife Extension Service’s 2014 Man of the Year for Region V. The award honors Perritt’s decades of supporting and furthering agriculture education.

In an interview with Nacogdoches’ Daily Sentinel, Perritt recalls the time he spent working on his family’s dairy farm in East Texas. According to Perritt, those years shaped his pursuit of a higher education.

“Agriculture was my connection to life and the real world,” Perritt explained to Daily Sentinel reporter Christine Broussard. “I wanted to get into a helping profession where I could help others succeed.”

Perritt joined SFA in 1981, and has remained an active part of the Texas A&M Extension Service.

“Getting the information out, that’s the reason this extension service is so important, because they are in the business of adoption and diffusion of new technology,” Perritt said.

Perritt, chair of the Department of Agriculture, was nominated by Smith County Extension Agent Chad Gulley.

Dr. Sheryll Jerez
Dr. Sheryll Jerez, associate professor of environmental sciences, was named the 2013-2014 Faculty Mentor of the Year at the 2014 Undergraduate Research Conference. Jerez joined ATCOFA in 2007 after receiving her doctorate in agricultural engineering from the University of Illinois at Urbana-Champaign. Her current research interests include air quality assessment, modeling and control, and biomass conversion into fuel.

Members of the Undergraduate Research Executive Committee consider professors from each college before selecting one outstanding faculty mentor each year. According to Dr. Michael Tkacik, director of SFA’s School of Honors, the award is bestowed upon an instructor who has a student among the Top Scholar portion of the research conference and has made ongoing contributions to the conference through their continued support and guidance of undergraduate research.

Jerez says she engages her undergraduate students in research because of its value in enhancing the quality of her teaching and its ability to serve as an outlet for student creativity and intellectual curiosity. She also believes that effective mentoring will help advance students’ careers.

Dr. Leon Young
Dr. Leon Young, Wayne Weatherford, Nutifafa Adotey, and Chris Sanderson’s research poster, “Value of Biomass Power Plant Wood Ash as a Limestone and Plant Nutrient Source,” represented the Arthur Temple College of Forestry and Agriculture as the Spotlight Exhibit at SFA’s 2014 Bright Ideas Conference. The poster outlined their study regarding how wood ash from biomass power plants has the potential to reduce soil acidity, improve nutrient availability, and increase yields of agricultural crops in East Texas.

The annual Bright Ideas Conference highlights faculty research, scholarship, and artistry at SFA.
Drs. Chris Comer and Jeremy Stovall

Drs. Chris Comer and Jeremy Stovall were recognized for their outstanding grantsmanship by the SFA Office of Research and Sponsored Projects (ORSP) at the 2014 Bright Ideas Conference. According to Grace Saldáña Romero, administrative assistant within the office, this was the first year the Distinguished Grant Award was presented. The award celebrates grant acquisition as well as the many aspects of successful grant writing. Recipients of the award are individuals serving as project directors and/or principal investigators. Criteria for consideration includes the number of competitive grant applications submitted as full proposals, the funding success rate, and/or the amount of awards received in a calendar year.

Comer, associate professor of wildlife, received the Senior Faculty Award, while Stovall, assistant professor of silviculture, received the Junior Faculty Award. Together, the professors applied for over $2.2 million worth of funding and received more than $200,000 worth of funds for the advancement of research for the 2013 fiscal year.

Drs. David Kulhavy, Daniel Unger, and I-Kuai Hung

Drs. David Kulhavy, Daniel Unger, and I-Kuai Hung are faculty members leading research in the field of urban forestry, using the latest technology to potentially revolutionize the way urban tree measurements are taken. Estimating tree height has been a critical component of forest inventory assessments for decades. Although estimating tree height on site is relatively straightforward, the ability to estimate tree height for multiple individual trees or stands of trees over remote and expansive areas can be time consuming and expensive. Their research, currently being reviewed for publication by the Journal of Forestry, found that Pictometry®, an aerial image capture process that displays digital aerial imagery within a web-based interface, was effective at estimating tree height within seconds and proved more accurate than historical results obtained with a clinometer, laser range finder, or Lidar data. In addition, crown shape, which can add difficulty in assessing tree height on site, is not an issue with Pictometry®. The web-based interface allows for a visual assessment of the top of a tree crown within an open grown urban setting. Estimating height of open grown urban trees using the Pictometry® web-based interface could supplement or replace time consuming field-based tree height estimation in the field of urban forestry.

See the professors utilize this technology to measure tree heights in a matter of seconds at www.youtube.com/watch?v=GVUu5PeA2MQ
New ATCOFA Staff

Maxwell Holmes
Maxwell Holmes joined the College of Forestry and Agriculture as the new academic advisor in June. A native of Baton Rouge, Louisiana, Holmes graduated from LSU with a bachelor’s degree in psychology. He then came to SFA where he earned master’s degrees in interdisciplinary studies and public administration. Prior to joining ATCOFA, Holmes worked as an admissions counselor for the university.

Holmes said he chose to become an academic advisor because of his desire to work one-on-one with students and to serve as a resource throughout the extent of their college career.

“When you do admissions, you only get the very beginning,” Holmes explained. “You get them in; you get them all excited about SFA, and then you never see them again.”

Holmes maintains an open-door policy for students and says his primary goal is making sure students have a smooth four years leading to graduation.

Justin Glasscock
Justin Glasscock joined the Department of Agriculture as the Broiler Research Center supervisor during the summer of 2014. He is responsible for the overall maintenance and management of the college’s Broiler Research Center. He said the best part of the job is the ability to continuously learn more about the poultry industry.

Prior to joining the college, Glasscock earned an associate’s degree in business administration from Tyler Junior College and a Bachelor of Science in agriculture from SFA. While at SFA, he hopes to earn a master’s degree in agriculture and gain valuable experience managing the broiler research farm.

Dr. Matthew McBroom
Dr. Matthew McBroom, associate professor of hydrology, was awarded the SFASU Teaching Excellence Award in April 2014. McBroom earned his doctorate degree in forest hydrology from SFA in 2005 before joining the college as a faculty member in 2006. His research interests focus on the effects of land management on water resources, as well as how to mitigate impacts on water quality through land management practices. McBroom teaches undergraduate courses related to these specialties in forestry and the Division of Environmental Science.

“To be the recipient of an award such as this is a great honor and incredibly humbling,” McBroom said in his acceptance speech.

The Teaching Excellence Award is designed to celebrate faculty contributions to the university and is based upon their knowledge of subject matter, lecture quality, relationship with students, commitment to the improvement of their quality of teaching, and effectiveness as a teacher as evaluated through student, peer, and alumni appraisals.
Dr. Jared Barnes

Dr. Jared Barnes joined the college this fall as an assistant professor of horticulture. He will teach a variety of classes, including introduction to crop science, plant propagation, woody materials, public garden management, annuals and perennials, and fruits and vegetables.

“Two of my passions in life are cultivating plants and cultivating gardeners,” Barnes said. “I’ll focus those passions at SFASU towards trialing herbaceous plants and edibles for the southeast and figuring out how to connect more students and the public with plants and horticulture.”

Barnes said his teaching philosophy revolves around the creation of an enriching environment that encourages students to want to learn more. He recalls a quote delivered in a lecture by Food Network host Alton Brown that remains at the forefront of his thinking: “Laughing brains are more absorbent.” Barnes believes this speaks to our capacity to enjoy and seek knowledge when we love something. He said he hopes to facilitate this in his classes.

Barnes earned his doctoral degree from North Carolina State University in 2013 and recently completed a post doc investigating how phosphorous and potassium influence plant growth on floriculture crops.

Dr. Roger Masse

This fall, the Department of Forestry welcomed Dr. Roger Masse to the faculty. He will teach a variety of lower and upper-level undergraduate wildlife courses, including vertebrate natural history, wildlife techniques, and non-game wildlife ecology.

Masse said his research interests focus on the management of both game and non-game birds, specifically their habitat selection, movement patterns, spatial ecology, and behavior. He also has great interest in the impacts of forest management and invasive shrubs on bird diversity.

There are a number of goals Masse has in mind for his time with ATCOFA, namely that of providing quality, engaging, and contemporary training for students.

“I believe that building constructive relationships with my students via direct interactions in the classroom and field-based exercises works to keep students engaged in their education and provides a learning environment where they feel comfortable articulating their ideas and interests,” Masse said.

Prior to joining ATCOFA, Masse earned a Bachelor of Science in wildlife biology at the University of Vermont, a Master of Science in natural resources from Delaware State University, and a Ph.D. in environmental sciences from the University of Rhode Island.

Dr. Shelby Gull Laird

Dr. Shelby Gull Laird will join ATCOFA this January as an assistant professor of communications in natural resource issues. She will teach introduction to forestry, as well as forest recreation classes.

Laird’s research interests focus on exploring human impacts on natural resources, as well as the impact of natural resources and the natural environment on humans. Some of her past and current research projects include climate change adaptation, urban and community environmental education, forest hydrology, and human dimensions of natural resources. Public understanding of science also is a key component of her work.

“I hope to inspire students to consider the importance of communication and education when dealing with colleagues, the public, stakeholders and others in a professional and personal capacity,” Laird said. “Being able to relate the science behind what you are doing in your field of study to others in a positive way is one of the most important contributions a person can make to their field.”

Laird holds a B.S. and MEd in science education and a Ph.D. in forestry from North Carolina State University. Most recently Laird was a lecturer, the U.S. equivalent of assistant professor, of environmental sciences at Charles Sturt University in Albury, New South Wales, Australia.
Student Awards

Amy Brennan -
Amy Brennan was named the 2014 Texas Society of American Foresters Outstanding Forestry Student at the annual Texas SAF meeting held in Athens. Brennan graduated in May 2014 with her bachelor’s degree in forest recreation, and is now pursuing her master’s in forestry under Dr. Brian Oswald.

Michael Tiller -
Environmental science graduate student Michael Tiller was awarded the Ed Komarek Graduate Student Excellence Award from the Association of Fire Ecology at the Large Wildland Fires: Social Political & Ecological Effects conference held in Missoula, Montana. While at the conference, Tiller also presented his poster, “Bastrop Complex Fire Burn Severity: Differenced Normalized Burn Ratio.”

Jason Lombardi -
Wildlife graduate student Jason Lombardi was presented a student travel award to attend the Wildlife Society Annual Conference in Pittsburg, Pennsylvania, and present his thesis research “Influence of Landscape Features on Population Density and Detection Probability of Urban Carnivores in East Texas.”

Changes to Field Station Reflect Curriculum Revision Findings

Summer 2014 marked the transition of ATCOFA’s field station from the summer after a student’s junior year to the summer after their sophomore year. Field station format and content will remain the same. The decision was made during the extensive 2013 curriculum revision process after it was determined the modification would benefit students twofold: First, immersing students in technical and professional field applications sooner provides them with a competitive edge in and outside of the classroom. Secondly, it allows students to secure internships and jobs during the period between their junior and senior year – an integral part of their post-graduation success.

To accomplish the transition, a junior camp was held May 9 through June 20, and a sophomore camp was held June 22 to August 1. The following pages feature highlights from the 2013 field station as well as the 2014 junior and sophomore field stations.

Field Ecology Appalachian Field Trip

Eleven students spent two weeks immersed in the ecology of the Appalachians as part of a summer field ecology class led by Drs. Stovall and Comer. Through the course, students explored the principles of synecology and population ecology as they affect vegetative and animal communities. Each day fostered new opportunities to explore a component of natural resource management, from discussing human-wildlife conflict to learning new vegetative species. Students also met with researchers conducting a variety of studies and assisted in the mist netting of bats for white-nose syndrome research.
Field Station 2013  By: Kim Dean and Jessica Vance (BSF '14)

Introduction
Activities begin early, and each new day brings a chance to view a glorious sunrise as one watches the mist rise off the mirror like pond in the center of the camp. Heavy workloads mean late nights, but this too has its own special magic as the wildlife awakens and one listens to deafening choruses of Woodhouse’s toads, green tree frogs, cricket frogs, screech owls, and, my personal favorite, the ever calling Chuck Will’s widow.

Biometrics and Silviculture Weeks
This was a demanding week, especially when you are trying to get into the groove of things. We got to see a lot of different sites and were able to see eucalyptus plantations, which was very fascinating. One of my most memorable moments from field station was the infamous Rubus cruise. This rite of passage was well deserved by everyone that had to go through it. That day we all learned just how far we could push ourselves and each other. What could have turned out to be a terrible experience turned out to be a memorable group bonding experience because of the great attitudes of my classmates. When we all felt completely defeated there was always someone to keep the moral up by either singing a song or just saying some words of motivation. I wouldn’t take that day back if I could, even if it was one of the worst experiences at the time. We all went through that experience together and none of us will ever forget it. Those two weeks consisted of looking at different sylvicultural systems, machinery used, timber cruising, and conducting our own timber sale.

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Wildlife Week

For wildlife week we had different assignments with each of the professors. My favorite part of the week was setting mist nets and catching bats with Dr. Comer. Working with bats was a completely different experience, and I really liked capturing them. At one point during class, Dr. Comer placed a small glow stick on the back of a bat prior to releasing it, and everyone really enjoyed watching it fly through the woods.

While the week was enjoyable, the time schedule was extremely difficult. We would get back at one or two o’clock in the morning and have reports due the next day. It was fun and I learned so much because of the hands-on work, but I have to admit that the time schedule was a killer.

GIS Week

GIS week was definitely a challenge for me because I’m not really a techy person, and it was difficult for me to remember everything I learned in GIS class. Using GPS, Garmins, Etrex, and Flints throughout the week, we navigated previously designated points and mapped out and designed a pond.

Going through the design and mapping process of the pond was easily my favorite part of the week because it is something I might want to do in the future.
Field Station 2014 - Sophomore Camp  By: Owen Best

Harvesting and Processing

Mill week, as it is more commonly referred to, was an interesting firsthand experience in the world of timber products. I like to think of it as an inside look at “how it’s made.” We got to tour lumber mills, a paper mill, an OSB mill, logging operations, a bioenergy plant, and a pole mill. These were interesting because we often see the raw timbers being hauled down the highway, and then we use the products in everyday life. During this week; however, we got to see the process by which it was broken down and transformed into real-world products. Another neat thing about this week is getting to meet real-world, professional foresters who are expected to use their forestry knowledge in order to either manage forests or procure fiber for these mills.

Non-Timber and Recreation

During this week, we students were very irritated because we got zero sleep the week before. Although this is known as an easier week, we got irritated with each other and tensions were high. We learned quickly how to work through things in order to not let things get out of hand. This week we learned a lot about how things are managed for the public, not just for the habitat. We visited Martin Dies Jr. State Park and the new Jasper Fish Hatchery. The fish hatchery was by far the most enjoyable because many of us had never seen one and had always been interested in them. We also received our boater’s education certification during this week which is very useful.
Student Organizations

Student Association of Spatial Scientists (SASS) Celebrates 2-year Anniversary

This fall marks the two-year anniversary of the creation of the Student Association of Spatial Scientists (SASS), founded by a group of spatial science students in fall 2012.

The Bachelor of Science in spatial science program was first introduced in fall 2008 in response to the rapid advancement in spatial technologies. Unlike other majors at ATCOFA, spatial science students initially did not have a professional organization. Realizing this, a coalition of students established the organization.

Faculty advisor Dr. I-Kuai Hung said although it is still young and small compared to other student organizations on campus, the spirit of SASS continues to grow, and upcoming excitement can be seen on the horizon.

Today, SASS has approximately 15 active members who meet every other week during fall and spring semesters. The goal of the organization is to promote awareness of the spatial science program, as well as related technologies and career opportunities. SASS offers social activities and events that allow members to gain leadership skills and professional development. Hung said the organization is currently designing a SASS T-shirt to promote the organization. Students from all disciplines are welcome to join.

Horticulture Judging Team Wins Awards

The SFA horticulture judging team placed third overall at the J.B. Storey Horticulture Judging Contest held at the annual American Society for Horticulture Science (ASHS) Southern Region conference held this year in Dallas. The contest requires proficiency in the identification and judging of landscape and woody ornamentals, herbaceous perennials, floricultural crops, vegetables, fruits, and nuts.

Waxahachie junior Jordan McGee earned reserve high point individual and also placed third in woody ornamentals. Amny Rose, a sophomore from Clifton, placed third in greenhouse floral and foliage.

According to their website, The Southern Region ASHS is recognized as one of the strongest and most active regions within the organization, with a history dating to 1920.

The Southern Region encompasses the 14 southern states of Texas, Louisiana, Oklahoma, Arkansas, Mississippi, Georgia, Alabama, Florida, South Carolina, North Carolina, Virginia, West Virginia, Kentucky, and Tennessee.
Internships: Gaining valuable experiences while making a difference

Ahmad Nasser

Graduate student Ahmad Nasser of Amman, Jordan, recently completed his internship with SFA's Environmental Health and Safety Risk Management Department (EHSRM). Nasser, who is pursuing a Master of Science in occupational and environmental health and science, said the internship provided him with valuable work and safety training skills.

Nasser was offered the position after contacting Director of EHSRM, Dr. Jeremy Higgins, to express his interest in gaining hands-on experience in the field.

His primary tasks included a chemical inventory and safety inspection of labs throughout campus. Following these inspections, he developed reports for the departments, providing them with an inventory of safety concerns, violations, as well as recommendations to improve user welfare. He also received training in the EPA's spill prevention, control, and countermeasure rule (SPCC), an experience he believes will greatly benefit his career prospects.

“My favorite part about the internship is the field work,” he said. “I get to spend 40 to 50 percent of my time in the office, and the other time I spend with the other safety officers on campus.”

After completing his degree, Nasser said he hopes to stay in Texas and pursue a career as a health and safety professional for an oil and gas company.

Courtney Williams

Courtney Williams, a senior studying forest wildlife management, completed a summer internship with the Texas A&M Forest Service. Though based in Hudson, Williams worked in agency offices and departments throughout the region, immersed in the diverse aspects of forest management. Her time at the Houston office focused on urban forestry, while her duties at Lufkin’s Cudlipp Forestry Center focused on Forest Inventory Analysis (FIA), water quality, wildland urban interface, and forest health. While learning about forest health, Williams said she had the opportunity to work with entomologists on a pinewood nematode project, inspect pine tip moth traps, and visit a black turpentine beetle project occurring in the I.D. Fairchild State Forest.

Williams learned about the internship through ATCOFA’s advisor, and said her favorite part of the internship was learning about the many opportunities available post-graduation.

“It has helped me learn what is available and how many different options there are with my degree,” Williams said. “Getting a forestry degree doesn’t mean I’ll be working with just timber; I could be working with bugs, water quality, fire, and so much more.”

D.J. Mathis

D.J. Mathis, a junior studying animal science, completed a summer internship with OvaGenix, a biotechnical company specializing in bovine reproduction. Mathis said the internship was extremely varied. Some days he worked on the OvaGenix ranch in Bryan, Texas, flushing cows and assisting in the preparation of embryos for implementation, and other days were spent traveling to and working on some of the world’s largest ranches with Dr. Charles Looney, embryologist and founder of the company. Mathis said his favorite part of the internship was the opportunity to work with cattle worth $150,000 to $200,000. Mathis learned about the internship after Looney spoke in Dr. Erin Brown’s bovine reproduction class.

“I asked him how he got into the business, and he said the only way to really do it was through an internship,” Mathis said. “So I went to work with him this summer to get some experience.”

Mathis said the internship truly provided a deeper understanding of the concepts he has learned during his time in the Department of Agriculture.
Agriculture

Miao Wang

Research conducted by Miao Wang, international student from Deyang City, Sichuan Province, China, addressed challenges faced by specialty lily growers in Texas. Wang explained that while lilium hybrids allow producers to grow high-quality lilies through spring, they struggle to produce high quality field-grown lilies during the summer and fall due to the region's high temperatures. His research evaluated the effect of shade cloths on temperature moderation and lilium growth, development, and flower quality. He also identified hybrid lilium cultivars that are adapted to high summer and fall temperatures characteristic of Texas and evaluated the vase-life of summer and fall field-grown hybrid lilium flowers. Based on his results, the hybrid Lilium Samur performed best in the Texas heat. To produce high quality lilies in the summer, he highly recommends the use of shade cloths. After graduation, Wang hopes to obtain a job in the field of horticulture-related research.

Master of Science in Resource Interpretation

Jenna Giddens

Masters of Science in Resource Interpretation (MSRI) student Jenna Giddens co-led the creation of one of five new MSRI courses. The newly developed classes aim to provide non formal science educators from across the U.S. with tools to effectively communicate controversial science issues to the general public. Her work, part of the Institute of Museum and Library Sciences and Science and the Public Interface curriculum development project, led to the development of the new MSRI class Connecting to Science. According to Giddens, the class will explore the importance of peer reviewed research, funding sources, and road blocks educators may face when attempting to communicate science to particular audiences. Giddens serves as the lead interpretive ranger for the Exit Glacier area of Kenai Fjords National Park in Alaska. As the lead interpreter, she supervises the day-to-day operations of a remote nature center and is responsible for interpretive coaching for the park’s seasonal staff.
Environmental Science

Danielle Waite

When Danielle Waite of Hurst, Texas, began pursuing a M.S. in environmental science, she knew her interests lie in soils. After consulting with Dr. Kenneth Farrish, director of the Department of Environmental Science, she began exploring literature and found her focus in the survival of E. coli in soil. “There’s been some research done around the Great Lakes area, and in Hawaii, looking at soil as a non-point source of E. coli, and they’re finding that once the E. coli is introduced into the soil, it persists for long periods of time,” Waite said. To date, no studies of this kind have been conducted in Texas’ sub-tropical soils. Waite says a better understanding of the bacteria’s persistence in soils will help determine its effectiveness as an indicator species in water contamination. Her field work is currently taking place in the Attoyac Bayou Watershed, an East Texas watershed listed on Texas’ 303(d) list due to elevated levels of E.coli. After graduation, Waite plans to pursue a career in the field of soil or water conservation.

Forestry

Lorraine Ketzler

Lorraine Ketzler of San Angelo is investigating the effects of desired forest condition (DFC) treatments on bats of the bottomland hardwood forests of the Mississippi Alluvial Valley. During the past two summers, Ketzler and her team have documented bat calls using acoustic recording devices in sections that have been logged for DFCs, as well as those that have remained undisturbed. She also documented vegetation and prey availability in between the logged and undisturbed areas. “We want to know if DFCs affect bats, if they affect certain species versus others, and if the effect is positive or negative for different species,” Ketzler said. Her field work took place at national wildlife refuges and wildlife management areas in Louisiana, Mississippi, and Arkansas. “I love my research because I have the opportunity to visit so many places, walk around in the forest all day, and see a lot of wildlife in places that have been relatively undisturbed,” she said. Prior to pursuing her M.S. forestry, Ketzler worked as a biological science technician for the U.S. Fish and Wildlife Service, and hopes to continue her career with the agency.
**FEATURE**

**ENDOCIDE: A Promising Solution for Giant Salvinia**

Researchers at ATCOFA’s National Center for Pharmaceutical Crops (NCPC) have cultivated a promising solution to one of the South’s most widespread and damaging invasive species, giant salvinia (*Salvinia molesta*).

The answer lies in endogenous biocide, or endocide, a concept developed by NCPC’s director, Dr. Shiyou Li. Endocide refers to the chemical compounds within a species that, when exposed, have biocidal effects in that species.

According to Texas Parks and Wildlife, salvinia, a floating fern native to Brazil, is one of Texas’ most problematic aquatic invasives, producing mats of vegetation up to three feet deep that not only reduce recreation opportunities, but devastate water quality and wildlife habitat. The southern U.S. is not the only region lying in the plant’s destructive wake. In 1996, Australia listed the species as a Weed of National Significance (WoNS) and has since launched education campaigns and legislation to curb its spread.

*Endocide, a concept developed by NCPC director Dr. Shiyou Li, employs the biocidal effects of chemical compounds found in salvinia to eliminate the problematic species, and shows promise for broader applications.*
In the case of salvinia endocides, Li explains that the breakthrough was made while attempting to grow giant salvinia in the lab to continue their exploration of compounds which show pharmaceutical potential. One of their discoveries, Salvinol, has shown great promise in controlling the growth of certain cancer cells.

Cultivating salvinia in a lab setting proved much more difficult than expected considering its rapid growth and wide-spread coverage in southern waterways.

"Instead of growing them, we were really killing them," Li said with a laugh.

Given this struggle, the research team launched an investigation and soon pinpointed autotoxicity as the cause. Their lab experiments revealed that extracts from salvinia can inhibit growth and eradicate the plant without harming surrounding aquatic species.

To determine if these findings translated to field application, the team partnered with the Red River Waterway Commission’s research center to conduct trials. Their results were successful.

"The two biggest advantages are number one, you’re not introducing anything new to the environment because that chemical is already there in the plant," explained Dr. Steve Bullard, dean of ATCOFA. "The second thing is the selectivity. It only kills giant salvinia or common salvinia."

Louisiana Fisheries, a consortium of Louisiana Sea Grant specialists and agents from the Louisiana State University Agricultural Center, state that certain herbicides proven to be most effective in controlling salvinia are not permitted for use in the United States due to their damaging effects on the surrounding environment. Furthermore, manual removal of the plant is only moderately effective for a short period of time.

Bullard said they believe the process of endocide extraction and application will be low cost. This, he said, is an enormous asset in a world where individuals have little option but to employ large amounts of money on synthetic chemicals that can negatively impact the surrounding biota.

The entire process, from collection and extraction to treatment, can be done in the field. Li explains that after application of the extract, the salvinia decomposes in a matter of weeks.

According to Li and Bullard, the research has received much support through collaboration with the Red River Waterway Commission, Texas Parks and Wildlife Department, Sabine River Authority of Texas, and the office of Congressman Louie Gohmert.

A patent has been filed by SFA, and Li and his staff are speaking with private companies about the commercialized use of this application pending EPA approval. An invitation only field demonstration exhibiting the process and results of endocide usage was held on August 26.
Honoring W.R. Owens

A new display honoring W. R. (Robert) Owens, founding head of SFA’s Forestry program, was unveiled in February 2014. The white oak display, located on the first floor of the forestry building, was commissioned by Owens’ sons and constructed by master craftsman A.L. Kaufman. The photos and memorabilia featured celebrate Owens’ lifetime of service to Texas forestry.

Owens was appointed the first head of the newly developed Department of Forestry at Stephen F. Austin State College in 1946. After resigning from the position in 1954, he established a successful forestry consulting and surveying company in Nacogdoches where he employed and mentored numerous SFA forestry students.

Gregg Owens and wife Mary Elisabeth Franks Owens (left) and Robert Owens with wife Jerrie and son Kirk (right).

Congratulations

Davey Promotes Jed Day to VP and GM

Jed Day, 1981 graduate of ATCOFA, was named vice president and general manager in the residential and commercial service line, western operations, for Davey Tree Expert Company.

Day holds a degree in urban forestry and is a graduate of Davey’s flagship month-long training program, the Davey Institute of Tree Sciences. With more than 32 years of experience at Davey, Day will now be responsible for all sales and marketing activities for residential western operations.

Heather Shipley

Forestry student Heather Shipley was awarded the 2014 Soldier of the Year for her National Guard brigade.

Shipley, a sophomore, competed against 27 soldiers and airmen from across the state in the second annual joint-service competition at the Texas Army National Guard’s Training site at Camp Swift. The three-day long event was comprised of various physical and knowledge-based challenges to recognize the fittest and most professional Guardsmen within the Texas Military Forces.

Specialist Shipley, the only female competitor, placed 5th at the regional competition.

ATCOFA is pleased to recognize Shipley and all of our current and past military for their service.

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**Distinguished Alumnus**

**Judge Lee Harris** was presented the Department of Agriculture’s first Outstanding Alumni Award at their 2014 awards convocation. In March 2014, Harris, a 1989 graduate of SFA, was elected to serve as judge of the 66th Judicial District Court in Hill County. Prior to earning his Juris Doctor from Baylor University in 1993, he taught agriculture science at Henderson High School. In 2005, he was appointed as the first Judge of the County Court at Law of Hill County and has served two terms in that position. He also served nearly six years as an assistant district attorney for Hill County and prosecuted approximately 600 felony cases.

In 2010, Judge Harris was named a Jaworski Fellow by Baylor Law School. He also serves as an adjunct professor in the law school’s famed Practice Court program.

Judge Harris and his wife Holly own and operate a ranch west of Aquilla, Texas. He currently serves as president of the Blackland Income Growth Program, which is dedicated to on-going agriculture education and improvement. He was also appointed by Texas Parks and Wildlife to serve on a statewide committee to restore the bobwhite quail. During his time at SFA, he served as State FFA 1st Vice President and won the National FFA Public Speaking Contest.

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**John Boyette**

John Boyette, District Forester III with the Texas A&M Forest Service, is entrenched in the management of Texas’ forest land. From working one on one with landowners to conducting school and teacher programs, each day brings a new set of exciting challenges.

“There is no such thing as a typical day,” Boyette explained. “They are all different.”

Boyette received both his Bachelor and Master of Science in forestry from ATCOFA. After graduating with his master’s in 1980, Boyette was employed by the Texas Forest Service as a wood technologist. After 13 years in that position, he moved to the Nacogdoches District where he still works today.

During his career, Boyette received a number of awards for his performance in the field, but says the most meaningful ones are those which recognize his skill as an effective educator. He credits his success to hard work, willingness to work with people, and more than a little luck.

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**Josh Butler**

Josh Butler, 2011 graduate of the Environmental Science program, is an environmental specialist and manager for Westward Environmental’s Dallas office. Butler’s duties range from project coordination and research to on-site compliance testing and compliance audits. He works directly with clients to discuss permitting options and answer questions they may have related to regulatory compliance.

“I believe that by obtaining the necessary permit authorizations associated with a client’s project and training our clients on the steps necessary to remain in compliance, we are able to preserve the industries that our quality of life depends on while respecting the environment in which we live,” Butler said.

Butler says he also uses many of the skills and information covered in his GIS, hydrology, soils, and environmental measurements classes at ATCOFA.
**Sherrill Hobbs**

Sherrill Hobbs, who earned a Bachelor of Science in forestry and a Master of Science in agronomy from SFA, has a successful science-based career that spans 28 years. Her titles have ranged from SFA lab technician and USDA soil conservation scientist to science department head and advanced placement chemistry teacher for Hemphill High School.

“My broad scientific background and experience has been a tremendous asset in my teaching career,” Hobbs said.

Her enthusiasm for science and its role in enabling an understanding of our natural world began during childhood. She now shares her knowledge with the next generation of scientists in her AP Chemistry classes.

Hobbs won the Gilbert I. “Buddy” Low Excellence in Teaching Award in 2011, but prefers to emphasize her student’s achievements. On two different occasions, Hobbs notes, her pupils have been named as top chemistry students in the Regional Academic UIL competition.

**Aaron Friar**

Aaron Friar, a 2010 forest recreation management graduate, serves as the promotions and sales specialist for Texas Parks and Wildlife Department’s State Parks Division. Through this position, he is responsible for promoting over 90 state park and historical sites in six eco-regions throughout the state. The duties of the job are varied, ranging from working with the travel and tourism industry and special interest groups to providing expertise to individual parks.

“I get to engage communities to get them interested in their natural environment,” Friar explained. “This is becoming increasingly important as our society’s children are becoming less connected to their natural surroundings, our lands are becoming more fragmented and urbanized, and our populations are growing and increasing demands on our world’s resources.”

Friar credits his success to his family who instilled a strong work ethic, the mentors he gained through ATCOFA, and finally, his willingness to take chances and challenge himself.

**Matt Norton**

Matt Norton is doing his part to introduce the next generation of farmers to the field of agriculture. Norton, a 2007 graduate of the agriculture program, is the proprietor of Fiddlesticks Farms located outside of Midland. During the fall, Norton, along with his wife Jessica and son Trail, facilitates the education of approximately 300 visiting students daily. Visitors experience everything from cow milking demonstrations to an extensive corn maze. Norton, who has a Master of Science in agriculture education from Texas Tech, says that many of the event planning skills he uses on a daily basis were learned through his time with SFA’s Rodeo Club. Because of this, he encourages students to pursue extracurricular activities they can draw from in the future. Norton also manages three other farming operations which produce meat cattle, coastal Bermuda grass hay, watermelons, and cotton.

Norton remains active in his community, serving as an active member of the Midland County Water Conservation District, Farm Bureau, and Young Farm Rancher. He also donates to local youth stock shows and assists with the Odessa Ag days.

See agriculture education in action at www.fiddlesticksfarms.com
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