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CASNR Chronicle

Summer 2014

Summer is a great time for students of the College of Agricultural Sciences and Natural Resources (CASNR) to support one of the UTIA Pillars—Experiential Learning! They do this by taking advantage of a wide range of learning and internship opportunities within the state, across the nation, and even in other countries. Many of these experiences are showcased in this issue. By actively using what they have learned, CASNR students gain confidence and a new sense of worth for the information that they have studied so hard to learn!

Caula Beyl, Dean

Achievement Pins for CASNR Graduates

With the strong focus on experiential learning, CASNR is encouraging students to engage in undergraduate research, service learning, internships, and international experiences. Tracking and measuring their progress toward achieving these goals is important, so we have developed a way both to obtain data on students involved in experiential learning and, at the same time, give recognition to those students who had achieved these milestones. For the first time, CASNR graduates participating in the spring 2014 graduation ceremonies could apply for and wear various achievement pins on their graduation robes. During the graduation ceremony, these outstanding students were asked to stand and be recognized.



Learning
Community



International
Experience



Internship



Service
Learning



Undergraduate
Research

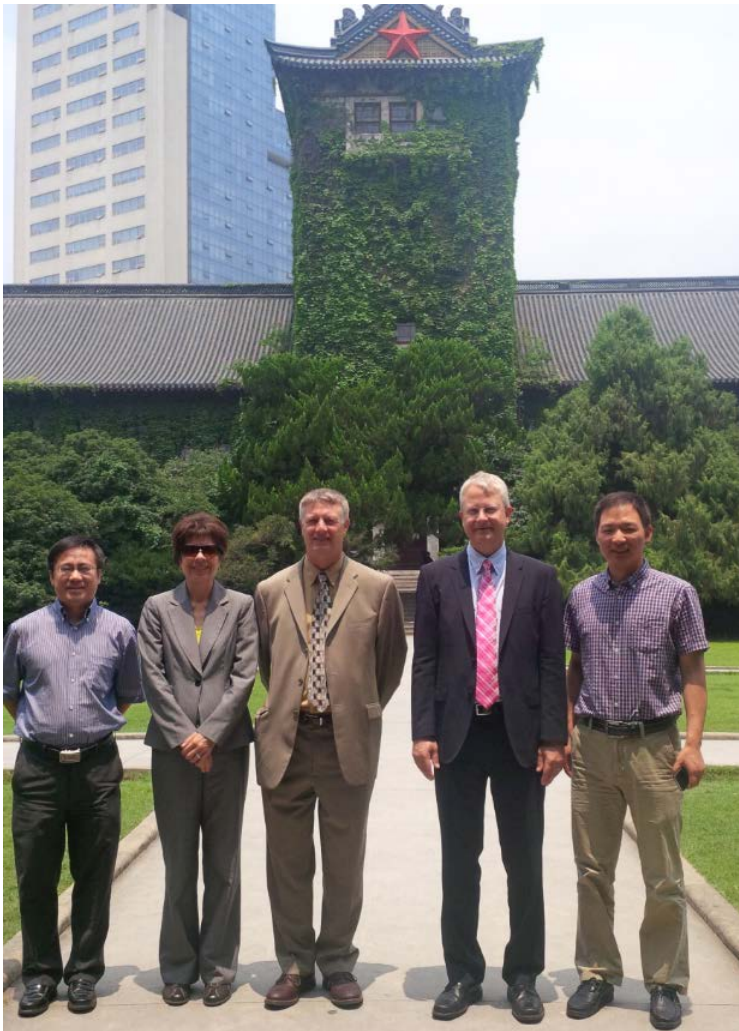
Contact Us:

865-974-7303
CASNR@utk.edu
University of
Tennessee
2621 Morgan Circle
Knoxville, TN 37996

In addition to the achievement pins pictured above, CASNR is developing two new pins to recognize students who have exhibited leadership in student organizations and charitable giving.

Coming to America: 100 Chinese Scholars

The College of Agricultural Sciences and Natural Resources (CASNR); UT AgResearch; and the University of Tennessee, Knoxville, are working together to enhance the University's prestige and international recognition. Earlier this year, Chancellors Arrington of the Institute of Agriculture and Cheek of UT Knoxville signed an agreement with three Chinese universities to bring 100 Chinese PhD students to UT over the next five years. The universities are China Agricultural University in Beijing, the Institute of Applied Ecology of the Chinese Academy of Sciences in Shenyang, and Nanjing University. The Chinese Scholarship Council will fund the students' living and travel expenses and the University waives out-of-state tuition. UT faculty need only pay in-state tuition and research expenses. Once their PhDs are completed, students will return to China and work in academia or industry.



Joe Zhuang; Pia Wood; John Stier; Chris Cox; and Dr. Zhang Xu-Xiang, Professor and (100 China Scholars) Program Coordinator, standing in front of the vine-covered entrance to one of the oldest buildings on the nearly 120-year-old Nanjing University main campus.

In July, John Stier (CASNR), Pia Wood (UT Knoxville Associate Vice Provost and Director of the Center for International Education), and Chris Cox (Associate Chair and Professor of Civil and Environmental Engineering) met with Joe Zhuang (AgResearch) in China to develop details of the program. The group also met with master's degree students at each university. The students were an impressive group—some had already published peer-reviewed research as an undergraduate and all had leadership experience combined with top academic performance. Many of the students spoke excellent English and would be indistinguishable from our UT students. Higher education in China is obviously benefiting from its economic growth: new campuses are being built, faculty are being hired, and the laboratories were well stocked with state-of-the-art equipment.

To date, over 100 UT faculty have signed up to indicate their interest in mentoring a student from the program. Three students will begin at UT this fall—two in CASNR and one in Engineering. About 15 to 20 are expected to apply this academic year as formal application procedures are finalized, with even more applying as news of the program spreads.

ANOTHER GLOBAL SUCCESS! Glorious Gardens of England and Scotland

What do you get when you mix seventeen students with various backgrounds with an enthusiastic professor and some of the most stunning scenery on the planet?

A broadened view of the world, an appreciation of unfamiliar cultures, and newly formed, lifelong friendships.



Garry Menendez, associate professor in the Department of Plant Sciences, recently returned from his eighth faculty-led study abroad adventure, this one taking his group from London to Edinburgh and all points in between. This trip of a lifetime for many began July 22 and had the students returning to the U.S. on August 8. A three-hour credit course, Plant Sciences 491 “The Glorious Gardens of England and Scotland” brought together students from not only plant sciences and landscape architecture but others from animal science, studio art, nursing, kinesiology, and special education.

While the focus of the adventure involved gaining an appreciation for world-class gardens and how these historic sites continue to influence both professional designers and casual visitors, the itinerary also offered an array of bucket-list attractions: Stonehenge, The Beatles Museum, 2012 Olympic Village, several castles, and a special treat not open to the public: The Garden of Cosmic Speculation in Dumfries, Scotland.

Menendez was accompanied by Brad Collett, an assistant professor, who provided some incredible companion instruction on how to fully absorb, appreciate, and sketch the landscape in order to not only see a space but truly understand and record the experience. Menendez believes passionately that travel is the most powerful tool at our fingertips to change lives. Comments offered from students agree. “I am so thankful to have had this experience. This trip meant so much to me. It gave me a chance to grow and discover myself as well and better understand my own culture. Being immersed in a foreign setting is truly an eye opening experience that has helped shape my outlook on life...” (2013 Italy participant).

While the investment each student put forth was and always is a challenge, Menendez, along with support from CASNR, the Department of Plant Sciences, Landscape Architecture, and Scripps Networks, allowed every student participant this year to receive financial assistance. The adventure continues in May 2015 as “The Glorious Gardens of Holland, France, and Germany” transports students across the globe. For more information or to learn how you may help support a future participant in this life changing opportunity, please contact Garry at Menendez@utk.edu.



Tropical Ecology, Conservation, and Field Methods in Belize

Emma V. Willcox; Assistant Professor; Department of Forestry, Wildlife and Fisheries

Adam S. Willcox; Research Assistant Professor; Department of Forestry, Wildlife and Fisheries

In May 2014, we took our inaugural study abroad class to Belize. Our team of nine UT students and two instructors joined ten students and two instructors from the University of Florida Department of Wildlife Ecology and Conservation and School of Forest Resources and Conservation. With expertise in a range of fields including forestry, wildlife, and habitat management, and human dimensions of natural resources, we were prepared to experience the wildlife and ecosystems of Belize and learn about tropical ecology and conservation concepts, issues, principles, and practices.

Belize is a small country in Central America bordered by Guatemala and Mexico with a population of about 340,000. Wildlife and ecosystems in these areas compete with many land uses such as ecotourism, timber extraction, and agriculture that have the potential to both positively and negatively affect them. However, globally, Belize has one of the highest proportions of land under environmental protection. The government co-manages this land in collaboration with a variety of nonprofit organizations including Friends for Conservation and Development and Belize Audubon.



During the course, we focused our attention on two different ecosystems: pine savannah, very similar to that found in peninsular Florida, and tropical rainforest, replete with massive buttressed trees and some of the highest global biodiversity. While visiting these ecosystems, we gave the students a taste of what it is to be a field biologist in the tropics. Everyone gained hands-on experience learning how and why field biologists survey different groups of animals and plants.

For example, students safely captured and handled bats and birds using mist nets, set small mammal live traps, sampled vegetation, surveyed reptiles and amphibians, monitored animal behavior, and set camera traps to photographically capture the cryptic critters of the rainforest. Additionally, we discussed conservation issues with Belizean natural resources professionals to learn management strategies for protected areas in the tropics. Some of the wildlife highlights included observing a group of more than thirty scarlet macaws socializing and preening; perusing camera trap photos of tapir and jaguars travelling the same trails we walked during the day; seeing and hearing black howler monkeys in the forest above us; handling dinner-plate-sized tarantulas; watching, from a distance as one of the University of Florida teaching assistants handled a jumping viper; and having a huge green iguana fall out of a tree and nearly land on our heads, scaring us all half to death.



In addition to the official learning time, our trips on days off were filled with visits to archeological sites and agricultural markets. Archeologists believe Belize's Mayan civilization thrived, with its population doubling or tripling Belize's current population. The evidence of this great civilization was everywhere, from the unexcavated ruins in the field camp we stayed at in the Chiquibul forest to the partly excavated and conserved temples we visited at Caracol, Cahal Pech, and Xunantunich, and to the pottery and skeletal remains we viewed while canoeing through Barton Creek Cave.

As instructors, we were fortunate to get a great group of Vols for our maiden study abroad voyage to Belize! In addition to all the good times, we got to experience life in the hot, muddy, and buggy tropics. Even when our van was broken and stuck in the mud, our group made the best of it, exploring the forest around the van and discovering an ocellated turkey nest. We look forward to our next trip to Belize and will offer the course again during Summer Mini-Term 2015. If you are interested, please don't hesitate to contact us directly or see us at the study abroad fairs this fall at UTIA and UT Knoxville.



International Experiences

International experiences are one component of CASNR's focus on experiential learning, and many students are taking advantage of the opportunity to take their studies off campus and to other parts of the world. Below are the experiences of CASNR students and recent graduates who experienced hands-on learning on an international level.

Drew Mallinak, Belize

This summer I found myself fortunate enough to be trekking through the jungles of Belize in an unreal world of biodiversity, majesty, and humidity, known as the Chiquibul National Park. I was there to conduct undergraduate research as well as aid the nonprofit, Friends for Conservation and Development (FCD), in their efforts to protect the park from the devastation of poaching. I was assigned to a small group of Belizeans whose job was to camp around the scarlet macaw nests around the Chalillo Lake, stopping and, if possible, apprehending poachers we came across. The monitored nests would also be periodically climbed and a wildlife veterinarian would assess the health of any chicks present.



My team alternated watch with another Belizean group, the Scarlet Six, which would rotate in while we went on stand-down every two weeks. Despite a frustrating bout with a lack of Internet access, and after assessing the logistics, my total time, and resources in the field, I developed a research project centering on the scarlet macaws' visitation behavior and will be comparing the time of visitation over a two month period with the chicks' ages at each nest.

Shortly after I left, all seven chicks from the nests we monitored fledged. That may not seem like much, but for a bird like the scarlet macaw, which possesses such low fecundity, every new adult matters. The scarlet macaw population in Belize is only numbered somewhere around 200 individuals. With a lifespan of up to fifty years, the effects of poaching and low birth rates will take years to take show. That is why I am convinced that without the good work of FCD, the scarlet macaw would soon be extirpated from Belize.

I returned from Belize after two months in the jungle with survival skills in some of the harshest conditions, a newfound resourcefulness, an international wildlife research project, master tortilla-making skills, international nonprofit experience, a cultural immersion, new friends, and above all, a new appreciation for my ability to handle any obstacles thrown my way. Working with FCD and observing first-hand their trials has also opened my eyes to the great issues facing conservation nonprofits around the world, but especially in tropical, less-developed countries, where attention to conservation is needed the most.



Amanda Plante, Royal Botanic Gardens, Kew

CASNR alumna Amanda Plante says that she was “extremely blessed to be participating in Kew Gardens’ internship program” this summer. The Royal Botanic Gardens, Kew, were founded in the eighteenth century. These gardens played an important role as a hub of economic botany for the British Empire—particularly during the Victorian era—by providing colonies with assistance in finding, researching, cultivating, and distributing crops such as rubber and cinchona.

Today, Kew continues to lead the way as a premier institution for horticultural and botanical research, conservation, and education.



The area of Kew where Amanda spent most of her time in is the order beds. Here, plants are laid out systematically by family. This is the view from the historic Temple of Aeolus.



Amanda keeps the aquatic garden clean and free of algae and duckweed as part of her internship with the Royal Botanic Gardens, Kew.

As a recent graduate with a master’s in public horticulture, this international internship experience with one of the best botanic gardens in the world will help prepare Amanda for a career in this field. In addition to doing practical garden maintenance in Kew’s order beds, grass, secluded, and aquatic gardens, Amanda also had the opportunity to learn about how a botanic garden of Kew’s size and caliber functions. This incredible opportunity would not have been possible without the support and generosity of the Botanical Research Institute of Texas’ Ian Leese Fellowship in Horticulture. To learn more about Kew and Amanda’s internship experience, follow her blog at aplantekew.blogspot.co.uk.

Courtney Dickson, South Africa

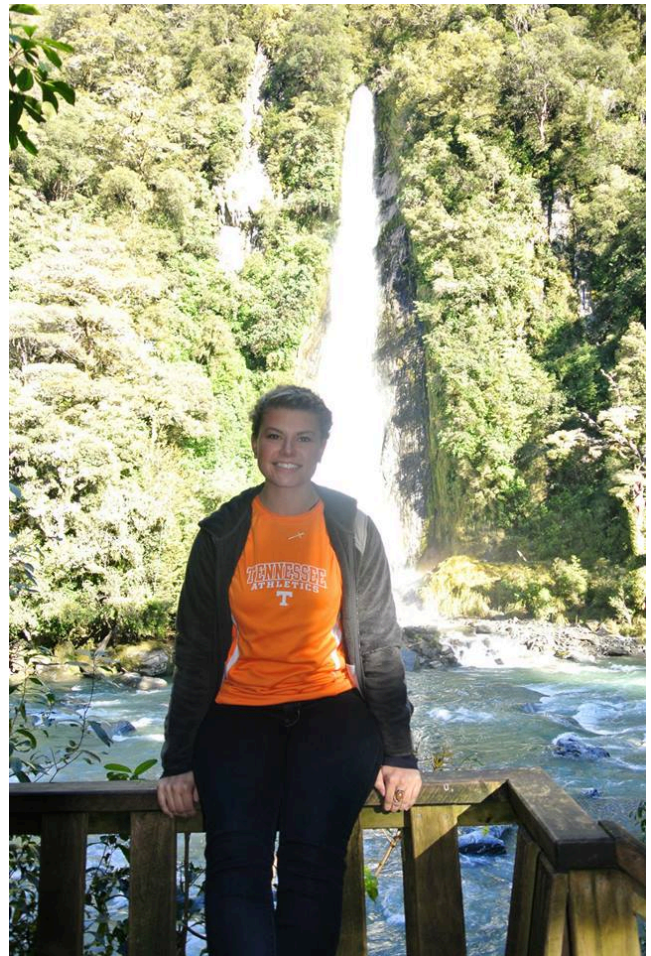
This summer I was very fortunate to have the opportunity to travel to South Africa. During my stay in the country, I was able to work in a rural veterinary hospital that is managed by the University of Pretoria in Hluvukani and Moholoholo Rehabilitation Center in Hoedspruit. The Hluvukani Veterinary Office services a rural community that relies heavily on cattle for their livelihood. Unfortunately the area is endemic with foot and mouth disease, which is causing a huge economic and cultural impact on the community. The University of Pretoria is able to offer veterinary services at extremely low prices. This benefits the community and offers a unique cultural and educational opportunity for veterinary students who cycle through on a clinical rotation. Moholoholo Rehabilitation Center is a nonprofit organization that works with state wildlife parks and privately owned estates to provide veterinary care for all animals, but it focuses primarily on wildlife. This was a dream-come-true experience for me. During my stay, I was able to treat cheetahs, lions, giraffes, leopards, African eagles, servals, owls, and rhinos. From the moment I walked through the gates, I had my hands on the animals, treating a large variety of illnesses and loving every second of it. It is an unreal experience to listen to the heart and lungs of a fully grown cheetah as it purrs away on the table and licks your face. CASNR taught me how to find and organize internships during my time there. My professors encouraged us to take every opportunity we could find to get different cultural and work experiences. They gave me the confidence that I needed in myself and my abilities that allowed me to develop strong networks that will benefit me for the rest of my life. Through these networks, I was able to find a way for me to make a difference on the other side of the world. After I graduate vet school, I plan to pursue opportunities working with Moholoholo and other nonprofit rehabilitation centers in South Africa.



Rachel Eatherly, New Zealand

The promise of hiking volcanoes, climbing up glaciers, and exploring New Zealand was enough to convince me to go to the other side of the world, but the first-hand internship opportunity and application of my studies is now what I appreciate the most about this unforgettable adventure. From staying in the shearer's quarters at a sustainable sheep farm, visiting the Livestock Improvement Corporation to understand the unique aspects of breeding on an island, to hiking up a volcano to admire a waterfall in New Zealand's oldest national park, the first two weeks were a whirlwind of activities. We then settled down for the next four weeks in an apple orchard in one of the most predominantly agricultural areas of New Zealand for our internships.

My internship focused on closing the information gap concerning water quality regulations between farmers, researchers, and the government. Currently working for and hoping to follow a career path in extension services, this opportunity and experience was invaluable. Through interviews, personal research, and farm visits, I learned the importance of utilizing the land wisely. My internship at LandWise gave me a real world application of maximizing economic growth while minimizing the environmental impacts, which now gives new meaning to all of those graphs from Dr. Park and the endless hours in economic classes!



Summer Internships for CASNR Students

Another component of CASNR's focus on experiential learning is internship opportunities for students. Read on to learn more about how CASNR students are reaching their potential through hands-on work in the field.

Billy Rochelle

Billy Rochelle, a junior in the Department of Agricultural and Resource Economics, had the opportunity to work for Farm Credit Mid-America (FCMA) this summer.

"For anybody interested in a job or internship, FCMA treats their employees very well with numerous benefits," he says.

Billy spent the majority of his time working on a personal project, which consisted of three parts: Growing Forward, AgDirect cross selling, and Climate Corp. The rest of his time was spent with either a mentor making sales calls, going to loan closings, tagging along on a construction inspection, or job shadowing different positions within FCMA.

"This internship has taught me how important and complex ag financing is to the agricultural industry. I have learned how to market a product to a variety of audiences. It is very important to find a place to work that has great people to work with and for," he says.



Billy Rochelle taking part in an interactive demonstration of how the Farm Credit Mid-America system works.

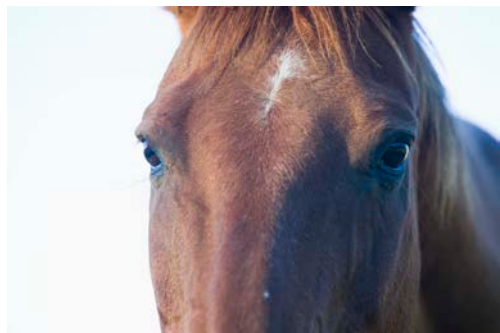


Engaging in team-building during orientation.

Kiyomi Duncan

A junior majoring in animal science, Kiyomi Duncan interned at Mane Support, a nonprofit, equine-based therapy organization. Kiyomi's duties ranged from helping cut out fabric to make stuffed animals for the children to administering wormer to horses. She also organized information and made displays of what goes on at Mane Support. But mostly she was in charge of helping out with the horses.

"This internship has taught me about how sensitive horses are and how easily they can adapt to a human's feelings," Kiyomi says. She hopes to further her education about equine therapy in the future.



Brittney Woods

Brittney Woods, a senior majoring in food science and technology, had the privilege of interning with one of the largest flour milling companies in the nation: ConAgra Mills. Brittney interned for twelve weeks in Alton, Illinois, just outside of St. Louis, Missouri.

While in Alton, Brittney served as a Quality Assurance Intern in the Quality Lab. Some of her duties consisted of conducting quality tests, updating data in Excel spreadsheets, delivering sample submits, swabbing the plant for microbes, and obtaining moisture and ash values of flour samples. In addition, Brittney was also given a project in which she had to conduct a study on differences between dough mix times on two different machines and create a method to more accurately predict their results.



During Brittney's time at ConAgra, the company merged with Horizon Milling, a Cargill Company, to form Ardent Mills. Brittney says, "I was honored to be a part of such a monumental transformation for the company. The merger has opened up doors of opportunities for the two companies, as well as contributed to making Ardent Mills the top flour milling company in the United States."

Aside from interning with the nation's premiere flour milling company, she explains that she was also given the opportunity to travel extensively. At the start of her internship, Brittney traveled to Omaha, Nebraska, to visit the ConAgra Foods Headquarters for orientation. Additionally, she traveled to the new Ardent Mills Headquarters in Denver, Colorado, to present her final project.

Brittney says, "I can truly say that this internship has helped me to develop more knowledge about the food industry, as well as equipped me with the skills necessary to succeed in the corporate environment."

Katelyn Galos

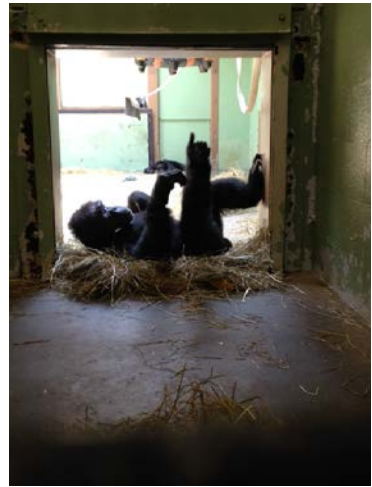
This summer, a typical day in the life of Knoxville Zoo intern Katelyn Galos began with cleaning and caring for the living quarters of several chimpanzees and gorillas. This day normally included taking out the dirty hay, rinsing the den, and replacing the hay. Sometimes, it was also Katelyn's responsibility to disinfect the dens, meaning she would have to take out all the hay and scrub the dens with disinfectant. After cleaning, she would set up the dens for lunch and shift the chimps and gorillas.



"In the afternoons, the diets are prepared and p.m. meds placed out. If there is any leftover time, we get enrichment ready, which ranges from peanut butter in PVC pipes to bird seed and cranberries in paper bags," Katelyn says.

Katelyn is a senior studying animal science with a concentration in pre-vet. She believes this internship taught her a great deal about the animals she worked with including their diets, mannerisms, and how to stay safe but still interact.

"This internship has definitely sparked my interest in exotic medicine; it may be something I explore in the future," she says.



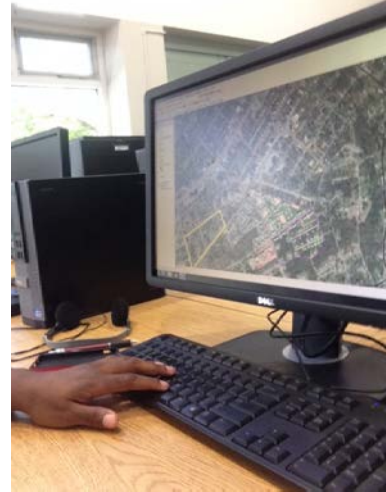
Rayricus Matthews



Rayricus Matthews, senior in the Department of Agricultural Leadership, Education, and Communications had the opportunity to intern with the Educational Advancement Program Research Institute this summer. Many housing developments in urban areas are experiencing one of the effects of global warming and climate change: urban heat stress due to the absorption of solar radiation. As a result, many neighborhoods are experiencing increases in temperatures throughout the night. When temperatures do not cool substantially, the human body's thermoregulation system is placed under greater stress to keep the

body cool. These stresses lead to fatigue, heat exhaustion, and even heat strokes. The goal of Rayricus' internship was to analyze the mitigation effects of vegetative and tree cover on urban heat stress due to solar radiation in urban communities. His goal is to create a real time analysis of the disparities in overnight temperatures and determine the relationship to the ratio of green space versus impermeable surfaces in residential communities in the Five Points Area of Knoxville, Tennessee.

As a component of his research project, Rayricus is digitizing aerial photographs through ArcGIS, ESRI software that provides GIS and Spatial Analysis



technology. This project also involves labeling and sectioning off testing sites in the Five Points Community in East Knoxville to assess urban heat stress throughout the neighborhoods. His next step is to develop a comparative ratio analysis of impermeable surfaces to tree cover in these particular neighborhoods within the Five Points Community.

At his preselected testing sites, Rayricus collects data on the amount of area heat stress using a device called a SkyScan. This device provides an assessment of the relative humidity and current temperature in the area to provide warnings of the amount of heat stress. He takes measurements in areas with low and high concentrations of impermeable surfaces to tree cover to develop an analysis of the differences in heat stress within his testing sites.

Sarah Rawlston

When asked what you did this summer, how amazing would it be to say that you worked with elephants every day? Well that is exactly the kind of response you can expect from Sarah Rawlston. Sarah is a junior majoring in animal science with a concentration in pre-veterinary medicine. She had the opportunity to intern at the Knoxville Zoo this summer, where she assisted the keepers in the daily care of the elephants. This included cleaning the yards and inside the barn, providing daily enrichment items, laying out hay and grain, and assisting in daily treatments.

She also had the opportunity to work on a project to provide a new, exciting enrichment item for the elephants. Sarah says, "I built a large ball interlaced with fire hose to allow openings to stuff with treats. The elephants were able to manipulate this ball with their trunks in order to get out the treats and hay inside." Sarah explains that she also enjoyed learning the medical aspects of working with elephants, such as hydrotherapy of one of the elephant's legs and seeing training of the elephants to allow for blood draws. "I really enjoyed the internship and learning all about the elephants and different aspects of working at the zoo. This internship has taught me what it's like to be a keeper at the zoo and how to care for exotic animals. I hope to go to vet school and gain experience in all fields before deciding what I would like to concentrate on after graduation" explains Sarah.



Incoming students

Alex Crockett



Alex Crockett, who will be joining the Department of Food Science and Technology this fall, was one of the 2014 recipients of the Peyton Manning Scholarship at the University of Tennessee. The Manning Scholarship, which is in its seventeenth year, is awarded annually to incoming first-year students who have also previously been selected into the prestigious Haslam Scholars program. The presentation ceremony was held at the Peyton Manning Locker Room at Neyland Stadium. "This program continues to be a great connection for me and my family to this great university," said Manning. "My four years here in Knoxville were wonderful and filled me with so many great memories. I am grateful, through this program, to be able to provide many of those same opportunities and chances that I had to others." Crockett, a 2014 graduate of the Alvin G. York Institute in Jamestown, served as the local, regional, and state 4-H President while in high school and spent time this summer on the UT Institute of Agriculture campus in Knoxville as team captain with the Scholars Bowl.

"I remember hearing a quote from Peyton once that life is about making decisions, first you ask questions, then you listen to the answers, then you listen to your heart," said Crockett. "I never dreamed I would be a Peyton Manning Scholar and would be compared to such a great representative of the University of Tennessee. When I received that award letter, I was so humbled to be a part of this family."

Victoria Utsman

At the state FFA convention in Gatlinburg, Tennessee, Victoria Utsman was elected Tennessee FFA State Reporter in March 2013. This began an adventure in leadership that will stay with her for the rest of her life. "Coming into this summer I could not wait to potentially impact the lives of the members I would encounter, not once did I think about how the might influence my life. I have discovered this summer that leadership is not the number of people you lead or the amount of deep conversations you have shared but instead leadership is taking a step back and learning from those around you." As part of her summer duties, she interacts with seven other talented individuals elected to leadership positions in FFA and has attended two weeks of FFA camp and leadership conferences.



This fall, Victoria will be joining the Department of Agricultural Leadership, Education, and Communication. She is like any other freshman contemplating how the UT experience will change her life and how different it soon will be.

Victoria says, "Knoxville has always been my first and only choice for college; in fact, I only applied to the University of Tennessee. I am already pretty much in love with UT and cannot wait to spend the next four years there. Although I am ecstatic about starting my 'volunteer years,' It is definitely safe to say that I have been very overwhelmed at

times when facing the fact that I am moving away from home, taking on classes, maintaining some sort of social life, and facing the amazing opportunity I have to serve Tennessee FFA. At times I have even forgotten that although I am committed to serving as a state officer, it is also my freshman year of college. It is almost too easy to stop thinking about what is best for yourself when given such a leadership position. I have basically just decided to try my best and go with the flow (not a small feat for me) and simply experience every bit of Knoxville that I can. I know in the end that this is where I am meant to be and what I am supposed to do. It will definitely be overwhelming at times, but the best is yet to be."

Alumni profiles

CASNR graduates do many things after graduation. Some go to work right away, some pursue graduate or professional school, and others follow their heart. This is the story of Caila and Matt Lane. Caila graduated in 2012 with a degree in Food Science and Technology and Matt graduated the same semester from animal science. They are now stationed in Swaziland with the Peace Corps.

Never Let the Journey End

How our experiences at UT shaped us for volunteering on a global scale

by Caila Lane

My journey at UT began at Morrill. I will never forget that sweltering August day in 2008 when my parents moved me in, hugged me, then handed me \$20 and drove off. As I stood there waving goodbye, I knew that I was standing on the brink of an amazing adventure, and what lay ahead of me were life-changing experiences. I just could have never imagined to what extent.

It was also at UT that I met Matt Lane, who would become my husband and partner in the Peace Corps adventure that we would undertake. We shared the same major, connected through our involvement in CASNR, and quickly became good friends. Freshman year came and went, with its trials and triumphs, failures and achievements. I began to gather knowledge not just from my text books and lectures, but from my peers and friends as well. Sophomore year proved to be a pivotal point in my journey. It was that year that my friendship with Matt had grown and developed into a relationship and also the year that I became aware of the mission of Peace Corps. It was just a regular day in my Environmental and Soil Sciences class with Dr. Logan, until a Peace Corps representative came in and educated us on what it meant to be a professional volunteer for the U.S. government. I remember being amazed and terrified at the same time by the prospect of living in a foreign country and dedicating two years of my life to a cause greater than myself.

I went home that summer conflicted. I knew I wanted to travel and do my part in serving humanity, but I was afraid of the incredible sacrifice it would take to serve as a volunteer for two years. I debated with myself all summer, and then finally decided in my heart that I wanted to be a Peace Corps volunteer. When my junior year began, Matt and I came together, and I shared my newly formed dream with him. He took time to consider it, and then decided he wanted to serve in the Peace Corps as well. So one dream suddenly became a mutual dream, and together we began working toward making our dream a reality. After meeting with the campus recruiter throughout the year, we were informed that the only way to serve together was if we were married for at least a year. We had intended to serve our two years after graduation and marry when we got back, but after much debating and soul-searching, we decided to get married our senior year, and then stay in Knoxville for our first year of marriage before leaving to serve in the Peace Corps.



Like all worthy goals, ours took tremendous patience, perseverance, and hard work. I remember walking across the stage and receiving my diploma, and how proud and accomplished I felt becoming a UT alum. Again, I found myself standing on a limitless brink, with every possibility laid out before me. That first year of marriage and waiting was challenging, and at many times, Matt and I doubted if we would ever see our dream become a reality. But we persisted and refused to give up. The day we received our invitation to serve in the Peace Corps was one of the happiest and most defining moments of my life. The excitement began to build as we scrambled around those last few months wrapping up our lives in the states and preparing to begin our journey in the kingdom of Swaziland, the tiny country settled between South Africa and Mozambique. Saying goodbye to my parents before I boarded the plane brought back feelings similar to that first day of college. Only this time I was not alone; I was sharing this amazing journey with my best friend.

Those first few months in Swaziland were the most challenging. We were eager, we were homesick, we were dedicated, and we were unsure of ourselves. We trained for two months straight, learning the language, acclimating to the culture, getting to know our comrades, getting to know each other, and getting to know ourselves. There were many obstacles to overcome in the beginning. The most difficult challenge to overcome personally was adjusting from a life of convenience and luxury to a life of struggle and poverty. Toilets, showers, electricity, and running water all made a drastic shift from expected privileges to precious commodities. There were many times during training that I doubted my ability to endure and complete my service. Again, I had to employ that relentless perseverance and just pure stubbornness at some desperate points. But when training was completed and I lifted my hand to swear a vow of commitment to become an official volunteer of the Peace Corps, I knew all of the hard work would be worth it, and that I would give my all not just for my country but for my new host-country as well.

Once training was complete and we had been sworn-in as official volunteers, we were moved to the permanent villages where we would be living and working for our two years of service. Our community is a



large village by the name of Ngculwini, tucked in between the hills and mountains of the Manzini area. Ngculwini is a very diverse community, with a mixture of suburban and rural homesteads. There are several wealthy, lavish homes in some areas, and then many brick and mud huts in others. Matt and I were placed on a modest homestead with the Mamba family, and given our own three-room hut. Our host family was excited upon our arrival, and eager to help us get settled in. With our Peace Corps allowance, we were able to furnish our hut and go about transforming it into a home.

The first few months in Ngculwini were devoted to integration, and getting to discover our community and all of the different people and opportunities it possessed. When integration and all of our formal trainings were complete, we were allowed to begin formulating projects and doing work throughout the community. Since Matt and I serve under the Community Health and HIV sector under PEPFAR, our main objective is to educate our community about HIV and its prevention through any creative and sustainable means we could organize with local counter-parts. Swaziland has a 26 percent prevalence rate of HIV (meaning about 1 in every 4 adults age 15-49 is HIV positive), and the average life expectancy is 48.9 years (the lowest in the world) (cdc.gov), so there was no shortage of need for the skills and knowledge that Peace Corps equipped us with.

So we started in the local schools. We began working with the high school Mbalenhle Christian Academy, assisting with their Life Orientation classes. Life Orientation is a required class for all students and it covers a broad range of topics, including sex and reproductive health. This provided us with the opportunity to do condom demonstrations with actual genitalia models and distribute condoms, and to educate and answer a wide variety of questions on the topic of HIV. We also began a health and exercise club for the students after school. We call it the One Heart Fitness Club, implying you have one heart and one life to get fit and live right. We meet twice a week, and cover a wide range of activities that many of the students are learning and doing for the first time. From yoga, to Krav Maga, to Ultimate Frisbee we teach them the versatility and importance of fitness. Through Peace Corps and the organization Books for Africa, we were given the opportunity to get Mbalenhle a library. For the equivalent of \$150, we were able to get around 1,500 books delivered to the school. We are still in the process of completing the construction of the library and organizing and stocking the books, but once the project is complete, the school will have the benefits of a fully functional library.

Matt ventured out from Mbalenhle and also does work at the local primary school Mgebiseni, where he does "Grassroots Soccer", an after-school program for children that combines HIV education with one of their favorite pastimes: soccer! Each lesson is designed with a creative, hands-on activity that helps the students make an easy correlation between the knowledge they are learning and how to apply it and share it with others in their life.





One project I am involved with is called GLOW, which stands for Girls Leading Our World. It is a program focused on female empowerment and education. Volunteers participating in GLOW start up clubs in their community and do a wide variety of interactive activities and lessons that teach the importance of individuality, health, education, and self-empowerment. Any girl is allowed to join, but the target age is for females between the ages of 12 to 18. Once a year, a few girls from each club around Swaziland are selected and they all come

together for a weeklong camp of fun, bonding, and empowerment. GLOW has a powerful purpose and a lasting impact on girls that get to participate.

There is a saying that "Peace Corps is the hardest job you will ever love". Those words could not be more truthful or insightful. A volunteer's service is what he or she makes it. There is definitely a lifetime of work to go around, and we do our best to do what we can. When we are not busy or out and about in the community, we are hanging out in our hut reading, writing, watching movies, cooking, playing games, interacting with our host family, or just relaxing and enjoying the slow pace of Swazi life. We have been fortunate enough to take a few vacations traveling around South Africa and Swaziland. We hope to visit Mozambique and Lesotho before our service is complete. There are so many adventures to be had and exotic places to visit around southern Africa. It truly is an amazing continent with so much beauty to be appreciated and explored.

While being a full-time volunteer is one of the most rewarding and fulfilling experiences I have had so far in my life, it is not without its trials and frustrations. Being a true volunteer means depending on others to complete your work, and going without recognition and appreciation for the majority of your service. You have to put aside your expectations, you have to open your mind and heart, and you have to be willing to completely change your perspective and the way you view the world. We are a year into our service so far, and I would not trade this life-changing experience for anything. I can't imagine where my life would be right now if it weren't for UT and the opportunities it presented me with. I do know for certain though that I would have never met my husband, or been encouraged to expand my horizons and join the Peace Corps.

For me, this incredible journey began when I accepted the call to become a UT Volunteer. And no matter where it takes me, I am resolved to cherish and appreciate every moment. So, if there is any advice I can offer to the Volunteers on the home front, it would be to fully dedicate your heart and mind to whatever dream you choose to pursue and make it happen. Never give up, and never let the journey end. It truly is great to be a Tennessee Volunteer.

CASNR Welcomes New Program Coordinator for Recruitment – Kyle Hensley

As UT prepares to welcome thousands of new faces to its campus, the CASNR dean's office is also welcoming a new member to the team. On August 4, Kyle Hensley joined the office staff as the new program coordinator for recruitment. He is only two years removed from his time as an undergraduate student within CASNR, where he majored in food and agricultural business and graduated in May 2012.

Kyle's diverse background made him uniquely qualified for this position. Growing up in a rural area between Lenoir City and Kingston, he found his love for agriculture at a young age.

"Some of my earliest and favorite memories revolve around spending time on my grandfathers' farms or tagging along with my older brothers to sheep shows," said Kyle. His entire family was actively involved in 4-H, where Kyle showed livestock and held leadership positions at the local, regional, and state levels. From there it was an easy transition to CASNR, which is something of a family tradition for the Hensley family. Kyle and all three of his brothers received their undergraduate degree from the Department of Agricultural and Resource Economics.



While an undergrad student, Kyle found his interest in recruiting students to the university. "I've always loved everything about UT, and I was looking for a way to put the passion to use. All of my brothers were CASNR Ambassadors, so I wanted an opportunity to forge my own trail. That led me to applying to be a UT Ambassador with the Office of Undergraduate Admissions."

As a UT Ambassador, Kyle gave tours to prospective students and helped answer questions about everything from campus life to the application process, experience that is sure to help in his new position.

After graduating from undergraduate work, Kyle moved straight through to UT's Master of Business Administration program, where he concentrated in marketing. He feels that the skills he learned there will be extremely useful in his current role. "One of the major aspects of our marketing program was this idea of 'brand management'. We can think of UT and CASNR as brands. My responsibility will be to help continue to improve our brand image and leverage that to help with the recruitment process." While in grad school Kyle continued to help with the UT Ambassador program, this time in an administrative role as a graduate assistant.

All of these experiences led Kyle to a belief that he was the right person for the job. "I never knew it at the time, but my background has led me directly to this position. It really is a dream job for me."

Though he is new to the position, he already has big ideas for the recruitment process. "I think of recruiting in a similar way that the athletic teams do. We need to have a process to identify talented students, make contact with them, get them to visit our campus and show them everything we have to offer. We have to be a presence across the state. I am really looking forward to carrying the CASNR banner with me everywhere I go." If you have ideas or suggestions for Kyle, he can be reached via email at kyle.hensley@utk.edu or by phone at 865-974-0315.

CASNR Sponsors Three Students for the LeaderShape Institute

The University of Tennessee hosted its fourth annual campus-based session of the LeaderShape Institute in May 2014. Since its inception in 1986, the LeaderShape Institute has developed a global reputation as one of the premier leadership development programs for students and young adults. During the intensive six-day program, students participate in workshops, seminars, debates and teambuilding programs—together, these activities help students enhance their leadership skills, while developing a deeper understanding of teamwork, conflict resolution, and effective communication. Specifics of the program include a Team Challenge Course (a half-day outdoor teambuilding experience), an evening with a Guest Leader Forum in which participants are exposed to "real-world" role models in business, industry, and the professions; quality facilitators from a variety of backgrounds; and learning and sharing in small groups called "family clusters." Now in its 26th year, the program has provided leadership training to over 38,000 young people from colleges, universities, corporations, and organizations across America and throughout the world.

In an effort to continuously produce the strongest Agricultural leaders, CASNR sponsors three students to attend the LeaderShape Institute each spring. This year, CASNR sponsored Kelsey Henderson (biosystems engineering), Margaret Henderson (food science) and Billy Rochelle (food and agricultural business). When asked about their individual experiences, each student described how the institute changed their lives. Margaret Henderson said, "It was an incredible experience that I will be forever grateful for! I've built so many relationships and gained many valuable leadership skills. I'm looking forward to bringing back what I learned to UT's campus." When asked about the most rewarding aspects of the program, Kelsey Henderson indicated that she enjoyed her small-group discussions and programming. "I wasn't so sure in the beginning because of the obvious range in interests, opinions, and backgrounds, but it turned out to be highly conducive to a healthy learning environment and was one of the most effective small groups I have ever been a part of. My group has already planned a reunion for this fall semester and our adult leader is definitely someone I would keep in touch with and talk to later down the road." When asked if they would recommend the program to their peers, all three students said yes. Billy Rochelle said, "I would encourage all CASNR students to apply for next year's LeaderShape Institute. It has been one of the more valuable experiences I have had in my two years here at the University of Tennessee." Kelsey Henderson's sentiments were similar, as she said, "Although LeaderShape is geared towards students who want to be the presidents, captains, CEOs and other big business people, the real focus of the program focuses on how each person is a leader in their own way and how to maximize your effect as the leader you are, and from there, how to recognize the appropriate leadership style necessary to a situation and therefore to be able to step down when someone else would be a better leader in the situation."



Summer Bridge Program

In an effort to provide underrepresented students with successful skills for future success within the agricultural industry, CASNR partnered with the UT College of Engineering and the UT College of Arts and Sciences to launch its inaugural Intercollegiate Summer Bridge Program (July 8 – July 30). The intensive three-week residential program provided incoming minority students from all three colleges with academic resources and professional development coaching for the future. With courses and programs focusing on STEM success, students participated in morning classes, afternoon seminars, and weekend field trips throughout East Tennessee. For the inaugural year, we provided nineteen students



Danielle Holdren (animal science), Nicolas Lopez-Montilla (animal science), Brajae Brazil (animal science), Jasmine Morrisette (animal science), and Quentin Hatton (forestry and wildlife/fisheries) are ready for mock interviews!

with opportunities to participate in the program free of charge, with five of those students coming from CASNR.

Morning activities focused on academic preparation. Students took pre-college courses in both chemistry and pre-calculus, an essential part of the program. Each year, all three colleges enroll a healthy number of minority students who have career goals and ambitions within the STEM industry, however, many struggle with lower-level sciences (chemistry, mathematics and biology). As a result, colleges lose many of these potential scholars to other areas

of study. The chemistry and pre-calculus courses provided students with a boost of confidence, while preparing them for their fall classes. All students showed dramatic improvements in both classes with some doubling their test scores by the end of the program!

In addition, students participated in “College/Life Planning” seminars. Erica Echols, diversity coordinator in the College of Engineering, focused on teambuilding and effective communication through a four-day bridge building project. Craig Pickett, CASNR coordinator for student life and diversity, focused on professional development and career planning. Over the course of four days, he facilitated presentations surrounding resumes, cover letters, internships, interviewing skills, and career planning. In addition to their morning classes and afternoon seminars, students participated in weekly field trips on Friday afternoons, with each trip highlighting a different area of the STEM field (including trips to Oak Ridge National Laboratory, Denso Manufacturing and Sweetwater Valley Farm). Students toured facilities, asked questions about career paths and networked with potential future employers.

On Wednesday, July 30, participants celebrated their accomplishments through a closing reception at the Howard Baker Center. Keynote speaker and Vice Chancellor for Diversity Rickey Hall encouraged students to continuously strive for new levels of personal success. Echols and Pickett distributed awards to participants, highlighted special achievements, and provided students with final words of encouragement as they prepared for the fall semester. Several students were asked to reflect on their experience, with each articulating how the program provided them with essential skills and a boost of confidence for their first academic year at UT. All three colleges plan to continue the collaboration in an effort to provide academic and professional development opportunities for underrepresented students within the STEM fields.

Student Award Winners



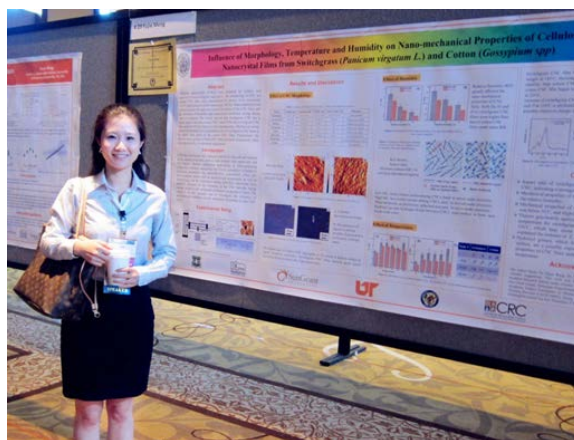
Laura Poplawski is an undergraduate student doing research in Dr. Robert Trigiano's lab, in the Department of Entomology and Plant Pathology.

She won second place in the oral competition at the American Society for Horticultural Science meeting, which was held July 28-31 in Orlando, Florida. Poplawski's oral presentation was titled "Assessment of Extracellular Enzymes Produced by Fungi Isolated from Muscadine Grapes" and it was her first professional presentation.

Laura says, "Undergraduate research has been a great opportunity, allowing me to learn things that are not taught in a classroom, and giving me a better idea of what a career in research is like. Presenting my research at ASHS was a wonderful experience in scientific communication, and seeing all the other research being done in the field was really eye-opening."

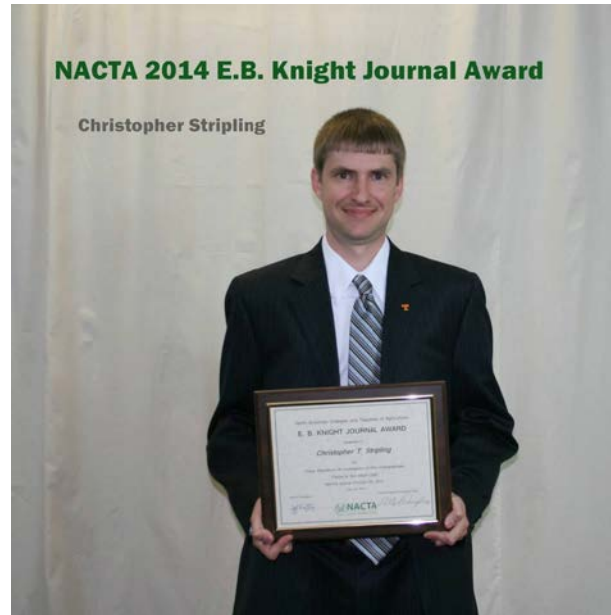
Yujie Meng, a doctoral student under the direction of Dr. Siqun Wang and Dr. Timothy M. Young, won first place in the student poster competition at the joint Forest Products Society and Society of Wood Sciences and Technology meetings in Austin, Texas. This honor was accompanied by a \$750 cash award. Her achievement was more notable in that she competed against more than 50 students who had submitted abstracts in this year's competition. Yujie also received support for travel by winning the Graduate Student Senate Travel Award from the UT. Yujie's research, "*Morphology and Size Distributions of Cellulose Nanocrystals Prepared from*

Switchgrass", described the overall morphology of individual cellulose nanocrystals using microscopy techniques and statistical analysis. The precise description of the shape of nanocrystals benefits not only model selection and prediction/design of nanocomposites with regard to the reinforcing effect, but also facilitates the explanation of complex cellulose nanocrystal structure.



NACTA honors Christopher Stripling

Dr. Christopher T. Stripling received the NACTA E.B. Knight Journal Award at the Annual Conference of the North American Colleges and Teachers of Agriculture held at Montana State University, Bozeman, Montana, June 25-28. The theme for the Conference was *"Learning Runs Through It."* The purpose of the annual conference is to provide for professional advancement of faculty engaged in classroom teaching. Participants have the opportunity to share teaching methods, philosophies, and styles of instruction.



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