Friends of the Environmental Studies Program,

I am delighted to share with you our annual review of all things Environmental Studies, I hope after you have had a moment to read through these pages you will be as excited as I am about where we are headed.

As you may see from the signature below, I am the interim Director this year for Environmental Studies. Chris Brown has a Fulbright Fellowship to develop his research on land change in some of Brazil’s fastest changing agricultural landscapes and is using this funding and his sabbatical to spend time in Brazil collaborating with his colleagues there and of course making new connections for a lifetime of research. We are very proud of Chris for the work he has done for Environmental Studies and hope his time in Brazil is enriching for his research and his family.

We have had a plethora of things to be grateful for this year in our program. Dorothy Daley, Shannon O’Lear and Chris Brown were recognized for their continued excellent work for our program and the University of Kansas through promotion to Professor. If you happen to see them, please give them a hearty congratulations for what is truly a great academic achievement.

We are fortunate to have truly excellent faculty in our program. The number of which has grown this year…. significantly! Peggy Schultz has joined us from Indiana University, while Amy Burgin and Terry Loecke will be joining us in January (2016) from the University of Nebraska. Take a moment to review their profiles in this document, the breadth expertise of our faculty has grown significantly with their addition as will the potential course offerings for our students.

While we are on the topic of our students, have a look at the opportunities they have taken advantage of in this document. I am certain you will agree that through the engaged scholarship and service they are conducting, both within the State of Kansas and around the world, we are truly educating future environmental leaders. It is perhaps most heartwarming to me, to see that these experiences are not just for a few, but that the majority of our students are finding novel opportunities to expand their horizons, engage in environmental scholarship and develop a strategic path to a career. Indeed, this path has a new fork for those that are interested in graduate school. This year saw our first students earn their degrees from our Professional Science Master’s Program in Environmental Assessment at the KU Edwards Campus, and our current undergraduates were introduced to the opportunity to attain this degree through the addition of only one more year of study after completion of their undergraduate degree. Take a moment to learn about the development of this program from its leader Mark Jakubauskas in these pages.

Our alumni and friends play a huge role in helping us achieve our goal of providing students with the learning experiences they need to become leaders in the environmental arena. I invite you to become a part of our team, knowing the contribution you make to Environmental Studies ultimately helps our students along the path they have chosen to solve the pressing environmental challenges of our time. Send us a note at envstudies@ku.edu, let us know how and what you are doing. In fact, a picture says a thousand words, so if you don’t mind sharing your past and present photos of Environmental Studies related work and experiences please share those as well. We live in a world that faces a variety of environmental challenges; our students are ready to be part of the solution.

David A. Fowle, Interim Director
Program Overview

The Environmental Studies Program at the University of Kansas, established in 1971, is one of the oldest environmental studies programs in the country. It is an interdisciplinary program, with faculty from professional schools, natural sciences, social sciences, and humanities.

The program provides students with the tools they need to investigate environmental phenomena, including soil sampling and freshwater ecology to policy-making and social science. Environmental Studies students learn how to put together what other disciplines take apart.

In addition to a vibrant classroom curriculum, Environmental Studies students are encouraged to participate in the many exciting experiential learning opportunities that KU offers, including study abroad, undergraduate research, co-curricular projects, and internships.

Environmental Studies provides the tools to involve our students in the intellectual life of the university and to connect them to environmental projects in the surrounding community. These experiences enhance the success of students along their path to graduation and rewarding careers.

Educating Leaders

Our interdisciplinary education prepares students for lifelong learning, leadership, and success. Our undergraduate curriculum includes courses in the natural sciences, social sciences, and humanities.

Building Healthy Communities

We encourage our students to enhance the prosperity and well-being of communities in Kansas and beyond. Environmental Studies students have worked in the Lawrence and Kansas City communities as well as in places as far ranging as Brazil, El Salvador, Germany, Guatemala, India, Peru, South Africa, and Uganda.

Making Discoveries that will Change the World

We offer a wide array of undergraduate research opportunities. Students work with a faculty mentor, who guides the research process, to develop new insights around a research topic that interests them.
Core Knowledge and Skills

Environmental Studies gives students a fundamental knowledge of the human environment, the dimensions of human impact on the environment, and holistic approaches to solving problems resulting from this impact. All Environmental Studies majors complete coursework in the following areas:

GLOBAL ENVIRONMENT

EVRN 140 & 142 - Global Environment I (offered fall) and Global Environment II (offered spring), surveys the foundations of environmental understanding and the process of scientific discovery from perspectives that combine the principles and methodologies of the humanities, physical, life, and social sciences.

Co-taught by three professors, Global Environment is designed for students who are interested in the interdisciplinary nature of Environmental Studies. Key topics include the history of environmental systems and life on earth, the discovery of biotic evolution, ecological change, and climate change.

ENVIRONMENTAL LAW

EVRN 332 - Environmental Law (offered fall and summer) is an introduction to how the American legal process improves, transforms, and damages the natural environment. This course emphasizes and compares shifting responsibilities of legal forces and institutions: judges and litigants, legislators and statutes, agencies and administrations, and citizens and regulated entities.

ENVIRONMENTAL POLICY ANALYSIS

EVRN 320 - Environmental Policy Analysis (offered spring and summer) is an analytical study of the formulation, implementation, and consequences of environmental policy in the United States. The course teaches students to define environmental problems and create feasible alternatives to solve these problems. In this course, attention is paid to relevant interest groups, issues specific to both rural and urban populations, relationships between national policies, and international organizations concerned with environmental problems.

FIELD ECOLOGY

EVRN 460 - Field Ecology (offered fall and summer) turns the outdoors into a living laboratory. It provides practical experience in the characterization of a diversity of ecosystem types: lakes, streams, forests, and prairies. The course is writing intensive, and designed specifically for Environmental Studies majors.

CAPSTONE PROJECT

EVRN 615 - Capstone Project (offered spring) allows students to integrate and synthesize the knowledge they have gained throughout their undergraduate education. It places students in situations in which they address real world environmental issues with a team approach and produce professionally meaningful reports, which can directly change the world around them.
Experiential Learning

Environmental Studies students are some of the most active and engaged on campus and in the community. We partner with community organizations and other units across campus to give our students hands-on experiential learning opportunities. Our students participate in research, projects, and internships that change the world around them.

**ADVISING**

Advising helps our students obtain an outstanding education. In 2014, Environmental Studies became the first two-time recipient of the Award for Excellence in Undergraduate Advising from the College of Liberal Arts & Sciences.

**LEARNING PATHWAYS**

Learning Pathways are thematic areas that match student interest to the environmental expertise of our faculty. Each Learning Pathway represents a concentration within our major and lists suggested courses and faculty with expertise in the pathway.

**RESEARCH**

Research in Environmental Studies involves an intellectual and educational collaboration between students and faculty mentors. Scholarships and Honors opportunities are available for students who participate in undergraduate research.

**PROJECTS**

Projects allow Environmental Studies students to apply their education to real world problems. Environmental Studies partners with the Center for Civic and Social Responsibility to offer an array of experiential learning opportunities.

**INTERNSHIPS**

Internships are wonderful and effective ways to connect academic experience with the professional work arena. Environmental Studies majors are eligible to receive academic credit for their internship experience.

**CAREER RESOURCES**

Career Resources guide our students to making the most informed decisions possible. Environmental Studies partners with the Career Center to provide our students with the tools they need to access a range of career opportunities.
The Environmental Studies program offers a three-course sequence for AAP students. Last year, I worked with Bob Hagen to develop the curriculum and teach the new courses Environmental Studies designed exclusively for the AAP program. The three courses—Introduction to Kansas Landscapes; Understanding Kansas Landscapes; and Kansas Landscape Projects—introduce students to the physical, ecological, and cultural processes that have shaped the Kansas environment.

During the first semester course, students have the chance to directly experience the Kansas landscape through field trips to places like the KU Field Station, the Haskell Wetlands, and a local farm. The second course focuses on the interdisciplinary approaches used by scholars in Environmental Studies, and we expose students to the types of knowledge and research methods used by scholars in the humanities, social sciences, and natural sciences. The sequence culminates with the Kansas Landscape Projects course, where students conduct primary research for a project focused on a local environmental topic. Our courses encourage students to carefully observe their new home in Kansas while simultaneously exposing them to concepts and skills that they can apply to understanding their place anywhere in the world.

On behalf of the AAP and Environmental Studies programs, I had the opportunity to travel to China for two weeks in November 2014. I visited six cities and participated in student recruitment efforts. While in Shanghai, I met with students and counselors at Shanghai High School, the best public high school in the city. When I left Shanghai, I joined the Maple Leaf Tour in Dalian, China. The Maple Leaf Tour is a college recruitment fair where university representatives travel to international high schools throughout China. Some of the most memorable parts of the recruitment fairs were the conversations I had with students and parents. I learned a lot about what they consider when deciding where to attend a university in the United States. Students and parents were extremely interested in my position as a lecturer in the Environmental Studies program at KU. And so were local TV stations. I was interviewed twice—in Chongqing and Wuhan—about KU and our program. The relevance of Environmental Studies to issues in China and the varied career opportunities that the major provides is extremely attractive to students and parents.

I had the chance to highlight the interdisciplinary aspect of the KU Environmental Studies program at a university admissions event in Changsha, China. I taught a mock class about air pollution to students, parents, and agents—people who help students with the university application process. The class was very well received. One of the most noticeable parts of my trip was the air pollution in Chinese cities. The level of visible pollution was something I had never experienced before. Students and parents expressed concern about the topic and were very engaged in the discussion and interdisciplinary approach I took to explaining some of the issues. My presentation also gave students an idea about what to expect in a U.S. university classroom setting.

— Ali Brox, Environmental Studies Lecturer
New Faces in Environmental Studies

**Amy Burgin**
Faculty Member

Amy studies the connections between microbes and chemistry, particularly in aquatic systems, and focuses on how human activities alter those connections. She previously taught at Wright State U and the University of Nebraska.

Fun fact: Amy has been to all 50 states!

**Terry Loecke**
Faculty Member

Terry studies how ecosystem processes are influenced by environmental variability. He comes to KU after working at the Cary Institute for Ecosystem Studies, US EPA, and the University of Nebraska.

Fun fact: Terry is married to Amy (above) and they have twin daughters!

**Tori Dreyer**
Communications Specialist
Lindley Hall, 213

Tori stepped into this new position in September 2015. She makes sure our website and social media stay up-to-date. Keep your eyes peeled for Tori at our events - she's the one with the notepad!

Fun fact about Tori: she is a huge Royals fan and attended a World Series 2015 game!

**Ally Smith**
Administrative Assistant
Lindley Hall, 213

Ally joined the program in August 2015 and is the main point of contact for faculty and undergraduate students. Some of her duties include scheduling courses and assisting the Student Ambassadors.

Fun fact: Ally graduated from KU this summer!

**Peggy Schultz**
Faculty Member

Peggy began working with the program this year, starting with the fall 2015 semester. Her area of specialization is in plant-soil microbial ecology. Before coming to KU, she was a Faculty Instructor and the Director of Biology Outreach at Indiana University.

Ramia began working with the department in April 2015. She also serves as the office manager for the Dept. of Geology as well as the Dept. of Geography and Atmospheric Science.

Fun fact: She and her husband have a German Shorthair Pointer named Phog!
STUDENT AMBASSADORS

Our Student Ambassadors work to engage current and prospective students through targeted outreach and networking events. Ambassadors meet and discuss the program with prospective students, plan alumni events, and engage with the broader Lawrence community through service.

LIZ BLACKBURN
Year of Study: Senior
Pathway: Environmental Security

NATHAN BUNKERS
Year of Study: Senior
Focus: Environmental Policy and Geographic Information Systems
ESSA Position: Grub Club Co-Ambassador; ESSA Coordinator (Spring 2015)

TYLER HOLCOM
Year of Study: Junior
Pathway: Environmental Policy
ESSA Position: Internal Relations Ambassador

BRYAN KURZ
Year of Study: Senior
Pathway: Indigenous Studies
ESSA Position: Campus Outreach Co-Ambassador

HALLE MCCOURT
Year of Study: Senior
Pathway: Land Use and Planning
ESSA Position: Community Outreach Co-Ambassador
LAURA METZ
Year of Study: Junior
Pathway: Conservation Science
ESSA Position: Prospective Student Meeting Ambassaleader

GABRIELLE MURNAN
Year of Study: Senior
Pathway: Environmental Policy
ESSA Position: Student Ambassador Coordinator (Fall 2015)

TRUDY RUBICK
Year of Study: Sophomore
Pathway: Environmental Humanities

ERICA STAAB
Year of Study: Senior
Pathway: Geographic Information Systems
ESSA Position: Campus Outreach Co-Ambassaleader

KATELYN WHITT
Year of Study: Senior
Pathway: Water and Soil Resources
ESSA Position: Community Outreach Co-Ambassaleader

KYLIE WYATT
Year of Study: Junior
Pathway: Environmental Justice
ESSA Position: Grub Club Co-Ambassaleader
Before I came to KU, I was certain of a few things: I could never hold a desk job, I enjoyed being outdoors, and I wanted an engaging and dynamic career path that would push me to think critically. Environmental Studies was my perfect fit.

My freshman year, I enrolled in Global Environment I and II. Professors from three different departments taught the course, which gave me my first glance at environmental studies as an interdisciplinary major. We learned about various issues ranging from air pollution and climate change to agriculture and water conservation, which provided an introduction to the environmental issues facing my community and the world.

The summer after my freshman year, I studied abroad in southern India with 11 other students in the Environmental Studies Program and took Field Ecology and Environmental Issues of India. I learned about environmental issues on a global scale, including how different countries interacted with the natural world and created policies for environmental protection.

During my sophomore year I took Environmental Law, which was my favorite class. We learned about the history of environmental lawmaking in the U.S., in particular in regulating air and water. My main research interest is water, and this class gave me a historical perspective on ongoing environmental issues. Second semester, I took Environmental Policy, which integrated problem identification with team problem solving and gave me a look at how we could take these heavy environmental problems and collaborate to make policy change.

Junior year, I was an undergraduate teaching assistant for Geology 101. I had the opportunity to present research on the importance of fieldwork for introductory geosciences students in Vancouver, British Columbia at the Geological Society of America conference, which again revealed to me the importance of multidisciplinary cooperation in the environmental field. Around this time, I also solidified my pathway as Water and Food & Agriculture. The pathways are great because they allow for a myriad of specialties within environmental studies for every individual’s interests.

My senior year, I did an independent research project on water policy and appropriation in the West. I worked closely with my mentor, Paul Stock, a leader in the food and agriculture pathway, to take a deeper look at the urban and rural relationships of water usage in California. I also enrolled in Sustainable Land Use Planning and Capstone. The capstone course integrated Bachelor of Science and Bachelor of Arts majors alike to work in groups to make sustainable changes on the KU campus and in the Lawrence community.

Because of this program, I have studied abroad, performed research, presented at an international conference, and met people from a wide variety of disciplines with incredible insight. Environmental Studies is an ever-evolving area of study that encourages collaboration and critical thinking. I am grateful to have been a part of such a program that encourages personal and academic growth.

— Katelyn Whitt
Study abroad is more than just a way to see the world. It is essential, for us as a community, to strive to see the world as others see it and develop empathy for one another. For environmental studies students, study abroad is particularly critical, in my opinion. Environmental issues don’t respect political boundaries, and traveling allows us to grasp the global interconnectedness of the problems we tackle. Equally important, study abroad allows us to connect with people who are passionate about the same issues and learn how others are addressing problems similar to our own.

But perhaps I’m getting ahead of myself. Throughout my time at KU, I have had the privilege to study abroad three times and each had a profound effect on the way I perceived the world and altered how I approach environmental issues. The first time I studied abroad was at a short, intensive winter break course on the United Nations in Geneva, Switzerland. Taught by former diplomats and UN officials, the course offered a more complete picture of the UN than a book could hope to. As the UN climate change talks take place in Paris this December, I am grateful for the opportunity I had to gain understanding of this entity upon which so much environmental effort rests.

The second time abroad was on a summer program to Freiburg, Germany on the “Environmental Studies in Europe”. This program, led by KU faculty, offered two courses: Environmental Economics, and Urban Planning. In the progressive, sustainable haven of Freiburg, we were able to directly see what a truly sustainable community would look like. The story of the community, whose sustainability had been developed through strong policies, inspired my fellow classmates and myself. I found the environmental economics class to be particularly compelling. As we visited sustainable business owners in the region, I became increasingly interested in economics as a way to express environmental reasoning and issues.

During my third time abroad, I went to Bishkek, Kyrgyzstan for the academic year. For those less familiar with Central Asia, the region has strong environmental resource concerns over water and other natural resources as well as pollution issues left over from the Soviet days. Climate change is beginning to effect the region, exacerbating the water concerns. While I mainly studied economics and Russian while I was there, discussing conservation issues with Kyrgyz host family and fellow students gave me a new perspective on the complexity surrounding environmentalism in developing countries.

From language and analytical skills to a better global understanding, studying abroad has profoundly shaped the way I approach the world and my education. I am fortunate for the numerous opportunities I had to improve my knowledge and travel. It has continued to benefit me in so many ways. For example, I am working on my honors thesis on environmental economic issues in Central and Eastern Europe with Professor Earnhart, who I met while on the Environmental Studies in Europe trip. My studies abroad also helped me to get a (awesome) job with the Office of Study Abroad as a peer advisor. Stop in and chat with me about studying abroad!

—Ashlie Koehn

STUDY ABROAD

The Office of Study Abroad (OSA) is an academic support unit that develops and maintains international education programs for students and faculty. The broad scope of overseas programs and institutional ties furthers the University’s mission and enhances its role as an international institution of education and research. The Office of Study Abroad provides a comprehensive range of student services throughout the processes of advising, program selection, application, enrollment, orientation, program completion, and the granting of academic credit.

For more information, visit: studyabroad.ku.edu
Throughout the 20th Century, rural America has been characterized by a predominant trend, rural flight. Many scholars attribute the mass exodus of rural communities to changes in agricultural technologies. Rural flight has continued into the 21st Century. Fewer and fewer people live in the rural communities of Kansas, which begs questions about the social and political stability of these declining areas.

Last fall I had the opportunity to design and conduct an independent research study with Dr. Paul Stock. I wanted to decipher whether or not discrepancies exist between the manner in which confined animal feeding operations (CAFOs) are described to prospective communities and economic and social realities of a community after the introduction and/or expansion of a CAFO. My study focused specifically on large-scale hog facilities in two rural communities in Kansas. I interviewed 11 rural residents that live within three miles of hog operations or own their own CAFO. Very few studies exist that look at the social impacts of CAFOs in rural communities. My project attempts to examine the very real social effects of CAFO introductions in small communities in Kansas.

Based on my research and interviews, I found that rural communities experience a lack of power in the face of state laws regulating CAFOs, specifically Kansas Department of Health and Environment policies that favor industrial agriculture over the health of communities. Additionally, the power of the livestock industry in shaping state policies directly affects the democratic power of small rural communities. The introduction of CAFOs not only highlights a lack of power, but also creates tensions between community members.

After interviewing residents from two Kansas communities in different parts of the state, I noticed patterns begin to develop. I found that CAFOs, despite industry promises, do not significantly impact the economies of rural towns and can significantly alter the social networks of cities by dividing the community. Numerous interviewees sighted the immense political, social, and economic complications of CAFO introductions. I identified four areas of

My experience designing and conducting my own research not only helped me understand the economic and social impacts of CAFOs on rural Kansas, but also helped hone my analytical and critical thinking skills.

More than anything, I learned the importance of on the ground research in order to understand broad environmental and social problems.

— Gabrielle Murnan
communication breakdowns from the simple introduction or expansion of a large-scale hog farm:

1. Kansas Department of Health and Environment and CAFO owners
2. Kansas Departments of Health and Environment and rural communities
3. CAFO owners and rural communities
4. Community members and community members

My experience designing and conducting my own research not only helped me understand the economic and social impacts of CAFOs on rural Kansas, but also helped hone my analytical and critical thinking skills. More than anything, I learned the importance of on the ground research in order to understand broad environmental and social problems.

— Gabrielle Murnan

“They have to take responsibility (CAFO owners). There are two choices. Either you can mask the smell somehow or just don’t produce the smell in the first place. Your guy with the bad body odor, what are his choices? Same thing. He can either take steps before he ever goes out with you guys to eliminate it or once he’s out and he realizes it he can go do something about it. Either way, he is taking responsibility. What would you think of him if he said I don’t stink. And if 5 people are sitting around there and they say dude you reek and he says no I don’t stink. I’m going to guess that he’s not going to be very welcome in your group. Not because he’s a bad person but because he’s not taking responsibility.”

The most impactful findings from my study were descriptions of breakdowns between community members. Often times the most important relationships in rural areas are those with family, friends, and neighbors. The introduction or expansion of multiple hog farms has deeply impacted the social fabric of my subject towns. Based off of the words of interview participants, there is an apparent divide among community members that surfaces in secrecy, side-taking, embarrassment, and a loss of trust and understanding among friends.
When I started my job at the Kansas Biological Survey as a student GIS assistant for the Heritage program in February 2015, I never imagined the opportunities that would present themselves to me. I’ve learned many things from this job so far, but two of the biggest lessons I’ve learned are one: Every professor, TA, researcher and co-worker you meet become part of your network and two: Never feel too shy to ask for what you want, especially when it comes to work and research experiences.

On my first day at the Survey, Jennifer Delisle, my boss in the Heritage department, gave me a tour and introduced me to people around the building. This was the day I met Kelly Kindscher, a botanist and professor in the Environmental Studies department. As my time at the Survey went on, I regularly spoke with Kelly while working on different projects for the survey. I told him I was very interested in getting involved in more research and helping with field work, and if he heard of any opportunities, I would really appreciate it if he passed my name along.

The end of the spring semester rolled around and I was speaking with Kelly one afternoon in the lab. He mentioned that he had an on-going research project that took him and a team to Colorado every year, and asked if I would be interested in spending two weeks helping with the project in August. Without even really knowing what the project was for, I immediately said yes. This was just the sort of opportunity I had been looking for to really get some hands-on experience.

It wasn’t until a few weeks later when I was talking to Leanne Martin, another researcher for this upcoming project, that I really started to get the details on what I would be getting myself into. This ongoing project is over the medicinal plant Osha and what effects harvesting has on the plant. Osha is an ethnobotanically important medicinal plant whose spicy roots are wild harvested by individuals and sold by herbal product companies to treat influenza, bronchitis, and sore throat, and by Native Americans as a ceremonial and medicinal plant. Each summer since 2012, Kelly’s team has ventured to the San Juan National Forest where they have laid out plots in multiple locations in order to better understand how different harvesting techniques affects the populations of Osha. The team spends these two weeks camped out and working every day at elevations of 10,000+ feet.

Without any previous plant research experience, I wasn’t exactly sure what it would be like working on this project until we actually arrived at our first worksite. I learned that research is much better experienced than explained. I could read all about plots and count and cover techniques, but until I got to the site, and began to lay out the plots, I was lost. It didn’t take too long to catch on and really begin looking at the research and ask my own questions. And I had many, many questions. What better opportunity would I have to ask and learn than when I had Kelly, Leanne and other experienced people at my fingertips to pick their brain?

I spent every day, working my butt off and thinking, what does this mean? How will this data be used, and what other questions do the results of this research bring up? We were driving back to our campsite on evening when I pitched my own idea for some additional research to Kelly. I wanted to use photography to analyze how seedlings in the plots survive from year to year. This would help us to better understand how the populations not only change year to year on bird’s eye view that is found in the count and cover data, but also on an individual plant basis. After explaining my idea, Kelly had lots of questions for me, and helped me to shape my question and idea into what could become my own project.

Kelly then spent an afternoon with me, helping me to use one of the already existing plots to laid out, and take the photographs for my research question. I was ecstatic that I was not only getting the experience to work on this project, but to get to do my own research on
the side, all because I was open to asking questions and pitching my own ideas to people much more experienced and educated than myself.

As we finished up our work in the mountains and began the trek back to Lawrence, Kansas, I realized just how much I had gotten out of the two weeks I spent working as part of this research team. I was leaving with not only hands-on research and field work experience, but also my own project to work on and an invitation to be a part of the team again this coming summer. I learned that, while conducting research to answer one question, there are always 1,000 more questions lying just beyond the answer you are reaching for. I am beyond thankful for the opportunities that I have been given simply because I got to know the right people within the university, and wasn’t afraid to put myself out there to new and different research opportunities.

I truly recommend that any Environmental Studies student looking for experiences in research, start by talking to their professors and being honest about what kind of experiences they are looking for. Everyone within the program have been beyond encouraging and helpful to me and I am already looking forward to going back to the mountains this coming summer.

— Erica Staab

2015 UNDERGRADUATE COLLOQUIUM SPEAKERS

The Environmental Studies Undergraduate Research Colloquium is an annual forum for students graduating with Honors in Environmental Studies, and students who have received the Environmental Studies Zadigan Research Scholarship to present about their research projects. The 2015 Research Colloquium was held on May 5 in Snow Hall.

GINA BEEBE
Sustainable Agriculture
Mentor: Dr. Kelly Kindscher, KBS

LIZ BLACKBURN
The Politics of Pollution: The Influence of Electoral Outcomes on Polluters’ Compliance
Faculty Mentor: Dr. Dietrich Earnhart, Economics

DAVID SZCZUCINSKI
Design on Sorting Behaviors and Associated Post-Consumer Compost Contamination Rates
Faculty Mentor: Dr. Derek Reed

Osha in full flower | © Kelly Kindscher, Kansas Biological Survey

USDA Plants Database map showing counties in Colorado where Osha has been collected (found only in higher elevations).
I interned at Vajra Farm, a 45-acre permaculture farm north of Lawrence. Permaculture is an ecologically diverse alternative to industrial agriculture. Permaculture is intended to be sustainable and self-sufficient. My internship goals at Vajra Farm fell into three broad sections: food production, plant medicine, and land use.

My work began in January with many hours of seed cataloging, planning, mapping of what would be planted, and ordering seeds. By the end of January, we had planted many flats of seeds and placed them under lights indoors. In early March, they were moved to the cold frame where the internal temperature was monitored and mitigated with a heating coil that ran underneath a piece of flashing.

In mid-March, a small group transplanted these starts into the earth. This occasion was like many transplanting days, filled with an air of celebration for the transition and also rife with anxiety concerning potential future cold snaps that might render our efforts useless. Aiming to protect ourselves from a total loss, we only planted one third of the starts and kept the remaining in the cold frame. This proved wise as a temperature drop in the next weeks killed off many of the transplants. Safe guarded against this, we transplanted the remaining starts two weeks later and they are sturdy and growing now.

Despite any gardener’s efforts to reduce weeds, no garden is free of them and certainly not an organic one such as ours. Many hours have been devoted to weeding our plot, with some key differences from your conventional garden. First of all, red clover was intentionally planted in the bed as opposed to typical efforts to suppress it. This is because clover fixes nitrogen from the air and provides means for replenishing this fertilizer to the plants. While it is common practice in larger fields to plant clover during crop rotation as a cover crop, it is unorthodox practice to plant clover in smaller gardens among a current crop.

Red clover can grow with vigor and both shade out and compete for space with some of your vegetables. That is why it is a key practice in permaculture to do what is called chop and drop. This is simply cutting back the foliage and leaving it on the soil to break down and add more nitrogen to the soil as well as keep its foliage in check. While clover was intentionally planted, other common weeds invited themselves to the garden as well. Many of these weeds are edible and were harvested as food. These edible weeds include curly dock, dandelion, purslane, and garlic mustard.

My relationship with permaculture is evolving and will continue to do so for many years into the future. I am genuinely grateful for the opportunity I have had to take the course and expand on my knowledge through practical experience through this internship.

— Ruth Story, ’14
PROFESSIONAL SCIENCE MASTERS in ENVIRONMENTAL ASSESSMENT

Environmental Studies’ graduate degree program is the Professional Science Masters (PSM) in Environmental Assessment, based at the KU-Edwards Campus in Overland Park. Since its launch in 2013, the program has grown dramatically, driven by the numerous environmental companies and agencies in the Kansas City metro area.

In 2015, the PSM program graduated its first student, Andrea (Salazar) Bryant, who also has a bachelor’s in Environmental Studies from KU. Andrea did an internship at Sprint Corporation in their Corporate Responsibility office, developing a supplier guide for calculating the “water footprint” of Sprint products, a document which was also her PSM capstone project. KU Environmental Studies alums Andrew Gieseke and Elle Weber will also be receiving their PSM degrees in December 2015.

The PSM program now has over 30 students enrolled in it. In 2015, we launched a graduate certificate in environmental assessment, with four graduate courses that can be applied to the PSM if the student decides to continue on to the masters. We also created an accelerated “4+1” track wherein a student can earn a bachelors degree and a masters (the PSM) in just five years total. Additionally, a graduate certificate in environmental justice and a new Science Manager Program (in collaboration the KUContinuing Education) are in the university approval process.

LA&S 492: PREPARING FOR INTERNATIONAL CAREERS

The Preparing for International Careers-Costa Rica course is designed for students interested in exploring international careers.

Students take a semester-long course which includes a spring break study abroad program in Costa Rica. The course provides students an excellent overview of the resources, opportunities, and steps involved in preparing for international employment. Participants learn strategies that will allow them to create a job-search plan that matches their individual career goals.

While in Costa Rica, students connect with KU alumni, global businesses, universities, and international organizations to learn firsthand about international careers. Past visits have included the University of Costa Rica, INBioparque (National Biodiversity Institute of Costa Rica), USAID Office of Foreign Disaster Assistance, a rainforest seed sanctuary and medicinal plant research facility, and a coffee estate and production plant.

Students make professional connections and conduct a site visit in their own particular interest area as well. While the program is open to all majors, because of Costa Rica’s emphasis on the environment and its geographic location, it may be of special interest to Environmental Studies majors.

For more information, visit: career.ku.edu/courses

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edwardscampus.ku.edu
Alumni News

Although much of our daily focus is devoted to our future and current students, we are always excited to hear about the accomplishments of our talented alumni. We tell our students that there are countless ways to use their degrees, but our alumni’s actions speak louder than our words. Every day, graduates from the Environmental Studies Program are doing their part to change the world for the better. Read the short summaries below to see why we are so proud of our alumni!

82 William (Bill) Ford, B.A. ’82, J.D. ’85 (Villanova University), is an Environmental Attorney with Lathrop & Gage in Kansas City, Missouri. He is also active in conservation philanthropies.

85 Jennifer Bowen Schmitendorf, B.A. ’85, M.A. Urban Planning ’10, works for KU Professional & Continuing Education in Overland Park, Kansas. She volunteers for KSP-APA committees.

86 Aaron Amey, B.G.S. ’86, works as Director of Facilities & Logistics for the Defense Advanced Research Projects Agency (DARPA), Arlington, Virginia. He retired from the USMCR in 2013 after 27 years as a Colonel/0-6, Logistics Officer.

92 Kris Craven, B.A. Land Use Planning and Resource Management ’92, M.S. Atmospheric and Oceanic Science ’97 (Univ. of Wisconsin-Madison), is a Senior Meteorologist with National Weather Service.

Marna Wenderott, B.G.S. ’92, is works as a Planner in the Environmental Department in Albuquerque Public Schools.

93 Dave Alburty, B.A. ’93, is President of AlburtyLab, Inc., and CEO of InnovaPrep LLC in Drexel, Missouri. He is the President of the DCBC/Missouri Main Street economic development organization.

Stephanie Hampton, B.A. ’93, M.S. Biology ’96 (UNLV), Ph.D. ’01 (Dartmouth College), is a professor in the School of the Environment and director of the Center for Environmental Research, Education and Outreach at Washington State University. Before going to WSU, she was deputy director of the National Center for Ecological Analysis and Synthesis at UC-Santa Barbara and an assistant professor at the University of Idaho.

95 Dana Peterson, B.G.S. ’95, M.A. Geography ’99, Ph.D. Geography ’16 (anticipated), works as an Associate Researcher at the Kansas Biological Survey, University of Kansas. She also instructed several courses at KU in the Department of Geography and Atmospheric Science, and the Environmental Studies Program.

Wendy Kirkpatrick Shrief, B.A. Environmental Studies and Geography ’95, works as a land use planner with Horrocks Engineers in Boise, Idaho. Wendy sits on the board of the Idaho Chapter of the U.S. Green Building Council. Wendy and her husband have two young children.

96 Eric D. Madden, B.A. Environmental Policy ’96, is a partner with Reid Collins & Tsai LLP, a boutique law firm specializing in complex litigation. He is representing Seahawk Drilling, one of the largest offshore drilling companies in the Gulf of Mexico, in the pending multidistrict litigation proceedings against BP related to the Deepwater Horizon incident. Seahawk’s claims have been selected (from among thousands of other claims) for trial as a “test case” to resolve novel issues of causation under the Oil Pollution Act of 1990.

Richard Miller, B.S. ’96, is a Senior Network Administrator for Douglas County, Kansas.

Amy Trainer, B.A. ’96, J.D. ’01, M.U.P. ’01 is the Executive Director of the Environmental Action Committee of West Marin, a grassroots environmental advocacy organization founded in 1971 to protect the unparalleled wild lands, coast, and ocean resources in western Marin County, California. Most recently, she was a national spokesperson in the campaign to protect Drakes Estero Wilderness in Point Reyes National Seashore, an estuary that is the only marine wilderness in the lower 48. She also spent a considerable time in the California Legislature this year to provide essential leadership to pass a critical oil spill prevention bill in response to the May 19th oil spill off the Santa Barbara coastline.

97 Tom Hill, B.G.S. ’97, is an owner/broker of Hill Realty, a Kansas and Missouri Land Brokerage. Hillrealtykansas.com

98 Brad Ayres, B.G.S. ’98, has been a Traffic Engineering Tech for Douglas County Public Works in Lawrence, KS for 17 years. His work has included detour design, drainage structure design, traffic studies, accident analysis, and project inspection. He is also USACE Certified in Wetland Delineation for road projects.

01 Eric Beightel, B.G.S. ’01, lives in Northern Virginia and is leading the federal environmental policy practice for the Strategic Consulting group within WSP | Parsons Brinckerhoff.

04 Sarah Swenson, B.A. ’04, is the Communications Director for the Toxics Release Inventory Program at the U.S. Environmental Protection Agency in Washington, D.C.

07 Javier Ahumanda, B.G.S., ’07, has worked for KDHE since...
graduation and is now the Chief of Air Compliance and Enforcement for the State of Kansas. He and his staff are tasked with ensuring that the air quality in Kansas is clean, healthy, and protected from pollution.

Danielle Golon, B.A. Environmental Studies and Geography ’10, M.A. Geography ’12, is a contractor to the USGS working as a Science Communications Specialist for the Land Processes Distributed Active Archive Center (LP DAAC) at the USGS Earth Resources Observation and Science (EROS) Center in Sioux Falls, SD. She also volunteers with South Dakota Game, Fish and Parks at the Outdoor Campus.

Kimberly Hernandez, B.S. ’10, works as a National Ocean & Atmospheric Administration (NOAA) Coastal Management Fellow with the Maryland Department of Natural Resources in Annapolis, Maryland.

Kimberly Tate, B.G.S. ’10, A.A.S. Interpreter Training ’13, is a sign language interpreter in Springfield, Missouri. Kimberly does Video Relay Service (VRA) and freelance interpretation.

Bria (Gruenbacher) Weast, B.S. ’10, is an Environmental Scientist/Project Manager at iSi Environmental in Wichita, KS. She also holds a volunteer position of Vice Chair of iSi Environmental Safety Committee.

Jay Decker, B.S. ’11 (Honors), M.S. Urban Planning ’13, is the Bike Share Manager/City Planner for Baltimore City Department of Transportation.

Maximilian Isern, B.A. ’11, works as an Environmental, Health and Safety Manager for QED Systems, Inc., a U.S. Navy contractor. He is also a member of the Jacksonville Area Ship Repair Association (JASRA).

Mikhail V. Marchenko, B.A. ’11, is a Clinical Informatics Specialist with PRA Health Sciences in Lenexa, KS. He was recently praised by Kansas City mayor Sly James for contributing original music for a multi-city film competition that took place on Sept. 18-20, 2015, and is a freelance composer for films on the side. www.mikhailmarchenko.com

Adam Fund, B.G.S. ’12, is currently pursuing an M.S. in Ecology at Utah State University. His work focuses on restoring native forbs within Great basin Plant communities using novel seed coating and restoration techniques.

Andrea (Salazar) Bryant, B.S. ’13, PSM-EA ’15, is an Environmental, Health and Safety Specialist for Sprint Corporation at the Headquarters on the Overland Park, KS campus.

Austin Hall, B.S. ’13, began as Document Control Specialist at Heritage Environmental Services in Kansas City, Missouri. He is currently a Field Chemist at Heritage.

Emily Lubarsky, B.S. Environmental Studies, B.A. Political Science ’13, served in Teach for America in the Rio Grande Valley between 2013 and 2015. She is currently in her first year of law school at the University of Colorado.

Faith Bitterman, B.S. ’14, is a Agriculture Volunteer for Peace Corps Tanzania working on food security issues.

Emma Donachie, B.S. ’14, is the Waste Stream Coordinator for Parkland Health & Hospital System. Emma co-established the first network in Texas to pair municipality and the healthcare sector to share best practices for realizing Zero Waste. Her program management diverted 605 tons from the landfill in one year.

Julia Nehring, B.A. Environmental Studies ‘14, B.A. Spanish ‘14, is a Project Manager at AEI Consultants in Overland Park, Kansas. Julia is also an AmeriCorps NCCC alum.

Brett Stevens, B.S. ’14, is an Environmental Specialist/Lab Pack Chemist for Stericycle Environmental Solutions in Kansas City, Missouri.

Casey Vogt, B.S. ’14, works as a Food, Drug, and Lodging Surveyor for the Kansas Department of Agriculture in Wichita Kansas. He is HACCP Certified with the State of Kansas.

Xiaoyi Zhang, B.S. ’14, was formerly a publicity minister at Green Rebbon Development Center in Shandong, China, and currently an Environmental Science graduate student at Troy University.

Erin Christiansen, B.S. ’15, is currently serving as an AmeriCorps member with New England Science and Sailing.

The hazardous waste disposal industry is a great starting point for Environmental Studies majors. Jobs aren’t hard to come by and you can get some great experience right away. Everyday I work directly with many of the laws and policies I studied such as RCRA, CAA, and CWA.

— Austin Hall, ’13
I graduated this May with my Bachelors of Science in Environmental Studies. Now for the 2015-16 school year, I am currently serving as AmeriCorps member with New England Science and Sailing in southeastern Connecticut. New England Science and Sailing provides students from preschool to high school with opportunities in ocean adventure sports and marine science. I am currently serving at Bennie Dover Jackson Middle School in New London, CT with 6th, 7th, and 8th grade students learning to sail, kayak, snorkel and exploring local ecosystems, marine science topics, and engineering projects.

I found this AmeriCorps position that perfectly fit all of my wildest dreams, and with thousands of AmeriCorps positions available across the country, there is a way to serve in almost any community with any focus that one’s heart may desire!

For more information on what I have been up to this year at New England Science and Sailing or on AmeriCorps in general, feel free to email me at erinrachristiansen@gmail.com!

Rock Chalk!
— Erin Christiansen