"On The Move" Newsletter

SUMMER 2013

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Peer Review

Thanks to all of you who provided feedback on our electronic newsletter. We certainly appreciate the input. If you haven't provided any, you are missing out on the chance to channel your inner Michiko Kakutani. We always like to hear from supporters, friends, and alumni.

Syngenta Student Awards

The Syngenta Outstanding Doctoral and Masters Student awards were given at the TIEHH Spring banquet in April. Dr. Marion Stypa of Syngenta has continued the tradition begun by Dr. Gary Dickson of supporting student awards at TIEHH. This year's M.S. winner was Meghan Funkhouser. Meghan is a student in Dr. Chris Salice's lab. She is working on the perfluorinated compounds and their potential impact on aquatic invertebrates. This year's Ph.D. recipient was Shuangying Yu. Shuangying is a student in Dr. Jonathan Maul's lab (co-advised by former ENTX faculty member George Cobb). She is working on the interaction of pesticides and UV radiation on amphibians.

2013 TIEHH Spring Banquet
Syngenta Crop Protection Outstanding Master's Student
Meghan Funkhouser

2013 TIEHH Spring Banquet
Syngenta Crop Protection Outstanding Doctoral Student
Shuangying Yu

Waste Control Specialists (WCS) Student Awards

ENTX alum and WCS Health Physicist Greg Zychowski (M.S. 2010) was present to hand out the graduate student awards from WCS. This year's recipients were Rebecca Pezdek (M.S. student in Céline Godard-Codding's lab) and Stephanie Plautz (Ph.D. student in Chris Salice's lab). Thanks to Elicia Sanchez (and previously Linda Beach) for continued support of our program.

2013 TIEHH Spring Banquet
Waste Control Specialists Outstanding Master's Student
Rebecca Pezdek

2013 TIEHH Spring Banquet
Waste Control Specialists Outstanding Doctoral Student
Stephanie Plautz

Student News

Meghan Cromie received a 2013 National Science Foundation (NSF) East Asia and Pacific Summer Institutes (EAPSI) Fellowship. She will spend 8 weeks in China conducting water quality research. Meghan is a Ph.D. student in Dr. Weimin Gao's laboratory.

At the Spring Texas Tech Annual Biological Sciences Symposium (TTABSS) , **Morgan Wilming and Stephanie Plautz** received first and second place awards, respectively, for their oral presentations in the Toxicology category. Morgan is a Ph.D. student with Dr. Jonathan Maul while Stephanie is a Ph.D. student with Dr. Chris Salice.

Maria Nunez, who worked in Dr. Jonathan Maul's lab as an undergraduate from South Plains College in the Plains Bridges Program, has been awarded an HHMI Scholarship and will be returning to his lab to continue her research endeavors.

In March, ENTX students participated in the 12th Annual Graduate Student Research Poster Competition (http://www.youtube.com/watch?v=iWcIq31DU5k). The competition is an opportunity for students to develop skills in effective communication of research information. This year, around 200 students from across the university participated. Get out the brooms, because it was an ENTX sweep in the Science Category; **Shuangying Yu** placed first, **Kaylyn Germ** placed second, and **Vinit Singh** placed third.

Kim Wooten helped Nick Hines (pictured) of Christ the King Cathedral School carryout a science fair project using an endocrine disruptor screening assay. Nick was successful at the regional and state level, eventually making it to the 2013 Intel ISEF in Phoenix, AZ.

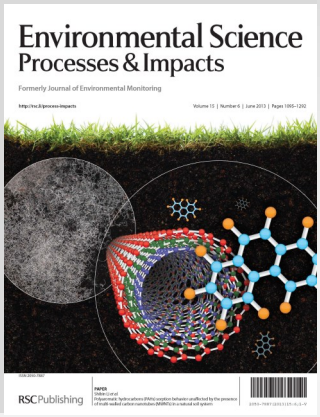
In belated news, **Catherine Baxter** took home top honors at the 3rd annual SETAC North America Student Advisory Council (NASAC) art contest held at the SETAC meeting in Long Beach, CA. Catherine is an M.S. student in Dr. Ron Kendall's lab.

More Student News

Amanda Parra, a Ph.D. student with Dr. Jaclyn Cañas-Carrell, received a 2013 Education Award from the AGRO Division of the American Chemical Society (ACS). Amanda will attend the ACS National Meeting in Indianapolis in September to present a poster of her current research related to plants and carbon nanotubes.

Alumni News

The SETAC North America Education and Short Course Committee awarded an Earth Day grant this year. ENTX alum **Norka Paden** (Ph.D. 2008) was this year's winner. The grant was used to support the purchase of environmental education kits for children and an information booth at the Boise WaterShed Celebration. Norka is with the Idaho Department of Health and Welfare Environmental Health Education and Assessment Program.



Shibin Li (Ph.D. 2012) recently published a portion of his dissertation research in *Environmental Science: Processes & Impacts* (15:1130-1136). The research on PAH sorption behavior in the presence of multi-walled carbon nanotubes was selected for the cover of the journal. Shibin is a postdoc with the U.S. EPA in Duluth, MN.

Faculty News

Jaclyn Cañas-Carrell was awarded the 2012-2013 President's Excellence in Diversity and Equity Award. The President's Excellence in Diversity and Equity Award recognizes Texas Tech faculty, staff, and students in their efforts to make Texas Tech a welcoming campus through their commitment to service, mutual respect, academic and intellectual freedom, and diversity.

At the May Board Meeting of American Association of Textile Chemists and Colorists, **Seshadri Ramkumar** was named Associate Editor for the peer-reviewed journal, *AATCC Journal of Research*. Dr. Ram will serve a 3-year term.

Research in **KP Singh's** lab on the interaction of arsenic and estrogen in the production of prostate cancer was recently published in *The Prostate* and featured online in *BioNews Texas*, *News-Medica.net*, and *Genetic Engineering News,* among others. KP was also the recipient of the TIEHH outstanding faculty award this year.

Applied Ecology and Ecotoxicology

These are challenging times. Naturally occurring organisms are faced with a barrage of anthropogenic (and natural) stress factors, many of which contribute to worldwide losses in biodiversity. Research in Dr. Christopher Salice's lab focuses on a variety of issues and questions related to conservation, protection, and function of natural populations and communities. The overarching research goal is to provide knowledge, insights, and methods that can be used to improve our understanding of how natural systems respond to anthropogenic stressors, particularly xenobiotics, so that sound management practices can be adopted.

Dr. Salice and his students use mathematical models, laboratory experiments, and field studies to address a wide range of questions in applied ecology and ecological risk assessment. Some recently completed efforts include improving our understanding parental effects of contaminants (Steph Plautz, Ph.D. 2013) and evolutionary responses to multiple stressors (David Kimberly, Ph.D. 2013). A key recent finding is how important contaminant exposure history can be in the manifestation of effects. Parental snails, for example, exposed to predators (*Ecotoxicology*, 2013), different diets (*Environmental Pollution*, 2013), and the heavy metal cadmium (*Ecotoxicology*, 2013) produce offspring that then respond differently to chemical stressors. Even short-term exposures to chemical stressors during development can result in adverse effects that may not manifest until a generation after the cessation of exposure. These results call into question the results from toxicity tests that assume adverse effects are constrained to study duration and that populations are static in that trait expression (e.g., toxicant sensitivity) is unchanging.

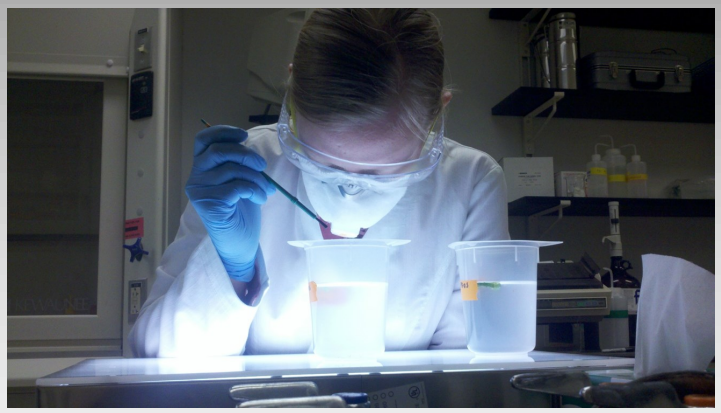
We have also continued our work towards filling data gaps and methodological approaches for reptile ecotoxicology (Scott Weir, Ph.D. candidate). This work has extended to some exciting research involving *Sceloporus arenicolus*, the dunes sagebrush lizard. This species is a dune specialist whose habitat is in prime oil and gas development areas. Scott has been exploring the impacts of oil and gas production activities on this charismatic (for a reptile!) species and is presenting some of his work in an invited session at the Joint Meeting of Ichthylologists and Herpetologists this July.

The lab has also initiated some exciting new projects with several new (ish) students. Adric Olson (Ph.D. student) and Meghan Funkhouser (M.S. student) are exploring the exposure and effects of perfluorinated compounds on aquatic systems. Dan Dawson (Ph.D. student) is working towards developing a spatially explicit model to predict risk of mosquito-borne pathogens based on underlying ecological drivers of occurrence and abundance. Evelyn Reategui (Ph.D. student) is developing biochemical methods to measure energetic components in aquatic invertebrates with the goal of eventually understanding how environmental stress impacts organismal bioenergetics. With any luck, these projects will both improve our general understanding of the ecological impacts of anthropogenic activities while also developing tools and data that can be used to improve environmental management here and now.

Dr. Salice failed to send a lab picture for this article. We found this one. Here is a barefoot Chris kissing a lady in a white dress (probably his wife Jamie) beside some type of stressed aquatic environment.

Photo Contest

The annual student photo contest was held, with the results announced at the Spring Banquet. Winners in the various categories are below.



Lab Safety Winner

Director's Choice

2nd Place

2012-2013 Champion

Graduates

Congratulations to our May graduates and students who have recently defended and will graduate in August.

Wenbin Zhu (M.S., May)
Andrew McEachran (M.S., May)
Tulika Tiyagi (M.S., May)
Song Tang (Ph.D., May)
Kevan Athanasiou (M.S., August)
David Kimberly (Ph.D., August)
Stephanie Plautz (Ph.D., August)
Justin Treas (Ph.D., August)
Richard Erickson (Ph.D., August)
Ife Bamgbose (M.S., August)

Dr. Kevin Johnson

We were saddened to learn in June of the passing of Kevin Johnson, Director of the Environmental Sciences Program at Southern Illinois University-Edwardsville. Although not a Texas Tech alum, Kevin was a 1996 graduate of our program at Clemson University, so most of us knew him and/or met him at SETAC. Since 1997, he had been on the faculty at SIUE where he rose to the rank of Professor in 2008. He was a big supporter of our program.

KJ was a special talent. Among other things, he was doing research on bioavailability of contaminants in soil before nearly everyone. Much of the early work in my (TAA) lab on bioavailability and passive sampling devices was modeled after Kevin's work on PCBs. Personally, I was envious of his analytical skills, his teaching and mentoring skills, and his softball skills. He will be missed.

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