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HEXAPOD HERALD

Vol. 28, No. 4

Entomology Department , University of Nebraska-Lincoln

October 2016

Welcome New Students

Bryant Gabriel is a new masters student who will be working under the supervision of **Dr. Troy Anderson**. Bryant received his B.S. degree in biochemistry this past May from Virginia Tech. His research project will involve an experimental examination of honey bee gut microbes and pesticide metabolism. Bryant is from Mentor, OH.

Samantha Daniel, a new masters student who will be supporting departmental teaching, will also be conducting research under the supervision of **Drs. Julie Peterson** and **Bob Wright**. Sam received her B.A. degree in Curriculum Information from Metropolitan State University in Denver, CO in 2009. Her research will focus on IPM in cropping systems, biological control, and predator-prey interactions between spiders and crop pests." Sam was born and raised in Denver, CO and, up until a few months ago, Denver was the only place she'd ever lived.

Tügçe Karaçoban, a new masters student from Ankara, Turkey, will be working under the supervision of **Dr. Judy Wu-Smart**. Tügçe received her B.S. in veterinary medicine from the University of Kirikkale in Kirikkale, Turkey in 2014, and for the next year and a half she worked at the Veterinary Surgical and Orthopedic Center in Ankara. Tügçe's research will focus on different aspects of bee virology and potential interaction effects of various biotic and abiotic stressors on the susceptibility and expression of viruses in honey bees.

Katie Lamke is a new masters student who will be working under the supervision of **Dr. Judy Wu-Smart**. Katie received her bachelor's degree in Environmental Biology in May of 2015 from Humboldt State University, Arcata, CA. For the past year she has worked in North Dakota with the U.S. Geological Survey (USGS) to expand the Pollinator Library database and will continue to develop the database while at UNL. Her research here will involve surveying native bee communities across a variety of landscape management practices within Nebraska prairies. Katie is originally from Petaluma, CA.

Jennifer (Jen) Williams is a new Ph.D. student who will be working under the supervision of **Dr. Troy Anderson**. Jen received her B.S. degree in biological sciences with a minor in entomology in 2012 and her M.S. degree in entomology in 2016, both from Virginia Tech. Her research will focus on an experimental examination of pesticide-induced oxidative stress and neurodegeneration in honey bees. Jen was born in New Orleans, LA and grew up in Woodbridge, VA.

"It's the bees' fault I moved from California to North Dakota, but luckily they also brought me down to UNL to start my masters. I'm excited to start in the program here and learn all I can!"

- Katie Lamke



Gabriel



Daniel



Karaçoban



Lamke



Williams

Welcome New Students con't.

Off-Campus M.S. Students: Fall 2016: **Amanda Eastin**, Clay Center, NE; **Steven Helm**, West Linn, OR; **Julie Hensley**, Port Chester, NY; Spring 2017: **Ijaz Ahmad**, Riyadh, Saudi Arabia; **T. Tyler Flower**, Newhall, CA; Matthew Trujillo, Nixa, MO

New insect science majors for this fall include: **Xi Xian Ng**, Muar, Malaysia; **Paola Perez**, Crete, NE, **Edward Rule**, Lavista, NE; **Dorothy Schneider**, San Jose, CA; **Braden Wojahn**, Prior Lake, MN

Congratulations

Dr. Shripat Kamble was named to the Crown Leadership Awards Class of 2016. The Crown Leadership Award honors pest management professionals, university educators, and other industry professionals who have made significant contributions to the growth and development of the pest control industry, as well as to their universities, companies, and local communities. Award winners will be honored at the National Pest Management Association's Pestworld Conference in Seattle, WA, in October.

Dr. Ana Vélez was one of three finalists for the 2016 New Investigator Award for the Agro Division of the American Chemical Society at their 252nd National Meeting, August 21–25, 2016 in Philadelphia, PA. This award recognizes scientists who have obtained a doctoral degree in the last five years and have produced significant accomplishments conducting research, consulting or regulatory studies.

Service awards were presented to university employees who completed years of service in five-year intervals during the State of the University Address by Chancellor Ronnie Green on September 22, 2016. Entomology Department honorees were: **Dr. Gary Brewer**, 10 years; **Jim Kalisch**, 35 years; **Bob Roselle**, 20 years; **Terence Spencer**, 20 years; and **Marilyn Weidner**, 35 years.

ESA National Meeting//ICE Meeting News

Dr. Robert Wright received the 2016 Distinguished Achievement Award in Extension at the International Congress of Entomology Meeting in Orlando, FL. This annual award recognizes outstanding contributions to extension entomology. At UNL, Bob is the extension IPM coordinator and has developed a productive research and extension program in agronomic insect pest management, which has had local, regional, and national impacts.

Dr. David Wangila received the **Student Certification Award, sponsored by PestWest Environmental Science**. This award recognizes and encourages outstanding entomology graduate students with an interest in the mission of the ESA certification program, and to promote the understanding and importance of the program. David received his Ph.D. degree in August under the supervision of **Dr. Lance Meinke**. David has returned to Nairobi, Kenya to work for Monsanto as Technology Development Lead for East & West Africa.

Jordan Reinders was awarded 2nd Place in the graduate student paper competition. His paper was entitled "Spatial variation in western corn rootworm susceptibility to Bt corn events in Nebraska".

Faculty News

Dr. Shripat Kamble attended a meeting of the Certified Entomologists of Mid America (CEMA) in Manhattan, KS, August 12 - 13, 2016, where he was elected as president of the group. Shripat also participated in the North Central Regional IR-4 Meeting in East Lansing, MI, August 21—24, 2016.

Dr. Joe Louis attended the Botany Society of America's Annual Meeting (Botany 2016) held at Savannah, GA, July 30 – August 3, 2016. Joe gave an invited talk at the symposium **Understanding Plant Defense Strategies: Interplay Between Traditional Botanical Tools and Modern Analytical Approaches**. The title of his talk was "Omics approaches to understand plant defense against insects".

Publications

Koch, Kyle G., Kaitlin Chapman, Joe Louis, Tiffany Heng-Moss, and Gautam Sarath. 2016. Plant tolerance: A unique approach to control hemipteran pests. *Frontier Plant Science*, doi:10.3389/fpls.2016.01363

Otto C.R.V., C.L. Roth, B.L. Carlson, and **M.D. Smart.** 2016. Land-use change reduces habitat suitability for supporting managed honey bee colonies in the Northern Great Plains. *Proceedings of the National Academy of Sciences USA*. doi: 10.1073/pnas.1603481113.

Paulsen, M.J. 2016. Two new species of South American Glaresidae (Coleoptera: Scarabaeoidea). *Zootaxa* 4154(5): 595-600.

Varsani, Suresh, Saumik Basu, W. Paul Williams, Gary W. Felton, Dawn S. Luthe, and Joe Louis. 2016. Intra-plant communication in maize contributes to defense against insects. *Plant Signaling & Behavior*, <http://dx.doi.org/10.1080/15592324.2016.1212800>.

Grants

Shripat Kamble

BASF. \$12,000
"Ant Research Project"

C. Oliveira-Hofman, J. Peterson, L.J. Meinke, & A.O. Adesemoye

Nebraska Corn Board \$18,169
"Evaluation of Entomopathogenic Fungi on Mortality of the Western Corn Rootworm and Other Corn Insects"

Julie Peterson

Monsanto \$19,040
"Performance of Cry1F and Vip3A Bt traits under varying western bean cutworm pressure"

LABServices \$13,824
"Miticides for control of Banks grass mite in field corn"

Valent \$12,000
"Efficacy of soil-applied insecticides and seed treatments for western corn rootworm"

Robert Wright

DuPont Crop Protection \$3,000
"Insect Management Industry"

Meet Buddy Roper, an Online Student

My name is Buddy Roper. I am originally from the Atlanta, GA metropolitan area but currently residing in Memphis, TN. I am the Parasitology Supervisor for a major animal health diagnostics laboratory called IDEXX Laboratories. In this role, I lead a team of 32 Medical Technicians in the testing and diagnosis of bacterial, protozoan, and nematode parasites in animal samples sent from veterinarians and zoos all across the United States to our laboratory. I also get to see a fair share of ectoparasites such as mites and ticks and have become quite good at identifying them for my clients.

I have always been fascinated with biology and the natural environment. I decided to take a few entomology courses at the University of Florida in 2014 and found that I really enjoyed learning about insects and their diversity. This prompted me to decide to apply for admission to earn a M.S. degree through the University of Nebraska. I am excited about the possibilities that this degree offers me for expanding my knowledge in the field. I have even decided that I would like to pursue my educational and research quest even further. My plan is to apply for Ph.D. programs next spring, as I will be finishing up the M.S. degree.



Student News

Kathryn (Katie) Keller was awarded a M.S. degree in August. Katie had worked under the supervision of **Drs. Tiffany Heng-Moss** and **Tom Weissling**. Her thesis was entitled, "Characterization of the Arthropod Communities Associated with Perennial Warm-Season Grasses (Poaceae) Composition in Nebraska and Wisconsin". Katie will continue to work as a research technician for **Dr. Gautam Sarath**, taking some time off when Baby Keller arrives in mid-October.

Brian Kelly received his M.S. degree through the online masters program. Brian lives in Colorado Springs, CO and plans to stay with his current company, Northrup Brumman, as a systems engineer, while continuing to be active in the Mile High Bug Club, which he co-founded. He plans to approach the university and colleges in Colorado Springs in hopes of starting an entomology program. Brian also founded and edits a website documenting the research and life cycle of *Latrodectus* sp - [http:// sites.google.com/site/widowman10/](http://sites.google.com/site/widowman10/)

Lia Marchi Werle received her Ph.D. degree under the supervision of **Drs. Tiffany Heng-Moss** and **Tom Hunt**. Her dissertation was entitled, "Soybean tolerance to soybean aphid (*Aphis glycines* Matsumura) herbivory". Lia is working as a post doc with Dr. Greg Kruger at the West Central Research and Extension Center in North Platte, NE. She will be working with pesticide application technology and assisting with graduate students.

Justin McMechan received his Ph.D. degree in entomology, along with the Doctor of Plant Health degree, under the supervision of **Dr. Gary Hein**. Justin's dissertation was entitled, "Over-summering ecology of the wheat curl mite". Justin joined the UNL Entomology Department in August as an extension assistant professor with a extension and research appointment.

Patrick Wagner received his M.S degree in August, working under the supervision of **Drs. Jeff Bradshaw** and **Tom Weissling**. His thesis was entitled, "Influence of Cattle Grazing Practices on Dung Beetle (Coleoptera: Scarabaeoidea) Communities in the Sandhill Rangelands of Central Nebraska". Pat moved to Rapid City, SD, where he is working as an extension field specialist for South Dakota State University.

Kaitlin Chapman received the Hardin Distinguished Graduate Fellowship Award from the Agricultural Research Division. This award is made in recognition of an outstanding performance of a graduate student to support research in plant physiology. Kait will be officially recognized as a recipient of this fellowship at a luncheon to be held later this year.

Suresh Varsani received the Skala Distinguished Graduate Fellowship Award from the Agricultural Research Division. This fellowship recognizes exceptional graduate students engaged in research in areas relating to new industrial uses of agricultural products. Suresh will be officially recognized as a recipient of this fellowship at a luncheon to be held later this year.

Westen Archibald, Debora Montezano, Camila Oliveira Hofman, Jordon Reinders, Dariane Souza, and Suresh Varsani were awarded travel support from the Myron H. Swenk Memorial Fund to attend the National Entomological Society of America Meeting in Orlando, FL, September 25—30, 2016.



L-r, Wagner, Keller, Marchi Werle, McMechan

Blast from the Past

U.S. Navy Lt. Alister Bryson (M.S. 2014) is an entomologist assigned to Naval Environmental Preventive Medicine, Unit 2. He is pictured below gathering a water sample to check a local well's mosquito count during Southern Partnership Station 2016 (SPS-16). SPS-16's medical team has partnered with the Operation Blessing, as they attempt to use biological methods to combat the Zika virus. SPS-16 is an annual series of U.S. Navy deployments focused on subject matter expert exchanges with partner nation militaries and security forces in Central and South America and the Caribbean. U.S. military teams work the partner nation forces during navel-focused training exercises, military-to-military engagements, and community relations projects in an effort to enhance partnerships with regional maritime activities and improve the operational readiness of participants.



U.S. Navy Lt. Alister Bryson
U.S. Navy Combat Camera photo by Mass Communication Specialist 1st Class Torrey W. Lee.

BugFest 2016

BugFest, the Entomology Department's annual open house, was held on September 11th. In addition to the perennial favorites of the Insect Zoo and Insects of Nebraska, Bronco Bugs (getting your picture taken and imposed on the back of a giant bug) was back for a second year. New activities this year included: Inside the Hive, where you can see different castes of bees at work inside a hive with glass sides; What's for Lunch?, which demonstrated how different insects eat; These are a Few of My Favorite Things, which showed how ants prefer some foods to others; Emerald Ash Borer Information; and Insect Rubbings and Tattoos.

In addition, back by popular demand were: Mites Be Cool; Dr. Bug; Compost Critters; Draw Your Favorite Bug; Lincoln Scientific Illustrators; Henry Doorly Zoo Salt Creek Tiger Beetle Rearing Program; Insect Origami; A Fly Went By...; Toxicology Lab Tour; Citizen Science; Bedbug Show and Tell; Insect Plinko; and Pollinator Garden Tour.

Four hundred fourteen people attended (a new record!), and a good time was had by all!



It's Kendra and the Compost Crew.



Nebraska insects are SOOOO cool!



Beautiful butterflies and a captive audience.



Everyone wants to know about bed bugs!



Searching for the queen bee.



I think Dr. Bug is too late for these patients.



Did we get lots of beautiful bug drawings or what?!



We have a new African millipede lover.