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December 2015

Department of Entomology

College of Agricultural Sciences and Natural Resources

Vol. 27, No. 5

<u>Welcome</u>

Off-Campus M.S. Students: <u>Spring 2016</u>: **Derrick Kelley**, Bellevue, NE; **Kelsey Larsen**, Lincoln, NE; **Lauren Segreto**, Voorhees, NJ; **Daniel Taylor**, Northfield, MN; **Patrick Thompson**, Perry, IA

<u>Congratulations</u>

The Entomology Department was well represented at the Entomological Society of America (ESA) national meeting in Minneapolis, MN, November 15–18, 2015, receiving the following awards:

Dr. John Foster, UNL Professor of Entomology Emeritus, received the **Lifetime Achievement Award** from the Plant-Insect Ecosystems Section of the Entomological Society of America.

Kait Chapman and Leslie Rault each received 1st place in the graduate ten-minute paper competition.

Chris McCullough received 1st place in the graduate poster competition, and **Patrick Wagner** received 2nd place in the graduate poster competition.

Sanjay Basnet received the ESA Student Certification Award and the "Shripat Kamble Urban Entomology Graduate Student Award for Innovative Research".

The Entomology Debate Team made its first appearance at the ESA Meeting this year. Team members were **Carolina Camargo Gil, Chris McCullough, Camila Oliveira-Hofman,** and **Matheus Ribeiro.** Team advisor was **Dr. Joe Louis.** The team won a debate against Florida A&M University and received third place in the general competition.

Dr. Doug Golick received the **Innovative Extension Specialist Award** from Nebraska Extension at their Fall Conference meeting in Kearney NE, Nov. 11-13, for his innovative use of citizen science projects, social media, mobile apps and demonstration gardens in his pollinator extension programming.

Justin McMechan, along with Dr. Chris Proctor, internship advisor, Dr. Roger Elmore and a host of extension educators, received the award "Excellence in Extension Materials" for their poster entitled "Evaluating Corn Performance Based on Injury Following a Major Hail Event" at the Agronomy Society of America's 2015 meeting.



L-r, Dr. Sujaya Rao, PIE President, Dr. John Foster, and Dr. Steve Skoda, nominator of Dr. Foster for the award



Entomology Debate Team L-r, Camargo Gil, Oliveira-Hofman, Ribeiro, McCullough, and team advisor, Louis.

Congratulations, con't.

The Lawrence Bruner Entomology Club presented **Dr. Joan Christen** with their Distinguished Alumnus Award on Oct. 23, 2015, for her career achievements, professionalism, contributions and dedication to science. Dr. Christen, nominated by **Dr. John Foster**, received her B.S. in Natural Sciences from Peru State in 1996, her M.S. in Entomology from UNL in 2001, and her Ph.D. in Entomology from UNL in 2008, where she worked under the direction of **Drs. John Foster** and **Steve Skoda** to develop molecular identification primers for the screwworm, *Cochliomyia hominivorax* (Coquerel). As a science instructor and Pro-



L-r, Christen, Brewer, Koch, McCullough

fessional Learning Community Chair at Beatrice High School, she has written and implemented over \$1.5 million in grants, which allowed for the construction of a greenhouse and various science club activities. Dr. Christen has received numerous awards including ESA's Presidential Award, the National Association of Biology Teachers Outstanding Biology Educator of the Year for the state of Nebraska, the National Science Teacher Association Ciba Specialty Exemplary High School Teacher of the Year Award, and the Christa McAuliffe Excellence in Teacher Education Award for the state of Nebraska. Bruner Club President, **Kyle Koch**, along with **Chris McCullough**, Education Committee Chair, and **Dr. Gary Brewer**, presented Dr. Christen with a plaque commemorating the award, and her name will be added to the Bruner Distinguished Alumni Recognition plaque.

Dr. Haichuan 'John' Wang, research technologist in the Department of Entomology, was named a recipient of IANR's 2015 Third Quarter Outstanding Employee Award. Wang practices molecular and genetic techniques in the insect toxicology lab and helps students, post-docs, and visiting scholars with molecular biology and bioinformatics. Most recently, Wang has actively sought to learn the various methods associated with DNA sequencing and assembly as well as gene expression analysis. John is an accomplished scientist in his own right, contributed to at least 15 publications and a first author on another three since joining the Department. He has contributed to many presentations at national meetings and has coordinated the activities of many undergraduate students, visiting scientists, post-docs, and grad students. Supporters wrote that Wang's enthusiasm and good nature are infectious. He unselfishly provides his time to anyone who asks and always presents a positive and pleasant attitude toward others. John received a cash award, a certificate, and lapel pin.

Harvey Perlman's annual State of the University Address and UNL's Employee Service Award recognition program was held September 30, 2015 at the Lied Center for Performing Arts. The following employees were honored for years of service to the University: **Tom Aspinall**, 45 years; **Jim Brown**, 40 years; **Steve Spomer**, 35 years; **Dr. Blair Siegfried**, 25 years; **Erin Bauer**, 15 years; **Dr. Ashley Hall**, 5 years; and **Dr. Nick Miller**, 5 years.

Melina Florez Cuadros and husband, **Juan Jaimes** are happy to announce the birth of their baby daughter, Antonia Isabela. Antonia was born December 5, at 7:32 p.m., weighing 7 lbs., 4 oz., and was 18.5 inches long. Mom and daughter are doing well.

Dr. Shripat Kamble and his wife, Linda, are the proud grandparents of a new grandson, William Jerome Fendrick, born August 20, 2015, weighing 8 lbs., 14 oz., and 19.25 inches long. Parents are Praima (Kamble) and Bill Fendrick of Lincoln. Brothers, Leo, Frankie, and Henry, and big sister, Adella, welcomed William home.



Haichuan 'John' Wang



Antonia Isabel Jaimes-Florez



William Jerome Fendrick

Student News

Jelfina Alouw received her Ph.D. degree December 18, 2015, under the supervision of **Dr. Nick Miller.** Her dissertation title was "Responses of Specialist and Generalist Corn Rootworms to Corn Defenses". Jelfina returned to Indonesia in October and works at the Indonesian Palmae Research Institute.

The following online masters degree students graduated December 18, 2015:

Amadeus DeKastle currently lives and works in Kyrgyzstan. After graduation he will be continuing to work with an organization called Plateau Perspectives in Kyrgyzstan doing community development projects. His personal role will be to put together smartphone applications about Kyrgyzstan's flora and fauna, similar to what he did for his master's project, "Butterflies of Kygyzstan" in an effort to encourage local people and tourists to take care of the amazing wildlife in that region of the world. You can find more information about their first app (which was also Amadeus' master's degree project) at www.discovernature.org.kg

Natalie Greynolds started the online master's degree program in 2011, while working for U.S. Customs and Border Protection at the Andrade Port of Entry, CA, as an agriculture specialist for Customs and Border Protection. Natalie has since transferred from the Mexican border to the Canadian border to be closer to her three grandchildren and two grown children. Her masters degree project "Defensible Space and Mitigating Mountain Pine Beetle Damage" is a topic close to home as many trees in nearby Glacier National Park, MT, and the Black Hills National Forest, SD, have fallen victim to the beetles.

Emily Kniep is currently an Associate Project Leader with Syngenta Seeds working within the sweet corn breeding program. Her masters degree project was "The development of a screening program for identification of the neoplastic pod gene (Np) in Syngenta snap peas." Emily has no plans in the immediate future for a job change, but having her masters degree in entomology with a focus on plant interactions complements her current role and will expand career opportunities in the future.

Robert Phillips works for the Missouri Department of Agriculture as a plant protection specialist and has worked in the horticulture field for the past 15 years. During this time he has designed and installed land-scapes and implemented pest management using IPM programs. Robert's masters degree project was entitled "An introduction to insects of regulatory concern." Having a masters degree, Robert says, can only benefit his future endeavors in the field of horticultural entomology.

Jon Robeson is a research associate with Pioneer Hi-Bred International in the Crop Protection Department and works in the insecticidal protein bioassay lab. His masters degree project was "Fall Armyworm (*Spodoptera frugiperda*) Control by RNAi as a Plausible Component to Integrated Pest Management Practice." Jon plans on using the knowledge obtained from his masters degree studies to make a positive and lasting inpact on his Discovery Entomology group within DuPont-Pioneer.

Sherry Spriggs' future plans are to remain with the federal government, either DHHS or DOD, investigating, coordinating and responding to incidents related to foodborne illnesses associated with insects in raw agricultural commodities, retail establishments, and occupational injuries/illness associated with environmental factors. Sherry's master's degree project was done with the Smithsonian Institution's Department of Entomology, within the National Museum of Natural History in Washington, D.C. with the informal title of "The Comprehensive Inventory of All of the Species in the Superfamily Gelechioidea (Insecta: Lepidoptera) in the Smithsonian Institution's Department of Entomology Collection".













Alouw

DeKastle

Greynolds

Kniep

Robeson

Spriggs

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Student News, con't.

The following Insect Science students graduated on December 19, 2015:

Junsuk Kim's senior thesis was entitled, "A Review and Identification Guide to the Genus *Golofa* (Coleoptera: Scarabaeidae: Dynastinae)." Jun is from Shreveport, LA, and is considering a graduate program in entomology.

Bonnie Kurtenbach graduated with a double major in insect science and forensic science. Bonnie, originally from Fairfax, VA, is currently seeking employment.

Carter Westerhold's senior thesis was entitled "Urban Land Use and Its Impacts on Insect Communities of the Great Plains". Carter is from Stanton, NE and will begin a masters degree program in Agronomy and Horticulture here at UNL this January. **Dr. Doug Golick** will be co-advising Carter with Dr. Kim Todd.

Leslie Rault was awarded a David H. & Annie E. Larrick Student Travel Funds award in the amount of \$500 to attend the ESA Meeting in Minneapolis, MN.

The following students received a Swenk Fund Travel Support award to attend the National ESA Meeting in Minneapolis, MN in November: Sanjay Basnet, Carolina Camargo Gil, Katie Keller, Kyle Koch, Lia Marchi Werle, Chris McCullough, Camila Oliveira Hofman, Adriano Pereira, Leslie Rault, and Patrick Wagner. Ashley Foster also received a Swenk Fund Travel Support award to attend the 2016 American Academy of Forensic Science Annual Meeting in Las Vegas, NV, on February 22–27, 2016.

Faculty News

Drs. Joe Louis (left) and **Junwei (Jerry) Zhu** (right) attended the Asia-Pacific Chemical Ecology Conference (APACE) held at Orange County, CA, September 23–26, 2015. Dr. Louis gave an invited talk, "Maize-corn leaf aphid interactions: Involvement of ethylene pathway" at the symposium, **New Physiological Aspects of Chemical Ecology**. Dr. Zhu was Chair of the Organizing Committee of the conference. He also received the APACE Outstanding Service Award at the conference and selected as the President of Asia-Pacific Association of Chemical Ecologists.

Dr. John Foster, invited by the Chinese Academy of Sciences, gave three presentations in China. The first presentation, "Good management practices for a maize germplasm bank" was in Beijing on October 26, 2015. The second presentation, "Development and maintenance of maize inbreds" was given on October 28 in Harbin, and the third presentation, "Testing maize inbreds and hybrids for insect resistance" was on October 30 in Shanghai. John also gave the talk, "C.V. Riley, Grape Phyllozera, History and Beyond" at the Viticulture Fall Workshop on Oct. 17, in Lincoln, NE.

Dr. Shripat Kamble chaired and moderated a symposium on "State of the Art Insect Monitoring Approaches" at the National ESA Meeting Meeting in Minneapolis, MN. He also participated in the IR-4 National Food Use Workshop in September in Chicago, IL.

Entomology Department Meeting Dates for Spring 2016 Entomology Hall, Room 110
Friday, January 29, 10:00 a.m.
Friday, February 26, 10:00 a.m.
Friday, April 1, 10:00 a.m.
Friday April 29, 10:00 a.m.
Wednesday, May 25, 8:30 a.m.





L-r, Phillips, (see pg. 3) Kim, Kurtenbach





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BASF \$10,000	
"Ant Research Project"	
ice Meinke	
Valent USA Corporation)
"Biology and ecology of Diabrotica"	
pert Wright	
Bayer CropScience\$3,500	
"Crop Insect Management Research"	
Valent USA Corporation)
"Crop Insect Management Research"	

Publications

Figueiredo, M. L C., Ivan Cruz, Rafael B. Silva and John E. Foster. 2015. Biological control with *Trichogramma pretiosum* increases organic maize productivity by 19.4%. DOI: 10.1007/s13593-015-0312-3.

Fisher, M. L., L. G. Higley and **J. E. Foster.** 2015. The Influence of Photoperiod on Development Rates of Three Species of Forensically Important Blow Flies. J. Insect Sci. 15(1) 153; DOI: 10.1093/jisesa/ieve133.

Husen, Timothy J., **Shripat T. Kamble**, and Julie M. Stone. 2015. Effect of Pentoxifylline on Chitinolytic Enzyme Activity in the Eastern Subterranean Termites (Isoptera: Rhinotermidtidae). J. Entomol. Sci. 50(4): 295-310.

Kneeland, K.M., S.R. Skoda, E. Claassen and J.E. Foster. 2015. A protocol to preserve the molecular integrity of stable fly (Diptera: Muscidae) for long distance shipment. Pakistan Entomologist, 37(1): 1-4.

Kneeland, K.M., S.R. Skoda and J.E. Foster. 2015. Genetic variability of the stable fly assessed globally using amplified fragment length polymorphism. Insect Science. 1-9. DOI: 10.1111/1744-7917.12219.

Miwa, Kentaro and **Lance J. Meinke**. 2015. Diel Patterns of Colaspis brunnea and Colaspis crinicornis (Coleoptera: Chrysomelidae) in Southeastern Nebraska. Environ. Entomol. 44(4): 1553-1561.

Pereira, Adriano E., Haichuan Wang, Sarah N. Zukoff, **Lance J. Meinke**, B. Wade French, **Blair D. Siegfried** (2015). Evidence of field-evolved resistance to bifenthrin in western corn rootworm (*Diabrotica virgifera virgifera* LeConte) populations in western Nebraska and Kansas. PLoS ONE 10(11): e0142299. doi:10.1371/journal.pone.0142299.

Torrisi, G.J., W. Wyatt Hoback, J. E. Foster, L. G. Higley, and E. A. Heinrichs. 2015. Predation of Introduced Mosquito Larvae by the Midge, *Metriocnemus knabi* in the Phytotelma of the Pitcher Plant Sarracenia purpurea, and Colonization Following Dry Conditions. Northeastern Naturalist 22(3): 513-520.

Vélez A.M., J. Jurzenski, N. Matz, X. Zhou, H. Wang, M. Ellis, and B.D. Siegfried. 2015. Developing an *in vivo* toxicity assay for RNAi risk assessment in honey bees, *Apis mellifera* L. to dietary RNAi. Chemosphere. 144: 1083-1090.

Zepeda-Jazo, Isaac, Jaime Molina-Ochoa, Roberto Lezama-Gutierrez, Steven R. Skoda and John E. Foster. 2014. Survey of entomopathogenic nematodes from the families Steinernematidae and Heterorhabditidae (Nematoda; Rhabdidtiada) in Colima, Mexico. International Journal of Insect Science. 34(1): 53-57 DOI:10.1017/S1742758413000416.

Zhu, Junwei J., Gary J. Brewer, David J. Boxler, Kristina Friesen, and **David B. Taylor.** 2015. Comparisons of antifeedancy and spatial repellency of three natural product repellents against horn flies, *Haematobia irritans* (Diptera: Muscidae). Pest Management Science, 71(11): 1553-1560.