

HEXAPOD HERALD

Vol. 29, No. 3

Entomology Department , University of Nebraska-Lincoln

May 2017

Congratulations

Maria Melina Florez-Cuadros was awarded her Ph.D. degree on May 5, 2017. Melina worked under the supervision of **Drs. Gary Brewer** and **Dave Taylor**. Her dissertation title was "Effects of Temperature and Diet in Stable Fly (*Diptera: Muscidae*) Development". Melina has already started a postdoctoral fellowship from the College of Agricultural and Life Sciences at North Carolina State University in Raleigh, NC. She will be responsible for developing a 'male-only' transgenic strain of *Lucila cuprina* and transferring the technology developed to the laboratory in Panama operated by their collaborators at the USDA-ARS for the Eradication of Screwworm Program.

Leslie Catherine Rault received her Ph.D. degree this May also. Leslie worked under the supervision of **Dr. Gary Brewer**, along with previous advisors, **Drs. Nick Miller** and **Blair Siegfried**. Her dissertation title was "Characterization of Resistance to the Cry3bb1 Toxin from *Bacillus thuringiensis* in Western Corn Rootworm, *Diabrotica virgifera virgifera* (LeConte) (Coleoptera: Chrysomelidae)". Leslie plans to stay on in the Entomology Department as a part-time postdoc working with **Dr. Troy Anderson** on Varroa mites miticide resistance and a part-time lab technician working with **Dr. Georgina Zivanovic** on stored grain pest insects.

Matheus Geraldo Pires de Mello Ribeiro was awarded his Ph.D. degree on May 5, 2017. Matheus worked under the supervision of **Dr. Tom Hunt**. His dissertation defense was entitled, "Baseline Susceptibility, Resistance Detection and Selection for Resistance in *Aphis glycines* (Hemiptera:Aphididae) to the Neonicotinoid Insecticide, Thiamethoxam". Matheus will have a post doctoral associate position for a year with the Department working with Tom on the effects of soybean seed treatments for soybean, aphid resistance to neonicotinoids and other insecticides, and Lepidoptera behavior with respect to resistance management.

"I had an amazing time as a graduate student here at UNL, and I am extremely excited to conquer the new challenges I will find as a postdoctoral associate."

- Matheus Ribeiro.
Ph.D.



Ribeiro, Rault, Brown, (see pg. 2) Johnson (see pg. 3)



Insect Pillowcases!



- In This Issue**
- Congrats to our graduates
 - Kamble retirement
 - Welcome
 - Faculty News
 - Publications
 - Travel to China
 - Kansas Entomological Society annual meeting news
 - Grants
 - Student News

Congratulations con't.

The following graduates were in the online masters entomology degree program:

Melissa Brown, from Newberry, FL, is currently the Veterinary Diagnostic Histology Laboratory Manager for the University of Florida, College of Veterinary Medicine. Along with managing the personnel and budget of the lab, she is the head of their Immunohistochemistry section. Her future plans include possibly pursuing a MBA degree. Her masters degree project was entitled, "The Red Imported Fire Ant: The Visitor Who Wouldn't Leave. A Brief Overview of the Control of *Solenopsis invicta* in the United States". Melissa and husband, Blast, drove 19 hours from Florida to attend the department reception and the graduation ceremony.

Joey Caputo will continue serving as the Survey Entomologist for the Utah Department of Agriculture and Food and as the chief apiary inspector and coordinator of the state's invasive species program. Joey also will be teaching an entomology course for Utah State University. His masters degree project was "A Guidebook on Honey Bee Health" which is a summary of information regarding honey bee immunity, diseases, pests, and effects of pesticides. Joey said he appreciated UNL's online graduate program. It allowed him to work while he attended school. The program has opened opportunities that he doesn't think he would have had otherwise. He also wanted to thank the instructors, fellow students and support staff.

Katy Hillard has been at Monsanto in St. Louis, MO, 10 years this month, and she will continue her career there in a new role as an IT Product Manager for the Global Plant Breeding organization. Her masters degree project was entitled, "Rag1 soybean photosynthetic response to Biotype 2 aphid colonization and feeding".

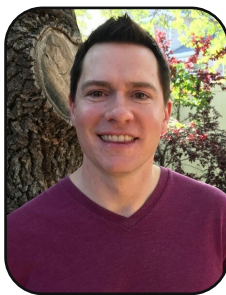
Ron Hirzel is currently deployed at Camp Arifjan, Kuwait in the US Army Reserve as a medic and preventive medicine non-commissioned officer, after enlisting right out of high school in 1980. He is looking forward to life as an entomologist when he does finally leave the military. Ron's masters degree project was "An Entomological Survey of Camp Arifjan, Kuwait: Comparing Species Richness Between Different Areas and Degrees of Human Use".

Timothy Lampasona works with growers, entomologists, plant pathologists, and extension agents at Cornell University's Hudson Valley Laboratory in Highland, NY, as a research technician under Peter Jentsch, a 2005 graduate of UNL's online masters degree program. His masters degree project was entitled, "Use of baited attract and kill stations in IPM alternative to control invasive *Drosophila suzukii* Matsumura (Spotted Wing Drosophila)".

Amanda Newton is an instructor of biology and horticulture at a small university located in VA, just outside of DC. Prior to this she has worked as an entomologist at botanical gardens, in museum collections, and as an extension educator. In her "spare" time, she maintains over 60 beehives throughout the state for local farmers as well as herself. Amanda hopes to pursue additional education in entomology either through a thesis-based or doctoral program. She plans to stay in education but also has interest in medical entomologist roles in the US Army, as the research and services they provide influence and help so many individuals. Her masters degree project was "Banshee Reeks Nature Preserve Pollinating Fly Inventory".



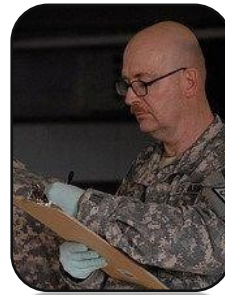
Melissa Brown



Joey Caputo



Katy Hillard



Ron Hirzel



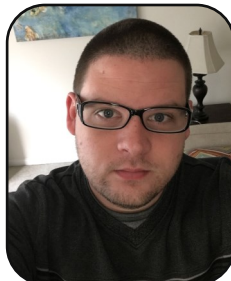
Tim Lampasona



Amanda Newton



Juan Rodriguez



Buddy Roper



Nadia Ruffin



Alicia Thuis



Zell Zanarkand

Congratulations con't.

Juan Rodriguez will continue to work for Saudi Aramco Oil Co. as an entomologist. His primary focus is urban pest management. He does some horticultural, lawn, and turf pest management also. Juan attributes his recent promotion to receiving his masters degree, which was not only a professional goal, but also a personal goal. His masters degree project was "New Hire Curriculum for International Urban Pest Management Professionals".

Buddy Roper lives in Memphis, TN, and is a Parasitology Supervisor at IDEXX Laboratories. Buddy says his degree has helped him tremendously in the identification of ectoparasites that are sent to the laboratory and has also given him a better understanding of diseases that are transmitted to animals via insect vectors. Buddy hopes to continue his education in biological sciences in the future. His masters degree project was entitled, "Entomophagy: Insect and other Arthropod Grub!" which includes a compilation of recipes that utilize insects and other arthropods as an ingredient.

Nadia Ruffin works as a Communicable Disease Investigator at the Hamilton County Public Health Department in Cincinnati, OH, and on her personal time she teaches people in the community about pollinator health and mosquito control. Nadia's future plans are to work at her urban farming business and nonprofit so she can do entomological research on urban farms and teach about the importance of insects and the roles they play in our lives. Her masters degree project was entitled, "Mosquito Proof". The project was created to educate the citizens in Cincinnati about mosquitoes.

Alicia Thuis has worked at the Ecolab R&D Center in the Pest Elimination Division (Eagan, MN) for about five years. Her main responsibility is to provide technical support to Ecolab's Pest operations/sales teams, in particular by providing insect identifications. Insect identifications are critical for determining the correct treatment strategies, but are also used as documentation for legal/audit purposes, and in civil forensic investigations (e.g. how did it get in the food?). Alicia then provides treatment recommendations and troubleshoots for unique pest situations. Her masters degree project was "Examination of Civil Forensic Entomology Through Case Studies".

Zell Zanarkand is a Professional Military Education (PME) instructor for the U.S. Air Force and is currently stationed at the Holloman Airman Leadership School in New Mexico. Zell hopes to use his degree to become a military entomologist. His masters degree project was entitled, "A Survey of Mosquitoes at Holloman AFB and Educational Surveillance".

Ellis Johnson and **Emily Kirkvold** received their B.S. degrees in insect science and **Kendra Nelson** received B.S. degrees in insect science and environmental studies. Ellis' capstone title was "Arabidopsis-Cabbage Aphid Interaction: Role of Myzus Persicae-Induced Lipase 1 (MPL1) Gene". Emily's capstone title was "Esters as olfactory attractants for *Stomoxys calcitrans* larvae". Kendra's title for the capstone course in the School of Natural Resources was "The effects of plant diversity on pollinator abundance".

Retirement Reception for Dr. Shripat Kamble

Wednesday, June 14, 2017, 3:30—5:00 p.m., Nebraska East Union

A book of letters will be presented to Shripat. Please email your letter to Marilyn Weidner at mweidner1@unl.edu or mail the unfolded letter to Marilyn at 103 Entomology Hall, University of Nebraska-Lincoln, Lincoln, NE 68583-0816

A gift in Dr. Kamble's name will be given to ESA. Donations can be given/sent to Marilyn also at the above address. Please make checks payable to the ESA.

Welcome

Tamiris Alves de Araujo joined **Dr. Tom Hunt's** laboratory this month and will be at UNL through January 2018. She is from the laboratory of Marcelo Picanço, Federal University of Viçosa, Brazil. She will be working on various projects including soybean IPM, corn lepidopteran larval behavior, and thrips population distribution and sampling.

Gabriela Inveninato Carmona is a new masters student who will be working under the supervision of **Dr. Justin McMechan**. She received her B.S. in agronomy from the Universidade Federal do Rio Grande do Sul in Brazil. Gabri's research will focus on the pest and beneficial potential of arthropods in cover crops and their impact on the subsequent cash crop.

Ellis Johnson, who just received his bachelor's degree in insect science from UNL, will be staying on in the Department as a masters degree student, working under the supervision of **Dr. Troy Anderson** on repellent mixtures for personal protection from mosquitoes.

Zach Rystrom recently started in his new role as the Field Research Coordinator for the Department of Entomology at the Agricultural Research and Development Center, part of the Eastern Nebraska Research and Extension Center, near Ithaca, NE. He will provide day-to-day support of research projects of Entomology faculty members conducted at ENREC-ARDC. Responsibilities include operational and maintenance oversight for field equipment and Entomology facilities; in collaboration with faculty/staff establishment and maintenance of field research experiments, supervision of seasonal workers, and support for entomology extension and outreach activities at the ARDC. Zach graduated with his B.S. degree in Diversified Agricultural Studies in 2012 and his M.S. degree in entomology in 2015, both from UNL and is currently in the Doctor of Plant Health Degree Program.

Wiktorja Szydło began a one year stint as a Post-Doctoral Research Associate with **Dr. Gary Hein** in April. Wiktorja received her Ph.D. from Adam Mickiewicz University in Poznan, Poland last fall working on the genetic variation, host specificity, and virus transmission ability of the wheat curl mite. Wiktorja is returning to Nebraska as she spent three months here in 2015 sampling mites in potential host grasses. She will be exploring host and virus transmission relationships for our North American wheat curl mite while here.

Online M.S. Students starting this Fall 2017: **Kelly Case**, Alpharetta, GA; **Scott Mendenhall**, San Jose, CA; **Erik Schumann**, Cleveland, OH; **Regina Sapp**, Joplin, MO; **Anna Wright**, Coon Rapids, MN



Alves de Araujo



Inveninato Carmona



Johnson



Rystrom



Szydło

Faculty News

Dr. Julie Peterson received the Ohio Wesleyan University Young Alumni Achievement Award at the Ohio Wesleyan University Reunion Weekend this month. Julie received her B.A. in zoology from Ohio Wesleyan University in 2007. This honor is given to alumni who have graduated in the last 15 years in recognition of a commitment to excellence in post-collegiate life through a significant or ongoing commitment to extraordinary professional work, research, volunteerism, or service to the University.

Dr. Bob Wright was elected chair of NCERA 222, the USDA-NIFA Multistate Committee on Integrated Pest Management (IPM), at their annual meeting in Fargo, ND in March. As committee chair, Wright will also be a member of the National IPM Coordinating Committee for the next two years. This committee reports to the Experiment Station Committee on Policy (ESCOP), and the Extension Committee on Policy (ECOP) as part of the Association of Public and Land-grant Universities (APLU).

Publications

Bentivenha José P.F., **Débora G. Montezano**, **Thomas E. Hunt**, **Edson L.L. Baldin**, **Julie A. Peterson**, Vinicius S. Victor, Luiz E.R. Pannuti, **Ana M. Vélez**, and **Silvana V. Paula-Moraes**. 2017. Intraguild interactions and behavior of *Spodoptera frugiperda* and *Helicoverpa* spp. on maize. *Pest Management Science*, DOI: 10.1002/ps.4595.

Bentivenha, José P.F., **Edson L.L. Baldin**, **Débora G. Montezano**, **Thomas E. Hunt**, and **Silvana V. Paula-Moraes**. 2017. Attack and defense movements involved in the interaction of *Spodoptera frugiperda* and *Helicoverpa zea* (Lepidoptera: Noctuidae). *J Pest Sci* 90: 433-445. DOI 10.1007/s10340-016-0802-3.

Bentivenha, J.P.F., **E.L.L. Baldin**, **T.E. Hunt**, **S.V. Paula-Moraes**, and E.E. Blankenship. 2016. Intraguild competition of three noctuid maize pests. *Environmental Entomology*, 45(4): 999-1008.

Otto, C.R.V., S. O'Dell, R.B. Bryant, N.H. Euliss Jr, R.M. Bush, **M.D. Smart**. 2017. Using publicly available data to quantify plant-pollinator interactions and evaluate conservation seeding mixes in the Northern Great Plains. *Environmental Entomology*, DOI: 10.1093/ee/nvx070.

Guzik, Hillary and Kessler McCoy-Simandle. 2017. Modeling Microorganism Transmission with Madagascar Hissing Cockroaches: An Inquiry Activity. *The American Biology Teacher* 79(5): 365-374.

Specht, A., **D.G. Montezano**, D.R. Sosa-Gómez, and N.M. Barros. 2016. Reproductive potential of *Spodoptera eridania* (Stoll) (Lepidoptera: Noctuidae) in the laboratory: effect of multiple couples and size. *Braz. J. Biol.* 76(2): 526-530.

Ratcliffe, B.C., H.J. Gasca-Alvarez, and C. Deloya 2017. Description of the female of *Hologymnetis reyesi* (Coleoptera: Scarabaeidae: Cetoniinae: Gymnetini) with new state records for Mexico and a bilingual key to the species of *Hologymnetis*. *The Coleopterists Bulletin* 71(1): 143–151.

Neita-Moreno, J. and **B.C. Ratcliffe**. 2017. The genus *Tomarus* Erichson (Coleoptera: Scarabaeidae: Dynastinae: Pentodontini) in Argentina, Chile, and Uruguay. *Insecta Mundi* 0547: 1-36.

Zuparko, R.L. and **B.C. Ratcliffe**. 2017. Obituary and bibliography of Norm Penny (1946–2016), an “entomologist’s entomologist”. *The Pan-Pacific Entomologist* 93: 35–51.

Grants

Lance Meinke

Sipcam Agro \$8,000
“*Diabrotica biology and ecology*”

Robert Wright

Syngenta Crop Protection \$5,528
“*Insect Management Industry*”

Student News

Debora Goulart Montezano has been awarded a Milton E. Mohr Fellowship from the Center for Biotechnology in the amount of \$1,000 for the 2017-2018 academic year. Debora is working under the supervision of **Drs. Tom Hunt** and **Julie Peterson**.

Ellis Johnson’s poster, “Arabidopsis-Cabbage Aphid Interaction: Role of Myzus Persicae-Induced Lipase 1 (MPL1) Gene,” was one of the top four undergraduate posters from CASNR for the 2017 Spring Research Fair. Ellis worked with **Dr. Joe Louis** on the project. The top undergraduate posters receive a \$250 award sponsored by their college.

Braden Wojahn has been awarded UCARE funding for the academic year 2017-2018 for the project “Discovery of Sorghum Resistance and Physiological Responses to Greenbugs (*Schizaphis graminum*)”. He will be working under the supervision of **Dr. Joe Louis**.

Kaitlin Chapman, **Debora Goulart Montezano**, **Lindsay Overmyer**, **Jordan Reinders**, and **Suresh Varsani** were awarded travel support from the Myron H. Swenk Memorial Fund to attend the North Central Branch (NCB) Entomological Society of America meeting in Indianapolis, IN on June 4 - 7, 2017. Debora, Jordan, and Suresh also received a NCB ESA student travel scholarship.

The Kansas Entomological Society Annual Meeting April 15, 2017, Lincoln, NE

Graduate Student Poster Competition-

1st place “Determining Acquisition and Retention Periods of Triticum Mosaic Virus by the Wheat Curl Mite,” Elliot A. Knoell, Gary L. Hein, University of Nebraska-Lincoln

2nd place “Age-Specific Susceptibility of Soybean Aphid to Thiamethoxam using a Detached-Leaf Bioassay Method,” Matheus G.P. de M. Ribeiro, Thomas Hunt, University of Nebraska-Lincoln; Blair Siegfried, University of Florida

3rd place “Spider Diversity and Abundance in Nebraska Agroecosystems and the Implication for Biological Control,” Samantha Daniel, Camila Oliveira-Hofman, Gavin Owen, University of Nebraska-Lincoln; Julie Peterson, West Central Research and Extension Center, University of Nebraska-Lincoln, North Platte

Graduate Student Oral Competition-

1st place “Soybean transcriptional responses to the soybean aphid (*Aphis glycines*),” Kaitlin Chapman, Joe Louis, Tiffany Heng-Moss, University of Nebraska-Lincoln

Undergraduate Student Poster Competition-

1st place “Arabidopsis- Cabbage Aphid Interaction: Role of *Myzus Persicae*-Induced *Lipase1 (MPL1) Gene*,” Ellis Johnson, Suresh Varsani, Kaitlin Chapman, Joe Louis, University of Nebraska-Lincoln

Blast from the Past



Dr. Renata Pereira, who was here on an internship during her masters degree program in 2012 and back again as a doctoral sandwich student from 2015– 2016, will be starting a job as a Senior Research Associate with DuPont/Pioneer in Toledo, Parana, Brazil this month. Renata said that the field experience and English proficiency she acquired while at UNL were essential for obtaining the position.

Travel

Dr. Julie Peter, Debora Goulart Montezano, and Westen Archibald attended the 26th IWGO (International Working Group on *Ostrinia* and Other Maize Pests) Conference at the Chinese Academy of Agricultural Sciences in Beijing, China, in April. They presented a total of four talks and two posters, and all received an International Organization for Biological Control Global, Young Research Travel Scholarship to attend this conference.



Recipients -Int'l Org. for Biological Control Young Researchers Travel Award



Deia Goulart Montezano, Westen Archibald, and Dr. Peterson