

# Monday, April 20, 2020

## Student Three-Minute Presentations

**36** Best way to spray: Spray volume and application frequency determine insecticide efficacy against western flower thrips. **Devin Radosevich** (devinrados@earthlink.net)<sup>1</sup> and Ray Cloyd<sup>2</sup>, <sup>1</sup>Iowa State Univ., Ames, IA, <sup>2</sup>Kansas State Univ., Manhattan, KS

## Student Ten Minute Paper Competition: Undergrad - MUVE, P-IE, & SysEB

**2** The effect of nicotine and cotinine on survival and duration of development of *Cochliomyia macellaria* (Fabricius) (Diptera:Calliphoridae). **Zoe Narvaez** (zen5@connect.rutgers.edu), Gautham Gautham, Heather Ketchum and Eric Bright, Univ. of Oklahoma, Norman, OK

**6** Honey bee (*Apis mellifera*) macronutrient regulation: Nurse bee nutritional preferences for proteins and lipids. **Cora Garcia** (coragarcia1999@gmail.com), Pierre Lau, Alexandria Payne, Jordan Gomez, Pierre Lesne, Spence Behmer and Juliana Rangel, Texas A&M Univ., College Station, TX

**9** Using social media to promote entomology. **Bailee Posey** (baposey@ostateemail.okstate.edu), William Hoback and Andrine A. Shufran, Oklahoma State Univ., Stillwater, OK

## Student Ten Minute Paper Competition: Master's - P-IE Session I

**16** Assessing asparagus beetle overwintering habitats and survival in an agroecosystem. **Jennifer Zavalnitskaya** (zavalnit@msu.edu) and Zsofia Szendrei, Michigan State Univ., East Lansing, MI

**17** Does the creation of pocket prairies improve the conservation value of urban vacant land for ant communities? **Alex Tyrpak** (tyrpak.3@buckeyemail.osu.edu), Kayla I. Perry, Joseph Raczowski, Christopher Riley and Mary Gardiner, The Ohio State Univ., Columbus, OH

**18** On the move: Attract-and-kill tactic for Japanese beetles (Coleoptera: Scarabaeidae). **Kelsey Benthall** (kjbhnd@mail.missouri.edu) and Kevin Rice, Univ. of Missouri, Columbia, MO

**19** Effects of fungus volatiles on the consumption and growth of tobacco hornworms (*Manduca sexta*). **Alyssa Lucas** (alysa.l.lucas@gmail.com) and Kevin Rice, Univ. of Missouri, Columbia, MO

**20** Are females better listeners? Interactions between herbivore bioacoustics and chemical defenses in dioecious plants **Layne Leake** (lbc8c@mail.missouri.edu)<sup>1</sup>, Reginald Cocroft<sup>1</sup>, Eric Yip<sup>2</sup>, John Tooker<sup>2</sup>, Sabrina Michael<sup>1</sup> and Kevin Rice<sup>1</sup>, <sup>1</sup>Univ. of Missouri, Columbia, MO, <sup>2</sup>Pennsylvania State Univ., Univ. Park, PA

**21** Temporal changes in olfactory cues from plant roots influence foraging by entomopathogenic nematodes. **John Grunseich** (johngrunseich@tamu.edu) and Anjel Helms, Texas A&M Univ., College Station, TX

**22** New host plant identified for wheat stem maggot. **Julia Campos** (julia.nog.campos@gmail.com)<sup>1</sup>, Anthony McMechan<sup>2</sup> and Robert Wright<sup>3</sup>, <sup>1</sup>Univ. of Nebraska, Lincoln, NE, <sup>2</sup>Univ. of Nebraska-Lincoln, Ithaca, NE, <sup>3</sup>Univ. of Nebraska Lincoln, Lincoln, NE

**23** Egg-laying monarchs do not discriminate oviposition based on the presence of a neonicotinoid insecticide. **Alex Mullins** (mullinsan8@gmail.com), Iowa State Univ., Ames, IA

**24** Improving trap design and placement for overwintering *Drosophila suzukii*. **Ariana Hernandez** (herna403@msu.edu), Juan Huang, Larry Gut and Matthew Grieshop, Michigan State Univ., East Lansing, MI

**11** Spotted-wing drosophila (*Drosophila suzukii* Matsumura) cold tolerance physiology and population genetics. **Samuel DeGrey** (degrey@wisc.edu), Christelle Guedot and Sean Schoville, Univ. of Wisconsin, Madison, WI

## Student Ten Minute Paper Competition: Master's - P-IE- Session II

**26** Assessment of plastic mulches for managing spotted-wing drosophila, fruit quality and yield, and soil health in raspberry. **Hanna McIntosh** (hrcintosh@wisc.edu), Amaya Atucha, Beth Ann Workmaster and Christelle Guedot, Univ. of Wisconsin, Madison, WI

**27** Evaluating volatile organic compounds emitted from male and female pecan weevils, *Curculio caryae* Horn (Coleoptera: Curculionidae). **Katherine Arnold** (arnoldk@nmsu.edu)<sup>1</sup>, David Thompson<sup>1</sup>, Ikju Park<sup>2</sup> and Larry Blackwell<sup>1</sup>, <sup>1</sup>New Mexico State Univ., Las Cruces, NM, <sup>2</sup>Univ. of California, Davis, Davis, CA

**28** Deployment of long-lasting insecticide-incorporated netting in pilot-scale warehouses effectively prevents dispersal and reduces infestation by stored product insects in commodities. **Rachel Wilkins** (rachwilk15@gmail.com)<sup>1</sup>, Kun Yan Zhu<sup>1</sup> and Rob Morrison<sup>2</sup>, <sup>1</sup>Kansas State Univ., Manhattan, KS, <sup>2</sup>USDA - ARS, Manhattan, KS

**31** Combining COI and simple morphometric analysis to inform billbug (*Sphenophorus* spp.) management. **Marian Rodriguez-Soto** (rodri561@purdue.edu)<sup>1</sup>, Laramy Enders<sup>1</sup>, Ricardo Ramirez<sup>2</sup> and Douglas Richmond<sup>1</sup>, <sup>1</sup>Purdue Univ., West Lafayette, IN, <sup>2</sup>Utah State Univ., Logan, UT

**32** Insecticide efficacy evaluation and emergence observations for soybean gall midge. **Mitchell Helton** (mhelton@iastate.edu)<sup>1</sup>, Erin Hodgson<sup>1</sup>, Anthony McMechan<sup>2</sup> and Nick Tinsley<sup>3</sup>, <sup>1</sup>Iowa State Univ., Ames, IA, <sup>2</sup>Univ. of Nebraska-Lincoln, Ithaca, NE, <sup>3</sup>Bayer Crop Science, White Heath, IL

**33** Hymenoptera feeders: Sugarcane aphid (*Melanaphis sacchari*) honeydew as a resource in sorghum (*Sorghum bicolor*) and Johnson grass (*Sorghum halepense*) fields. **Michael Caballero** (michaelcaballero9@gmail.com)<sup>1</sup>, William Hoback<sup>1</sup> and J. Scott Armstrong<sup>2</sup>, <sup>1</sup>Oklahoma State Univ., Stillwater, OK, <sup>2</sup>USDA - ARS, Stillwater, OK

**35** Optimizing RNA interference in fall armyworm *Spodoptera frugiperda* using improved nanoparticles. **Ana Trabanino** (trabaninopino.1@buckeyemail.osu.edu), Yosra Helmy, Gireesh Rajashekara and Andy Michel, The Ohio State Univ., Wooster, OH

**14** The timing of winter survival in *Culex pipiens* mosquitoes. **Caitlin Peffers** (peffers.2@buckeyemail.osu.edu) and Megan Meuti, The Ohio State Univ., Columbus, OH

**15** Artificial Light at Night (ALAN) induces abnormal seasonal responses in *Culex pipiens* mosquitoes. **Lydia Fyie** (fyie.1@osu.edu), Mary Gardiner and Megan Meuti, The Ohio State Univ., Columbus, OH

## Student Ten Minute Paper Competition: Ph.D - PBT & SysEB

**100** Biorational tick repellents: Differences in response by species. **Colin Wong** (cwong1@iastate.edu), Kylie Crystal and Joel Coats, Iowa State Univ., Ames, IA

**101** Determining how honey bee (*Apis mellifera*) nurse visitation rates and brood type might facilitate larval cell invasion by the mite *Varroa destructor*. **Taylor Reams** (tdreams@tamu.edu) and Juliana Rangel, Texas A&M Univ., College Station, TX

**102** Osmoregulation and thermoregulation in *Amblyomma americanum*: The lone star tick sucks and sweats!. **L. Paulina Maldonado-Ruiz** (lpmaldonado@ksu.edu) and Yoonseong Park, Kansas State Univ., Manhattan, KS

**103** Surveying termite communities in primary and secondary neotropical rainforest. **Mark Janowiecki** (janowiecki.12@osu.edu)<sup>1</sup> and Edward Vargo<sup>2</sup>, <sup>1</sup>City of New Orleans, New Orleans, LA, <sup>2</sup>Texas A&M Univ., College Station, TX

**106** Avoiding delay tactics: Improved student insect collections by assembling the parts. **Melissa Reed** (mleath@okstate.edu) and William Hoback, Oklahoma State Univ., Stillwater, OK

**93** Plant essential oil constituents synergize deltamethrin toxicity in resistant bed bugs (*Cimex lectularius* L.) by inhibiting cytochrome P450 enzymes. **Sudip Gaire** (sgaire@purdue.edu), Wei Zheng, Michael Scharf and Ameya Gondhalekar, Purdue Univ., West Lafayette, IN

**94** Sub-lethal reproductive effects on *Alphitobius diaperinus* from insecticide and litter amendment treatments. **Brandon Lyons** (brandon@lyonspride.net), Justin Talley, Tom Royer, Astri Wayadande and Blake Wilson, Oklahoma State Univ., Stillwater, OK

## Student Ten Minute Paper Competition: Ph.D - P-IE - Session I

**108** Robustness of biological control using multiple natural enemies against whitefly influx or delayed natural enemy releases. **Erfan Vafaie** (erfanv@tamu.edu)<sup>1</sup>, Brent Pemberton<sup>2</sup>, Mengmeng Gu<sup>3</sup>, Micky Eubanks<sup>3</sup>, David Kerns<sup>3</sup> and Kevin Heinz<sup>3</sup>, <sup>1</sup>Texas A&M Univ., Overton, TX, <sup>2</sup>Texas A&M AgriLife Research, Overton, TX, <sup>3</sup>Texas A&M Univ., College Station, TX

**110** Monarch butterfly (*Danaus plexippus*) host plant selection and the effects of aphid competitors. **Katie LaPlante** (kmlaplante@mail.missouri.edu), Terry L. Woods and Debbie Finke, Univ. of Missouri, Columbia, MO

**111** Seasonal relationships between naturally occurring entomopathogenic nematodes and Asiatic garden beetle, *Maladera castanea*, in Ohio agroecosystems. **Adrian Pekarcik** (pekarcik.4@osu.edu) and Kelley Tilmon, The Ohio State Univ., Wooster, OH

**112** Bee community form and function in urban vacant land: Implications for managing pollinator friendly cities. **Katherine Turo** (kjtodd91@gmail.com), MaLisa Spring, Frances S. Sivakoff, Yvan Delgado de la Flor and Mary Gardiner, The Ohio State Univ., Columbus, OH

**113** Honeydew microbiota of the invasive sugarcane aphid. **Jocelyn Holt** (holtjocelyn@gmail.com)<sup>1</sup>, Antonino Malacrinò<sup>2</sup>, Crys Wright<sup>1</sup> and Raul F. Medina<sup>1</sup>, <sup>1</sup>Texas A&M Univ., College Station, TX, <sup>2</sup>Linköping Univ., Linköping, Sweden

**114** Effects of lifetime dietary exposure to SmartStax PRO<sup>®</sup> in the F<sub>0</sub> generation on life history traits of western corn rootworm (Coleoptera: Chrysomelidae) F<sub>1</sub> progeny. **Jordan Reinders** (jordan.reinders3@gmail.com)<sup>1</sup>, William Moar<sup>2</sup>, Paula A. Price<sup>2</sup>, Sean Evans<sup>2</sup>, Graham P. Head<sup>2</sup> and Lance J. Meinke<sup>1</sup>, <sup>1</sup>Univ. of Nebraska, Lincoln, NE, <sup>2</sup>Bayer Crop Science, Chesterfield, MO

**115** Making scents of host preference in *Lygus lineolaris*. **Matthew Hetherington** (mhetheringto@wisc.edu)<sup>1</sup> and Christelle Guedot<sup>2</sup>, <sup>1</sup>USDA-ARS Center for Grain and Animal Health Research, Manhattan, KS, <sup>2</sup>Univ. of Wisconsin, Madison, WI

**117** How do plant-associated microbes modify host-plant selection for insect herbivores? **Morgan Thompson** (mthompson@tamu.edu), John Grunseich, Natalie Aguirre and Anjel Helms, Texas A&M Univ., College Station, TX

## Student Ten Minute Paper Competition: Ph.D - P-IE - Session II

**118** The use of a relay cropping system to improve biological control. **Jeffrey Cluever** (cluever.jeffrey@huskers.unl.edu)<sup>1</sup>, Nevin Lawrence<sup>2</sup>, Robert Wright<sup>3</sup>, Julie Peterson<sup>4</sup> and Jeffrey Bradshaw<sup>2</sup>, <sup>1</sup>United States Dept. of Agriculture, Fargo, ND, <sup>2</sup>Univ. of Nebraska-Lincoln, Scottsbluff, NE, <sup>3</sup>Univ. of Nebraska Lincoln, Lincoln, NE, <sup>4</sup>Univ. of Nebraska, North Platte, NE

**120** Investigating the effects of *Rice hoja blanca virus* on the insect vector *Tagosodes orizicolus*. **Jaclyn Martin** (jaclyn.martin@tamu.edu) and Ismael Badillo-Vargas, Texas A&M Univ., College Station, TX

**122** Sorghum tolerance to sugarcane aphids. **Sajjan Grover** (sajjan.grover@huskers.unl.edu)<sup>1</sup>, Earl Agpawa<sup>1</sup>, Scott E. Sattler<sup>2</sup> and Joe Louis<sup>1</sup>, <sup>1</sup>Univ. of Nebraska, Lincoln, NE, <sup>2</sup>USDA - ARS, Lincoln, NE

**123** Density-dependent mortality of larval Western corn rootworm in Bt and non-Bt corn. **John McCulloch** (johnmcc@iastate.edu) and Aaron J. Gassmann, Iowa State Univ., Ames, IA

**124** Everything's sweeter in Texas? A chemical and palynological analysis of honey in Texas **Pierre Lau** (plau0168@tamu.edu), Vaughn Bryant and Juliana Rangel, Texas A&M Univ., College Station, TX

**97** Temporal changes in knockdown resistance-associated mutations in bed bug populations across the United States. **Cari Lewis** (cdl5261@utulsa.edu)<sup>1</sup>, Coby Schal<sup>2</sup>, Edward Vargo<sup>3</sup> and Warren Booth<sup>1</sup>, <sup>1</sup>Univ. of Tulsa, Tulsa, OK, <sup>2</sup>North Carolina State Univ., Raleigh, NC, <sup>3</sup>Texas A&M Univ., College Station, TX

**98** Exposure to a reduced-risk insecticide on maize reduces movement by the stored product pests, *Prostephanus truncatus* and *Sitophilus zeamais*. **Hannah Quellhorst** (hquellho@ksu.edu)<sup>1</sup>, Frank Arthur<sup>2</sup> and Rob Morrison<sup>3</sup>, <sup>1</sup>Kansas State Univ., Manhattan, KS, <sup>2</sup>USDA-ARS, Manhattan, KS, <sup>3</sup>USDA - ARS, Manhattan, KS

## Student Poster Competition: Undergrad Session I - MUVE & PBT

**D2** Prevalence of *Plasmodium* sp. in mosquitoes collected in urban areas of southern Oklahoma. **Brandon Henriquez** (brandon.henriquez@okstate.edu), Jordan Sanders and Bruce Noden, Oklahoma State Univ., Stillwater, OK

**D3** Mutations in the voltage-gated sodium channel gene of pyrethroid-resistant *Amblyomma mixtum* (Acari: Ixodidae) from Mexico. **Odessa A. Mata** (odessa.mata01@utrgv.edu)<sup>1</sup>, Guilherme M. Klafke<sup>2</sup>, Jason P. Tidwell<sup>2</sup>, Francisco T. Barradas-Piña<sup>3</sup>, Teresa Feria<sup>1</sup> and Adalberto A. Pérez de León<sup>4</sup>, <sup>1</sup>The Univ. of Texas Rio Grande Valley, Edinburg, TX, <sup>2</sup>USDA - ARS, Edinburg, TX, <sup>3</sup>INIFAP, Medellín de Bravo, VL, Mexico, <sup>4</sup>USDA - ARS, Kerrville, TX

**D4** Effect of bluetongue virus infection on blood meal feeding behavior in female *Culicoides sonorensis*. **Brandon Hall** (brandonhall98@ksu.edu)<sup>1,2</sup>, Paula Rozo-Lopez<sup>1,2</sup>, Barbara Drolet<sup>1</sup> and Dana Nayduch<sup>1</sup>, <sup>1</sup>USDA-ARS, Manhattan, KS, <sup>2</sup>Kansas State Univ., Manhattan, KS

**D7** Evidence of pheromone production in an orb weaver (Genus *Metepeira*). **Bryan Lara** (larabryan20@gmail.com)<sup>1</sup> and David Thompson<sup>2</sup>, <sup>1</sup>Student, El Paso, TX, <sup>2</sup>New Mexico State Univ., Las Cruces, NM

**D8** Determining the effects of nutrition on honey bee (*Apis mellifera*) pathogen defense against deformed wing virus. **Jordan Gomez** (jordangomez363@gmail.com), Pierre Lau, Alexandria Payne, Cora Garcia, Pierre Lesne, Spence Behmer and Juliana Rangel, Texas A&M Univ., College Station, TX

**D9** Improvements to RNAi in mosquitoes through nanoparticle mediated delivery. **Rachel Brown** (r.brown@uky.edu), Dhandapani Ramesh, Laura Ruberg and Reddy Palli, Univ. of Kentucky, Lexington, KY

**D17** Do food and egg density levels have an effect on intraspecific interactions that could lead to cannibalism among monarch (*Danaus plexippus*) larvae? **Kayla Shepherd** (kaylas2@iastate.edu) and Nancy Shryock, Iowa State Univ., Ames, IA

## Student Poster Competition: Undergrad Session II - SysEB & P-IE

### Grand Ballroom Prefunction (Skirvin Hilton)

**D10** Does predation prevent or promote the evolution of virulence in soybean aphids? **Kelsey Shepherd** (kelshep@iastate.edu), Jessica Hohenstein, Matthew O'Neal and Matthew Kaiser, Iowa State Univ., Ames, IA

**D11** Chemical and foraging ecology of *Theocolax elegans* (*Westwood*) (*Hymenoptera: Pteromalidae*) on two alternate hosts. **Chloe Albin** (albinc@ksu.edu)<sup>1</sup> and Rob Morrison<sup>2</sup>, <sup>1</sup>Kansas State Univ., Manhattan, KS, <sup>2</sup>USDA - ARS, Manhattan, KS

**D12** Feeding performance and preference of the Asiatic garden beetle, *Maladera castanea*, in field crops. **Matthew Lorentz** (mlorentz1@luc.edu), Adrian Pekarck, Amy Raudenbush and Kelley Tilmon, The Ohio State Univ., Wooster, OH

**D13** Effect of Asiatic garden beetle, *Maladera castanea*, grub density on corn and soybean seedlings. **Madeleine Ferguson** (mferguson20@wooster.edu), Adrian Pekarck, Amy Raudenbush and Kelley Tilmon, The Ohio State Univ., Wooster, OH

**D14** Geographical distribution of Western bean cutworm, *Striacosta albicosta*, in Ohio. **Kimberley Gault** (kagault06@gmail.com), Adrian Pekarck, Amy Raudenbush and Kelley Tilmon, The Ohio State Univ., Wooster, OH

**D16** Secondary plant metabolites in a novel oilseed crop, *Silphium integrifolium* and chemotaxis by its main insect pest, *Eucosma giganteana* (Lepidoptera: Pyralidae). **Kaitlyn Ruiz** (kpruiz@ksu.edu)<sup>1</sup>, Damián Ravetta<sup>2</sup>, Chase Stratton<sup>3</sup>, Ebony Murrell<sup>3</sup> and Rob Morrison<sup>4</sup>, <sup>1</sup>Kansas State Univ., Manhattan, KS, <sup>2</sup>Museo Paleontológico Egidio Feruglio, Buenos Aires, Argentina, <sup>3</sup>The Land Institute, Salina, KS, <sup>4</sup>USDA - ARS, Manhattan, KS

**D18** Evaluation of different bowl trap colors for sampling bees. **Haider Ibrahim** (haider.ibrahim@okstate.edu) and Eric Rebek, Oklahoma State Univ., Stillwater, OK

**D23** Evaluation of row covers for exclusion of squash bug, *Anasa tristis* (DeGeer) (Hemiptera:Coreidae), from squash. **Hollie Thorne** (hollie.thorne@okstate.edu)<sup>1</sup>, Eric Rebek<sup>1</sup>, James Shrefler<sup>1</sup>, Tracey Peyton-Miller<sup>2</sup> and Lynda Carrier<sup>1</sup>, <sup>1</sup>Oklahoma State Univ., Stillwater, OK, <sup>2</sup>Langston Univ., Langston, OK

## Student Poster Competition: Master's Session I - PBT & SysEB

### Grand Ballroom Prefunction (Skirvin Hilton)

**D24** Characterization of microbial communities in American burying beetle (*Nicrophorus americanus*) secretions through gram staining and MALDI-TOF analysis. **Carrie Pratt** (carrie.pratt96@gmail.com), John E. Gustafson and William Hoback, Oklahoma State Univ., Stillwater, OK

**D26** Transcriptomic analysis of the honey bee (*Apis mellifera*) queen brain in response to pesticide exposure during development. **Myra Dickey** (mdickey2@tamu.edu)<sup>1</sup>, Tonya Shepherd<sup>2</sup>, Raul F. Medina<sup>1</sup>, Aaron Tarone<sup>1</sup> and Juliana Rangel<sup>1</sup>, <sup>1</sup>Texas A&M Univ., College Station, TX, <sup>2</sup>Texas A&M, College station, TX

**D28** Determining *Nicrophorus americanus* months of reproduction in Oklahoma. **Leonardo Vieira Santos** (leonardo.santos@okstate.edu) and William Hoback, Oklahoma State Univ., Stillwater, OK

**D29** A survey of the polypore fungus beetles of Wisconsin (Coleoptera: Tetratomidae). **Jacquelyn Whisenant** (jacki.whisenant@gmail.com)<sup>1</sup> and Dan Young<sup>2</sup>, <sup>1</sup>Wisconsin Insect Research Collection, Madison, WI, <sup>2</sup>Univ. of Wisconsin, Madison, WI

**D30** Forage plants and associated native bees of Parker County, Texas. **Camille Carey** (camille.carey@okstate.edu)<sup>1</sup>, David H. Kattes<sup>2</sup> and William Hoback<sup>1</sup>, <sup>1</sup>Oklahoma State Univ., Stillwater, OK, <sup>2</sup>Tarleton State Univ., Stephenville, TX

## Student Poster Competition: Master's Session II - P-IE

### Grand Ballroom Prefunction (Skirvin Hilton)

**D32** Insect-plant interactions in native but invasive silver leaf nightshade (*Solanum elaeagnifolium* Cav.). **Jesus Chavana** (jesus.chavana01@utrgv.edu), Univ. of Texas Rio Grande Valley, Edinburg, TX

**D34** Re-designing agricultural landscapes: The effect of habitat on arthropod communities. **Aleksandra Dolezal** (adolezal@uoguelph.ca), Andrew MacDougall and Ellen Esch, Univ. of Guelph, Guelph, ON, Canada

**D35** Efficacy of insecticides for control of grasshoppers in Bermuda grass pasture in Oklahoma. **Grace Levy** (gracej67@gmail.com), Ali Zarrabi, Tom Royer, S. Seuhs, Kristopher Giles and Jacquie Pruit, Oklahoma State Univ., Stillwater, OK

**D36** Eating your greenbugs with a side of veggies: A diverse diet improves reproductive performance and life history in *Hippodamia convergens* (Coleoptera: Coccinellidae). **Hannah Stowe** (hstowe@ksu.edu)<sup>1</sup>, J.P. Michaud<sup>2</sup> and Tania Kim<sup>1</sup>, <sup>1</sup>Kansas State Univ., Manhattan, KS, <sup>2</sup>Kansas State Univ., Hays, KS

**D37** Soybean gall midge: Evaluating the efficacy of insecticide timing relative to adult emergence. **Vilma Montenegro** (vilma.montenegro.c@gmail.com)<sup>1</sup>, Anthony McMechan<sup>2</sup>, Robert Wright<sup>3</sup> and Débora Montezano<sup>2</sup>, <sup>1</sup>Univ. of Florida, Vero Beach, FL, <sup>2</sup>Univ. of Nebraska, Lincoln, NE, <sup>3</sup>Univ. of Nebraska Lincoln, Lincoln, NE

**D38** Change in mesquite organic volatile profile and natural herbivore response after herbicide application. **Lovely Adhikary** (lovely\_a@nmsu.edu) and David Thompson, New Mexico State Univ., Las Cruces, NM

## Student Poster Competition: PhD

### Grand Ballroom Prefunction (Skirvin Hilton)

**D39** Using front-end evaluation to identify audiences for science communication. **Joan King** (joanie\_king@tamu.edu), Edward Vargo and Rhonda Struminger, Texas A&M Univ., College Station, TX

**D41** Investigating stress driven altruistic self-removal of honey bee (*Apis mellifera*) workers from the colony. **Jordan Twombly Ellis** (jt574@tamu.edu) and Juliana Rangel, Texas A&M Univ., College Station, TX

**D42** Interspecies virus transmission between ants and honey bees (*Apis mellifera*). **Alexandria Payne** (alexnpayne@gmail.com) and Juliana Rangel, Texas A&M Univ., College Station, TX

**D43** Interaction between defoliation and stink bug economic thresholds in soybean. **Rafael Hayashida** (hayashidarafoel@gmail.com)<sup>1</sup>, Adeney Bueno<sup>2</sup> and William Hoback<sup>3</sup>, <sup>1</sup>Federal Univ. of Paraná, Curitiba, Brazil, <sup>2</sup>Embrapa Pesquisa e Desenvolvimento, Londrina, Brazil, <sup>3</sup>Oklahoma State Univ., Stillwater, OK

**D44** Reciprocal benefits to cotton and bee pollinators in a cotton agroecosystem. **Isaac Esquivel** (iesqu002@tamu.edu)<sup>1</sup>, Michael Brewer<sup>2</sup> and Robert Coulson<sup>1</sup>, <sup>1</sup>Texas A&M Univ., College Station, TX, <sup>2</sup>Texas A&M AgriLife Research, Corpus Christi, TX