

# Georgia Entomological Society

Annual Meeting

Nº. 83



April 10-12,  
2019

Lake Blackshear  
Resort & Golf Club

Cordele, GA



## PRESIDENT • 2018-2019

### Ed Mondor

Thank you for attending the 83<sup>rd</sup> Annual Meeting of the Georgia Entomological Society (GES) at the Lake Blackshear Resort and Golf Club, in Cordele, GA. We last held our annual meeting here in 2011, so thought it was high time that we return to this beautiful location.

Cordele has an interesting history. In 1864, it served as the temporary capital of Georgia during the last days of the Confederacy. Gov. Joseph Brown used

his farmhouse as the official capital during “Sherman’s March to the Sea” (Maj. Gen. William Sherman of the Union Army conducted a “scorched earth” campaign from Atlanta to Savannah, leading to the eventual surrender of the Confederacy). In 1888, Cordele was officially incorporated. It is named for Cordelia Hawkins, the oldest daughter of Col. Samuel Hawkins, President of the Savannah, Americus, and Montgomery Railway.

Today, Cordele (the “Watermelon Capital of the World”) is a thriving town of over 11,000 people. Located in the middle of Georgia Veterans Memorial State Park, the world-class Lake Blackshear Resort and Golf Club, located on an 8,700-acre lake, has activities to keep everyone busy: golfing, hiking, fishing, and more.

I want to thank President-Elect Nancy Hinkle for the Herculean task of putting together this year’s program, and Michelle Tremblay and Scott Horn for ensuring that all local arrangements run smoothly. Most importantly, thank you to all of our members for supporting GES! This year we have over 60 presentations, the largest number we’ve ever had!

Ed Mondor was born and raised in Brandon, MB, Canada. He attended Brandon University, where he received a B.S. in Psychology with a minor in Botany (1993). Ed then attended the University of Alberta where he received his M.S. in Zoology (1996), working on tachinid parasitoids of the forest tent caterpillar. He received his Ph.D. from Simon Fraser University (2001), studying the evolution of alarm signaling behavior in aphids. He completed postdocs at the University of Calgary and the University of Wisconsin-Madison and was employed as a Junior Entomologist at the University of Hawaii, prior to arriving at Georgia Southern University (2006). An Associate Professor in the Department of Biology, he teaches three courses a semester and has almost 40 peer-reviewed publications (including being featured in the Editor’s Choice section of Science Magazine). In addition to his insect behavior, ecology, and evolution research, he is the only practicing Forensic Entomologist in Georgia.

## SCHEDULE OVERVIEW

### Wednesday, April 10, 2019

- NOON – 5:00 PM Fishing Tournament (*Meet at Lodge Dock – Will Hudson*)
- 4:00 – 6:00 PM Registration, Auction Items Drop-Off, & T-Shirt Pickup & Sales (*Conference Center Lobby*)
- 4:00 – 6:00 PM Poster Set Up (*Ballroom B*)
- 5:00 PM Burrower Bug Bustle Fun Run (*Meet in Lobby – Jason Schmidt*)
- 7:00 PM Executive Committee Meeting (*Meet at Cordelia’s Restaurant*)

### Thursday, April 11, 2019

- Breakfast (*on your own*)
- 7:00 – 8:00 AM Registration, Auction Items Drop-Off, & T-Shirt Pickup & Sales (*Conference Center Lobby*)
- 7:00 – 8:00 AM Poster Set Up (*Ballroom B*)
- 8:00 AM – 7:00 PM Silent Auction (*Ballroom B*)
- 8:00 AM – 8:00 PM Poster Displays (*Ballroom B*)
- 8:00 – 8:10 AM Welcome & Announcements (*Ballroom A*)
- 8:10 – 8:40 AM 2019 GES Founders Lecture
- 8:40 – 8:45 AM GES Founders Honoree Award Presentation
- 8:45 – 9:00 AM Journal of Entomological Science Update
- 9:00 – 9:30 AM Industry Panel
- 9:30 – 10:00 AM Break**
- 10:00 AM – NOON Symposium
- NOON – 1:30 PM Luncheon & Photo Salon (*Ballroom B*)**
- 1:30 – 3:00 PM M.S. Student Paper Competition
- 3:00 – 3:30 PM Break (*Authors at Posters*)**
- 3:30 – 4:10 PM B.S. Student Paper Competition
- 4:00 – 5:00 PM Ph.D. Student Paper Competition
- 6:00 – 8:00 PM GES Mixer & Student Awards Presentations (*Ballroom B*)**

### Friday, April 12, 2019

- Breakfast (*on your own*)
- 7:00 – 8:00 AM Registration & T-Shirt Pickup & Sales (*Conference Center Lobby*)
- 8:00 AM – NOON Poster Displays (*Ballroom B*)
- 8:00 – 10:00 AM Regular Member Paper Session (*Ballroom A*)
- 10:00 – 10:30 AM Break**
- 10:30 – 11:40 AM Regular Member Paper Session (*continued*)
- 11:45 – 12:30 PM Business Meeting





## FOUNDERS HONOREE • 2019

### Dan Hagan

Daniel Hagan received his B.S. and M.S. degrees from Georgia Southern College, followed by a Ph.D. at the University of Georgia. Immediately upon completion, his alma mater hired him as an assistant professor, and he spent 25 years on the Georgia Southern faculty, being awarded Professor Emeritus status in 2005. In his last faculty iteration, he taught in the Certified Registered

Nurse Anesthetist (CRNA) program and the M.D. - Biomedical Program at Mercer University School of Medicine (MUSM). Additionally, he directed the Body Donor Program for 10 years and, in 2015, was awarded the title of Professor Emeritus of Anesthesiology and Basic Medical Sciences at MUSM.

Dr. Hagan admits that over the course of his career in teaching and biological research (at Brunswick Jr. College, Georgia Southern College/University, and Mercer University School of Medicine) his students have taught him a lot. His academic career has been overlaid with an intense “part-time” commitment to the U.S. Coast Guard Reserve (having enlisted as E-1 and retiring as O-6), as the Coast Guard Medical Entomologist on weekends, summers, and holidays at stations and bases across the U.S. He considers himself blessed to have been able to serve on Methodist construction and medical mission trips to Latin America and India. His leadership role in his sons’ Cub and Boy Scout programs permitted many boys without dads to participate; he acknowledges that sometimes the adult leaders had more fun than Scouts on trips to the Okefenokee Swamp, hiking the Appalachian Trail, visiting Cape Canaveral, weekends on the aircraft carrier USS Yorktown, camping on Nanny Goat Beach on Sapelo Island, etc.

He recognizes his colleagues and friends in the Georgia Entomological Society, who he claims have been integral in his career development. In particular, he attributes participating in GES to the success his undergraduate and graduate students have experienced. By asking great questions in an unthreatening manner, GES members allowed sometimes academically callow young scientists to develop competence and confidence in a non-threatening environment.

As a young Instructor of Biology at Brunswick Junior College, Dan attended his first GES meeting in Savannah in 1976, where he met Dr. U. Eugene Brady (B.S. and M.S. Auburn; Ph.D., University of Illinois) who became his Ph.D. advisor. He cites such interaction with GES members in low-key settings at lunch and in the halls for providing great times, fellowship, friendships, and intellectual stimulation.



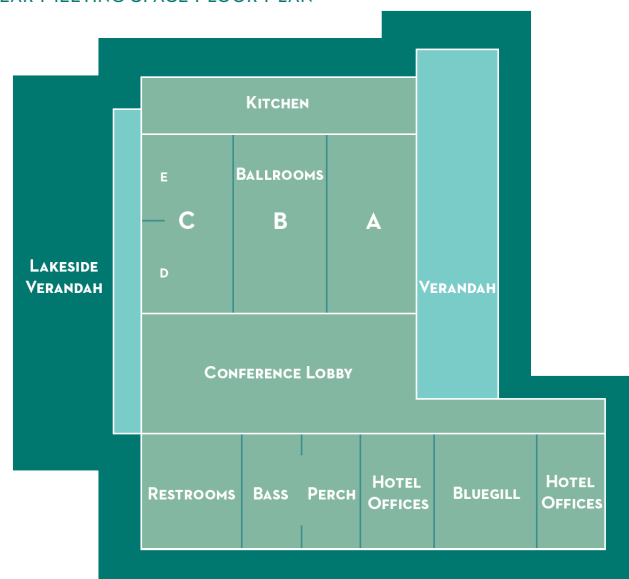
## FOUNDERS LECTURER • 2019

### Lance Durden

Lance Durden is a Professor of Biology (Vector Ecology) and Curator of the Insect Collection in the Department of Biology at Georgia Southern University (GSU). He grew up in England and earned degrees in Zoology from the University of London. At GSU, he teaches courses in Entomology, Medical and Veterinary Entomology, and Emerging Diseases. His research interests are mainly in ectoparasitic arthropods of vertebrates and vector-borne diseases, but he also works on biodiversity of Lepidoptera, especially moths. His work on vector biology and systematics has been funded by grants from USDA, NIH, NSF, and other organizations. He also has a Sustainability grant from GSU to survey insects, especially Lepidoptera and Odonata, on the Statesboro campus. He has authored or co-authored more than 300 peer-reviewed publications and is co-editor, with Gary Mullen (Auburn University) of a textbook entitled “Medical and Veterinary Entomology;” the 3<sup>rd</sup> edition of this book was published in 2019. He has described or co-described 2 new genera and 23 new species of fleas, 1 new genus and 29 new species of sucking lice, 5 new species of ticks, 2 new species of chiggers, and one new tribe, genus, and species of mammal. He is also a Research Associate at the Smithsonian Institution (Department of Entomology), American Museum of Natural History (Department of Mammalogy) and the University of Florida (McGuire Center for Lepidoptera and Biodiversity).



### LAKE BLACKSHEAR MEETING SPACE FLOOR PLAN



## FOUNDERS LECTURE SERIES

The Society has recognized significant and selfless contributions to science and the GES by means of the Founders Lecture Series, since 1990. The founders lecture serves to honor the individual to whom the lecture is dedicated, and to recognize a scholar/researcher of the society who has contributed significantly and historically to the advancement of our science and/or whose research is at the cutting edge of his/her discipline.

Year	Founder	Lecturer
1990	Theodore Bissell	W. Louis Tedders, Jr.
1991	Horace O. Lund	Preston E. Hunter
1992	Hamlin H. Tippins	Wayne A. Gardner
1993	U. Eugene Brady, Jr.	C. Wayne Berisford
1994	Cedric R. Jordan	T. Don Canerday
1995	Clifford M. Beckham	Herbert Womack
1996	Oliver I. Snapp, Sr.	Carroll E. Yonce
1997	T. Don Canerday	Max H. Bass
1998	Loy W. Morgan	Max H. Bass
1999	William F. Turner	Daniel L. Horton
2000	Preston E. Hunter	Raymond Noblet
2001	Harry O. Yates, III	James L. Hanula
2002	Alton N. Sparks	Beverly Sparks
2003	James H. Oliver, Jr.	Richard L. Osburn
2004	Sturgis McKeever	Frank E. French
2005	Herbert H. Ross	J. Bruce Wallace
2006	Gary A. Herzog	Max H. Bass
2007	Jerry A. Payne	Ted E. Cottrell
2008	W. Louis Tedders, Jr.	Russell F. Mizell, III
2009	Ronald D. Oetting	Wayne A. Gardner
2010	Frank E. French	Daniel V. Hagan
2011	Keith Griffith	Lance Peterson
2012	John N. All	James D. Dutcher
2013	Wayne A. Gardner	G. David Buntin
2014	Richard B. Chalfant	David G. Riley
2015	James D. Dutcher	Will Hudson
2016	Raymond Noblet	Wayne A. Gardner
2017	Jim Hanula	Scott Horn
2018	Herbert Womack	Phillip Roberts
2019	Dan Hagan	Lance A. Durden

## FELLOWS OF THE GEORGIA ENTOMOLOGICAL SOCIETY

1991	James H. Oliver, Jr	2007	James Dutcher
1992	Preston E. Hunter	2007	Keith Griffith
1993	Alton N. Sparks	2008	John All
1994	J. Bruce Wallace	2008	T. Don Canerday
1995	Harry O. Yates, III	2009	William Tietjen
1998	Sturgis McKeever	2011	Beverly Sparks
2000	Rudolph T. Franklin	2011	Robert McPherson
2001	W. Joe Lewis	2012	G. David Buntin
2002	Richard B. Chalfant	2013	Kristine Braman
2003	Ronald D. Oetting	2013	Tracie Jenkins
2004	Frank E. French	2014	Dan Horton
2005	C. Wayne Berisford	2015	Jim Hanula
2005	Daniel V. Hagan	2018	William R. Lambert
2006	Wayne Gardner	2018	Raymond Noblet
2006	Lance Peterson		

### President Ed Mondor Letter, continued from page 2

On Wednesday, join us for the annual Fishing Tournament and Fun Run (The Blackshear Burrower Bug Bustle). Thursday will kick off with Founders Lecturer Lance Durden honoring Founder Dan Hagan. Dan has contributed to the GES in multiple ways (including President in 2002), is an excellent researcher and instructor, and is the textbook definition of a jolly good fellow. The industry panel will provide members with updates on products helping to ensure the continued safe and bountiful production of our agricultural crops. This year's symposium is centered around the topic of Pests of Home and Health. During lunch we will have the Photo Salon, proving that insects really are "pretty faces" in addition to important research subjects. The afternoon will consist of student oral presentations. In addition to M.S. and Ph.D. awards, I am delighted to have a new award for B.S. students (the James H. Oliver, Jr. award). During the evening mixer, don't forget to check out student and regular member posters. In addition, the mixer will be the last chance to bid on items in our inaugural Silent Auction. Be generous, all money raised goes towards helping the society (e.g., student awards, scholarships). Friday morning will consist of cutting-edge, groundbreaking regular member papers, followed by our Business Meeting.

Last but not least, I want to express my sincere appreciation to everyone that volunteers their time (committee members, moderators, industry sponsors, etc.) to make GES a dynamic, friendly, and growing society. Your efforts do not go unnoticed. It has been my distinct honor to be your GES President.

## THURSDAY, APRIL 11

7:00 – 8:00 AM Registration (Conference Center Lobby)

7:00 – 8:00 AM Poster Set Up (Ballroom B)

7:00 – 7:45 AM Load Talks onto Computer (see Brett Blaauw - Ballroom A)

8:00 AM – 7:00 PM Silent Auction (Ballroom B)

8:00 AM – 8:00 PM Poster Displays (Ballroom B)

### Opening Session

BALLROOM A • PRESIDENT ED MONDOR, PRESIDING

8:00 – 8:10 AM Welcome and Announcements

8:10 – 8:40 AM 2019 GES Founders Lecture Honoring **Dan Hagan**,  
Presented by **Lance Durden**

8:40 – 8:45 AM GES Founders Honoree Award Presentation

8:45 – 9:00 AM Journal of Entomological Science Update,  
Presented by **Wayne Gardner**

9:00 – 9:30 AM Industry Panel,  
Moderated by **Scott Croxton**

9:30 – 10:00 AM Break

10:00 AM – NOON Symposium – Pests of Home and Health,  
Moderated by **Nancy Hinkle**

10:00 AM Big Invaders Come in Small Packages: Invasive Ants in Georgia. **Dan Suiter**. Department of Entomology, University of Georgia, Griffin, GA.

10:30 AM Tracking an Invader: Wildlife Surveillance for *Haemaphysalis longicornis* (Ixodida: Ixodidae) in the Eastern U.S. **Stacey Vigil**<sup>1</sup>, Michael Yabsley<sup>1</sup>, Adam Randall<sup>2</sup>, Jan Lovy<sup>3</sup>, David Shaw<sup>1</sup>, Seth White<sup>1</sup>, Peach VanWick<sup>4</sup>, Ernesto Dominguez<sup>4</sup>, James Mertins<sup>5</sup>, and Mark Ruder<sup>1</sup>. <sup>1</sup>SCWDS, College of Veterinary Medicine, University of Georgia, Athens, GA, <sup>2</sup>NJ Wildlife Services, USDA-APHIS-WS, Pittstown, NJ, <sup>3</sup>NJ Department of Fish and Wildlife, Oxford, NJ, <sup>4</sup>Wildlife Center of Virginia, Waynesboro, NJ, and <sup>5</sup>National Veterinary Services Laboratories, USDA-APHIS-VS, Ames, IA.

11:00 AM Brown Marmorated Stink Bug: the Invasive Agricultural Pest that Keeps on Invading. . .Homes! **Angelita Acebes-Doria**. Department of Entomology, University of Georgia, Tifton, GA.

11:30 AM Introduction to History and Biology of the Brown Widow Spider (*Latrodectus geometricus*) in the Southeastern U.S. **Scott Harrison**. Department of Biology, Georgia Southern University, Statesboro, GA.

NOON – 1:30 PM Luncheon (Ballroom B)

Photo Salon, Presented by **Lisa Ames** (Ballroom B)

### M.S. Student Paper Competition

BALLROOM A • MODERATORS: JOSH GIBSON & MICHAEL TOEWS

1:30 PM Live from South Georgia, It's the Beetles! **Lauren Perez** and Michael Toews. Department of Entomology, University of Georgia, Tifton, GA.

## THURSDAY, APRIL 11 - CONTINUED

1:40 PM Making a Case for Tarnished Plant Bug Damage in Cotton. **Taylor Randell**<sup>1</sup>, Stanley Culpepper<sup>1</sup>, and Phillip Roberts<sup>2</sup>. <sup>1</sup>Department of Crop and Soil Science, University of Georgia, Tifton, GA and <sup>2</sup>Department of Entomology, University of Georgia, Tifton, GA.

1:50 PM Exploring the Molecular Basis of Jewel Wasp Hybrid Lethality. **Bonnie Cobb**, Lucia Botnaru, and Joshua Gibson. Department of Biology, Georgia Southern University, Statesboro, GA.

2:00 PM Lethal and Sublethal Effects of an Insect Growth Regulator, Pyriproxyfen, on *Drosophila suzukii* (Diptera: Drosophilidae). **Ihsan Tunckol** and Ashfaq Sial, Department of Entomology, University of Georgia, Athens, GA.

2:10 PM Bioassays for Insecticide Resistance Determinations in Whitefly. **Tanner Sparks**, Department of Entomology, University of Georgia, Tifton, GA.

2:20 PM Aging the Vector *Aedes aegypti* and its Implications from Immune Gene Expression. **Jillian Masters**<sup>1,2</sup>, Katie Evans<sup>2</sup>, Austin Drury<sup>1,2</sup>, Aline Bronzato-Badial<sup>1</sup>, and Jonas King<sup>1</sup>. <sup>1</sup>Department of Biochemistry, Molecular Biology, Entomology, and Plant Pathology, Mississippi State University, Starkville, MS and <sup>2</sup>Department of Biological Sciences, Mississippi State University, Starkville, MS.

2:30 PM Aflatoxin Suppression in Stored Corn by Managing Maize Weevils and Introducing an Exogenous Molecule. **Sarah Hobby**<sup>1</sup>, Pablo Delclos<sup>2</sup>, Jeff Tomberlin<sup>2</sup>, and Michael Toews<sup>1</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Tifton, GA and <sup>2</sup>Department of Entomology, Texas A&M, College Station, TX.

2:40 PM Habitat Management Influences Trophic Interactions and Community Function. **Carson Bowers**, Michael Toews, and Jason Schmidt. Department of Entomology, University of Georgia, Tifton, GA.

2:50 PM Potential Role of Potassium on the Survival and Development of Fall Armyworm *Spodoptera frugiperda* (Lepidoptera: Noctuidae) Larvae on Bermudagrass. **Gurjit Singh**<sup>1</sup>, Clint Waltz<sup>2</sup>, and Shimat Joseph<sup>1</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Griffin, GA and <sup>2</sup>Department of Crop and Soil Science, University of Georgia, Griffin, GA.

3:00 – 3:30 PM Break (Authors at Posters)

### B.S. Student Paper Competition

BALLROOM A • MODERATOR: EVAN LAMPERT

3:30 PM The Physiological Basis of *Nasonia* Hybrid Inviability. **Lucia Botnaru**, Bonnie Cobb, and Joshua Gibson. Department of Biology, Georgia Southern University, Statesboro, GA.

3:40 PM Do Argentine Ants (*Linepithema humile*) Produce Diploid Males? **Charles Turner** and Joshua Gibson. Department of Biology, Georgia Southern University, Statesboro, GA.

3:50 PM Testing Insecticidal Efficacy of Diatomaceous Earth on *Alphitobius diaperinus* (Coleoptera: Tenebrionidae). **Sierra King** and Nancy Hinkle. Department of Entomology, University of Georgia, Athens, GA.

## THURSDAY, APRIL 11 - CONTINUED

4:00 PM Temperature Tolerance and Distribution of *Culicoides sonorensis* in a Thermogradient Box Apparatus. **Ari Wernick** and Nancy Hinkle. Department of Entomology, University of Georgia, Athens, GA.

### Ph.D. Student Paper Competition

BALLROOM A • MODERATOR: PHILLIP ROBERTS

- 4:10 PM Spotted Wilt Disease of Peanut: Epidemiology and Impact on Yield. **Pin-Chu Lai**<sup>1</sup>, Rajagopalbabu Srinivasan<sup>1</sup>, and Mark Abney<sup>2</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Griffin, GA and <sup>2</sup>Department of Entomology, University of Georgia, Tifton, GA.
- 4:20 PM Population-Level Persistence of Environmentally Acquired Symbionts in the Squash Bug, *Anasa tristis* DeGeer (Hemiptera: Coreidae). **Jason Chen**<sup>1</sup>, Nicole Gerardo<sup>1,2</sup>, and Nic Vega<sup>1,2</sup>. <sup>1</sup>Population Biology, Ecology, and Evolution Graduate Program, Laney Graduate School, Emory University, Atlanta, GA and <sup>2</sup>Department of Biology, Emory University, Atlanta, GA.
- 4:30 PM Transmission of Begomoviruses by *Bemisia tabaci* Biotypes. **Saurabh Gautam**<sup>1</sup>, Tim Coolong<sup>2</sup>, James Buck<sup>3</sup>, Bhabesh Dutta<sup>4</sup>, Rajagopalbabu Srinivasan<sup>1</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Griffin, GA, <sup>2</sup>Department of Horticulture, University of Georgia, Tifton, GA, <sup>3</sup>Department of Plant Pathology, University of Georgia, Griffin, GA, and <sup>4</sup>Department of Plant Pathology, University of Georgia, Tifton, GA.
- 4:40 PM Phenology of Billbugs (Coleoptera: Curculionidae) from Georgia Sod Farms. **Midhula Gireesh** and Shimat Joseph. Department of Entomology, University of Georgia, Griffin, GA.
- 4:50 PM Soil Applications for Plum Curculio Management in Peaches. **Tzu-Chin Liu** and Brett Blaauw. Department of Entomology, University of Georgia, Athens, GA.

6:00 – 8:00 PM **GES Mixer & Student Awards Presentation** (Ballroom B)

## FRIDAY, APRIL 12

7:00 – 8:00 AM **Registration** (Conference Center Lobby)

7:00 – 7:45 AM **Load Talks onto Computer** (see Brett Blaauw - Ballroom A)

8:00 AM – NOON **Poster Displays** (Ballroom B)

### Regular Member Session

BALLROOM A • MODERATORS: SCOTT HORN & DAVID RILEY

- 8:00 AM Clover Mites Keep on Truckin' - An Unusual Infestation of *Bryobia praetiosa* Koch (Arachnida: Acari: Tetranychidae) in Macon, Georgia. **Linda Smyth**. GES Emeritus Member, Macon, GA.

## FRIDAY, APRIL 12 - CONTINUED

- 8:10 AM Economic Impact of the Bermudagrass Stem Maggot, *Atherigona reversura* (Diptera: Muscidae), in Georgia Hayfields. **Will Hudson**<sup>1</sup>, Lisa Baxter<sup>2</sup>, Bill Anderson<sup>3</sup>, and Dennis Hancock<sup>4</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Athens GA, <sup>2</sup>Department of Crop and Soil Science, University of Georgia, Tifton, GA, <sup>3</sup>USDA/ARS, Tifton, GA, <sup>4</sup>Department of Crop and Soil Science, University of Georgia, Athens, GA.
- 8:20 AM Description of New Species of Spider Mites (Acari: Tetranychidae). **Tea Arabuli**<sup>1</sup> and Jason Schmidt<sup>2</sup>. <sup>1</sup>Agricultural University of Georgia, Tbilisi, GA and <sup>2</sup>University of Georgia, Tifton, GA.
- 8:30 AM Molecular Detection of Pest Difficulties in Biocontrol Systems. **Jason Schmidt**<sup>1</sup>, Magdy Alabady<sup>2</sup>, Zengyan Wang<sup>2</sup>, Michael Toews<sup>1</sup>, and Dawn Olson<sup>3</sup>. <sup>1</sup>University of Georgia, Tifton, GA, <sup>2</sup>University of Georgia, Athens, GA, and <sup>3</sup>USDA-ARS Crop Protection.
- 8:40 AM Sugarcane Aphid (Hemiptera: Aphididae) Diversity and Biotypes. **Karen Harris-Shultz**<sup>1</sup>, J. Scott Armstrong<sup>2</sup>, Sulochana Paudyal<sup>3</sup>, and Xinzhi Ni<sup>1</sup>. <sup>1</sup>USDA-ARS, Crop Genetics and Breeding Research, Tifton, GA, <sup>2</sup>USDA-ARS, Wheat, Peanut and Other Field Crops Research, Stillwater, OK, and <sup>3</sup>Department of Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK.
- 8:50 AM Preferential Infectivity of Entomopathogenic Nematodes in an Envenomed Host. **David Shapiro-Ilan**<sup>1</sup>, George Mbata<sup>2</sup>, Hans Alborn<sup>3</sup> and Michael Strand<sup>4</sup>. <sup>1</sup>USDA-ARS, Southeastern Fruit and Tree Nut Research, Byron, GA, <sup>2</sup>Agricultural Research Station, Fort Valley State University, Fort Valley, GA, <sup>3</sup>USDA-ARS, Center for Medical, Agricultural and Veterinary Entomology, Gainesville, FL, <sup>4</sup>Department of Entomology, University of Georgia, Athens, GA.
- 9:00 AM Opportunities for Protecting Pollinators in Urban Landscapes. **Kris Braman**<sup>1</sup>, Becky Griffin<sup>2</sup>, and Jim Quick<sup>3</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Athens, GA, <sup>2</sup>Georgia Center for Urban Agriculture, Griffin, GA, and <sup>3</sup>Department of Entomology, University of Georgia, Griffin, GA.
- 9:10 AM Application of Entomopathogenic Fungi Does Not Control Sugarcane Aphid (Hemiptera: Aphididae) in Sorghum. **Joseph Knoll**<sup>1</sup>, Karen Harris-Shultz<sup>1</sup>, Somashekhar Punnuri<sup>2</sup>, and Xinzhi Ni<sup>1</sup>. <sup>1</sup>USDA-ARS, Crop Genetics and Breeding Research, Tifton, GA and <sup>2</sup>Fort Valley State University, Fort Valley, GA.
- 9:20 AM Management of Sugarcane Aphid on Sorghum Using Seed and Foliar Applied Insecticides. **David Buntin**<sup>1</sup>, Michael Toews<sup>2</sup>, Phillip Roberts<sup>2</sup>, and David Kerns<sup>3</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Griffin, GA, <sup>2</sup>Department of Entomology, University of Georgia, Tifton, GA, and <sup>3</sup>Department of Entomology, Texas A&M University, College Station, TX.
- 9:30 AM Virulence of a New Strain of *Isaria fumosorosea* Against Coleopteran Larvae. **Shaohui Wu**<sup>1</sup>, Michael Toews<sup>1</sup>, David Shapiro-Ilan<sup>2</sup>, Louela Castrillo<sup>3</sup>, Apurba Barman<sup>1</sup>, and Ted Cottrell<sup>2</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Tifton, GA, <sup>2</sup>USDA-ARS, Southeastern Fruit and Tree Nut Research, Byron, GA, and <sup>3</sup>USDA-ARS, Robert W. Holley Center for Agriculture & Health, Ithaca, NY.



## FRIDAY, APRIL 12 - CONTINUED

9:40 AM New GMO Cowpea Provides a Possible Solution to the Cowpea Curculio (Coleoptera: Curculionidae) Crisis in Georgia. **David Riley**, Department of Entomology, University of Georgia, Tifton, GA.

9:50 AM Integrated Strategies to Improve Management of Spotted Wing *Drosophila* and Sour Rot in Grapes. **Brett Blaauw**<sup>1</sup>, Cain Hickey<sup>2</sup>, and Phil Brannen<sup>3</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Athens, GA, <sup>2</sup>Department of Horticulture, University of Georgia, Athens, GA, and <sup>3</sup>Department of Plant Pathology, University of Georgia, Athens, GA.

### 10:00 - 10:30 AM Break

10:30 AM Monitoring and Identification of Whitefly Species in South Georgia. **Apurba Barman**<sup>1</sup>, Phillip Roberts<sup>1</sup>, Alton Sparks<sup>1</sup>, Rajagopalbabu Srinivasan<sup>2</sup>, David Riley<sup>1</sup>, and Michael Toews<sup>1</sup>. Department of Entomology, University of Georgia, Tifton, GA and <sup>2</sup>Department of Entomology, University of Georgia, Griffin, GA.

10:40 AM Silverleaf Whitefly Population Dynamics and Impact on Cotton Yield During 2017 and 2018. **Phillip Roberts**, Apurba Barman, and Michael Toews. Department of Entomology, University of Georgia, Tifton, GA.

10:50 AM A Non-persistent Aphid-transmitted Potyvirus Differentially Alters the Vector and Non-vector Fitness. **Rajagopalbabu Srinivasan**<sup>1</sup>, Kiran Gadhav<sup>1</sup>, Bhabesh Dutta<sup>2</sup>, and Timothy Coolong<sup>3</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Griffin, GA, <sup>2</sup>Department of Plant Pathology, University of Georgia, Tifton, GA, and <sup>3</sup>Department of Horticulture, University of Georgia, Tifton, GA.

11:00 AM Vertical Distribution of the Pecan Nut Casebearer (Lepidoptera: Pyralidae) within the Pecan Canopy and Implications for Mating Disruption. **Ted Cottrell**. USDA-ARS, Southeastern Fruit and Tree Nut Research, Byron, GA.

11:10 AM Leveraging Entomopathogenic Nematode Movement for Improved Biological Control. **Camila Oliveira-Hofman**<sup>1</sup>, S. Wu<sup>1</sup>, F. Kaplan<sup>2</sup>, E. Lewis<sup>3</sup>, P. Schliekelman<sup>4</sup>, and D. Shapiro-Ilan<sup>1</sup>. <sup>1</sup>USDA-ARS, Southeastern Fruit and Tree Nut Research Laboratory, Byron, GA, <sup>2</sup>Pheronym, Inc., Gainesville, FL, <sup>3</sup>Department of Entomology, Plant Pathology and Nematology, University of Idaho, Moscow, ID, <sup>4</sup>Department of Statistics, University of Georgia, Athens, GA.

11:20 AM Teaching Entomology Without a Collection? Experiences Teaching Entomology as an Undergraduate Research Experience. **Evan Lampert**, Department of Biology, University of North Georgia, Gainesville, GA.

11:30 AM Hot is Not Sexy: The Tale of an Invasive Fly. **Ashfaq Sial**, Department of Entomology, University of Georgia, Athens, GA.

### 11:45 - 12:30 PM Business Meeting

## STUDENT POSTERS

- SP-1 What Arthropods are Hiding in Your Live Cover Crops? **Rachel Perez**<sup>1</sup>, Carson Bowers<sup>2</sup>, and Jason Schmidt<sup>2</sup>. <sup>1</sup>Abraham Baldwin Agricultural College, Tifton, GA and <sup>2</sup>Department of Entomology, University of Georgia, Tifton, GA.
- SP-2 Amazing Fire Ant Diets: A Molecular Approach. **Emmalee Milner**<sup>1</sup>, Melissa Thompson<sup>2</sup>, and Jason Schmidt<sup>2</sup>. <sup>1</sup>Abraham Baldwin Agricultural College, Tifton, GA and <sup>2</sup>Department of Entomology, University of Georgia, Tifton, GA.
- SP-3 Comparison Between Individuals with Resolved and Unresolved Cases of Delusory Parasitosis. **Elizabeth Slater** and Nancy Hinkle, Department of Entomology, University of Georgia, Athens, GA.
- SP-4 Predation of the Brown Marmorated Stink Bug *Halyomorpha halys* by the Chinese Mantis *Tenodera sinensis* Between Varying Life Stages. **Daniel O'Connell** and Lee Paul Guillebeau. Department of Entomology, University of Georgia, Athens, GA.
- SP-5 Monitoring of *Prionus* Rootboring Beetles using Pheromone Traps in a Commercial Pecan Orchard. **Kameron Walker**<sup>1</sup> and Angelita Acebes-Doria<sup>2</sup>. <sup>1</sup>Abraham Baldwin Agricultural College, Tifton, GA and <sup>2</sup>Department of Entomology, University of Georgia, Tifton, GA.
- SP-6 Arthropod Associations with Native and Nonnative *Quercus* in Thompson Mills Forest. **Ren Cylkowski**, Katie McDonough, and Collin Young. Department of Biology, University of North Georgia, Gainesville, GA.
- SP-7 Effects of Relative Humidity on the Vector of Rose Rosette Disease, *Phyllocoptes fructiphilus*, and Disease Symptoms. **Alejandra Monterrosa**<sup>1</sup>, Mathews Paret<sup>2</sup>, Fanny Iriarte<sup>2</sup>, Xavier Martini<sup>3</sup>, and Shimat Joseph<sup>1</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Griffin, GA, <sup>2</sup>Department of Plant Pathology, University of Florida, Quincy, FL, and <sup>3</sup>Department of Entomology, University of Florida, Quincy, FL.
- SP-8 Insecticide Efficacy for Whiteflies in the Greenhouse. **Tanner Sparks**. University of Georgia, Tifton, GA.
- SP-9 Evidence of Pepper Weevil Overwintering in Southern Georgia, 2019 Pheromone Trap Data. **Ryan Weredyk**<sup>1</sup>, Jeremy Kichler<sup>2</sup>, Stephanie Hollifield<sup>3</sup>, Ty Torrance<sup>4</sup>, Justin Shealey<sup>5</sup>, Alton Sparks<sup>1</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Tifton, GA, <sup>2</sup>Colquitt County Extension, Moultrie, GA, <sup>3</sup>Brooks County Extension, Quitman, GA, <sup>4</sup>Grady County Extension, Cairo, GA, and <sup>5</sup>Echols County Extension, Statenville, GA.
- SP-10 Seasonal Population Distribution and Monitoring Trap Optimization of Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) (Hemiptera: Pentatomidae) in Georgia. **Dilani Patel**<sup>1</sup>, Brett Blaauw<sup>1</sup>, Michael Toews<sup>2</sup>, Patricia Tillman<sup>3</sup>, and Ashfaq Sial<sup>1</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Athens, GA, <sup>2</sup>Department of Entomology, University of Georgia, Tifton, GA, and <sup>3</sup>USDA-ARS, Crop Protection and Management Research, Tifton, GA.

## STUDENT POSTERS - CONTINUED

- SP-11 Dung Beetle and Carrion Beetle Activity in Herbivore and Predator Free Environments. **Kelsea Young**<sup>1,2</sup>, Thomas Sheehan<sup>2</sup>, Kier Klepzig<sup>2</sup>, and Jessica Hartshorn<sup>1</sup>. <sup>1</sup>Department of Forestry and Environmental Conservation, Clemson University, Clemson, SC and <sup>2</sup>Jones Center at Ichauway, Newton, GA.
- SP-12 Response of Root Feeding Weevils and Associates to Wind Disturbance, Salvage Operations, and Root Damage Following Hurricane Michael. **Crystal Bishop**<sup>1,2</sup>, Thomas Sheehan<sup>2</sup>, Brittany Barnes<sup>1</sup>, Kier Klepzig<sup>2</sup>, Kamal Gandhi<sup>1</sup>, and Caterina Villari<sup>1</sup>. <sup>1</sup>Warnell School of Forestry and Natural Resources, University of Georgia, Athens, GA and <sup>2</sup>Jones Center at Ichauway, Newton, GA.
- SP-13 Lethal Effects of Selected Insecticides on the Immature Life Stages of *Drosophila suzukii* (Matsumura). **Jamal Hunter**. Department of Entomology, University of Georgia, Athens, GA.
- SP-14 The Effect of Elevated Carbon Dioxide on the Pea Aphid Endosymbiont *Hamiltonella defensa*. **Tyler Follman** and Edward Mondor. Department of Biology, Georgia Southern University, Statesboro, GA.
- SP-15 Identification of Potential Thrips Vectors of Orthotospovirus in Georgia Peanut. **Yi-Ju Chen**<sup>1</sup>, Joseph McHugh<sup>2</sup>, and Rajagopalbabu Srinivasan<sup>1</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Griffin, GA and <sup>2</sup>Department of Entomology, University of Georgia, Athens, GA.
- SP-16 Availability of Curated Transcriptomes for Plant Pathogen Vectors. **Michael Catto**<sup>1</sup> and Rajagopalbabu Srinivasan<sup>2</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Athens, GA and <sup>2</sup>Department of Entomology, University of Georgia, Griffin, GA.
- SP-17 Differential Division of Labor in the Ancient Symbionts of Sap-sucking Insects (Sternorrhyncha: Adelgidae). **Dustin Dial**<sup>1</sup>, Gaelen Burke<sup>1</sup>, Kathryn Weglarz<sup>2</sup>, Nathan Havill<sup>3</sup>, and Carol von Dohlen<sup>2</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Athens, GA, <sup>2</sup>Department of Biology, Utah State University, Logan, UT, and <sup>3</sup>USFS, Northern Research Station, Hamden, CT.



## REGULAR MEMBER POSTERS

- RP-1 Attracting Beneficials: Implications of Native Wildflowers for Enhancing Southeast Landscapes. **Melissa Thompson**<sup>1</sup>, Bethany Harris<sup>2</sup>, Bodie Pennisi<sup>2</sup>, Carson Bowers<sup>1</sup>, Emmalee Milner<sup>3</sup>, Rachel Perez<sup>3</sup>, Zac Wainright<sup>3</sup>, and Jason Schmidt<sup>1</sup>. <sup>1</sup>University of Georgia, Tifton, GA, <sup>2</sup>University of Georgia, Griffin, GA, and <sup>3</sup>Abraham Baldwin Agricultural College, Tifton, GA.
- RP-2 Georgia's Arthropod Diversity Featured on Georgia Biodiversity Portal. **Anna Yellin**, Wildlife Conservation Section, Georgia Department of Natural Resources, Social Circle, GA.
- RP-3 Optimizing Nitrogen Fertilizer and Insecticide for Chilli Thrips (Thysanoptera: Thripidae) Control in Nurseries. **Shimat Joseph**. Department of Entomology, University of Georgia, Griffin, GA.
- RP-4 Response of Bark Beetles and Associates to Wind Disturbance and Salvage Operations Following Hurricane Michael. **Benjamin Gochnour**<sup>1,2</sup>, Thomas Sheehan<sup>2</sup>, Brittany Barnes<sup>1</sup>, Kier Klepzig<sup>2</sup>, and Kamal Gandhi<sup>1</sup>. <sup>1</sup>Warnell School of Forestry and Natural Resources, University of Georgia, Athens, GA, and <sup>2</sup>Jones Center at Ichauway, Newton, GA.
- RP-5 Spatial Abundance and Temporal Flight Activity of Peanut Burrower Bug, *Pangaeus bilineatus*, in Georgia. **Mark Abney** and Benjamin Aigner. Department of Entomology, University of Georgia, Tifton, GA.
- RP-6 Evaluating the Use of Insecticidal Netting for Pecan Weevil Management. **Pamela Halliday**<sup>1</sup>, Ted Cottrell<sup>2</sup>, and Angelita Acebes-Doria<sup>1</sup>. <sup>1</sup>Department of Entomology, University of Georgia, Tifton, GA and <sup>2</sup>USDA-ARS, Southeastern Fruit and Tree Nut Research, Byron, GA.



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## Best Regular Member Presentation

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COVER PHOTO BY **B. MERLE SHEPARD**, CLEMSON U., COASTAL RES. & ED. CENTER  
Hickory Horned Devil Caterpillar of the Regal Moth (*Citheronia regalis*)

Other photos contributed by: E. Mondor, N. Hinkle, A. Harvey, & M. Tremblay

## PAST MEETINGS OF THE GES

### Meeting Dates

### Location

2 April 1937	Agricultural Experiment Station, Experiment
1 April 1938	Georgia Institute of Technology, Atlanta
28-30 Oct. 1938	Okefenokee Swamp, Fargo
6 May 1939	Georgia State College for Women, Milledgeville
14 October 1939	Agricultural Experiment Station, Experiment
6 April 1940	Emory University, Atlanta
7 November 1940	Agricultural Experiment Station, Experiment
5 April 1941	Wesleyan College, Macon
4 April 1942	Emory University, Atlanta
21 March 1944	Piedmont Hotel, Atlanta
29 March 1946	Agricultural Experiment Station, Experiment
10 April 1948	Baldwin Hall-UGA, Athens
30 April 1949	Jekyll Island Hotel, Jekyll Island
3-4 March 1950	American Legion, Fort Valley
9-10 March 1951	Abraham Baldwin Agricultural College, Tifton
7-8 March 1952	Savannah Hotel, Savannah
6-7 March 1953	Hotel Dempsey, Macon
12-13 March 1954	Ida Dunlap Little Library -UGA, Athens
4-5 March 1955	Radium Springs Hotel, Albany
8-9 March 1956	Manger Hotel, Savannah
19-20 March 1957	Rock Eagle 4-H Club Center, Eatonton
5-7 March 1958	King and Prince Hotel, St. Simons Island
4-5 March 1959	Radium Springs Hotel, Albany
30-31 March 1960	New Chemistry Building-UGA, Athens
8-9 March 1961	Wanderer Motel, Jekyll Island
20-22 March 1962	Radium Springs Hotel, Albany
20-22 March 1963	Holiday Inn, Pine Mountain
26-27 March 1964	Corsair Motel, Jekyll Island
9-11 March 1965	Downtown Holiday Inn, Atlanta
23-25 March 1966	Stuckey's Carriage Inn, Jekyll Island
21-23 March 1967	Manger Hotel, Savannah
19-21 March 1968	Elks Club, Albany
18-20 March 1969	Stuckey's Carriage Inn, Jekyll
17-19 March 1970	Downtowner Motor Inn, Albany
16-18 March 1971	DeSoto Hilton, Savannah
15-17 March 1972	King and Prince Hotel, St. Simons Island
28-30 March 1973	Macon Hilton Hotel, Macon
13-15 March 1974	Holiday Inn, Athens
19-21 March 1975	King and Prince Hotel, St. Simons Island
17-19 March 1976*	DeSoto Hilton, Savannah
16-18 March 1977	Downtowner Motor Inn, Albany

## PAST MEETINGS OF THE GES

15-17 March 1978	King and Prince Hotel, St. Simons Island
21-23 March 1979*	Quality Inn, Hilton Head Island, SC
19-21 March 1980	Ramada Inn West, Macon
18-19 March 1981	Rural Development Center, Tifton
24-26 March 1982	History Village Inn & Conference Center, Athens
23-25 March 1983	Downtowner Motor Inn, Albany
21-23 March 1984	Buccaneer Motor Lodge, Jekyll Island
20-22 March 1985	Rural Development Center, Tifton
24-26 March 1986*	Sheraton Resort & Country Club, Savannah
18-20 March 1987	Quality Inn- Buccaneer, Jekyll Island
23-25 March 1988	Georgia Southern Col., Statesboro
22-24 March 1989	Univ. of Georgia, Athens
28-30 March 1990	Unicoi Lodge & Conference Center, Helen
27-29 March 1991	Callaway Gardens, Pine Mountain
25-27 March 1992	Clarion Resort Buccaneer, Jekyll Island
24-26 March 1993	Georgia Center for Continuing Ed., Athens
23-25 March 1994*	Sheraton Charleston Hotel, Charleston, SC
29-31 March 1995	Merry Acres Motel, Albany
27-29 March 1996	Holiday Inn-Midtown, Savannah
16-17 April 1997	Unicoi State Park, Helen
16-17 April 1998	Buccaneer Motor Lodge, Jekyll Island
14-16 April 1999	Rural Development Center, Tifton
6-7 April 2000	Georgia Center for Continuing Education, Athens
4-6 April 2001*	Georgia Mountain Center, Gainesville
3-5 April 2002	Georgia Southern University, Statesboro
2-4 April 2003	Holiday Inn, Jekyll Island
31 March - 2 April 2004	Callaway Gardens, Pine Mountain
30 March - 1 April 2005	Georgia Center for Continuing Education, Athens
29-31 March 2006	Holiday Inn, Jekyll Island
16-18 May 2007	Georgia Center for Continuing Education, Athens
2-4 April 2008	Lake Blackshear Resort and Golf Club, Cordele
1-3 April 2009	The Ridges Hotel and Resort, Hiawassee
6-8 October, 2010*	Hickory Knob State Park, McCormick, SC
6-8 April 2011	Lake Blackshear Resort & Golf Club, Cordele
4-6 April 2012	Holiday Inn, Statesboro
10-12 April 2013	Amicalola Falls State Park, Dawsonville
9-11 April 2014	James H. Rainwater Conference Center, Valdosta
9-10 April 2015	Villas by the Sea, Jekyll Island
6-8 April 2016	Callaway Gardens, Pine Mountain
5-7 April 2017	Villas by the Sea, Jekyll Island
4-6 April 2018*	Unicoi State Park and Lodge, Helen

\*Joint meeting of the *Georgia Entomological Society* and the *South Carolina Entomological Society*

## STUDENT SPEAKERS

BOTNARU, LUCIA	THURSDAY, APRIL 11	3:30 PM
BOWERS, CARSON	THURSDAY, APRIL 11	2:40 PM
CHEN, JASON	THURSDAY, APRIL 11	4:20 PM
COBB, BONNIE	THURSDAY, APRIL 11	1:50 PM
GAUTAM, SAURABH	THURSDAY, APRIL 11	4:30 PM
GIREESH, MIDHULA	THURSDAY, APRIL 11	4:40 PM
HOBBY, SARAH	THURSDAY, APRIL 11	2:30 PM
KING, SIERRA	THURSDAY, APRIL 11	3:50 PM
LAI, PIN-CHU	THURSDAY, APRIL 11	4:10 PM
LIU, TZU-CHIN	THURSDAY, APRIL 11	4:50 PM
MASTERS, JILLIAN	THURSDAY, APRIL 11	2:20 PM
PEREZ, LAUREN	THURSDAY, APRIL 11	1:30 PM
RANDELL, TAYLOR	THURSDAY, APRIL 11	1:40 PM
SINGH, GURJIT	THURSDAY, APRIL 11	2:50 PM
SPARKS, TANNER	THURSDAY, APRIL 11	2:10 PM
TUNCKOL, IHSAN	THURSDAY, APRIL 11	2:00 PM
TURNER, CHARLES	THURSDAY, APRIL 11	3:40 PM
WERNICK, ARI	THURSDAY, APRIL 11	4:00 PM

## REGULAR MEMBER SPEAKERS

ACEBES-DORIA, ANGELITA	THURSDAY, APRIL 11	11:00 AM
ARABULI, TEA	FRIDAY, APRIL 12	8:20 AM
BARMAN, APURBA	FRIDAY, APRIL 12	10:30 AM
BLAAUW, BRETT	FRIDAY, APRIL 12	9:50 AM
BRAMAN, KRIS	FRIDAY, APRIL 12	9:00 AM
BUNTIN, DAVID	FRIDAY, APRIL 12	9:20 AM
COTTRELL, TED	FRIDAY, APRIL 12	11:00 AM
HARRIS-SHULTZ, KAREN	FRIDAY, APRIL 12	8:40 AM
HARRISON, SCOTT	THURSDAY, APRIL 11	11:30 AM
HUDSON, WILL	FRIDAY, APRIL 12	8:10 AM
KNOLL, JOSEPH	FRIDAY, APRIL 12	9:10 AM
LAMPERT, EVAN	FRIDAY, APRIL 12	11:20 AM
OLIVEIRA-HOFMAN, CAMILA	FRIDAY, APRIL 12	11:10 AM
RILEY, DAVID	FRIDAY, APRIL 12	9:40 AM
ROBERTS, PHILLIP	FRIDAY, APRIL 12	10:40 AM
SCHMIDT, JASON	FRIDAY, APRIL 12	8:30 AM
SHAPIRO-ILAN, DAVID	FRIDAY, APRIL 12	8:50 AM

## REGULAR MEMBER SPEAKERS - CONTINUED

SIAL, ASHFAQ	FRIDAY, APRIL 12	11:30 AM
SMYTH, LINDA	FRIDAY, APRIL 12	8:00 AM
SRINIVASAN, RAJAGOPALBABU	FRIDAY, APRIL 12	10:50 AM
SUITER, DAN	THURSDAY, APRIL 11	10:00 AM
VIGIL, STACEY	THURSDAY, APRIL 11	10:30 AM
WU, SHAOHUI	FRIDAY, APRIL 12	9:30 AM

## STUDENT POSTERS

BISHOP, CRYSTAL	STUDENT POSTER (SP-12)
CATTO, MICHAEL	STUDENT POSTER (SP-16)
CHEN, YI-JU	STUDENT POSTER (SP-15)
CYLKOWSKI, REN	STUDENT POSTER (SP-6)
DIAL, DUSTIN	STUDENT POSTER (SP-17)
FOLLMAN, TYLER	STUDENT POSTER (SP-14)
HUNTER, JAMAL	STUDENT POSTER (SP-13)
MILNER, EMMALEE	STUDENT POSTER (SP-2)
MONTERROSA, ALEJANDRA	STUDENT POSTER (SP-7)
O'CONNELL, DANIEL	STUDENT POSTER (SP-4)
PATEL, DILANI	STUDENT POSTER (SP-10)
PEREZ, RACHEL	STUDENT POSTER (SP-1)
SLATER, ELIZABETH	STUDENT POSTER (SP-3)
SPARKS, TANNER	STUDENT POSTER (SP-8)
WALKER, KAMERON	STUDENT POSTER (SP-5)
WEREDYK, RYAN	STUDENT POSTER (SP-9)
YOUNG, KELSEA	STUDENT POSTER (SP-11)

## REGULAR MEMBER POSTERS

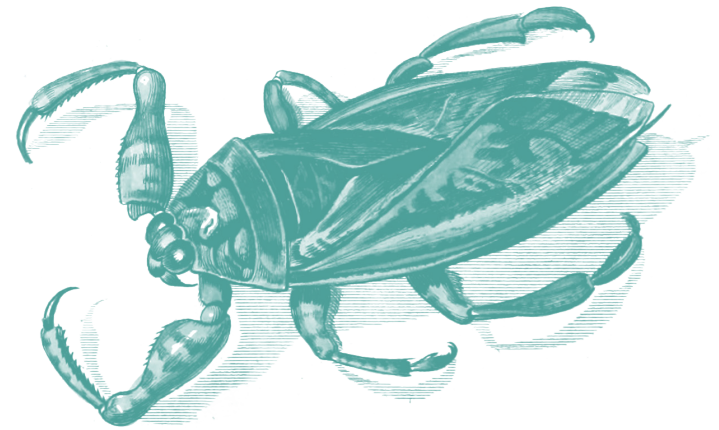
ABNEY, MARK	REGULAR POSTER (RP-5)
GOCHNOUR, BENJAMIN	REGULAR POSTER (RP-4)
HALLIDAY, PAMELA	REGULAR POSTER (RP-6)
JOSEPH, SHIMAT	REGULAR POSTER (RP-3)
THOMPSON, MELISSA	REGULAR POSTER (RP-1)
YELLIN, ANNA	REGULAR POSTER (RP-2)



## NOTES



## NOTES



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**BAYER CROPSOURCE**

**CORTEVA AGRISCIENCE**

**NICHINO AMERICA**

**ORKIN**

**SYNGENTA**

**TERMINIX**

**VALENT USA CORPORATION**



**2019**

PROGRAM WOVEN BY MICHELLE TREMBLAY

