

# 93<sup>RD</sup> ANNUAL MEETING OF THE SOUTHEASTERN BRANCH

ENTOMOLOGICAL SOCIETY OF AMERICA  
MARCH 3–6, 2019, MOBILE, ALABAMA



**Oscar Liburd**  
President, 2018-2019



Female blueberry gall midge,  
*Dasineura oxycoccana*,  
Photo by O. E. Liburd



Full green blueberries with a  
predator (spider) hidden in the  
calyx end of the fruit,  
Photo by A. Fraulo



# SPONSORS OF THE 2019 SEB MEETING

Our sponsors provide support for the mixers, breakfast, and various other functions of the meeting. In so doing, they help reduce the registration costs and provide a much more enjoyable environment for our meeting. Please be sure to express your appreciation to our sponsors:

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[www.entsoc.org](http://www.entsoc.org)

DATE: February 11, 2019  
FROM: SEB-ESA President Oscar E. Liburd, [oeliburd@ufl.edu](mailto:oeliburd@ufl.edu)  
TO: SEB-ESA Membership

Welcome to the 93<sup>rd</sup> meeting of the Southeastern Branch (SEB) of the Entomological Society of America.

The meeting will feature 10 symposia with topics from vegetable pest management to vector biology. One symposium that will be of broad interest is "What's in Your Toolbox? the Skillset Needed for a Successful Career in Entomological Research". Skill enhancement talks in this symposium will focus on developing successful collaborations, obtaining funding, mentoring, and how to build your scientific skillset, including new approaches to experimental design and statistical analyses. In addition, there will be a total of 75 student talks, 44 student posters, 25 submitted talks, and 34 submitted posters.

The Plenary address will be given by Dr. Nicholas Storer, a Global Regulatory Advocacy Lead for Corteva Agriscience™. He will be discussing the development and status of Bt crops, including resistance issues domestically and globally.

There will also be a special Lunch and Learn on Monday 4th March "Strategy of Mixture Experimentation", which will discuss how to analyze multi-component treatments, including pheromone blends, insecticide mixtures, and diet ingredients.

We have formalized the Early Career Professional committee (ECP) for young professional entomologists so that they can continue to contribute to the society. The committee is currently chaired by Lauren Diepenbrock and she is looking for new and innovative ideas.

Mobile is a beautiful city with historical significance. It is the birthplace of Mardi Gras and our meeting is held during Mardi Gras festivities. Do not forget to take some time to enjoy the parades that will be passing right by the meeting space, with 2-4 parades running every day Sunday through Tuesday.

Please take advantage of every opportunity to meet and interact with your fellow scientists and enjoy the meeting.

Regards,

*Oscar Liburd*

President, SEB



# Meeting Notices and Policies

## PROGRAM SCHEDULE:

All activities will be in the Renaissance Mobile Riverview Plaza Hotel. Sessions must adhere to the printed schedule. It is the moderators' responsibility to keep speakers on schedule. If a scheduled presentation is not given, the moderator should ensure that the next speaker does not begin until his/her scheduled time.

## AUDIOVISUAL:

Please design your material so that it can be read easily by the audience when it is projected. Presentations may be

uploaded in the Riverboat Suite from 3:00 PM to 5:00 PM on Sunday, 7:00 AM to 5:00 PM on Monday, 7:00 AM to

5:00 PM on Tuesday. Upload presentations in this room as early as possible on Sunday afternoon, Monday morning, or Tuesday morning. Laptops with presentations uploaded will be moved to the respective rooms 30 minutes before the start of the sessions.

## DISPLAY PRESENTATIONS:

Poster boards measuring 4 ft. x 8 ft. will be provided for each display presentation in Second Floor Foyer. So that we can fit 4 posters per board, posters should be no larger than 46" x 46". Displays should be mounted on the boards (assigned by the number of the presentation) using pushpins, and authors are asked to bring their own pins. All prints, figures, tables, etc. should be large enough to be read easily from a distance of at least 3 ft. Displays for the Student Competition on Monday should be setup on Sunday evening 5:00 – 7:00 PM or Monday morning 7:00 – 8:00 AM in Second Floor Foyer. Students should be present at their posters on Monday 1:45 – 2:45 PM. Students are encouraged to keep their posters up until 5:00 PM, and posters should be removed by 7:00 PM on Monday evening.

Regular displays for Tuesday should be setup on Monday 7:00 – 8:00 PM or Tuesday morning 7:00 – 8:00 AM in

Second Floor Foyer. Posters should be available for viewing 8:00 AM – 5:00 PM. Presenters should be at their posters from 1:45 – 2:45 PM on Tuesday. Be sure to remove all displays by 7:00 PM on Tuesday.

## REGISTRATION:

Registration is mandatory to attend the SEB-ESA meeting except ESA Honorary and Emeritus Members. On-site registration fees include a luncheon ticket, and are: Active Members-\$240; Student Members-\$100; Guests-\$75; and Non-members-\$290. One-day registration fee is \$240.

Registration Desk is located in Second Floor Foyer, and will be open on Sunday (1:00 PM-5:00 PM), Monday (7:00 AM-5:00 PM), Tuesday (7:00 AM-5:00 PM) and Wednesday (7:00 AM-9:00 AM).

## FUNCTIONS/EVENTS:

We have several activities that should be of interest to participants.

**Sunday: 4:00 PM-7:00 PM** Linnaean Games: Preliminary Rounds (Bon Secour Bay II & III)

**Monday: 7:00-8:00 AM** Host State Breakfast (Bon Secour Bay I)

**8:00-10:15 AM** Preliminary Business Meeting and Plenary Address (Bon Secour Bay II & III)

**8:00 AM-4:00 PM** Mississippi Bug Blues (Jubilee Suite)

**10:15-10:30 AM** Break (Second Floor Foyer)

**4:00 PM-7:00 PM** Linnaean Games: Finals (Bon Secour Bay II & III)

**7:00-9:00 PM** Welcome Reception (Schooner Suite)

**Tuesday: 7:00-9:00 AM** Past President's Breakfasts (Harbor Room restaurant)

**9:00-10:00 AM** Student Affairs Committee (Bay-point)

**12:00-1:30 PM** Awards Luncheon & Photo Salon (Bon Secour Bay)

As a registered accompanying guest at this meeting, you will be eligible for all of the above. In addition, you are welcome to attend any of the other meeting events including, Opening Session, Linnaean Games, etc.

*Meeting Notices and Policies, cont'd*

## ESA CERTIFICATION BOARD INFORMATION

Information on the Certification Board of the Entomological Society of America will be offered in the Registration area during Registration periods. Please contact the Certification Board Manager at the National Office to make arrangements to take the Certification Board Examination at the meeting.

## CODE OF CONDUCT:

*By attending the 2018 Southeastern Branch Annual Meeting, you agree voluntarily to abide by our ethics policy. The full policy may be found online at [entsoc.org/conduct](http://entsoc.org/conduct). If you need to file a complaint, please contact Rosina Romano at [rromano@entsoc.org](mailto:rromano@entsoc.org), 703-593-0222.*

## JOB PLACEMENT CENTER:

The Student Affairs Committee will sponsor a job placement board in Riverboat Suite for all interested employers and prospective employees from 7:00 AM to 5:00 PM on Monday and Tuesday. If you have a job vacancy or are seeking employment, please bring an announcement or résumé to the Riverboat Suite or post it directly on the appropriate board located at the same location.

## PUBLIC RELATIONS:

The Public Relations Committee will sponsor a Press Release area near the Registration desk during regular meeting hours. Press releases and public relations information may be brought to this area.

## SOCIAL MEDIA:

We are excited you could join us this year and would love for you to share your experiences! Please use #SEBEntsoc2019 for Twitter and visit our Facebook page SEB\_Entsoc to share your pictures, thoughts, and opinions with us! Let's make this an unforgettable event!

# ESA Sections

**Medical, Urban & Veterinary Entomology (MUVE)** deals with insect interactions with other animals, including humans, including medical entomology, urban entomology, veterinary entomology, forensic entomology, epidemiology, integrated disease management, human and veterinary parasitology, public health pest management, mosquito control, management of structural pests (e.g., termites, ants), and others.

**Physiology, Biochemistry, and Toxicology (PBT)**, formerly Integrative Physiological and Molecular Insect Systems or IPMIS, is for people who study insects at the cellular or molecular levels, and it includes topics such as biochemistry, microbiology, toxicology, endocrinology, cytology, molecular biology, allelochemicals, pheromones, hormones, metabolism, and others.

**Plant-Insect Ecosystems (P-IE)** deals with insect interactions with plants, including behavioral, ecological, and evolutionary relationships in natural landscapes, as well as integrated pest management (IPM) in agriculture, horticulture, forests, and lawn and garden. Aspects of crop protection, host-plant response, plant pathology/vectors, pollination, biological control, microbial control, and others are relevant.

**Systematics, Evolution, and Biodiversity (SEB)** is for people who study insect anatomy, classification and history. As the name implies, it focuses on systematics, evolution and biodiversity, but it could also include morphology, ecology, population dynamics, genetics, phylogeny, nomenclature, biogeography, zoology, and other specialties.



## Southeastern Branch-ESA 2018-2019

### Officers and Committees

#### Executive Committee

Oscar Liburd, *President*

Yasmin Cardoza, *President-Elect*

Stephen Lapointe, *Past- President*

Amanda Hodges (2018/21), *Secretary-Treasurer*

Karla Adesso (2019), *Gov. Board Representative*

Emma Weeks (2019), *Member-at-Large*

Jason Oliver (2020), *Member-at-Large*

Ryan Kurtz (2021), *Member-at-Large*

#### Program Committee (Mobile, 2019)

Rebecca Schmidt-Jeffris, SC, *Chair*

Ayanava Majumdar, AL

Xing Ping Hu, AL

Arthur Appel, AL

Michelle Samuel-Foo, AL

Justin George, FL

Torrence Gill, FL

Rodrigo Diaz, LA

Jawwad Qureshi, FL, *Ex-Officio*

#### Membership Committee

Lina Bernaola, LA (2019), *Chair*

Josh Temple, FL (2019)

Michael Toews, GA (2019)

Rizana Mahroof, SC (2020)

Karla Adesso, TN (2020)

Rosa Franqui, PR (2020)

Hannah Burrack, NC (2020)

Christopher Werle, MS (2020)

Savannah Duke, Student (2020)

#### Member Awards Committee

David Buntin, GA (2019) *Chair*

Teresia Nyoike (2021) co-Chair

Dennis Ring, LA (2019)

Gregory Wiggins, TN (2020)

Juan Luis Jurat-Fuentes, TN (2020)

Carey Minter, FL (2020)

Cindy McKenzie, USDA FL (2019)

#### Archives Committee

Jim Harper, NC (2020)

#### Resolutions Committee (2019)

Courtney Jackson, AK, *Chair* (2020)

Jason Schmidt, GA (2017), *Ex Officio*

#### Student Awards Committee

Hugh Smith, FL, *Chair*

Haseeb Muhammad, FL (2021)

Justin George, FL (2020)

Esmaeil Amiri, NC (2020)

Mohamed Alburaki, TN (2018), *Ex-Officio*

## Local Arrangements Committee

### (Mobile, AL, 2019) Meeting

David Held, Chair

Arthur Appel

Geoffrey Williams

Kelly Palmer

Fudd Graham

Rob Meagher, FL *Ex-Officio*

Amanda Hodges, Sec-Treas, *Ex-Officio*

## Student Affairs Committee

Zhou Chen, AL (2020), *Chair*

Ying Niu, LA (2019)

Conor Fair, (2021)

Zhou Chen, AL (2019)

Darsy Smith, PR (2019)

Aaron Cato, AR (2019)

Gabe Zilnik, NC (2019)

Tommy Bilbo, SC (2019)

Scott Graham, TN (2019)

Tyler Towles, MS (2019)

Casey Parker, FL, *Ex Officio*

## Student Affairs Subcommittees:

Insect Photo Salon  
Aaron Cato (2019)

Job Placement  
Linnaean Games  
Michael Williams

Student Symposium  
Frank Hale (University of Tennessee)

## Public Relations Committee (2019)

Marianne Shockley, GA (2019) Chair

Alejandro Calixt0, FL (2019)

Adam Dale, FL (2018), *Ex-Officio*

## Audit Committee

Adam Dale, FL (2020) Chair

Amanda Hodges, FL, *Secretary-Treasurer*

Mark Abney, GA, *Ex-Officio*

## Meeting Location/Time: Georgia (2020)

Brett Blaauw, GA, *Chair*

David Shapiro-Ilan, GA

Amanda Hodges, Sec-Treas, *Ex-Officio*

## Meeting Location/Time: Puerto Rico (2021)

J C Rodriguez, PR, *Chair*

Alvin Simmons, SC, co-chair

Oscar Liburd, FL

David Jenkins, SC

Amanda Hodges, Sec-Treas, *Ex-Officio*

Brett Blaauw, GA, *Ex Officio*

## Board Certification Committee

Dennis Ring, LA, (2020) Chair

Rebecca Baldwin, FL (2021)

Jeffrey Brown, MS (2019)

## Education Committee (2019)

Eric Riddick, MS (2020), *Chair*

*Michelle Samuel-Foo, AL*

John Guyton, MS (2019)

Eric Butler, NC, *Ex Officio*

## Linnaean Games

Mike Williams, AL, *Chair*

Jerome Grant, TN

David Jenkins, SC



## **Nominating Committee (2019)**

*Gov., John Adamczyk, Chair*

*Gov., Stephen D. Hight*

*State, Jim Walgenbach*

*State, Joseph Shimat*

*Industry, Brett Highland*

*Industry, Scott Croxton*

## **Ad hoc Annual Meeting Sponsorship Committee (2019-2020)**

*Alejandro Arevalo-Rodriguez (2019), Chair*

## **Ad hoc National Offices Nominating Committee (2019)**

*Yasmin Cardoza, NC, President-Elect, Chair*

*Oscar Liburd, FL, President*

*Stephen Lapointe, FL, Past President*

## **Ad hoc By-Laws Committee 2018**

*Jeremy Greene, SC, Chair*

*Stephen Lapointe*

*Philip Roberts, GA*

*Mike Williams, AL*

## **ESA national committee reps (terms expire at national meeting)**

### **ESA Central Student Affairs Committee**

*Rebecca Zimler, FL Representative (2019)*

### **ESA Central Education & Outreach Committee**

*Marianne Shockley, GA, SEB Representative (2019)*

### **SEB Representative on the ESA Awards & Honors Committee**

*G. David Buntin, GA (2020)*

### **Student Representative on the ESA Governing Board**

*Lina Bernaola, LA (2019) (nominated)*

### **SEB Representative on the ESA Finance Committee**

*Amanda Hodges, FL (2020)*

*Juang Chong (2018)*

### **SEB Representative on the Science Policy Committee**

*Lauren Diepenbrock, FL (2020)*

### **SEB Representative on the ESA Certification Board**

*Dennis Ring, LA (2020)*

### **STEP Travel Awards Judging Panel**

*Yasmin Cardoza (2019)*

### **SEB Representative on the ESA Committee on Diversity and Inclusion**

*Gloria McCutcheon, 2019*

### **SEB Representative on the ESA Early Career Professionals Committee**

*Katelyn Kesheimer, 2020*

### **Early Career Professionals**

*Lauren Deipenbrock, FL, Chair*

*Lina Bernaola*

*Tolulope Morawo*

# Past Presidents of the ESA-SEB

(formerly the *Cotton States Branch*)

President	Date	Meeting Site
W. E. Hinds	3-4 Feb. 1926	Atlanta, GA
G. M. Bentley	29 Dec. 1927	Nashville, TN
G. M. Bentley	1-2 Feb. 1928	Memphis, TN
F. L. Thomas	6-7 Feb. 1929	Houston TX
B. R. Coad	6-7 Feb. 1930	Jackson, FL
J. M. Robinson	5-6 Feb. 1931	Atlanta, GA
R. W. Harned	31 Dec. 1931	New Orleans, LA
R. W. Harned	3-4 Feb. 1932	Birmingham, AL
J. W. Folsom	2-3 Feb. 1933	New Orleans, LA
R.W. Leiby	1-2 Feb. 1934	Memphis, TN
S. W. Bilsing	31 Jan.-2 Feb. 1935	Atlanta, GA
C. Lyle	5-6 Feb. 1936	Jackson, MS
W. E. Anderson	18-20 Feb. 1937	San Antonio, TX
W. E. Dove	3-5 Feb. 1938	New Orleans, LA
C. O. Eddy	7-9 Feb. 1940	Birmingham, AL
Z. P. Metcalf	5-8 Feb. 1941	Waco, TX
F. A. Fenton	4-6 Feb. 1942	Memphis, TN
O. W. Rosewall	1-3 Feb. 1944	New Orleans, LA
E. W. Laake	24-25 Jan. 1945	New Orleans, LA
C. E. Smith	3-6 Dec. 1945	Dallas, TX
R. C. Gaines	11-16 Jan. 1947	Biloxi, MS
D. Isley	4-6 Feb. 1948	Atlanta, GA
J. T. Creighton	31 Jan.-2 Feb. 1949	Baton Rouge, LA
E. W. Dunnam	13-16 Dec. 1949	Tampa, FL
J. W. Ingram	5-7 Feb. 1951	Memphis, TN

President	Date	Meeting Site
C. H. Alden	4-6 Feb. 1952	Atlanta, GA
K. L. Cockerham	9-11 Feb. 1953	New Orleans, LA
F. S. Arant	25-27 Jan. 1954	Biloxi, MS
W. G. Bruce	17-19 Jan. 1955	Tampa, FL
H. C. Young	6-8 Feb. 1956	Atlanta, GA
A. N. Tissot	4-6 Feb. 1957	Birmingham, AL
N. Allen	2-5 Dec. 1957	Memphis, TN
C. G. Lincoln	2-4 Feb. 1959	Memphis, TN
F. E. Guyton	25-27 Jan. 1960	Savannah, GA
I. J. Becnel	23-25 Jan. 1961	Mobile, AL
C. N. Smith	27-30 Nov. 1961	Miami, FL
R. J. Kowal	29-31 Jan. 1963	Jackson, MS
W. C. Nettles	28-29 Jan. 1964	Asheville, NC
L. D. Newsom	25-26 Jan. 1965	Little Rock, AR
J. C. Alden	29 Nov.-2 Dec. 1965	New Orleans, LA
M. E. Merkl	30 Jan.-2 Feb. 1967	Atlanta, GA
J. S. Roussel	29 Jan.-1 Feb. 1968	Charleston, SC
C. M. Beckham	27-30 Jan. 1969	Biloxi, MS
S. R. Morris	26-29 Jan. 1970	Hot Springs, AR
W. G. Eden	30 Nov.-3 Dec. 1970	Miami, FL
C. R. Jordan	1-3 Feb. 1972	Mobile, AL
C. F. Smith	30 Jan.-1 Feb. 1973	Savannah, GA
T. R. Pfrimmer	9-31 Jan. 1974	Memphis, TN
S. B. Hays	28-30 Jan. 1975	Raleigh, NC
T. D. Canerday	30 Nov.-3 Dec. 1975	New Orleans, LA



## Past Presidents of the ESA-SEB

Past Presidents of the ESA-SEB, cont'd

President	Date	Meeting Site
J. B. Graves	25-27 Jan. 1977	Charleston, SC
A. N. Sparks	24-26 Jan. 1978	Gainesville, FL
F. G. Maxwell	23-25 Jan. 1979	Nashville, TN
S. G. Turnipseed	29-31 Jan. 1980	Biloxi, MS
D. F. Martin	30 Nov.-4 Dec. 1980	Atlanta, GA
J. E. Paine, Sr.	25-28 Jan. 1982	Mobile, AL
R. L. Rabb	24-27 Jan. 1983	Little Rock, AR
K. L. Hays	23-26 Jan. 1984	New Orleans, LA
G. J. Musick	28-31 Jan. 1985	Greenville, SC
M. H. Bass	8-12 Dec. 1985	Hollywood, FL
D. V. Allemann	26-29 Jan. 1987	Jackson, MS
B. R. Wiseman	25-28 Jan. 1988	Raleigh, NC
T. E. Skelton	30 Jan.-2 Feb. 1989	Nashville, TN
J. W. Todd	4-8 Feb. 1990	Orlando, FL
E. R. Mitchell	10-13 Mar. 1991	Orange Beach, AL
D. J. Boethel	8-11 Mar. 1992	Savannah, GA
G. A. Herzog	7-10 Mar. 1993	Little Rock, AR
R. E. Lynch	6-9 Mar. 1994	Baton Rouge, LA
J. E. Eger	5-8 Mar. 1995	Charleston, SC
D. C. Herzog	3-6 Mar. 1996	Biloxi, MS
D. F. Williams	2-5 Mar. 1997	Asheville, NC

President	Date	Meeting Site
J. D. Culin	1-4 Mar. 1998	Chattanooga, TN
D. R. Johnson	28 Feb.-3 Mar. 1999	Sandestin, FL
R. G. Luttrell	27 Feb.-1 Mar. 2000	Mobile, AL
F. S. Guillot	4-7 Mar. 2001	Augusta, GA
G. L. Lentz	3-6 Mar. 2002	Little Rock, AR
B. L. Sparks	9-12 Mar. 2003	Baton Rouge, LA
M. L. Williams	16-18 Feb. 2004	Charleston, SC
G. R. Mullen	7-9 Mar. 2005	Tunica, MS
W. A. Gardner	5-8 Mar. 2006	Wilmington, NC
R. K. Sprenkel	2-5 Mar. 2007	Knoxville, TN
J. D. Harper	2-5 Mar. 2008	Jacksonville, FL
A. M. Simmons	8-11 Mar. 2009	Montgomery, AL
S. K. Braman	7-10 Mar 2010	Atlanta, GA
F. A. Hale	19-22 Mar. 2011	San Juan, PR
N. C. Leppla	4-7 Mar. 2012	Little Rock, AR
G. D. Buntin	3-5 Mar. 2013	Baton Rouge, LA
D. Hall	2-4 Mar. 2014	Greenville, SC
C. Mannion	15-18 Mar 2015	Biloxi, MS
N. C. Hinkle	13-16 Mar 2016	Raleigh, NC
D. G. Riley	12-15 Mar 2017	Memphis, TN
S. L. Lapointe	4-7 Mar 2018	Orlando, FL

## Awards

### Southeastern Branch Excellence in Early Career Award

#### Dr. Ashfaq A. Sial



Dr. Ash Sial is Assistant Professor in Entomology Department at University of Georgia. He has research, extension, and teaching appointment with statewide responsibilities for blueberry pest management and IPM Coordinator for the state of Georgia. His research program seeks to investigate biology and ecology of economic pests and utilize that information to develop more sustainable IPM programs.

Currently spotted-wing drosophila, an invasive pest of small and stone fruits, is the primary focus of research projects in his lab. His research program has successfully secured \$6.9 million in competitive grants through federal and state agencies as well as private industry. He has published over 40 peer-reviewed papers, and numerous extension publications, delivered 174 presentations, created several resources for farmers including blogs, websites and smartphone apps, and organized 17 symposia. He has served ESA and other professional organizations in a leadership role at the regional, national and international level. His program has been highlighted multiple times in print and broadcast media including national radio and television.

### Southeastern Branch Award for Excellence in Integrated Pest Management

#### Dr. Daniel Carrillo



Dr. Daniel Carrillo is an Assistant Professor of entomology at the University of Florida, located at the Tropical Research and Education Center in Homestead, Florida. He earned his Ph.D. in entomology at the University of Florida under the direction of Dr. Jorge Peña. Dr. Carrillo specializes in Tropical Fruit Entomology and Acarology. He works on varied tropical fruit crops that harbor a great diversity

of arthropods that require investigations to determine their impacts on production and to devise ways of mitigating pests and preserving beneficial species. Dr. Carrillo's research and extension programs generate science-based information to provide tropical fruit growers with IPM practices and invasive species preparedness. His efforts focus on the continuous improvement of IPM programs for tropical fruit crops.

### Southeastern Branch Recognition Award in Entomology

#### Dr. Rajagopalbabu Srinivasan



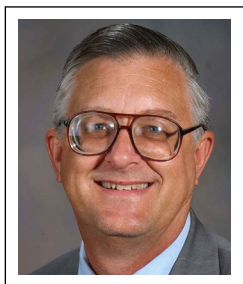
Dr. Rajagopalbabu Srinivasan is an Associate Professor in the Department of Entomology at the University of Georgia. He is also an Adjunct Associate Professor in the Department of Plant Pathology. He conducts basic and applied research on important thrips, whitefly, and aphid-transmitted plant viruses affecting several row and vegetable crops in southeastern United States. His goal is to understand these

viral pathosystems at micro and macro levels, and his lab is currently involved in studying the process of virus transmission by vectors, component (vector-virus-host plant) interactions, and the various factors that mediate these interactions. His lab is also focused on sustainable management of insect-transmitted viruses

and vectors. Dr. Srinivasan is a member of the Entomological Society of America and the American Phytopathological Society, and he has authored and/or co-authored more than 50 peer-reviewed papers and 7 book chapters. He has also served as a PI and/or Co-PI on grant projects totaling over \$7.5 million from federal, regional, state, and industry funding sources since 2009. Dr. Srinivasan is an associate editor for two entomology journals, and has been a member of several national and international grant reviewing committees. Since 2009, Dr. Srinivasan has been involved in advising 3 M.S. students, 7 Ph.D. students, and 5 postdoctoral associates.

## Southeastern Branch Recognition Award In Urban Entomology

### Dr. Dennis R. Ring



Dr. Dennis Ring is a professor and extension entomologist with the LSU AgCenter in the Entomology Department at Louisiana State University. His responsibilities include extension in the following areas: termites, structural, household, fire ants, school IPM, pecans, horticulture, and ornamentals. In addition, his experience has included numerous other commodities. He was the LSU AgCenter's principal investiga-

tor of a large pilot test in the French Quarter for IPM of Formosan subterranean termites and coordinates the Lois Caffey Termite Training Center. Eighty square blocks of the French Quarter were inspected and treated for termites. Densities of termites were reduced in the treated area during this test. Dennis provides educational programs and unbiased information to county agents, legislators, governmental agencies, industry, and the public.

## Southeastern Branch Recognition Award in Insect Physiology, Biochemistry, and Toxicology

### Dr. Jeff Bloomquist



Professor of Vector Management, Neurotoxicology Laboratory, Entomology and Nematology Department, Emerging Pathogens Institute, University of Florida, Gainesville, FL 32610

Jeff Bloomquist was raised in northern Indiana, and obtained B.S. (Purdue University, 1978), M.S. (Mississippi State University, 1981), and Ph.D. (University of California, Riverside, 1984) degrees,

all in Entomology. He then held postdoctoral appointments at Cornell University (1985-1988), before accepting a position with Rhone-Poulenc Ag Co. He moved to the Department of Entomology at Virginia Tech as an assistant professor in 1989 and attained the rank of full professor in 2003. Dr. Bloomquist has established an internationally recognized program in neurotoxicology, including work on toxicant-induced neurodegeneration, as well as insecticide resistance and the search for new insect control molecules. In 2009, he relocated his laboratory to the University of Florida, where He currently leads multiple projects on new insecticides and repellents for mosquito control.



## Student Awards

### JOHN HENRY COMSTOCK AWARD

#### Outstanding Ph.D. Student

#### Dr. Zachary DeVries



Dr. Zachary DeVries (Southeastern Branch) received his Ph.D. in Entomology from North Carolina State University under the direction of Dr. Coby Schal. Zach received both his bachelor's degree in Zoology and Master's degree in Entomology from Auburn University, where he developed a passion for working with urban pests (e.g. cockroaches, bed bugs, etc.). His dissertation research focused on

several aspects of urban pest behavior, physiology, evolution, and management. Specifically, he evaluated the efficacy and exposure risks associated with total release foggers ("bug bombs") used for German cockroach control. In addition, he evaluated bed bug host-attraction and several behavioral and physiological factors responsible for preventing gene flow among different host-associated lineages (human- and bat-associated) of bed bugs. During his graduate tenure, Zach received numerous national and international level awards for his work relating to insect behavior, physiology, and integrated pest management (IPM). He has also taught several undergraduate entomology courses and has actively engaged the public in both extension and outreach activities throughout his career, including events such as BugFest and pest control association meetings. Zach is currently a postdoctoral research scholar at North Carolina State University, working with Dr. Coby Schal on the relationship among urban pest biology, management, and human health.

### KIRBY L. HAYS MEMORIAL AWARD

#### Outstanding M.S. Student

#### Kelly Murray-Stoker



Kelly Murray-Stoker grew up in Tifton, GA and realized an interest in scientific research after summers during high school spent working on the University of Georgia Tifton campus. She attended the University of Georgia, majoring in both Entomology and Ecology with a minor in Geology. Kelly conducted undergraduate research on a species of caddisfly in Trinidad in the context of changing stream fish

communities. She graduated in 2014, then spent time working as a stream ecology technician for the Georgia Department of Natural Resources. She was able to combine her interests in stream ecology and entomology during her Master's program at UGA. Her thesis research focused on long-term change in aquatic insect communities of the Ogeechee River, which was made possible by sampling conducted in the 1980s. During her Masters, she was also able to explore an interest in Trichoptera taxonomy by participating in a collecting trip to Vietnam with researchers from Clemson University. Kelly hopes to continue to study caddisfly systematics and ecology in a PhD program in the near future.

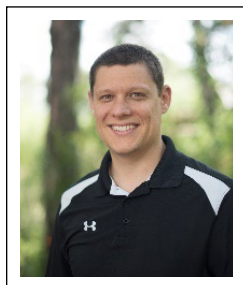
# Student Awards - 2018

## ROBERT T. GAST AWARDS

### Outstanding Ph.D. Oral Presentations

#### SESSION I

##### First Place, Cameron Jack (UF)



Cameron is the Apiculture Lecturer and Distance Education Coordinator for the Department of Entomology and Nematology at the University of Florida. His goal is to create an educational program that prepares students for the many challenges associated with beekeeping and to train those interested in entering the beekeeping workforce. His main interest is to serve the beekeeping

industry by providing practical solutions to beekeepers seeking to improve honey bee health. Currently, his research efforts are focused on honey bee epidemiology and toxicology.

##### Second Place, Thomas Bilbo (Clemson)



Tom is a Ph.D. candidate at Clemson University where he researches the management of agricultural insect pests. His research project is focused on improving the resistance management of the corn earworm in *Bt* crops by determining the effects of *Bt* toxins on its biology and ecology. He earned his M.S. in Environmental Toxicology from Texas Tech University and his B.S. in Biology from Denison University. His

hobbies include tracking down insects in the field, cooking with his wife, searching for new coffee beans, and fly-fishing for trout in small streams.

#### SESSION II

##### First Place, Aaron Cato (UA)



Aaron Cato was born in Osceola, Arkansas and has lived most of his life in the Mississippi River Delta. Aaron previously attended Arkansas State University where he earned a BS in Biology, and Kansas State University where he earned an MS in Entomology with a focus in resistance management in stored product entomology. Aaron recently graduated with his PhD from

the University of Arkansas where he studied the rice stink bug, *Oebalus pugnax*. His work focused on improving integrated pest management for this and other pest species in both rice, grain sorghum, and other row crops.

##### Second Place, James Villegas (LSU)



James Villegas is a Ph.D. student co-advised by Drs. Michael Stout and Blake Wilson. His research focuses on elucidating tolerance traits to root injury and integrating plant tolerance as a management tactic against rice insect pests. He completed his bachelor's in life sciences with a specialization in molecular biology and biotechnology in the Philippines in 2012. He worked as a researcher at the

International Rice Research Institute (IRRI) for two years before joining LSU in 2015. He obtained his master's degree in entomology with a minor in applied statistics at LSU in 2017. His master's thesis was focused on the effects of nitrogen and soil silicon amendment on the rice insect pest complex.

## Outstanding Ph.D. Oral Presentations

### SESSION III

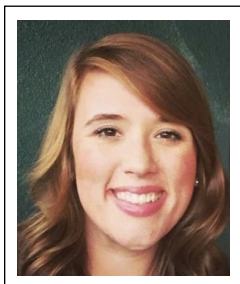
#### First Place, Hillary Fischer (UA)



Hillary Fischer is a Ph.D. candidate at the University of Arkansas with Dr. Fiona Goggin. As a Nebraska native, she attended the University of Nebraska-Lincoln where she received B.S. degrees in Entomology and Plant Biology in 2016. While at Nebraska, she discovered her passion for plant-insect interactions while working with the soybean aphid and plant tolerance in the lab of Dr. Tiffany Heng-Moss. Her

dissertation research is focused on the role of primary metabolism in plant defense against aphids..

#### Second Place, Whitney Crow (MSU)

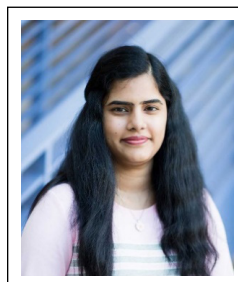


Dr. Whitney Crow is a native of Atoka, TN. In May 2013, she received her B.S. degree in Agriculture with a concentration in Crop and Soil Management from the University of Tennessee at Martin. After graduation, she accepted a position at the University of Tennessee in the Plant Science Department with Dr. Larry Steckel. In December of 2014, she completed her Master's degree in Plant Science with a

concentration in Weed Science. Whitney completed her Ph.D. in entomology with a minor in agronomy and is currently an Integrated Field Scientist for Corteva Agriscience in Leland, MS.

### SESSION IV

#### First Place, Ranastri Pothula (UT)



Ratnasri Mallipeddi Pothula is a native of India. She received her B.S. in Agricultural Sciences and M.S. in Agricultural Entomology from India. She was a student of Dr. Juan Luis Jurat-Fuentes in the Department of Entomology and Plant Pathology, at the University of Tennessee, Knoxville. Her research studies involved combining some techniques in biochemistry, molecular biology, and bioinformatics

to determine the genes encoding for cellulase enzymes in one of the primitive insect groups, *Thermobia domestica* and *Ctenolepisma longicaudata* (Zygentoma). She recently completed her Ph.D. and hopes to continue her career in insect molecular biology.

#### Second Place, Miles Zhang (UCF)



Yuanmeng Miles Zhang completed his PhD at the University of Central Florida in 2018 under the supervision of Dr. Barb Sharanowski, investigating the speciation patterns in parasitoid wasps (*Peristenus*) of a major crop pest, lygus bugs using phylogenetics and population genomic methods. Currently, he is a postdoctoral research associate at Dr. Andrea Lucky's lab at the University of Florida, working on the phylogenomics

of crazy ants (*Nylanderia* spp.) using ultra conserved elements, while also dabbling in the taxonomy of gall wasps and their parasitoids.

## Outstanding Ph.D. Poster Presentations

### SESSION I

#### First Place, Nataraja Maheshala (NCSU)



Nataraja is a researcher at ICAR-Directorate of Groundnut Research in Junagadh, India and also a graduate student at North Carolina State University under the guidance of Dr. George Kennedy. His research questions include how tobacco thrips develop resistance to neonicotinoids and the effects on its life cycle, feeding behavior and virulence in peanut.

Nataraja earned his B.S. from University of Agricultural Sciences, Bangalore and M.S. from Acharya N. G Ranga Agricultural University, Guntur, both in India. Nataraja has won three prestigious scholarships and a poster prize for his presentations at conferences.

#### Second Place, Damon D'Ambrosio (NCSU)

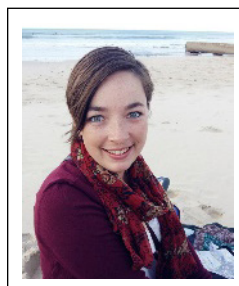


Dr. Damon D'Ambrosio completed his PhD at North Carolina State University under the direction of Dr. George Kennedy. His research focused on the feeding and oviposition behaviors of thrips in cotton, how these behaviors are impacted by insecticides, and how these impacts differ between neonicotinoid-susceptible and resistant populations. Damon hails from Fuquay-Varina, NC, and before

beginning his graduate studies, received his B.S. in Zoology from North Carolina State University in 2012. Damon is currently a postdoctoral researcher under the mentorship of Dr. Anders Huseeth at North Carolina State University.

### SESSION II

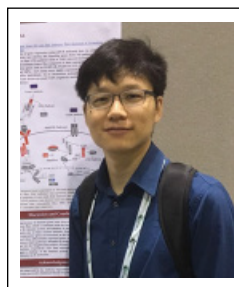
#### First Place, Megan Mulcahy (LSU)



Megan Mulcahy was born in South Africa, where she completed her B.S. degree, with majors in Botany and Entomology at Rhodes University and M.S. in Entomology at the same university. Her past research projects included pollination of the water lily species, *Nymphaea nouchali*, thermal tolerances of two species of blowflies of forensic importance, and implementing a push-pull program for the

management of *Eldana saccharina* in South African sugarcane. She is currently a Ph.D. student in the Department of Entomology at Louisiana State University under the direction of Dr. Blake Wilson and Dr. Thomas E. Reagan. Megan's research study is focused on improving the deployment of insecticidal seed treatments in Louisiana rice.

#### Second Place, Zhou Chen (AU)



Zhou Chen was born in Huanggang, China. He received his B.S. in Plant Protection with specialization in behavioral biology from Huazhong Agricultural University, Wuhan in 2011. He received his M.S. in Agricultural Entomology and Pest Control in 2014 at China Agricultural University, Beijing. Currently, Zhou is working on his Ph.D under the supervision of Dr. Nannan Liu at Auburn University, where he is

studying the neuronal mechanism of how the yellow fever mosquito, *Aedes aegypti* is attracted by human odor and how chemical repellents protect humans from mosquitoes.



## Outstanding M.S. Oral Presentations

### SESSION I

#### First Place, Cody Seals (UT)

#### Second Place, Joseph Black

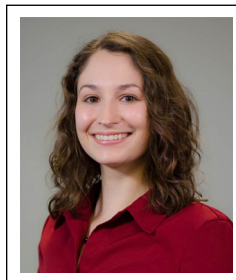


Joe Black received his BS from the University of Arkansas in 2013. After graduating, he worked for the University of Arkansas Cooperative Extension Services as a Program Technician in Dr. Gus Lorenz's IPM program. He worked for a year before starting his MS program at the University of Arkansas where he is studying the potential for horizontal transmission of a biopesticide,

*Helicoverpa armigera* Nucleopolyhedrovirus, in a soybean field infested with *Helicoverpa zea*. After finishing his MS, he plans on pursuing a Ph.D.

### SESSION II

#### First Place, Amy Michael (UT)



Amy grew up exploring the outdoors in southwestern Ohio, where she became fascinated with insects. This led her to a career centered on invasive species, their impact on agriculture, and the role of IPM in an increasingly international world. She obtained an undergraduate degree in Entomology from the University of California, Riverside. After graduating, she worked with the California Department of Food and

Agriculture before completing her MS program at the University of Tennessee in Knoxville. Her graduate research investigated kudzu bug ecology and phenology, and the ecological factors that contributed to its initial explosion and eventual decline in its invasive range. She is currently working with the University of Arkansas Cooperative Extension Service and will soon begin working with the Arkansas Plant Board to manage the state's responsibilities in the USDA CAPS program.

#### Second Place, Mary-Kate Williams (UA)

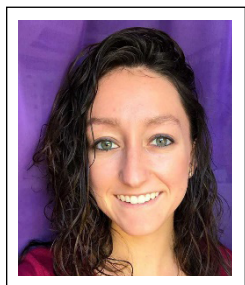


Mary-Kate Williams is a recent graduate of the Department of Entomology at the University of Arkansas. She worked on surveillance of two trypanosome parasites in honey bees within the United States during her Master's. She is currently a Ph.D. student at Utah State University, Department of Biology, working on the presence of pathogens and viruses in native solitary bee species in Utah.

Outstanding M.S. Oral Presentations, continued

## SESSION III

### First Place, Morgan Pinkerton (UF)



Morgan graduated from the University of Florida with her B.S. degree in Biology in 2016 with minors in Spanish and Anthropology. She developed a passion for Entomology when she worked as a lab technician for the Biosecurity Research and Extension (BRE) lab in 2016. She will be graduating from the Master's program in Entomology at UF in Spring 2019. Her research is in the area of invasive

species and plant biosecurity education. She will be continuing her education as a Doctor of Plant Medicine student and a USDA-NIFA-Nation Needs.

### Second Place, Layton McCullars (UofA)



Layton McCullars is a native of DeWitt, Arkansas. In Fall 2016, he received his B.S. degree in Crop Science from the University of Arkansas. Layton began his Master's degree under the supervision of Dr. Gus Lorenz in January 2017 at the University of Arkansas. Currently, Layton is working on refining the Fall armyworm, *Spodoptera frugiperda* threshold in rice. After graduation, Layton plans to

pursue a sales career in industry.

## SESSION IV

### First Place, Selina Bruckner (AU)



Selina grew up in a small village in Switzerland, Europe where she first extracted honey. She was taught by a kind retired beekeeper, who shared some honey bee stories that piqued her interest. In 2014, she joined the Institute for Bee Health in Bern to investigate the effects of neonicotinoids on the food glands of honey bees under the supervision of Dr. Geoff Williams. In 2017, she became the first

graduate student of the Auburn Bee Lab. Her research project focuses on potential combined effects of pesticides and the Varroa destructor mite on honey bee health.

### Second Place, Eleanor Moen (MSU)



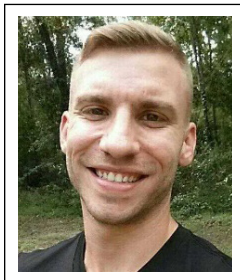
Eleanor Moen is from Paxton, IL. She received her B.S. degree in Integrative Biology from The University of Illinois at Urbana-Champaign in 2015. After working for a year on aquatic invertebrates at the Illinois Natural History Survey, Ms. Moen began her M.S. degree with Dr. Jonas King at Mississippi State University. Her research focused on the difference in gut microbiome between wild and

lab-strain *Anopheles quadrimaculatus* and its effect on vector competence and innate immunity. She completed her degree in August 2018. After completion of her degree Ms. Moen accepted an officer commission in the United States Navy as an entomologist and will serve her first station at the Navy Environmental and Preventative Medicine Unit 2 in Norfolk, Virginia.

## MS Student Poster Presentation

### SESSION I

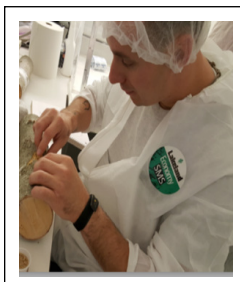
#### First Place, Edward Traczyk (UF)



Edward Traczyk obtained a bachelor's in history from FSU before beginning studies in biology where he discovered his interest in entomology. He joined Dr. Martini's lab in May 2017. During his Master's degree, he has developed a program on minute pirate bugs and western flower thrips. He demonstrated that minute pirate bugs use thrips cues to optimize prey detection and foraging strategies. He is also very

active in serving the community as he aided in the creation of the entomological club at the Leon county 4-H along with other graduate students. Edward has been accepted in the US Navy to serve as an entomologist for 3 years after his graduation.

#### Second Place, Daniel Stanaland (FAMU)



Daniel Stanaland is originally from Cairo, Georgia. His research interests include invasive species, their impact on forest and landscape, and the role of integrated pest management in increasingly global world. He recently graduated with his M.S. from Florida A&M University (FAMU). While at FAMU, he was supervised by Dr. Muhammad Haseeb and together, they worked on the identification, monitor-

ing, and management of forest pest insects. Also, he studied acoustic detection of Asian longhorned beetle and emerald ash borer in hardwood forest trees under the supervision of Dr. Richard Mankin at USDA-ARS-CMAVE, Gainesville, FL. Daniel co-authored an article titled "Assessment of plant structural characteristics, health, and ecology using bioacoustic tools". Also, he has presented his research findings in professional annual meetings in Florida and nationwide.

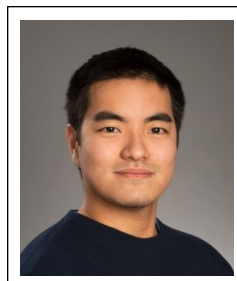
### SESSION II

#### First Place, Sara Kennedy (LSU)



Sara Kennedy is a graduate student at Louisiana State University working towards her Master of Science degree in entomology. Her research is aimed at studying the Deformed Wing Virus (DWV) infection in *Varroa destructor*, an ectoparasitic mite of honey bees, *Apis mellifera*.

#### Second Place, Leo Ohyama (UCF)



Leo is currently in a Master's program at the University of Central Florida, Orlando. His research project involves studying the ecology of Florida's *Solenopsis* thief ants, which includes understanding the diversity patterns of subterranean thief ant, as well as their purported predatory interactions with other ants in upland ecosystems. His side interests include the integration of ecological and evolutionary data to

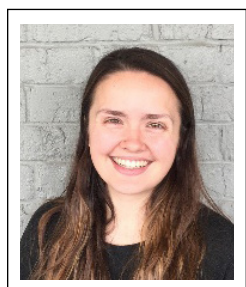
better understand community assembly and dynamics.

## BS Student Oral Presentation

**First Place, William Koval (Emory)**

## BS Student Poster Presentation

**First Place, Rachel Watson (UF)**

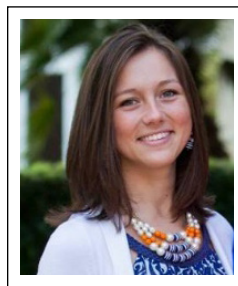


Rachel is currently a Master's student in Dr. Rodrigo Diaz's lab at Louisiana State University (LSU), where she works on the biological control of the invasive giant salvinia using *Cyrtobogous salvinia*. Her goals involve conducting tests on a biotype of the biocontrol agent to determine its suitability, especially during winter and to observe how heat affects longevity and fecundity of *C. salviniae*. Her

undergraduate project involved working with the Brazilian peppertree. She won many awards and scholarships for her presentations at conferences and workshops.

## Extension, Outreach Teaching Student Oral Presentation

**First Place, Casey Parker (UF)**



Casey Parker is a dually-enrolled PhD (entomology) and Masters of Public Health student at the University of Florida. Her research focuses on mosquitoes, insecticide resistance and its influence on vector competence, integrating social science skills for effective communication with the public. She is a member of various professional organizations including ESA, AMCA, and SOVE and has received

awards and/ or scholarships for her presentations. Her passion lies in public health vector control and protecting communities from the nuisance of mosquitoes as well as vector-borne disease.

**Second Place, Cory Penca (UF)**



Cory Penca was born and raised in Coral Springs, Florida. He obtained his M.S. and M.S. at the University of Florida. Cory is dual enrolled in the PhD Entomology and DPM programs at the University of Florida under the supervision of Dr. Amanda Hodges. His PhD research focuses on studying the catfacing pest complex in Florida peaches and investigating the use of juvenile hormone analogs for diapause

interruption and parasitoid rearing. He is currently a pathways intern with USDA-APHIS-PPQ where he is helping address biosecurity issues important to Florida. He will graduate with his PhD and DPM degree in Spring 2019. Cory hopes to apply his education towards a fulfilling career in the service of those who grow our food.



# Program Schedule

## Program Summary

### SUNDAY, MARCH 3, 2019

Program	Time	Location
S1058: Biological Control of Arthropod Pests and Weeds Multistate Working Group Meeting	10:00 AM - 11:00 AM	Mobile Bay I & II
Local Arrangements/Program Committee Meeting	11:00 AM - 12:00 PM	Mobile Bay I & II
Executive Committee Meeting	1:00 PM - 4:00 PM	Mobile Bay I & II
Registration	1:00 PM - 5:00 PM	Second Floor Foyer
SAC/NCAC Department Heads Meeting	2:00 PM - 4:00 PM	Mobile Bay III
Audiovisual and Job Placement	3:00 PM - 5:00 PM	Riverboat Suite
Linnaean Games: Preliminary Rounds	4:00 PM - 7:00 PM	Bon Secour Bay II & III

### MONDAY, MARCH 4, 2019

Program	Time	Location
Audiovisual and Job Placement	7:00 AM - 5:00 PM	Riverboat Suite
Host State Breakfast	7:00 AM - 8:00 AM	Windjammer Suite
Registration	7:00 AM - 5:00 PM	Second Floor Foyer
Student Competition Poster Set Up	7:00 AM - 8:00 AM	Second Floor Foyer
Preliminary Business Meeting and Plenary Address	8:00 AM - 10:15 AM	Bon Secour Bay II & III
Mississippi Bug Blues	8:00 AM - 4:00 PM	Jubilee Suite
Undergraduate Student Poster Competition I	8:00 AM - 5:00 PM	Second Floor Foyer
Undergraduate Student Poster Competition II	8:00 AM - 5:00 PM	Second Floor Foyer
M.S. Student Poster Competition I	8:00 AM - 5:00 PM	Second Floor Foyer
M.S. Student Poster Competition II	8:00 AM - 5:00 PM	Second Floor Foyer
Ph.D. Student Poster Competition I	8:00 AM - 5:00 PM	Second Floor Foyer
Ph.D. Student Poster Competition II	8:00 AM - 5:00 PM	Second Floor Foyer
Student Poster Competition Judging	9:00 AM - 4:00 PM	Second Floor Foyer
Break	10:00 AM - 10:30 AM	Second Floor Foyer
Undergraduate Student Oral Presentation Competition	10:30 AM - 12:30 PM	Clipper Suite
M.S. Student Oral Presentation Competition I	10:30 AM - 12:30 PM	Mobile Bay III
M.S. Student Oral Presentation Competition II	10:30 AM - 12:30 PM	Mobile Bay I & II
M.S. Student Oral Presentation Competition III	10:30 AM - 12:30 PM	Grand Bay Ballroom
M.S. Student Oral Presentation Competition IV	10:30 AM - 12:30 PM	Schooner Suite

## PROGRAM SCHEDULE: Program Summary

Lunch and Learn: Strategy of Mixture Experimentation	12:45 PM - 1:45 PM	Schooner Suite
Student Poster Presenters at Posters	1:45 PM - 2:45 PM	Second Floor Foyer
Ph.D. Student Oral Presentation Competition I	2:00 PM - 4:00 PM	Grand Bay Ballroom
Ph.D. Student Oral Presentation Competition II	2:00 PM - 4:00 PM	Mobile Bay III
Ph.D. Student Oral Presentation Competition III	2:00 PM - 4:00 PM	Schooner Suite
Ph.D. Student Oral Presentation Competition IV	2:00 PM - 4:00 PM	Mobile Bay I & II
Extension, Outreach, and Teaching - All Degree Levels	2:00 PM - 4:00 PM	Clipper Suite
Break	3:00 PM - 3:30 PM	Second Floor Foyer
Linnaean Games: Finals	4:00 PM - 7:00 PM	Bon Secour Bay II & III
Student Poster Removal	5:00 PM - 7:00 PM	Second Floor Foyer
Welcome Reception	7:00 PM - 9:00 PM	Windjammer Suite

### TUESDAY, MARCH 5, 2019

Program	Time	Location
Audiovisual and Job Placement	7:00 AM - 5:00 PM	Riverboat Suite
Past Presidents Breakfast	7:00 AM - 8:00 AM	Harbor Room
Registration	7:00 AM - 5:00 PM	Second Floor Foyer
Regular Poster Set Up	7:00 AM - 8:00 AM	Second Floor Foyer
Biocontrol Symposium - S1073: Biological Control of Arthropod Pests and Weeds	8:00 AM - 12:00 PM	Schooner Suite
Current Issues and Management Strategies for Corn Earworm, <i>Helicoverpa zea</i> , in Row Crops	8:00 AM - 12:00 PM	Grand Bay Ballroom
Turfgrass and Ornamental Entomology	8:00 AM - 12:00 PM	Jubilee Suite
Vector-Pathogen-Host Interactions: Broadening Our Understanding of Vector-Borne Infections	8:00 AM - 12:00 PM	Mobile Bay I & II
What's in Your Toolbox? The Skillset Needed for a Successful Career in Entomological Research	8:00 AM - 12:00 PM	Mobile Bay III
Regular Posters: Medical, Urban, and Veterinary Entomology	8:00 AM - 5:00 PM	Second Floor Foyer
Regular Posters: Plant-Insect Ecosystems	8:00 AM - 5:00 PM	Second Floor Foyer
Regular Posters: Physiology, Biochemistry, and Toxicology	8:00 AM - 5:00 PM	Second Floor Foyer
Regular Posters: Systematics, Evolution, and Biodiversity	8:00 AM - 5:00 PM	Second Floor Foyer
Ecological Management of Vegetable Crops in the Southeastern United States	8:30 AM - 12:00 PM	Clipper Suite
Student Affairs Committee Meeting	9:00 AM - 10:00 AM	Windjammer Suite
Break	10:00 AM - 10:30 AM	Second Floor Foyer
Awards Luncheon and Photo Salon	12:00 PM - 1:30 PM	Bon Secour Bay

## PROGRAM SCHEDULE: Program Summary

Regular Poster Presenters at the Posters	1:45 PM - 2:45 PM	Second Floor Foyer
Biology, Ecology, and Epidemiology of Mosquitoes	2:00 PM - 4:00 PM	Mobile Bay I & II
Helicoverpa zea: Genetic Population Structure, Life History Traits, Susceptibility and Economic Impact on Bt Crops, and Management Alternatives	2:00 PM - 4:00 PM	Grand Bay Ballroom
Contributed Papers: Plant-Insect Ecosystems 1	2:00 PM - 4:00 PM	Jubilee Suite
Contributed Papers: Plant-Insect Ecosystems 2	2:00 PM - 4:00 PM	Schooner Suite
Break	3:00 PM - 3:30 PM	Second Floor Foyer
Final Business Meeting	4:00 PM - 6:00 PM	Mobile Bay I & II
Regular Poster Removal	5:00 PM - 7:00 PM	Second Floor Foyer

### WEDNESDAY, MARCH 6, 2019

Program	Time	Location
Registration	7:00 AM - 10:00 AM	Second Floor Foyer
Application of Molecular Techniques in Forest Health	8:00 AM - 10:00 AM	Jubilee Suite
Basic and Applied Research in Sustainable Pest Management: Lessons from the Past and Directions for the Future	8:00 AM - 12:00 PM	Grand Bay Ballroom
SIPMC PD Workshop	8:30 AM - 12:00 PM	Mobile Bay III
Break	10:00 AM - 10:30 AM	Second Floor Foyer
Contributed Papers: Medical, Urban and Veterinary; Physiology, Biochemistry, and Toxicology; Systematics, Evolution, and Biodiversity	10:30 AM - 12:00 PM	Jubilee Suite
SERA 003: Southern Region Information Exchange Group for IPM-Annual Meeting	11:30 AM - 5:00 PM	Mobile Bay I & II
SERA003 Luncheon	12:00 PM - 2:00 PM	Mobile Bay III

# Program Schedule

## SUNDAY, MARCH 3, 2019, AFTERNOON

### Executive Committee Meeting

Mobile Bay I & II (Renaissance Mobile Riverview Plaza Hotel)

- 1:00** Call to Order, President Oscar Liburd  
Comments from:  
ESA President – Robert Peterson  
ESA Executive Director – David Gammel  
ESA Governing Board Representative – Karla Addesso  
ESA Certification Board – Dennis Ring  
SEB Representatives to ESA (national) committees – Rebecca Zimler, Marianne Shockley, David Buntin, John Hopkins, Lina Bernaola, Amanda Hodges, Lauren Diepenbrock, Dennis Ring, Faith Oi, Monique Rivera  
Entomological Foundation – Marianne Shockley
- 1:45** Reading of Previous Year's Minutes: Secretary-Treasurer, Amanda Hodges  
Committee Reports from:  
Local Arrangements – Chair, David Held  
Meeting Location and Time: GA 2020 – Pres-Elect, Yasmin Cardoza  
Meeting Location and Time: PR 2021 – Chair, Brett Blaauw  
Program – Chair, Ayanava Majumdar  
Public Relations – Chair, Marianne Shockley  
Membership – Chair, Lina Bernaola  
Member Awards – Chair, David Buntin  
Student Awards – Chair, Hugh Smith  
Student Affairs – Chair, Zhou Chen  
Nominating – Chair, John Adamczyk  
Ad hoc National Offices Nominating – Pres-Elect, Yasmin Cardoza  
Resolutions – Chair, Courtney Jackson  
Education – Chair, Eric Riddick  
Archives – Chair, Jim Harper  
Linnaean Games – Chair, Mike Williams  
Insect Photo Salon Committee (ad hoc) – Chair, Aaron Cato  
Job Placement Committee (ad hoc) – Chair, Beth Ferguson  
Audit Committee – Chair, Adam Dale

## MONDAY, MARCH 4, 2019, MORNING

### Preliminary Business Meeting and Plenary Address

Bon Secour Bay II & III (Renaissance Mobile Riverview Plaza Hotel)

- 8:00** Call to Order - Oscar Liburd
- 8:05** Welcome, President and CEO – Visit Mobile - David Clark
- 8:15** General Announcements and Reports - Oscar Liburd  
Local Arrangements - David Held  
Program - Ayanava Majumdar  
Nominations - John Adamczyk  
Membership - Lina Bernaola  
2020 Meeting Time and Location - Yasmin Cardoza, SEB President-Elect
- 8:50** Message from ESA President - Robert Peterson
- 9:05** Message from ESA Executive Director - David Gammel
- 9:15** Message from SEB Representative to the Governing Board - Carla Addesso
- 9:20** Message from SEB Representative to the Certification Board - Dennis Ring
- 9:25** Message from SEB representative on Science and Policy Committee - Lauren Diepenbrock
- 9:30** Plenary Address - Dr. Nicholas Storer, Global Regulatory Advocacy Lead for Corteva Agriscience™
- 10:10** Closing Remarks - Oscar Liburd



## MONDAY, MARCH 4, 2019, POSTERS

### Undergraduate Student Poster Competition I / 8:00 AM-5:00 PM

Second Floor Foyer (Renaissance Mobile Riverview Plaza Hotel)

- P-1** Infestation method with natural egg deposition of *Helicoverpa zea* for ecological studies.  
**Christopher Hemphill** ([chemphill@ufl.edu](mailto:chemphill@ufl.edu))<sup>1</sup>, **Marcelo Rabelo**<sup>1</sup> and **Silvana Paula-Moraes**<sup>2</sup>,  
<sup>1</sup>Univ. of Florida, Jay, FL, <sup>2</sup>Florida Univ., Jay, FL
- P-2** Carbon isotopic signatures of *Helicoverpa zea* populations from the Florida Panhandle.  
**Phillip Bann** ([phillipbann@gmail.com](mailto:phillipbann@gmail.com))<sup>1</sup>, **Silvana Paula-Moraes**<sup>2</sup> and **Latisa Ledbetter-Kish**<sup>1</sup>,  
<sup>1</sup>Univ. of Florida, Jay, FL, <sup>2</sup>Florida Univ., Jay, FL
- P-3** Measuring the effects of common essential oils on *Myzus persicae* feeding behavior using Electrical Penetration Graph (EPG) monitoring.  
**Caroline Ruppert** ([Cruppe2@lsu.edu](mailto:Cruppe2@lsu.edu)) and **Jeff Davis**, Louisiana State Univ., Baton Rouge, LA
- P-4** Effect of temperature and photoperiod on the progeny production the wasp, *Habrobracon hebetor* (Say) provisioned with diapausing and non-diapausing larvae of *Plodia interpunctella* (Hb) and on host mortality.  
**Trishauna Wynter** ([trish2094@gmail.com](mailto:trish2094@gmail.com)), **George N. Mbata** and **Sanower Warsi**, Fort Valley State Univ., Fort Valley, GA
- P-5** Influence of temperature on the fecundity and search ability of *Habrobracon hebetor* Say (Hymenoptera: Braconidae) reared on the pyralid host Indian meal moth.  
**Amber Johnson** ([ajohn165@wildcat.fvsu.edu](mailto:ajohn165@wildcat.fvsu.edu)), **Sanower Warsi** and **George N. Mbata**, Fort Valley State Univ., Fort Valley, GA
- P-6** DominANT invasive species disrupt food webs.  
**Annie McElvenny** ([aemcelv@g.clemson.edu](mailto:aemcelv@g.clemson.edu)) and **Carmen Blubaugh**, Clemson Univ., Clemson, SC

- P-7** Comparative analysis of vigor and pollinator appeal in black belt prairie forb seeds versus seeds from a non-local supplier.  
**Brady Dunaway** ([bsd115@msstate.edu](mailto:bsd115@msstate.edu)), Mississippi State Univ., Mississippi State, MS
- P-8** Phenology and population dynamics of the catalpa sphinx, *Ceratonia catalpae*, in north Georgia.  
**Anton Mejias** ([almeji7724@ung.edu](mailto:almeji7724@ung.edu)), **Taniszahera Momin** and **Evan Lampert**, Univ. of North Georgia, Oakwood, GA

### Undergraduate Student Poster Competition II / 8:00 AM-5:00 PM

Second Floor Foyer (Renaissance Mobile Riverview Plaza Hotel)

- P-9** Demographic analysis of *Dirofilaria immitis* in *Canis lupus familiaris* and mosquito populations within northeast Georgia, USA.  
**Madison Embrick** ([mlembr2834@ung.edu](mailto:mlembr2834@ung.edu)), **Mason Carlisle**, **Evan Lampert** and **Davison Sangweme**, Univ. of North Georgia, Oakwood, GA
- P-10** Diversity and abundance of invasive *Aedes albopictus*, other mosquitoes (Diptera: Culicidae), and arthropods in north Georgia.  
**Mason Carlisle** ([mccarl0408@ung.edu](mailto:mccarl0408@ung.edu)), **Madison Embrick**, **Evan Lampert** and **Davison Sangweme**, Univ. of North Georgia, Oakwood, GA
- P-11** Functional role of tick  $\alpha$ -D-galactosidase in carbohydrate metabolism and red meat allergy.  
**Ahmed Mohamed** ([ahmed.mohamed@usm.edu](mailto:ahmed.mohamed@usm.edu)), **Cameron Cox**, **Gary Crispell** and **Shahid Karim**, The Univ. of Southern Mississippi, Hattiesburg, MS
- P-12** Patterns in membrane potential of hemocytes of the caterpillar, *Heliothis virescens*.  
**Phillip Baker** ([pjbaker@g.clemson.edu](mailto:pjbaker@g.clemson.edu)), **Annelise Babcock**, **Peng Zhang** and **Matthew Turnbull**, Clemson Univ., Clemson, SC
- P-13** Effect of selenium on honey bee gene regulation and survivorship.  
**Kristina Smith** ([Kristina.D.Smith@usm.edu](mailto:Kristina.D.Smith@usm.edu)), **Mohamed Alburaki** and **Shahid Karim**, The Univ. of Southern Mississippi, Hattiesburg, MS

- P-14** A survey of bee and arthropod diversity in north Georgia suburbs.

**Margaret Reynolds** (mebeif4960@ung.edu) and Oliver Howington, Univ. of North Georgia, Oakwood, GA

- P-15** Arthropod associations with native & nonnative *Quercus* in Thompson Mills Forest.

**Collin Young** (cryoun9793@ung.edu), Katherine McDonough and Ren Cylkowski, Univ. of North Georgia, Oakwood, GA

- P-16** Palm Weevil Survey—2018 Highlights.

**Alexandra Hendon** (agh247@msstate.edu), Jennifer Seltzer and JoVonn Hill, Mississippi State Univ., Mississippi State, MS

## M.S. Student Poster Competition I / 8:00 AM-5:00 PM

Second Floor Foyer (Renaissance Mobile Riverview Plaza Hotel)

- P-17** *Habrobracon hebetor* Say (Hymenoptera: Braconidae) responses: Implications of physiological states of *Plodia interpunctella* Hübner (Lepidoptera: Pyralidae) host larvae and variability of storage structures.

**Sanower Warsi** (sanowerw@yahoo.com) and George Mbata, Fort Valley State Univ., Fort Valley, GA

- P-18** Potential role of potassium on the survival and development of fall armyworm *Spodoptera frugiperda* (Lepidoptera: Noctuidae) larvae on bermudagrass.

**Gurjit Singh** (fg69001@uga.edu), Clint Waltz and Shimat Joseph, Univ. of Georgia, Griffin, GA

- P-19** Evaluation of larval movement of fall armyworm in seed mixed plantings of Bt and non-Bt corn containing Trecepta™ Trait.

**Marcelo Dimase** (mdimas2@lsu.edu)<sup>1</sup>, Jianguo Guo<sup>1</sup>, Sebe Brown<sup>2</sup>, Graham P. Head<sup>3</sup>, Paula A. Price<sup>3</sup>, Wenbo Yu<sup>1</sup> and Fangneng Huang<sup>1</sup>, <sup>1</sup>Louisiana State Univ., Baton Rouge, LA, <sup>2</sup>Louisiana State Univ., Winnsboro, LA, <sup>3</sup>Monsanto Company, St. Louis, MO

- P-20** Sap beetles (Coleoptera:Nitidulidae) in field corn, a new Bt target?

**Katherine Cassell** (Kc71986@uga.edu) and G. David Buntin, Univ. of Georgia, Griffin, GA

- P-21** Performance of selected bio-pesticides against major insect pests in organic production of summer squash in Alabama.

**Sonu Koirala BK** (skoirala4947@tuskegee.edu), Franklin Quarcoo, Anitha Chitturi, Kokoasse Kpomblekou-A, Desmond Mortley and Wendall McElhenney, Tuskegee Univ., Tuskegee, AL

- P-22** Pesticide resistance of *Tetranychus urticae* on strawberry in the Carolinas.

**Paul Bergeron** (peberge@g.clemson.edu)<sup>1</sup>, T. Aurora Toennisson<sup>2</sup>, Hannah Burrack<sup>2</sup> and Rebecca Schmidt-Jeffris<sup>3,4</sup>, <sup>1</sup>Clemson Univ., Clemson, SC, <sup>2</sup>North Carolina State Univ., Raleigh, NC, <sup>3</sup>USDA - ARS, Wapato, WA, <sup>4</sup>Clemson Univ., Charleston, SC

- P-23** Monitoring for insecticide resistance in spotted wing drosophila (*Drosophila suzukii*) in Georgia.

**Nathan Spaulding** (nathan.spaulding@uga.edu) and Ashfaq Sial, Univ. of Georgia, Athens, GA

- P-24** Aging the disease vector *Aedes aegypti* and its implications.

**Jillian Masters** (jm3427@msstate.edu), Austin Drury, Eleanor Moen and Jonas G. King, Mississippi State Univ., Mississippi State, MS

- P-25** Impact of environmental factors, temperature and humidity, on the population dynamics of *Aedes* mosquito in Alabama.

**Yifan Wang** (YZW0093@auburn.edu) and Nannan Liu, Auburn Univ., Auburn, AL

## M.S. Student Poster Competition II / 8:00 AM-5:00 PM

Second Floor Foyer (Renaissance Mobile Riverview Plaza Hotel)

- P-26** Cover crops and soybean: Pests, beneficials, and potential for producers in Tennessee.

**Matthew Longmire** (mlongmir@vols.utk.edu)<sup>1</sup>, Jerome Grant<sup>1</sup> and Scott Stewart<sup>2</sup>, <sup>1</sup>Univ. of Tennessee, Knoxville, TN, <sup>2</sup>Univ. of Tennessee, Jackson, TN

- P-27** The effects of cover crop and novel organic herbicide on weeds and insects.

**Danielle Lewis** (dglewis@clemson.edu)<sup>1,2</sup>, Rebecca Schmidt-Jeffris<sup>1,3</sup> and Carmen Blubaugh<sup>2</sup>, <sup>1</sup>Clemson Univ., Charleston, SC, <sup>2</sup>Clemson Univ., Clemson, SC, <sup>3</sup>USDA - ARS, Wapato, WA

- P-28** Examining the prevalence of *Solenopsis invicta* virus (SINV-3) in *Solenopsis invicta* (Hymenoptera: Formicidae) alates collected in rural and urban areas of north and central North Florida.

**Donna Arnold** (donnaarnold16@hotmail.com) and Benjamin Hottel, Florida A&M Univ., Tallahassee, FL

- P-29** Temporal variation in abundance and diversity of ant species (Hymenoptera: Formicidae) around homes in Auburn, Alabama.

**Gokhan Benk** (gokhanbenk@gmail.com), Arthur G. Appel and Xing Ping Hu, Auburn Univ., Auburn, AL

- P-30** Instar determination of the Asian cockroach (*Blattella asahinai*) from digital measurements of the pronotum and number of cercus annuli.

**Madison Peterson** (mkp0044@tigermail.auburn.edu), Arthur G. Appel and Xing Ping Hu, Auburn Univ., Auburn, AL

- P-31** Effects of western flower thrips contact cues on the foraging behaviors of a minute pirate bug, *Orius insidiosus*.

**Edward Traczyk** (eddietraczyk@yahoo.com)<sup>1</sup>, Xavier Martini<sup>2</sup>, Joe Funderburk<sup>2</sup> and Heather Mcauslane<sup>3</sup>, <sup>1</sup>Univ. of Florida, Tallahassee, FL, <sup>2</sup>Univ. of Florida, Quincy, FL, <sup>3</sup>Univ. of Florida, Gainesville, FL

- P-32** Survey of butterflies at the Noxubee National Wildlife Refuge.

**Jordan Gesell** (jlg684@msstate.edu), Mississippi State Univ., Mississippi State, MS

## Ph.D. Student Poster Competition I / 8:00 AM-5:00 PM

Second Floor Foyer (Renaissance Mobile Riverview Plaza Hotel)

- P-33** Investigating the prevalence of *Ixodes scapularis* on reptile hosts in Florida.

**Carrie De Jesus** (carriedejesus@ufl.edu) and Samantha Wisely, Univ. of Florida, Gainesville, FL

- P-34** Transmission potential of Zika virus by mosquito vector populations from Florida.

**Rebecca Zimler** (razimler@ufl.edu) and Barry Alto, Univ. of Florida, Vero Beach, FL

- P-35** Controlling sweetpotato whitefly (*Bemisia tabaci*) using kaolin: an integrated IPM approach.

**Nicholas Johnston** (njohnston8979@ufl.edu) and Xavier Martini, Univ. of Florida, Quincy, FL

- P-36** Vegetable crops as hosts of thrips (Thysanoptera: Thripidae) vectoring tomato chlorotic spot virus in tomatoes.

**Rafia Khan** (rkhan@ufl.edu)<sup>1</sup>, Dakshina Seal<sup>1</sup>, Edward Evans<sup>2</sup>, Oscar Liburd<sup>3</sup>, Rajagopalbabu Srinivasan<sup>4</sup> and Shouan Zhang<sup>1</sup>, <sup>1</sup>Univ. of Florida, Homestead, FL, <sup>2</sup>Univ. of Florida Tropical Research and Education Center, Homestead, FL, <sup>3</sup>Univ. of Florida, Gainesville, FL, <sup>4</sup>Univ. of Georgia, Tifton, GA

- P-37** Effects of large-scale prescribed burns on pollinator communities in the Southeastern United States.

**Conor Fair** (cfair13@uga.edu)<sup>1</sup>, Michael D. Ulyshen<sup>2</sup>, Scott Pokswinski<sup>3</sup> and Kevin Hiers<sup>3</sup>, <sup>1</sup>Univ. of Georgia, Athens, GA, <sup>2</sup>USDA - Forest Service, Athens, GA, <sup>3</sup>Tall Timbers Research Station, Tallahassee, FL

- P-38** Tolerance among conventional inbred and hybrid rice cultivars to root injury by rice water weevil in the southern U.S..  
**James Michael Villegas** ([jamesvillegas12@gmail.com](mailto:jamesvillegas12@gmail.com))<sup>1</sup>, Blake Wilson<sup>1</sup>, Michael (Mo) Way<sup>2</sup>, Jeff Gore<sup>3</sup> and Mike Stout<sup>1</sup>, <sup>1</sup>Louisiana State Univ., Baton Rouge, LA, <sup>2</sup>Texas A&M AgriLife Research, Beaumont, TX, <sup>3</sup>Mississippi State Univ., Stoneville, MS
- P-39** Evaluation of mycorrhizal and insecticidal seed treatments for control of rice water weevil (*Lissorhoptrus oryzophilus*).  
**Lina Bernaola** ([lbernaola@agcenter.lsu.edu](mailto:lbernaola@agcenter.lsu.edu)) and Mike Stout, Louisiana State Univ., Baton Rouge, LA

## Ph.D. Student Poster Competition II / 8:00 AM-5:00 PM

Second Floor Foyer (Renaissance Mobile Riverview Plaza Hotel)

- P-40** Can Cry1Ac genetically modified soybean stimulate larval growth of the non-target pest *Spodoptera eridania*?  
**Marcelo Rabelo** ([mmendesrabelo@ufl.edu](mailto:mmendesrabelo@ufl.edu))<sup>1,2</sup>, João Matos<sup>2</sup>, Oscar Santos-Amaya<sup>2</sup>, Joselia Fanca<sup>3</sup>, Silvana Viera de Paula Moraes<sup>1</sup> and Eliseu Pereira<sup>2</sup>, <sup>1</sup>Univ. of Florida, Jay, FL, <sup>2</sup>Universidade Federal de Viçosa, Viçosa, Brazil, <sup>3</sup>Universidade Federal de Lavras, Lavras, Brazil
- P-41** Using GAL4-UAS transgenic *Drosophila melanogaster* to study Polydnavirus gene function.  
**Peng Zhang** ([pzhang2@clemson.edu](mailto:pzhang2@clemson.edu)), Harrison Moss, Alex Copeland and Matthew Turnbull, Clemson Univ., Clemson, SC

- P-42** Initial estimation of resistance allele frequency in corn earworm populations collected from southeast region of the U.S. to Cry1Ab and Vip3A proteins.  
**Wenbo Yu** ([wyu14@lsu.edu](mailto:wyu14@lsu.edu))<sup>1</sup>, Isaac/Olatunji Oyediran<sup>2</sup>, Jianguo Guo<sup>1</sup>, Ying Niu<sup>1</sup>, Francis Reay-Jones<sup>3</sup>, Don Cook<sup>4</sup>, Xinzhi Ni<sup>5</sup>, Dominic Reisig<sup>6</sup>, Silvana Paula-Moraes<sup>7</sup>, Sebe Brown<sup>8</sup>, Marcelo Dimase<sup>1</sup> and Fangneng Huang<sup>1</sup>, <sup>1</sup>Louisiana State Univ., Baton Rouge, LA, <sup>2</sup>Syngenta Biotechnology Inc., Research Triangle Park, NC, <sup>3</sup>Clemson Univ., Florence, SC, <sup>4</sup>Mississippi State Univ., Stoneville, MS, <sup>5</sup>USDA - ARS, Tifton, GA, <sup>6</sup>North Carolina State Univ., Plymouth, NC, <sup>7</sup>Florida Univ., Jay, FL, <sup>8</sup>Louisiana State Univ., Winnsboro, LA
- P-43** The role of a symbiotic poxvirus in the success of its parasitoid wasp host.  
**Kelsey Coffman** ([kcoffman@uga.edu](mailto:kcoffman@uga.edu)) and Gaelen Burke, Univ. of Georgia, Athens, GA
- P-44** Differential division of labor in the ancient symbionts of sap-sucking insects (Sternorrhyncha: Adelgidae).  
**Dustin Dial** ([dtdial@uga.edu](mailto:dtdial@uga.edu)), Univ. of Georgia, Athens, GA
- P-45** Discontinuous gas exchange of invasive and native pest fire ants, *Solenopsis* spp. in the Southeastern United States: Effects of species, caste, size and temperature.  
**Olufemi Ajayi** ([osa0001@auburn.edu](mailto:osa0001@auburn.edu)), Arthur G. Appel and Henry Fadamiro, Auburn Univ., Auburn, AL
- P-46** Fipronil and pyrethroid resistance in the German cockroach: Some things never change.  
**Maria González-Morales** ([magonz23@ncsu.edu](mailto:magonz23@ncsu.edu)), Zachary DeVries, Madhavi Kakumanu, Angela Sierras and Coby Schal, North Carolina State Univ., Raleigh, NC



# MONDAY, MARCH 4, 2019, MORNING

## Undergraduate Student Oral Presentation Competition

Clipper Suite (Renaissance Mobile Riverview Plaza Hotel)

Moderator: Evan Lampert, Univ. of North Georgia, Oakwood, GA

- 10:30 AM 1 Evolution of RHS proteins in blood feeding arthropods with an emphasis on *Cimex*.  
*Tony Zbysinski* (tjz19@msstate.edu), *Aline Badial* and *Jonas G. King*, Mississippi State Univ., Mississippi State, MS
- 10:42 AM 2 Transcriptomic effects of varying larval carbon:nitrogen ratio on adult *Aedes aegypti*.  
*Austin Drury* (ald557@msstate.edu)<sup>1</sup>, *Catherine Dean*<sup>2</sup>, *Travis van Warmerdam*<sup>1</sup>, *Donald Yee*<sup>2</sup> and *Jonas G. King*<sup>1</sup>, <sup>1</sup>Mississippi State Univ., Mississippi State, MS, <sup>2</sup>The Univ. of Southern Mississippi, Hattiesburg, MS
- 10:54 AM 3 Plant-arthropod associations of the “Botanical Lost World”.  
*Joshua Fuller* (jbfull0575@ung.edu), *James Diggs* and *Evan Lampert*, Univ. of North Georgia, Oakwood, GA
- 11:06 AM 4 Weed diversity decreases pest abundance without yield loss.  
*Melina Madden* (mk.madden987@gmail.com), Clemson Univ., Simpsonville, SC
- 11:18 AM 5 Host preference study for the redbanded stink bug, *Piezodorus guildinii* (Westwood).  
*Trevor Forsberg* (tforsberg@ufl.edu), *Morgan Pinkerton* and *Amanda Hodges*, Univ. of Florida, Gainesville, FL
- 11:30 AM 6 Seasonal parasitism rates and composition of non-native wasps attacking roseau cane scale in Louisiana.  
*Keyla Pruett* (kpruett@agcenter.lsu.edu), *Ian Knight* and *Rodrigo Diaz*, Louisiana State Univ., Baton Rouge, LA
- 11:42 AM 7 *Varroa destructor* impact on temperature regulation in *Apis mellifera* colonies.  
*Marica Thomas* (mst011@bravemail.uncp.edu)<sup>1</sup>, *Kaitlin Campbell*<sup>1</sup> and *Michael Cunningham-Minnick*<sup>2</sup>, <sup>1</sup>Univ. of North Carolina, Pembroke, NC, <sup>2</sup>Miami Univ., Oxford, OH

## M.S. Student Oral Presentation Competition I

Mobile Bay III (Renaissance Mobile Riverview Plaza Hotel)

Moderator: Silvana Paula-Moraes, Florida Univ., Jay, FL

- 10:30 AM 8 Larval behavior and chemical control of the lepidopterans in peanut using the direct spray.  
*Jessica Baldwin* (jbalwin46@ufl.edu), *Silvana Viera de Paula Moraes*, *Marcelo Rabelo*, *Latisa Ledbetter-Kish* and *Michael Mulvaney*, Univ. of Florida, Jay, FL
- 10:42 AM 9 Studies on the burrower bug, *Pangaueus bilineatus* (Say) and its susceptibility to entomopathogenic nematodes.  
*LaChristi Hunter* (lachristi4@hotmail.com), Fort Valley State Univ., Fort Valley, GA
- 10:54 AM 10 Membrane potential patterns associated with gut stem and mature cells in the caterpillar tobacco budworm, *Heliothis virescens*.  
*Richard Melton* (rdmelto@g.clemson.edu), *Jessie Parker* and *Matthew Turnbull*, Clemson Univ., Clemson, SC
- 11:06 AM 11 Potential insect deterrence in tri-species cotton hybrid.  
*Raven Allison* (ravenallison@tamu.edu)<sup>1</sup>, *David Kerns*<sup>1</sup>, *Charles Suh*<sup>2</sup> and *Alois Bell*<sup>2</sup>, <sup>1</sup>Texas A&M Univ., College Station, TX, <sup>2</sup>USDA - ARS, College Station, TX
- 11:18 AM 12 Effects of Bt expression on bollworm distribution in the cotton canopy.  
*Dawson Kerns* (dkerns1@vols.utk.edu) and *Scott Stewart*, Univ. of Tennessee, Jackson, TN
- 11:30 AM 13 Bollworm (*Helicoverpa zea*) damage and behavior in Bt cotton.  
*Russell Godbold* (reg194@msstate.edu), Mississippi State Univ., Cleveland, MS
- 11:42 AM 14 *Helicoverpa zea* incidence and susceptibility to Bt corn across North Carolina and South Carolina.  
*Benjamin Arends* (brarends@ncsu.edu)<sup>1</sup>, *Dominic Reisig*<sup>2</sup>, *Kristen Hopperstad*<sup>1</sup>, *Anders Huseeth*<sup>1</sup> and *George Kennedy*<sup>1</sup>, <sup>1</sup>North Carolina State Univ., Raleigh, NC, <sup>2</sup>North Carolina State Univ., Plymouth, NC
- 11:54 AM 15 The impact of brown stink bug, *Euschistus servus*, damage on early vegetative stage field corn yield.  
*William Hardman* (wch176@msstate.edu)<sup>1</sup>, *Don Cook*<sup>1</sup>, *Jeff Gore*<sup>1</sup>, *Angus Catchot*<sup>2</sup> and *William Henry*<sup>2</sup>, <sup>1</sup>Mississippi State Univ., Stoneville, MS, <sup>2</sup>Mississippi State Univ., Mississippi State, MS

**M.S. Student Oral Presentation Competition II****Mobile Bay I & II (Renaissance Mobile Riverview Plaza Hotel)****Moderator:** Norman Leppla, Univ. of Florida, Gainesville, FL

- 10:30 AM 16** Defining bee pollinator community composition in Tennessee soybean.  
**Andrew Lawson** (alawso37@vols.utk.edu), Univ. of Tennessee, Knoxville, TN
- 10:42 AM 17** Rearing protocol for the redbanded stink bug, *Piezodorus guildinii* (Westwood).  
**Morgan Pinkerton** (morgan0402@ufl.edu), Amanda Hodges and Norman Leppla, Univ. of Florida, Gainesville, FL
- 10:54 AM 18** The impact of fall armyworm, *Spodoptera frugiperda*, on growth and yield of rice.  
**Layton McCullars** (ldmccull@uark.edu)<sup>1</sup>, Gus Lorenz<sup>2</sup>, Nick Bateman<sup>3</sup>, Jarrod T. Hardke<sup>4</sup>, Jeff Gore<sup>5</sup>, Nicki Taillon<sup>2</sup>, Ben Thrash<sup>2</sup>, Tara Clayton<sup>3</sup>, Andrew Plummer<sup>2</sup>, Kevin Mcpherson<sup>6</sup> and Aaron Cato<sup>1</sup>, <sup>1</sup>Univ. of Arkansas, Fayetteville, AR, <sup>2</sup>Univ. of Arkansas, Lonoke, AR, <sup>3</sup>Univ. of Arkansas Division of Agriculture, Stuttgart, AR, <sup>4</sup>Univ. of Arkansas, Stuttgart, AR, <sup>5</sup>Mississippi State Univ., Stoneville, MS, <sup>6</sup>Univ. of Arkansas Division of Agriculture, Lonoke, AR
- 11:06 AM 19** Efficacy of novaluron on tarnished plant bugs in the Mid-South.  
**Beverly Catchot** (bdc12@msstate.edu)<sup>1</sup>, Fred Musser<sup>1</sup>, Natraj Krishnan<sup>1</sup>, Ryan L. Jackson<sup>2</sup>, Jeff Gore<sup>3</sup>, Gus Lorenz<sup>4</sup>, Scott Stewart<sup>5</sup>, Nick Seiter<sup>6</sup>, Sebe Brown<sup>7</sup> and Angus Catchot<sup>1</sup>, <sup>1</sup>Mississippi State Univ., Mississippi State, MS, <sup>2</sup>USDA - ARS, Stoneville, MS, <sup>3</sup>Mississippi State Univ., Stoneville, MS, <sup>4</sup>Univ. of Arkansas, Lonoke, AR, <sup>5</sup>Univ. of Tennessee, Jackson, TN, <sup>6</sup>Univ. of Illinois, Champaign, IL, <sup>7</sup>Louisiana State Univ., Winnsboro, LA
- 11:18 AM 20** Determining the presence or absence of west Indian sweetpotato weevil in Haiti.  
**Marie Lexidort** (mlexid1@lsu.edu)<sup>1</sup> and Jeff Davis<sup>2</sup>, <sup>1</sup>Louisiana State Univ. AgCenter, Baton Rouge, LA, <sup>2</sup>Louisiana State Univ., Baton Rouge, LA
- 11:30 AM 21** Population distribution, host plants, and natural enemies of the brown marmorated stink bug, *Halyomorpha halys* (Stål) (Hemiptera: Pentatomidae), in Georgia.  
**Dilani Patel** (dilani.patel@uga.edu)<sup>1</sup>, Brett Blaauw<sup>1</sup>, Glynn Tillman<sup>2</sup>, Michael Toews<sup>3</sup> and Ashfaq Sial<sup>1</sup>, <sup>1</sup>Univ. of Georgia, Athens, GA, <sup>2</sup>USDA - ARS, Tifton, GA, <sup>3</sup>Univ. of Georgia, Tifton, GA

**M.S. Student Oral Presentation Competition III****Grand Bay Ballroom (Renaissance Mobile Riverview Plaza Hotel)****Moderator:** Kaushalya Amarasekare, Tennessee State Univ., Nashville, TN

- 10:30 AM 22** Pollinators of *Rhododendron maximum* in hemlock forests: Are there non-target impacts caused by imidacloprid treatments for hemlock woolly adelgid?  
**David Bechtel** (dbechtel@vols.utk.edu)<sup>1</sup>, Jerome Grant<sup>1</sup>, Becky Nichols<sup>2</sup>, R. Jesse Webster<sup>2</sup> and Greg Wiggins<sup>1</sup>, <sup>1</sup>Univ. of Tennessee, Knoxville, TN, <sup>2</sup>National Park Service, Gatlinburg, TN
- 10:42 AM 23** Efficacy of entomopathogenic fungi against the crapemyrtle bark scale.  
**Giovana Matos Franco** (gfranco@agcenter.lsu.edu)<sup>1</sup>, Rodrigo Diaz<sup>1</sup> and Yan Chen<sup>2</sup>, <sup>1</sup>Louisiana State Univ., Baton Rouge, LA, <sup>2</sup>Louisiana State Univ., Hammond, LA
- 10:54 AM 24** Insects associated with palms and phytoplasma in Puerto Rico.  
**Paola Agosto** (paola.agosto@upr.edu) and Jose Verle Rodrigues, Univ. of Puerto Rico, San Juan, PR
- 11:06 AM 25** Can addition of odor and visual target enhance attraction of the Asian citrus psyllid, *Diaphorina citri* Kuwayama (Hemiptera: Liviidae) to sticky traps?  
**Arjun Khadka** (akhadka@ufl.edu)<sup>1</sup>, Sandra Allan<sup>2</sup> and Emma Weeks<sup>1</sup>, <sup>1</sup>Univ. of Florida, Gainesville, FL, <sup>2</sup>USDA - ARS, Gainesville, FL
- 11:18 AM 26** Seasonal abundance of *Chrysopa nigricornis* in tree fruit orchards in Middle Tennessee.  
**Kyle Williams** (kyletaylorwilliams@gmail.com), Kaushalya Amarasekare and Richard Link, Tennessee State Univ., Nashville, TN
- 11:30 AM 27** Evaluation of SPLAT® for *Drosophila suzukii* Matsumura attract-and-kill in Florida blueberries.  
**Gabrielle LaTora** (ag.latora@ufl.edu) and Oscar Liburd, Univ. of Florida, Gainesville, FL
- 11:42 AM 28** Use of herbivore induced plant volatiles (HIPVs) for monitoring *Orius insidiosus* and thrips in sweet pepper.  
**Uzoamaka Abana** (uzoamaka.abana@gmail.com), Kaushalya Amarasekare and Richard Link, Tennessee State Univ., Nashville, TN
- 11:54 AM 29** Trap cropping strategies for stink bugs in organic tomato production.  
**Alexander Gannon** (agannon@ufl.edu), Norman Leppla, Amanda Hodges, Oscar Liburd and Xin Zhao, Univ. of Florida, Gainesville, FL

**12:06 PM 30** Evaluation of squash bug damage to watermelon cultivars grafted on to squash root stock.  
*Cleveland Ivey* (civey@ufl.edu), Amanda Hodges and Norman Leppla, Univ. of Florida, Gainesville, FL

### M.S. Student Oral Presentation Competition IV

**Schooner Suite (Renaissance Mobile Riverview Plaza Hotel)**

**Moderator:** Shahid Karim, The Univ. of Southern Mississippi, Hattiesburg, MS

**10:30 AM 31** Effect of artificial herbivory and soil fertility on Chinese tallow performance in Louisiana.  
*Omosola Omoyele* (Savvy715@yahoo.com), Southern Univ. AG Center, Baton Rouge, LA

**10:42 AM 32** Pre-release studies of the invasive Chinese tallow (*Triadica sebifera*) in Louisiana: Preparing for biological control.  
*Dora Sevor* (dorasevor@gmail.com)<sup>1</sup>, Veronica Manrique<sup>1</sup>, Rodrigo Diaz<sup>2</sup> and Greg Wheeler<sup>3</sup>,  
<sup>1</sup>Southern Univ. and A&M College, Baton Rouge, LA, <sup>2</sup>Louisiana State Univ., Baton Rouge, LA, <sup>3</sup>USDA - ARS, Fort Lauderdale, FL

**10:54 AM 33** Survival and population growth of roseau cane scale on *Phragmites* varieties and selected grass species.  
*Leslie Aviles Lopez* (LAviles@agcenter.lsu.edu), Rodrigo Diaz, Ian Knight and James T. Cronin, Louisiana State Univ., Baton Rouge, LA

**11:06 AM 34** The ABC transporter/White Gene locus in the Indian meal moth, *Plodia interpunctella*, and mutagenesis with CRISPR/Cas9 gene editing.  
*Bryce Shirk* (bryce.shirk@gmail.com)<sup>1,2</sup>, Paul Shirk<sup>2</sup>, Richard B. Furlong<sup>2</sup>, Ke Wu<sup>1</sup>, Erin Scully<sup>3</sup> and Blair Siegfried<sup>1</sup>, <sup>1</sup>Univ. of Florida, Gainesville, FL, <sup>2</sup>USDA - ARS, Gainesville, FL, <sup>3</sup>USDA - ARS, Manhattan, KS

**11:18 AM 35** The impact of provisioning the wasp, *Habrobracon hebetor* (Say), with supplementary carbohydrate diet on reproduction and longevity of the wasp.  
*Matthew Durst-Scarlett* (mdurstsc@wildcat.fvsu.edu), George Mbata and Sanower Warsi, Fort Valley State Univ., Fort Valley, GA

**11:30 AM 36** Exploring the role of novel transcripts involved in vertical transmission of *Borrelia miyamotoi*.  
*Latoyia Downs* (latoyia.downs@usm.edu) and Shahid Karim, The Univ. of Southern Mississippi, Hattiesburg, MS

**11:42 AM 37** Ecology of aquatic Hemiptera and their invertebrate associates in the seasonally inundated Atchafalaya River floodplain.  
*Patricia Shorter* (pshort3@lsu.edu), Michael Kaller, William Kelso and Mike Stout, Louisiana State Univ., Baton Rouge, LA

**11:54 AM 38** Describing the spatial and temporal occurrence of adult horse fly populations along the Louisiana coastline.  
*Darrius Davis* (ddavi97@lsu.edu), Louisiana State Univ., Baton Rouge, LA

**12:06 PM 39** Establishing inventories of insects temporally and along salinity gradients in Louisiana's coastal marshes.  
*Benjamin Aker* (bgaker@agcenter.lsu.edu), Claudia Husseneder and Lane Foil, Louisiana State Univ., Baton Rouge, LA



# COOK'S

## PEST CONTROL

## MONDAY, MARCH 4, 2019, AFTERNOON

### Ph.D. Student Oral Presentation Competition I

Grand Bay Ballroom (Renaissance Mobile Riverview Plaza Hotel)

Moderator: Dakshina Seal, Univ. of Florida, Homestead, FL

- 2:00 PM 40** Rapid analysis of raw next-generation sequencing data *in silico* as a tool for detecting *Tuta absoluta*.  
**Travis van Warmerdam** (tcv34@msstate.edu)<sup>1</sup>, Austin Drury<sup>1</sup>, Todd Gilligan<sup>2</sup> and Jonas G. King<sup>1</sup>,  
<sup>1</sup>Mississippi State Univ., Mississippi State, MS, <sup>2</sup>USDA - APHIS, Fort Collins, CO
- 2:12 PM 41** Determining the effect of postharvest cold storage treatment on the survival of immature *Drosophila suzukii* in small fruits.  
**Laura Kraft** (ljkraft@ncsu.edu) and Hannah Burrack, North Carolina State Univ., Raleigh, NC
- 2:24 PM 42** Reactive oxygen species as a plant defense mechanisms against aphids.  
**Hillary Fischer** (hillfisch@gmail.com) and Fiona L. Goggin, Univ. of Arkansas, Fayetteville, AR
- 2:36 PM 43** Economic thresholds for cat-facing pests of Florida peaches.  
**Cory Penca** (cpenca@ufl.edu) and Amanda Hodges, Univ. of Florida, Gainesville, FL
- 2:48 PM** Break
- 3:13 PM 44** Species assemblage, abundance, and distribution of phytophagous and phytoseiid mites in Citrus Under Protective Screen (CUPS).  
**Emilie Demard** (edemard@ufl.edu)<sup>1</sup> and Jawwad Qureshi<sup>2</sup>, <sup>1</sup>Univ. of Florida Indian River Research and Education Center, Fort Pierce, FL, <sup>2</sup>Univ. of Florida, Immokalee, FL
- 3:25 PM 45** Phylogeny of hickory-feeding phylloxerans (Hemiptera: Phylloxeridae: *Phylloxera* spp.).  
**Fredericka Hamilton** (fbh0006@auburn.edu) and Nate Hardy, Auburn Univ., Auburn, AL
- 3:37 PM 46** Abundance and seasonal incidence of *Sphenophorous* spp. (Coleoptera: Curculionidae) in Georgia sod farms.  
**Midhula Gireesh** (mg58755@uga.edu) and Shimat Joseph, Univ. of Georgia, Griffin, GA

### Ph.D. Student Oral Presentation Competition II

Mobile Bay III (Renaissance Mobile Riverview Plaza Hotel)

Moderator: Angus Catchot, Mississippi State Univ., Mississippi State, MS

- 2:00 PM 47** Initial assessment of bifenthrin resistance in soybean looper, *Chrysodeixis includens* (Walker).  
**Scott Lee** (slee168@lsu.edu)<sup>1</sup>, Jeremy Greene<sup>2</sup>, Dominic Reisig<sup>3</sup>, Sally Taylor<sup>4</sup> and Jeff Davis<sup>1</sup>,  
<sup>1</sup>Louisiana State Univ., Baton Rouge, LA, <sup>2</sup>Clemson Univ., Blackville, SC, <sup>3</sup>North Carolina State Univ., Plymouth, NC, <sup>4</sup>Virginia Tech Tidewater AREC, Suffolk, VA
- 2:12 PM 48** Parental effect resulting from exposure to Cry1Ac protein in *Spodoptera cosmioides* (Lepidoptera-Noctuidae).  
**Marcelo Rabelo** (mmendesrabelo@ufl.edu)<sup>1,2</sup>, João Matos<sup>2</sup>, Ana Carolina Eloi<sup>2</sup>, Morgana Miranda<sup>2</sup>, Silvana Viera de Paula Moraes<sup>1</sup> and Eliseu Pereira<sup>2</sup>, <sup>1</sup>Univ. of Florida, Jay, FL, <sup>2</sup>Universidade Federal de Viçosa, Viçosa, Brazil
- 2:24 PM 50** Landscape level contributions of *Helicoverpa zea* in Mississippi corn.  
**Tyler Towles** (tt305@entomology.msstate.edu)<sup>1</sup>, Angus Catchot<sup>1</sup>, Jeff Gore<sup>2</sup>, Don Cook<sup>2</sup>, Michael Caprio<sup>1</sup> and Christopher Daves<sup>3</sup>, <sup>1</sup>Mississippi State Univ., Mississippi State, MS, <sup>2</sup>Mississippi State Univ., Stoneville, MS, <sup>3</sup>Monsanto Company, Coila, MS
- 2:36 PM 51** Spatial analysis of rice water weevil (*Lissorhoptrus oryzophilus*) larvae in Louisiana rice.  
**Megan Mulcahy** (mmulca2@lsu.edu)<sup>1</sup>, Blake Wilson<sup>2</sup> and Thomas Reagan<sup>1</sup>, <sup>1</sup>Louisiana State Univ., Baton Rouge, LA, <sup>2</sup>Louisiana State Univ., St. Gabriel, LA
- 2:48 PM** Break
- 3:08 PM 52** Field evaluations of exotic upland cotton landraces for resistance to thrips.  
**Sophia Conzemius** (sconzem@g.clemson.edu)<sup>1</sup>, Francis Reay-Jones<sup>1</sup>, Jeremy Greene<sup>2</sup>, Benjamin Campbell<sup>3</sup> and Dominic Reisig<sup>4</sup>, <sup>1</sup>Clemson Univ., Florence, SC, <sup>2</sup>Clemson Univ., Blackville, SC, <sup>3</sup>USDA - ARS, Florence, SC, <sup>4</sup>North Carolina State Univ., Plymouth, NC
- 3:20 PM 53** Host specialization of two haplotypes of sugarcane aphid originating from sugarcane or sorghum.  
**Greg Wilson** (gregwils@tamu.edu), Texas A&M Univ., Bryan, TX

**Ph.D. Student Oral Presentation Competition III**

Schooner Suite (Renaissance Mobile Riverview Plaza Hotel)

Moderator: Arthur G. Appel, Auburn Univ., Auburn, AL

- 2:00 PM 54 Tick immunity: Understanding the tick-pathogen interactions through innate immunity and redox signaling pathways. **Faizan Tahir** (tahirfaizan93@gmail.com) and **Shahid Karim**, The Univ. of Southern Mississippi, Hattiesburg, MS
- 2:12 PM 55 Glycine-rich proteins of *Amblyomma americanum*, a unique family with diverse functions. **Surendra Sharma** (surendra.sharma@usm.edu), The Univ. of Southern Mississippi, Hattiesburg, MS
- 2:24 PM 56 The effect of food availability on the development and feeding efficiencies of black soldier fly larvae, *Hermetia illucens* (L., 1758) (Diptera: Stratiomyidae). **Devon Brits** (dbrits@agcenter.lsu.edu)<sup>1</sup>, **James Pryke**<sup>2</sup>, **Cameron Richards**<sup>3</sup> and **Martin Villet**<sup>4</sup>, <sup>1</sup>Louisiana State Univ., Baton Rouge, LA, <sup>2</sup>Stellenbosch Univ., Stellenbosch, South Africa, <sup>3</sup>AgriProtein Technologies, Cape Town, South Africa, <sup>4</sup>Rhodes Univ., Grahamstown, South Africa
- 2:36 PM 57 Toxicity profiles of aromatic and aliphatic essential oil components against strains of the German cockroach, *Blattella germanica*. **Seun Oladipupo** (seun\_oladipupo@yahoo.com), Arthur Appel and Xing P Hu, Auburn Univ., Auburn, AL
- 2:48 PM 58 Effects of diet on tergal secretions and mating success of German cockroach males. **Samantha McPherson** (smmcphe2@ncsu.edu), Ayako Katsumata, Jules Silverman and Coby Schal, North Carolina State Univ., Raleigh, NC
- 3:00 PM Break
- 3:12 PM 59 Mutant mosquitoes hold the key to life-saving perfume. **Joshua Raji** (jraji001@fiu.edu), Florida International Univ., Miami, FL
- 3:24 PM 60 Reception of human odorants inhibited by plant-derived chemicals in the yellow fever mosquito, *Aedes aegypti*. **Zhou Chen** (zzc0012@auburn.edu)<sup>1</sup>, **Walter Leal**<sup>2</sup> and **Nannan Liu**<sup>1</sup>, <sup>1</sup>Auburn Univ., Auburn, AL, <sup>2</sup>Univ. of California, Davis, CA
- 3:36 PM 61 The ecology of dog heartworm disease. **Meredith Spence Beaulieu** (mrspenc2@ncsu.edu), Michael Reiskind and Robert Dunn, North Carolina State Univ., Raleigh, NC

- 3:48 PM 62 Characterizing the epidemiology of bluetongue and epizootic hemorrhagic disease virus with implications of cattle movement in south Louisiana.

**Michael Becker** (mbecker@agcenter.lsu.edu), Louisiana State Univ., Baton Rouge, LA

**Ph.D. Student Oral Presentation Competition IV**

Mobile Bay I & II (Renaissance Mobile Riverview Plaza Hotel)

Moderator: Angelita Acebes, Univ. of Georgia, Tifton, GA

- 2:00 PM 63 Impacts of warming on non-consumptive predator-prey interactions. **Cori Speights** (cjs815@msstate.edu), Angus Catchot and Brandon Barton, Mississippi State Univ., Mississippi State, MS
- 2:12 PM 64 Symbiont mediated protection is compromised under daytime and nighttime warming. **Clesson Higashi** (clessonh@uga.edu)<sup>1</sup>, **Brandon Barton**<sup>2</sup> and **Kerry M. Oliver**<sup>1</sup>, <sup>1</sup>Univ. of Georgia, Athens, GA, <sup>2</sup>Mississippi State Univ., Mississippi State, MS
- 2:24 PM 65 Identifying phage genes that control insect reproduction. **Dylan Shropshire** (dylan.shropshire@vanderbilt.edu), Emily Layton, Jungmin On, Helen Zhou and Seth Bordenstein, Vanderbilt Univ., Nashville, TN
- 2:36 PM 66 Measuring the impact of *Lilioceris cheni* as a biological control agent of air potato vine in Louisiana. **Charity Schaffer** (charityschaffer@gmail.com)<sup>1</sup>, **Veronica Manrique**<sup>2</sup> and **Rodrigo Diaz**<sup>3</sup>, <sup>1</sup>Southern Univ. and A&M College, Greensburg, LA, <sup>2</sup>Southern Univ. and A&M College, Baton Rouge, LA, <sup>3</sup>Louisiana State Univ., Baton Rouge, LA
- 2:48 PM 67 Investigation of pecan aphid parasitism in Georgia pecan production. **Eddie Slusher** (eslushe0@yahoo.com)<sup>1</sup>, Angelita Acebes<sup>1</sup> and Ted Cottrell<sup>2</sup>, <sup>1</sup>Univ. of Georgia, Tifton, GA, <sup>2</sup>USDA - ARS, Byron, GA
- 3:00 PM Break
- 3:20 PM 68 The use of cultural and biological control strategies for management of key pests in organic squash. **Marice Lopez** (mlopez90@ufl.edu) and **Oscar Liburd**, Univ. of Florida, Gainesville, FL
- 3:32 PM 69 The sugarcane borer in the Everglades Agricultural Area: a sugarcane pest under biological control. **Erik Roldan** (erikroldan@ufl.edu)<sup>1</sup>, **Julien Beuzelin**<sup>2</sup>, **Ronald Cherry**<sup>2</sup>, **Matthew VanWeelden**<sup>2</sup> and **Michael Karounos**<sup>2</sup>, <sup>1</sup>Univ.



of Florida Everglades Research and Education Center, Belle Glade, FL, <sup>2</sup>Univ. of Florida, Belle Glade, FL

- 3:44 PM 70 **Infestation by parasitized larvae affects attraction of the parasitoid, *Microplitis croceipes* to cotton: avoidance of superparasitism?**  
*Basu Kafle* (bz0055@auburn.edu), Tolulope Morawo and Henry Fadamiro, Auburn Univ., Auburn, AL

## Extension, Outreach, and Teaching - All Degree Levels

Clipper Suite (Renaissance Mobile Riverview Plaza Hotel)

Moderator: Katelyn Kesheimer, Auburn Univ., Auburn, AL

- 2:00 PM 71 **Pest management priorities among Florida's tomato producers.**  
*Ploy Kurdmongkoltham* (pkurdmongkoltham@ufl.edu)<sup>1</sup> and Hugh A. Smith<sup>2</sup>, <sup>1</sup>Univ. of Florida, Gainesville, FL, <sup>2</sup>Univ. of Florida, Wimauma, FL

- 2:12 PM 72 **Outreach efforts to manage insecticide resistance in the diamondback moth in Georgia.**

*John Bennett* (jebennett1995@gmail.com), David Riley and Alton N. Sparks, Univ. of Georgia, Tifton, GA

- 2:24 PM 73 **Challenges and opportunities of teaching insect identification and IPM in Ecuador.**  
*Sage Thompson* (sagemthompson@ufl.edu)<sup>1</sup>, Morgan Pinkerton<sup>1</sup>, Amanda Hodges<sup>1</sup>, Hugh A. Smith<sup>2</sup> and Lisbeth Espinoza<sup>3</sup>, <sup>1</sup>Univ. of Florida, Gainesville, FL, <sup>2</sup>Univ. of Florida, Wimauma, FL, <sup>3</sup>Escuela Superior Politecnica del Litoral, Guayaquil, Ecuador

- 2:36 PM 74 **Curriculum development for proper curation and pinning techniques for 4-H and youth target groups.**

*Clayton Bania* (cbania@ufl.edu) and Rebecca Baldwin, Univ. of Florida, Gainesville, FL

2:48 PM

Break

- 2:48 PM 76 **Expanding a Florida invasive species youth outreach program.**  
*Craig Frey* (cf1193@ufl.edu), Morgan Pinkerton, Sage Thompson, Amanda Hodges and Norman Leppla, Univ. of Florida, Gainesville, FL

Monday Afternoon



# FREE

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## TUESDAY, MARCH 5, 2019, POSTERS

### Regular Posters: Medical, Urban, and Veterinary Entomology / 8:00 AM-5:00 PM

Second Floor Foyer (Renaissance Mobile Riverview Plaza Hotel)

- P-47** Water relations of several stages of the Asian cockroach, *Blattella asahinai*.  
**Patrick Thompson** (pjt0010@tigermail.auburn.edu), Auburn Univ., Auburn, AL
- P-48** Life cycle evaluation of the eastern bat bug, *Cimex adjunctus*.  
**Jinbo Song** (sjinbo@clemson.edu), Eric Benson and Brittany Ellis, Clemson Univ., Clemson, SC
- P-49** Immune response of *Cimex lectularius* to traumatic insemination, bacterial infection, and synthetic nanobeads challenges.  
**Aline Badial** (ar2563@msstate.edu)<sup>1</sup>, Jose Pietri<sup>2</sup> and Jonas King<sup>1</sup>, <sup>1</sup>Mississippi State Univ., Mississippi State, MS, <sup>2</sup>Apex Bait Technologies, Inc., Santa Clara, CA
- P-50** Evaluation of size as a factor in aggressive interactions between the dark rover ant, *Brachymyrmex patagonicus*, and co-occurring species.  
**David Bowers** (dqbower@g.clemson.edu), Eric Benson, Brittany Ellis and Jinbo Song, Clemson Univ., Clemson, SC
- P-51** Assessing the academic and personal value of an internship in a scientific research environment.  
**Emma Rogers** (abbyrogers@yahoo.com), Univ. of North Georgia, Oakwood, GA

### Regular Posters: Plant-Insect Ecosystems / 8:00 AM-5:00 PM

Second Floor Foyer (Renaissance Mobile Riverview Plaza Hotel)

- P-52** Introduction to quarantine of *Anagyrus cachamai* and *Anagyrus lapachosus* as potential biocontrol agents of the Harrisia

Cactus Mealybug (*Hypogeococcus sp.*) in Puerto.

**Yorelyz Rodriguez-Reyes<sup>1</sup>, Michael West-Ortiz<sup>1</sup>, Stephen Hight<sup>2</sup> and Jose Verle Rodrigues** (jose\_carlos@mac.com)<sup>1</sup>, <sup>1</sup>Univ. of Puerto Rico, San Juan, PR, <sup>2</sup>USDA - ARS, Tallahassee, FL

- P-53** Organophosphate alternatives for rootworm management in peanut.  
**Mark R. Abney** (mrabney@uga.edu), D. Bryce Sutherland and Kent Hill, Univ. of Georgia, Tifton, GA
- P-54** Multi-year evaluation of Thimet® 20-G for tomato spotted wilt virus suppression in peanuts.  
**Scott Ludwig** (ScottL@amvac-chemical.com)<sup>1</sup>, Wen Carter<sup>2</sup> and Mason Newark<sup>3</sup>, <sup>1</sup>AMVAC Chemical Corporation, Arp, TX, <sup>2</sup>AMVAC Chemical Corporation, Tifton, GA, <sup>3</sup>AMVAC Chemical Corporation, Gainesville, FL
- P-55** Laboratory evaluation of selected on field-collected populations of bollworm (*Helicoverpa zea*) and tobacco budworm (*Heliothis virescens*) larvae - 2018 Update.  
**Bridget Piatt** (bpiatt1@my.westga.edu), Justin Dover and Gregory Payne, Univ. of West Georgia, Carrollton, GA
- P-56** Cotton growers in the Florida Panhandle: Pest risk aversion and knowledge of transgenic technology.  
**Ethan Carter** (ethancarter@ufl.edu)<sup>1</sup>, Silvana Paula-Moraes<sup>2</sup>, Antonio Roosevelt Moraes Jr<sup>3</sup>, Michael Mulvaney<sup>4</sup> and Pratap Devkota<sup>5</sup>, <sup>1</sup>Univ. of Florida, Marianna, FL, <sup>2</sup>Florida Univ., Jay, FL, <sup>3</sup>Univ. of Nebraska, Lincoln, NE, <sup>4</sup>Univ. of Florida, Jay, FL, <sup>5</sup>West Florida Research and Education Center, Jay, FL
- P-57** Efficacy of selected insecticides tank-mixed with bifenthrin for management of tarnished plant bug, *Lygus lineolaris*, in cotton.  
**Glenn Studebaker** (gstudebaker@uaex.edu) and Courtney Spinks, Univ. of Arkansas, Keiser, AR
- P-58** Standardized insecticide trial for control of tarnished plant bugs across the Mid-South, 2018.  
**Sandy Steckel** (ssteckel@utk.edu)<sup>1</sup>, Matthew Williams<sup>1</sup>, Scott Stewart<sup>1</sup>, Gus Lorenz<sup>2</sup>, Glenn Studebaker<sup>3</sup>, Nick Bateman<sup>4</sup>, Ben Thrash<sup>5</sup>, Angus Catchot<sup>5</sup>, Jeff Gore<sup>6</sup>, Don Cook<sup>6</sup>, Sebe Brown<sup>7</sup>, Katherine Parys<sup>8</sup>, Nathan Little<sup>8</sup> and K. Clint Allen<sup>8</sup>, <sup>1</sup>Univ. of Tennessee, Jackson, TN, <sup>2</sup>Univ. of Arkansas, Lonoke, AR, <sup>3</sup>Univ.

of Arkansas, Keiser, AR, <sup>4</sup>Univ. of Arkansas Division of Agriculture, Monticello, AR, <sup>5</sup>Mississippi State Univ., Mississippi State, MS, <sup>6</sup>Mississippi State Univ., Stoneville, MS, <sup>7</sup>Louisiana State Univ., Winnsboro, LA, <sup>8</sup>USDA - ARS, Stoneville, MS

**P-59 Monitoring the seasonal abundance of pest insects and natural enemies of soybean in Middle Tennessee.**

**Kaushalya Amarasekare** (kaushalya2641@yahoo.com) and Richard Link, Tennessee State Univ., Nashville, TN

**P-60 What is the impact on yield when the brown marmorated stink bug is an important member of the stink bug complex feeding on soybeans?**

**Tim Reed** (reedtim@aces.edu), Auburn Univ., Madison, AL

**P-61 The kudzu bug, *Megacopta cribraria*, and its natural enemies: A star is born.**

**Jerome Grant** (jgrant@utk.edu) and Amy Michael, Univ. of Tennessee, Knoxville, TN

**P-62 Efficacy of zein nanoparticles against *Anticarsia gemmatilis* (Hübner).**

**Colin Bonser** (cbonse2@lsu.edu), Carlos Astete, Cristina Sabliov and Jeff Davis, Louisiana State Univ., Baton Rouge, LA

**P-63 Resistance of soybean varieties to soybean looper and velvet bean caterpillar.**

**Monique de Souza** (monique.mfs@hotmail.com) and Jeff Davis, Louisiana State Univ., Baton Rouge, LA

**P-64 Irrigation termination timing and possible interactions with plant protectants in NE Arkansas soybeans.**

**Tina Gray Teague** (tteague@astate.edu)<sup>1</sup>, Kyle Wilson<sup>2</sup>, N. Benson<sup>3</sup> and Michele Reba<sup>4</sup>, <sup>1</sup>Arkansas State Univ., Jonesboro, AR, <sup>2</sup>Univ. of Arkansas Division of Agriculture, State Univ., AR, <sup>3</sup>Univ. of Arkansas Division of Agriculture, Blytheville, AR, <sup>4</sup>USDA - ARS, State Univ., AR

**P-65 Monitoring southwestern corn borer, *Diatraea grandiosella*, populations in Arkansas using ArcMap.**

**Courtney Spinks** (cspinks@uaex.edu) and Glenn Studebaker, Univ. of Arkansas, Keiser, AR

**P-66 Sticky trap placement influences whitefly captures.**

**Phillip Roberts** (proberts@uga.edu)<sup>1</sup>, Ronnie Barentine<sup>1</sup>, Sydni Barwick<sup>2</sup>, Scott Carlson<sup>1</sup>, Will Gay<sup>3</sup>, Joshua Grant<sup>4</sup>, Justin Hand<sup>1</sup>, Stephanie Hollifield<sup>5</sup>, Jeremy Kichler<sup>6</sup>, Tucker

Price<sup>7</sup>, Andrew Sawyer<sup>8</sup>, D. Bryce Sutherland<sup>9</sup>, Apurba Barman<sup>1</sup> and Michael Toews<sup>1</sup>, <sup>1</sup>Univ. of Georgia, Tifton, GA, <sup>2</sup>Univ. of Georgia, Thomasville, GA, <sup>3</sup>Univ. of Georgia, Ashburn, GA, <sup>4</sup>Univ. of Georgia, Cordele, GA, <sup>5</sup>Univ. of Georgia, Quitman, GA, <sup>6</sup>Univ. of Georgia, Moultrie, GA, <sup>7</sup>Univ. of Georgia, Adel, GA, <sup>8</sup>Univ. of Georgia, Rochelle, GA, <sup>9</sup>Univ. of Georgia, Sylvester, GA

**P-67 Combating rose rosette disease: What we have learned in Tennessee.**

**Frank Hale** (fahale@utk.edu)<sup>1</sup>, Mark T. Windham<sup>2</sup>, Alan Windham<sup>1</sup>, Qunkang Cheng<sup>2</sup>, Katherine Solo<sup>2</sup>, Brent England<sup>3</sup>, Walt Hitch<sup>3</sup> and Sara Collins<sup>2</sup>, <sup>1</sup>Univ. of Tennessee, Nashville, TN, <sup>2</sup>Univ. of Tennessee, Knoxville, TN, <sup>3</sup>Univ. of Tennessee, Crossville, TN

**P-68 The Dundee Biological Control Laboratory: Mass rearing the parasitoid *Tamarixia radiata* for control of the Asian citrus psyllid, *Diaphorina citri*, in Florida.**

**Robin Stuart** (robin.stuart@freshfromflorida.com), Florida Dept. of Agriculture and Consumer Services, Dundee, FL

**P-69 *Tiphia* wasp species present in middle Tennessee.**

**Karla Adesso** (kaddesso@tnstate.edu), Jason Oliver, Paul O'Neal and Nadeer Youssef, Tennessee State Univ., McMinnville, TN

**P-70 The good side of the bad guys: predation of noctuids by red imported fire ants in agroecosystems.**

**Jessica Baldwin** (jbaldwin46@ufl.edu)<sup>1</sup>, Silvana Viera de Paula Moraes<sup>1</sup> and Roberto Pereira<sup>2</sup>, <sup>1</sup>Univ. of Florida, Jay, FL, <sup>2</sup>Univ. of Florida, Gainesville, FL

**P-71 Attracting beneficials: Implications of native wildflowers for enhancing southeast landscapes.**

**Bethany Harris** (bah5191@uga.edu)<sup>1</sup>, Bodie Pennisi<sup>1</sup>, Melissa D. Thompson<sup>2</sup>, Carson Bowers<sup>2</sup>, Emmalee Milner<sup>3</sup>, Rachel Perez<sup>3</sup>, Zac Wainright<sup>3</sup> and Jason Schmidt<sup>2</sup>, <sup>1</sup>Univ. of Georgia, Griffin, GA, <sup>2</sup>Univ. of Georgia, Tifton, GA, <sup>3</sup>Abraham Baldwin Agricultural College, Tifton, GA

**P-72 Temperature and parasite monitoring on *Apis mellifera* honey bees at the University of North Carolina-Pembroke apiary.**

**Marica Thomas** (mst011@bravemail.uncp.edu), Univ. of North Carolina, Pembroke, NC



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## Regular Posters: Physiology, Biochemistry, and Toxicology / 8:00 AM-5:00 PM

Second Floor Foyer (Renaissance Mobile Riverview Plaza Hotel)

- P-73** Macro nutrient intake by the house cricket, *Acheta domesticus*, (Orthoptera: Gryllidae) after self selecting among natural and by-products.  
**Juan Morales-Ramos** (Juan.MoralesRamos@ARS.USDA.GOV)<sup>1</sup>, M. Guadalupe Rojas<sup>1</sup>, Aaron Dossey<sup>2</sup> and Mark Berhow<sup>3</sup>, <sup>1</sup>USDA - ARS, Stoneville, MS, <sup>2</sup>All Things Bugs LLC, Athens, GA, <sup>3</sup>USDA - ARS, Peoria, IL
- P-74** Sublethal effects of consumption of defatted *Camelina sativa* meal by the red imported fire ant, *Solenopsis invicta* (Hymenoptera: Formicidae).  
**M. Guadalupe Rojas** (guadalupe.rojas@ars.usda.gov)<sup>1</sup>, Juan Morales-Ramos<sup>1</sup> and Mark Berhow<sup>2</sup>, <sup>1</sup>USDA - ARS, Stoneville, MS, <sup>2</sup>USDA - ARS, Peoria, IL

## Regular Posters: Systematics, Evolution, and Biodiversity / 8:00 AM-5:00 PM

Second Floor Foyer (Renaissance Mobile Riverview Plaza Hotel)

- P-75** A survey of aquatic macro- and micro-invertebrates of vernal granite outcrop pools in North Georgia.  
**Joshua Fuller** (jbf0575@ung.edu)<sup>1</sup>, Cruz Mejia-Rodriguez<sup>2</sup>, Ana Guimaraes-Ferreira<sup>1</sup> and Margi Flood<sup>1</sup>, <sup>1</sup>Univ. of North Georgia, Oakwood, GA, <sup>2</sup>Univeristy of North Georgia, Oakwood, GA
- P-76** Results from the Regional Identification Center of the USDA-APHIS (Raleigh Hub) for the 2017-2018 Exotic Pest Surveys, including new state and county records.  
**Jennifer Seltzer** (jls30@entomology.msstate.edu)<sup>1</sup>, Terence Schiefer<sup>1</sup> and Richard Brown<sup>2</sup>, <sup>1</sup>Mississippi State Univ., Mississippi State, MS, <sup>2</sup>Mississippi Entomological Museum, Mississippi State, MS
- P-77** Mississippi Bug Blues – 2017-2018 Highlights.  
**Jason Sanders** (jsanders@entomology.msstate.edu), Mississippi State Univ., Mississippi State, MS
- P-78** Comparison of three DNA extraction methods for biological barcoding.  
**Avrie Martello** (AMartello001@lsua.edu), Brett Lambert, Jacob Cutler, Clifton Johnston and Christof Stumpf, Louisiana State Univ. AgCenter, Alexandria, LA



## TUESDAY, MARCH 5, 2019, MORNING

### Ecological Management of Vegetable Crops in the Southeastern United States

Clipper Suite (Renaissance Mobile Riverview Plaza Hotel)

**Moderator and Organizers:** Deepak Shrestha, Univ. of Florida, Gainesville, FL and Oscar Liburd, Univ. of Florida, Gainesville, FL

8:30 AM      **Introductory Remarks**

- 8:32 AM      135    **Implementation of specialty crop and community IPM strategies in north Florida.**  
**Muhammad Haseeb** ([muhammad.haseeb@famu.edu](mailto:muhammad.haseeb@famu.edu))<sup>1</sup>, Albertha Parkins<sup>1</sup>, Jesusa C. Legaspi<sup>2</sup>, Oscar Liburd<sup>3</sup> and Lambert Kanga<sup>1</sup>, <sup>1</sup>Florida A&M Univ., Tallahassee, FL, <sup>2</sup>USDA - ARS, Tallahassee, FL, <sup>3</sup>Univ. of Florida, Gainesville, FL
- 8:47 AM      136    **Insect population dynamics and evaluation of selected organic insecticides against insect pests of organic summer squash in the Southeastern USA.**  
**Anitha Chitturi** ([achitturi@tuskegee.edu](mailto:achitturi@tuskegee.edu))<sup>1</sup>, Sonu Koirala<sup>1</sup>, Franklin Quarcoo<sup>1</sup>, Jeanine Davis<sup>2</sup>, Casey Barickman<sup>3</sup>, Kokoasse Kpomblekou<sup>1</sup> and Desmond Mortley<sup>1</sup>, <sup>1</sup>Tuskegee Univ., Tuskegee, AL, <sup>2</sup>North Carolina State Univ., Mills River, NC, <sup>3</sup>Mississippi State Univ., Verona, MS
- 9:02 AM      137    **Refining integrated pest management of cucumber beetles with missing knowledge of pest biology.**  
**Hayley Bush** ([hgbush@clermson.edu](mailto:hgbush@clermson.edu)) and Carmen Blubaugh, Clemson Univ., Clemson, SC
- 9:17 AM      138    **Testing of different release methods of *Amblyseius swirskii* in squash fields.**  
**Deepak Shrestha** ([dshrestha@ufl.edu](mailto:dshrestha@ufl.edu)), Marice Lopez, Lorena Lopez and Oscar Liburd, Univ. of Florida, Gainesville, FL
- 9:32 AM      139    **Spatial distribution patterns of the predatory mite *Amblyseius swirskii* in a squash cropping system.**  
**Lorena Lopez** ([lorellopezq.257@ufl.edu](mailto:lorellopezq.257@ufl.edu)) and Oscar Liburd, Univ. of Florida, Gainesville, FL

- 9:47 AM      140    **The diversity and potential food webs of Phytoseiidae in two annual specialty crops in South Carolina.**  
**Monica Farfan** ([mfarfan@clermson.edu](mailto:mfarfan@clermson.edu))<sup>1</sup> and Rebecca Schmidt-Jeffris<sup>1,2</sup>, <sup>1</sup>Clemson Univ., Charleston, SC, <sup>2</sup>USDA - ARS, Wapato, WA
- 10:02 AM      **Break**
- 10:12 AM      141    **Wild sources of pest resistance for cultivated watermelon.**  
**Alvin Simmons** ([alvin.simmons@ars.usda.gov](mailto:alvin.simmons@ars.usda.gov))<sup>1</sup>, Robert Jarret<sup>2</sup>, Charles Cantrell<sup>3</sup> and Amnon Levi<sup>1</sup>, <sup>1</sup>USDA - ARS, Charleston, SC, <sup>2</sup>USDA - ARS, Griffin, GA, <sup>3</sup>USDA - ARS, Univ., MS
- 10:27 AM      142    **Chronic and emerging issues posed by whiteflies and whitefly-transmitted viruses in vegetable production in the Southeastern United States.**  
**Rajagopalbabu Srinivasan** ([babusri@uga.edu](mailto:babusri@uga.edu))<sup>1</sup>, Saurabh Gautam<sup>1</sup>, Bhabesh Dutta<sup>1</sup>, Timothy Coolong<sup>1</sup>, Scott Adkins<sup>2</sup> and William Turechek<sup>2</sup>, <sup>1</sup>Univ. of Georgia, Tifton, GA, <sup>2</sup>USDA - ARS, Fort Pierce, FL
- 10:42 AM      143    **Recent experiences with pepper weevil in southern Georgia.**  
**Alton N. Sparks** ([asparks@uga.edu](mailto:asparks@uga.edu)) and David Riley, Univ. of Georgia, Tifton, GA
- 10:57 AM      144    **Management of fall armyworm using biorational insecticides.**  
**Dakshina Seal** ([dseal3@ufl.edu](mailto:dseal3@ufl.edu)), Univ. of Florida, Homestead, FL
- 11:12 AM      145    **Evaluation of traps for corn silk fly (Diptera: Ulidiidae) adult population monitoring in Florida sweet corn.**  
**Julien Beuzelin** ([jbeuzelin@ufl.edu](mailto:jbeuzelin@ufl.edu))<sup>1</sup>, Dakshina Seal<sup>2</sup>, Sandra Allan<sup>3</sup>, Gregg Nuessly<sup>4</sup> and Donna Larsen<sup>4</sup>, <sup>1</sup>Louisiana State Univ., Baton Rouge, LA, <sup>2</sup>Univ. of Florida, Homestead, FL, <sup>3</sup>USDA - ARS, Gainesville, FL, <sup>4</sup>Univ. of Florida, Belle Glade, FL
- 11:27 AM      146    **Whitefly insecticide efficacy and resistance studies in Georgia.**  
**tanner sparks** ([tcsparks@uga.edu](mailto:tcsparks@uga.edu)) and David Riley, Univ. of Georgia, Tifton, GA
- 11:42 AM      **Concluding Remarks**



## Biocontrol Symposium - S1073: Biological Control of Arthropod Pests and Weeds

Schooner Suite (Renaissance Mobile Riverview Plaza Hotel)

**Moderator and Organizer:** Jason Schmidt, Univ. of Georgia, Tifton, GA and Rodrigo Diaz, Louisiana State Univ., Baton Rouge, LA

- 8:00 AM**      **Introductory Remarks**
- 8:00 AM**      **77**      **Biological control of weeds updates from Florida.**  
*Eutyclus M. Kariuki* (eutyclus.kariuki@ufl.edu) and Carey Minteer, Univ. of Florida, Fort Pierce, FL
- 8:15 AM**      **78**      **Biological control of Brazilian peppertree in Florida.**  
*Patricia Prade* (prade@ufl.edu)<sup>1</sup>, Carey Minteer<sup>1</sup> and James Cuda<sup>2</sup>, <sup>1</sup>Univ. of Florida, Fort Pierce, FL, <sup>2</sup>Univ. of Florida, Gainesville, FL
- 8:30 AM**      **79**      **Biological control of air potato in Louisiana: Will augmentation be needed for success?**  
*Veronica Manrique* (vmanrique@agcenter.lsu.edu)<sup>1</sup> and Rodrigo Diaz<sup>2</sup>, <sup>1</sup>Univ. of Florida, Fort Pierce, FL, <sup>2</sup>Louisiana State Univ., Baton Rouge, LA
- 8:45 AM**      **80**      **The impact of the plant fungal pathogen, SPFG, on *Cyrtobagous salviniae* (Calder & Sands) (Coleoptera: Curculionidae), a biological control agent of *Salvinia molesta*.**  
*Michael Grodowitz* (michael.grodowitz@ars.usda.gov)<sup>1</sup>, Brad Elliott<sup>1</sup> and Rodrigo Diaz<sup>2</sup>, <sup>1</sup>USDA - ARS, Stoneville, MS, <sup>2</sup>Louisiana State Univ., Baton Rouge, LA
- 9:00 AM**      **81**      **Improving biological control of giant salvinia (*Salvinia molesta*) under climate extremes.**  
*Rodrigo Diaz* (RDiaz@agcenter.lsu.edu) and Lori Moshman, Louisiana State Univ., Baton Rouge, LA
- 9:15 AM**      **82**      **Biocontrol food webs in GA commodities: A molecular approach.**  
*Jason Schmidt* (jschmid2@uga.edu)<sup>1</sup>, Carson Bowers<sup>1</sup>, Ashfaq Sia<sup>2</sup>, Michael Toews<sup>1</sup> and Dawn Olson<sup>3</sup>, <sup>1</sup>Univ. of Georgia, Tifton, GA, <sup>2</sup>Univ. of Georgia, Athens, GA, <sup>3</sup>USDA - ARS, Tifton, GA
- 9:30 AM**      **83**      **Potential utilization of *Stethorus punctillum* to control *Tetranychus cinnabarinus* on strawberry in greenhouses and high tunnels.**  
*Eric Riddick* (eric.riddick@ars.usda.gov), USDA - ARS, Stoneville, MS
- 9:45 AM**      **84**      **Managing Asian citrus psyllid (*Diaphorina citri*) using predators and parasitoids in commercial citrus production systems.**  
*Jawwad Qureshi* (jawwadq@ufl.edu), Univ. of Florida, Immokalee, FL
- 10:00 AM**      **Break**

- 10:20 AM**      **85**      **Leveraging entomopathogenic nematode movement for improved biological control.**  
*Camila Oliveira-Hofman* (camila.o.hofman@gmail.com)<sup>1</sup>, Shaohui Wu<sup>2</sup>, Fatma Kaplan<sup>3</sup>, Edwin Lewis<sup>4</sup>, Paul Schliekelman<sup>5</sup> and David Shapiro-Ilan<sup>1</sup>, <sup>1</sup>USDA - ARS, Byron, GA, <sup>2</sup>Univ. of Georgia, Tifton, GA, <sup>3</sup>Pheronym, Inc., Gainesville, FL, <sup>4</sup>Univ. of Idaho, Moscow, ID, <sup>5</sup>Univ. of Georgia, Athens, GA
- 10:35 AM**      **86**      **Greenhouse evaluation of the compatibility of cyflumetofen with *Amblyseius swirskii* and *Phytoseiulus persimilis*.**  
*Juang-Horng Chong* (juanghc@clemson.edu), Clemson Univ., Clemson, SC
- 10:50 AM**      **87**      **Risks and benefits of weed diversity for conservation biological control of crop pests.**  
*Carmen Blubaugh* (carmen.blubaugh@gmail.com) and Melina Madden, Clemson Univ., Clemson, SC
- 11:05 AM**      **88**      ***Ephestia kuehniella* larval diets affect the quality of host eggs and *Trichogramma brassicae*.**  
*Yasaman Moghaddasi* (ymoghaddasi@gmail.com)<sup>1</sup>, Norman Leppla<sup>1</sup>, Paul Shirk<sup>2</sup> and Alexander Gannon<sup>1</sup>, <sup>1</sup>Univ. of Florida, Gainesville, FL, <sup>2</sup>USDA - ARS, Gainesville, FL
- 11:20 AM**      **89**      **Do Acylsugars affect impact biocontrol insects as well as plant pests?**  
*Martha A. Mutschler* (mam13@cornell.edu) and John Smeda, Cornell Univ., Ithaca, NY
- 11:35 AM**      **Concluding Remarks**

## Current Issues and Management Strategies for Corn Earworm, *Helicoverpa zea*, in Row Crops

Grand Bay Ballroom (Renaissance Mobile Riverview Plaza Hotel)

**Organizers:** Ben Thrash, Univ. of Arkansas, Lonoke, AR and Nick Bateman, Univ. of Arkansas Division of Agriculture, Stuttgart, AR

- 8:00 AM**      **90**      **Current issues with corn earworm in the Mid-South.**  
*Angus Catchot* (acatchot@entomology.msstate.edu), Mississippi State Univ., Mississippi State, MS
- 8:20 AM**      **91**      **Current issues with corn earworm in the Southeast.**  
*Dominic Reisig* (ddreisig@ncsu.edu), North Carolina State Univ., Plymouth, NC
- 8:40 AM**      **92**      **Corn earworm in soybean.**  
*Gus Lorenz* (glorenz@uaex.edu)<sup>1</sup>, Nick Bateman<sup>2</sup>, Ben Thrash<sup>3</sup>, Nicki Taillon<sup>1</sup>, Andrew Plummer<sup>1</sup>, Kevin Mcpherson<sup>4</sup> and Aaron Cato<sup>5</sup>, <sup>1</sup>Univ. of Arkansas, Lonoke, AR, <sup>2</sup>Univ. of Arkansas Division of Agriculture, Stuttgart,

		AR, <sup>3</sup> Mississippi State Univ., Mississippi State, MS, <sup>4</sup> Univ. of Arkansas Division of Agriculture, Lonoke, AR, <sup>5</sup> Univ. of Arkansas, Fayetteville, AR			
9:00 AM	93	<b>Transgenic corn economics and potential issues for other crops.</b> <i>Don Cook</i> (dcook@drec.msstate.edu), Mississippi State Univ., Stoneville, MS	8:53 AM	100	<b>Development of pre-harvest treatments for certifying field-grown nursery stock against imported fire ants.</b> <i>Jason Oliver</i> (joliver@tnstate.edu) <sup>1</sup> , Karla Adesso <sup>1</sup> , Nadeer Youssef <sup>1</sup> , Paul O'Neal <sup>1</sup> , Amy Dismukes <sup>1</sup> , Ronald D. Weeks <sup>2</sup> , Lisa Alexander <sup>3</sup> , David O <sup>4</sup> and Mark Halcomb <sup>5</sup> , <sup>1</sup> Tennessee State Univ., McMinnville, TN, <sup>2</sup> USDA - APHIS, Raleigh, NC, <sup>3</sup> USDA - ARS, McMinnville, TN, <sup>4</sup> USDA - ARS, Gainesville, FL, <sup>5</sup> Univ. of Tennessee, Nashville, TN
9:20 AM	94	<b>Survival and emergence of corn earworm from seed blends of Vip3a pyramided field corn.</b> <i>G. David Buntin</i> (gbuntin@uga.edu), Univ. of Georgia, Griffin, GA	9:10 AM	101	<b>Management of chilli thrips in commercial nurseries in Georgia.</b> <i>Shimat Villanassery Joseph</i> (svjoseph@uga.edu), Univ. of Georgia, Griffin, GA
9:40 AM	95	<b>Current state of bollworm in Bt cotton.</b> <i>David Kerns</i> (dlkerns@tamu.edu), Texas A&M Univ., College Station, TX	9:27 AM	102	<b>Repellency of eight plant extracts against the western flower thrips.</b> <i>Juang-Horng Chong</i> (juanghc@clermson.edu) <sup>1</sup> and Liyun Ren <sup>2</sup> , <sup>1</sup> Clemson Univ., Clemson, SC, <sup>2</sup> Guangxi Univ., Nanning, China
10:00 AM		Break	9:44 AM	103	<b>Trying to prevent insecticide resistance among Chilli thrips in woody plant nurseries in Alabama.</b> <i>Kyle Owsley</i> (kto0003@auburn.edu) <sup>1</sup> , David Held <sup>1</sup> and Jeremy Pickens <sup>2</sup> , <sup>1</sup> Auburn Univ., Auburn, AL, <sup>2</sup> Auburn Univ., Mobile, AL
10:30 AM	96	<b>Thresholds and management of corn earworm in row crops.</b> <i>Ben Thrash</i> (bthrash@uaex.edu) <sup>1</sup> , Gus Lorenz <sup>2</sup> , Nick Bateman <sup>3</sup> , Nicki Taillon <sup>2</sup> , Andrew Plummer <sup>2</sup> , Kevin Mcpherson <sup>4</sup> , Aaron Cato <sup>5</sup> and Joseph Black <sup>2</sup> , <sup>1</sup> Mississippi State Univ., Mississippi State, MS, <sup>2</sup> Univ. of Arkansas, Lonoke, AR, <sup>3</sup> Univ. of Arkansas Division of Agriculture, Stuttgart, AR, <sup>4</sup> Univ. of Arkansas Division of Agriculture, Lonoke, AR, <sup>5</sup> Univ. of Arkansas, Fayetteville, AR	10:01 AM		Break
10:50 AM		Panel Discussion	10:21 AM	104	<b>Spotted lanternfly: Tree killer, nuisance pest, or both?</b> <i>Kevin Chase</i> (kchase@Bartlett.com), Bartlett Tree Experts, Charlotte, NC
<b>Turfgrass and Ornamental Entomology</b>			10:38 AM	105	<b>Current role and future potential of the Florida State Collection of Arthropods in scale insect pest management.</b> <i>Muhammad Ahmed</i> (Muhammad.Ahmed@freshfromflorida.com), Florida Dept. of Agriculture Division of Plant Industry, Gainesville, FL
Jubilee Suite (Renaissance Mobile Riverview Plaza Hotel)			10:55 AM	106	<b>Phenology and control of false oleander scale (<i>Pseudaulacaspis cockerelli</i>) on Aucuba japonica.</b> <i>Kendra Carson</i> (kmh0100@auburn.edu) and David Held, Auburn Univ., Auburn, AL
Moderator and Organizer: Adam Dale, Univ. of Florida, Gainesville, FL			11:12 AM	107	<b>Determining the potential impact of elongate hemlock scale on Florida tree species.</b> <i>Adam Dale</i> (agdale@ufl.edu) <sup>1</sup> , Jill Sidebottom <sup>2</sup> and Travis Birdsell <sup>3</sup> , <sup>1</sup> Univ. of Florida, Gainesville, FL, <sup>2</sup> North Carolina State Univ., Mills River, NC, <sup>3</sup> North Carolina Cooperative Extension, Jefferson, NC
8:00 AM		Welcoming Remarks	11:29 AM	108	<b>Bionomics of crapemyrtle bark scale (<i>Acanthococcus lagerstroemiae</i>) crawlers.</b> <i>Cora Yates-Baggett</i> (cny0001@tigermail.auburn.edu), Arthur Appel and David Held, Auburn Univ., Auburn, AL
8:02 AM	97	<b>Ethanol lures are not attractive to wood boring moths (Lepidoptera: Cossidae and Sesiidae).</b> <i>David Held</i> <sup>1</sup> , <i>Jeremy Pickens</i> (pickej@auburn.edu) <sup>2</sup> and Dylan Bartlett <sup>1</sup> , <sup>1</sup> Auburn Univ., Auburn, AL, <sup>2</sup> Auburn Univ., Mobile, AL	11:46 AM		Concluding Remarks
8:19 AM	98	<b>Cultural and biological control of ficus whitefly, <i>Singhiella simplex</i> (Singh) (Hemiptera: Aleyrodidae).</b> <i>Catherine Mannion</i> (cmannion@ufl.edu), Univ. of Florida, Homestead, FL			
8:36 AM	99	<b>Mortality and crawling distance of fall armyworms on aged residues of common turf insecticides.</b> <i>Elijah Carroll</i> (epc0015@auburn.edu), David Held and Kendra Carson, Auburn Univ., Auburn, AL			

## Vector-Pathogen-Host Interactions: Broadening Our Understanding of Vector-Borne Infections

Mobile Bay I & II (Renaissance Mobile Riverview Plaza Hotel)

Moderator and Organizer: Shahid Karim, The Univ. of Southern Mississippi, Hattiesburg, MS

- 8:00 AM      **Introductory Remarks**
- 8:05 AM      109    Integrating the effects of climate, dispersal and evolution to model range expansion of disease vectors.  
*Guha Dharmarajan* (guha@srel.uga.edu), Univ. of Georgia, Aiken, SC
- 8:25 AM      110    Modulation of arthropod signaling by vector-borne pathogens.  
*Girish Neelakanta* (gneeelaka@odu.edu), Old Dominion Univ., Norfolk, VA
- 8:45 AM      111    Transcriptional analysis of Rickettsia surface antigens in the tick vector.  
*Rebekah Bullard* (rebekah.bullard@eagles.usm.edu), The Univ. of Southern Mississippi, Hattiesburg, MS
- 9:05 AM      112    An updated Deep overview of the mosquito immune system.  
*Jonas King* (jonas.king@msstate.edu), Mississippi State Univ., Mississippi State, MS
- 9:25 AM      113    Repurposing of Tick Glycine-Rich Proteins in abiotic and biotic stresses.  
*Surendra Sharma* (surendra.sharma@usm.edu), The Univ. of Southern Mississippi, Hattiesburg, MS
- 9:45 AM      114    Vector and host contributions of *Ehrlichia chaffeensis* assessed by employing the newly developed mutagenesis system.  
*Roman Ganta* (rganta@vet.k-state.edu), Kansas State Univ., Manhattan, KS
- 10:05 AM      **Break**
- 10:35 AM      115    Tick-pathobiome interactions: Collusion and cooperation within the vector host.  
*Shahid Karim* (shahid.karim@usm.edu), The Univ. of Southern Mississippi, Hattiesburg, MS
- 10:55 AM      116    A reservoir targeted vaccine against *B. burgdorferi* reduces the prevalence of *Babesia* infected ticks.  
*Maria Gomes-Solecki* (mgomesso@uthsc.edu), Univ. of Tennessee, Memphis, TN

- 11:15 AM      117    Vector modulation of the tick-borne relapsing fever spirochete *Borrelia turicatae*.  
*Job Lopez* (job.lopez@bcm.edu), Baylor College of Medicine, Houston, TX

- 11:35 AM      118    Differential expression analysis of microRNA in *Borrelia burgdorferi*-infected tick salivary gland.  
*Deepak Kumar* (deepak.kumar@eagles.usm.edu), The Univ. of Southern Mississippi, Hattiesburg, MS

11:55 AM      **Concluding Remarks**

## What's in Your Toolbox? The Skillset Needed for a Successful Career in Entomological Research

Mobile Bay III (Renaissance Mobile Riverview Plaza Hotel)

Moderators and Organizers: Lauren Diepenbrock, Univ. of Missouri, Columbia, MO and Tolulope Morawo, Auburn Univ., Auburn, AL

- 8:00 AM      **Introductory Remarks**
- 8:05 AM      119    The hidden gems: Finding trends in a data set using multivariate and data mining approaches.  
*Alejandro I. Del Pozo-Valdivia* (adelpozo@ucanr.edu), Univ. of California Cooperative Extension, Salinas, CA
- 8:15 AM      120    Bugs in space: Delineating spatial associations.  
*Hannah Penn* (hannahjpenn@gmail.com), Louisiana State Univ., Baton Rouge, LA
- 8:25 AM      121    Grocery shoppers as stakeholders in the development of agricultural pest management technologies.  
*Johanna Elsensohn* (jeelsens@ncsu.edu), North Carolina State Univ., Raleigh, NC
- 8:35 AM      122    Seeing is believing: Visual tools in behavioral research.  
*Tolulope Morawo* (tom0002@tigermail.auburn.edu), Auburn Univ., Auburn, AL
- 8:45 AM      123    Using microscopy to assign biological meanings to electropenetrography waveforms in the study of hemipteran probing behaviors.  
*Holly Shugart* (hshugart@ufl.edu), Univ. of Florida, Lake Alfred, FL
- 8:55 AM      124    Using molecular tools to understand insect movement.  
*Lauren Diepenbrock* (ldiepenbrock@ufl.edu), Univ. of Florida, Lake Alfred, FL

9:05 AM	125	<b>Out of the frying pan and into the fire: Becoming an ECP.</b> <i>Lina Bernaola</i> ( <i>lbernaola@agcenter.lsu.edu</i> ), Louisiana State Univ., Baton Rouge, LA	10:45 AM	130	<b>From my perspective: Useful skills for a job in industry.</b> <i>Scott Croxton</i> ( <i>SCCroxton@nichino.net</i> ), Nichino America, LaBelle, FL
9:20 AM	126	<b>Playing the middle ground in the mentee-mentor relationship.</b> <i>Tolulope Morawo</i> ( <i>tom0002@tigermail.auburn.edu</i> ), Auburn Univ., Auburn, AL	11:00 AM	131	<b>Developing an extension program? You're gonna need a bigger toolbox...</b> <i>David Coyle</i> ( <i>dcoyle@sref.info</i> ), Clemson Univ., Clemson, SC
9:35 AM	127	<b>Changing roles: Tips for a successful transition from mentee to mentor.</b> <i>Katelyn Kesheimer</i> ( <i>kak0083@auburn.edu</i> ), Auburn Univ., Auburn, AL	11:15 AM	132	<b>Grant Writing 101: Opportunities and challenges.</b> <i>Amanda Hodges</i> ( <i>achodges@ufl.edu</i> ), Univ. of Florida, Gainesville, FL
9:50 AM	128	<b>Nurturing a lab environment with diversity and 1st generation college students.</b> <i>Adam Wong</i> ( <i>adamcnwong@ufl.edu</i> ), Univ. of Florida, Gainesville, FL	11:30 AM	133	<b>Getting to win/win: Developing mutually beneficial collaborations.</b> <i>Hannah Burrack</i> ( <i>hjburrac@ncsu.edu</i> ), North Carolina State Univ., Raleigh, NC
10:05 AM		<b>Break</b>	11:45 AM	134	<b>Building your network.</b> <i>Alana Jacobson</i> ( <i>alj0043@auburn.edu</i> ), Auburn Univ., Auburn, AL
10:30 AM	129	<b>Working to live, finding the right balance of work and home.</b> <i>Kelly Palmer</i> ( <i>ridleka@auburn.edu</i> ), Auburn Univ., Auburn, AL			



## TUESDAY, MARCH 5, 2019, AFTERNOON

### Tuesday Afternoon

#### Awards Luncheon and Photo Salon

Bon Secour Bay (Renaissance Mobile Riverview Plaza Hotel)

12:00 Presiding, Oscar Liburd, SEB President  
Invocation: Oscar Liburd  
Introduction of Head Table and Special Guests: Oscar Liburd  
Member Awards: David Buntin  
Student Awards: Hugh Smith  
Linnaean Games: Mike Williams  
Photo Salon Awards: Aaron Cato  
Recognition of SEB President: Robert Peterson  
Friends of Southern IPM Awards: Henry Fadamiro  
Adjourn

#### Final Business Meeting

Mobile Bay I & II (Renaissance Mobile Riverview Plaza Hotel)

4:00 Call to Order, President Oscar Liburd  
Reading of 2018 Minutes – Amanda Hodges, Secretary-Treasurer  
Financial Report – Amanda Hodges, Secretary-Treasurer  
Auditing Committee Report – Adam Dale  
Proposed Budget – Amanda Hodges, Secretary-Treasurer

4:15 Committee Reports:  
Local Arrangements – Chair, David Held  
Program – Chair, Ayanava Majumdar  
Public Relations – Chair, Marianne Shockley  
Membership Committee – Chair, Lina Bernaola  
Member Awards – Chair, David Buntin  
Student Awards – Chair, Marianne Shockley  
Education Committee – Chair, Eric Riddick  
Resolutions – Chair, Courtney Jackson  
Meeting Location and Time (2020) – Chair, Brett Blaauw

4:45 Selection of Meeting Site for Two Years Out (2021) – Yasmin Cardoza

4:50 Nominations for National ESA Offices – Yasmin Cardoza, President-Elect

5:00 Report of the Nominating Committee – Chair, John Adamczyk

5:10 Old Business

5:20 New Business  
Recognition of Program and Local Arrangements Chairs – Oscar Liburd  
Recognition of New SEB President – Yasmin Cardoza  
Introduction of New Committee Chairs – Yasmin Cardoza

Adjourn

#### Biology, Ecology, and Epidemiology of Mosquitoes

Mobile Bay I & II (Renaissance Mobile Riverview Plaza Hotel)

**Organizers:** Zhou Chen, Auburn Univ., Auburn, AL; Rebecca Zimler, Univ. of Florida, Vero Beach, FL; Conor Fair, Univ. of Georgia, Athens, GA and Gabriel Zilnik, North Carolina State Univ., Raleigh, NC

2:00 PM Welcoming Remarks

2:00 PM 147 Ecological interactions in mosquitoes and traits relevant to their ability to transmit arboviruses.  
*Barry Alto (bwalto@ufl.edu), Univ. of Florida, Vero Beach, FL*

2:15 PM 148 Investigating the role of asymptomatic carriage in malaria epidemiology.  
*Derrick Mathias (d.mathias@ufl.edu)<sup>1</sup>, Vincent Nyasembe<sup>2</sup>, Rhoe Dinglasan<sup>3</sup>, Billy Ngasala<sup>4</sup>, Brian Tarimo<sup>5</sup>, Chris Basham<sup>6</sup>, Jon Juliano<sup>6</sup> and Jessica Lin<sup>6</sup>, <sup>1</sup>Univ. of Florida, Vero Beach, FL, <sup>2</sup>International Center of Insect Physiology and Ecology, Nairobi, Kenya, <sup>3</sup>Univ. of Florida, Gainesville, FL, <sup>4</sup>Muhimbili Univ. of Health and Allied Sciences, Dar es Salaam, Tanzania, United Republic of, <sup>5</sup>Ifakara Health Institute, Dar Es Salaam, Tanzania, United Republic of, <sup>6</sup>Univ. of North Carolina, Chapel Hill, NC*

2:30 PM 149 Incorporating ecological models into vector borne disease investigations.  
*Lindsay Campbell (lcampbell2@ufl.edu), Univ. of Florida, Vero Beach, FL*



- 2:45 PM 150 *Aedes aegypti* (Diptera: Culicidae) salivary defenses against the host immune system.  
**Donald Champagne** (dchamp@uga.edu) and John Layman, Univ. of Georgia, Athens, GA
- 3:00 PM Break
- 3:15 PM 151 Host-pathogen interactions in arthropods, from innate immunity to mechanisms of cellular invasion.  
**Jonas King** (jonas.king@msstate.edu), Mississippi State Univ., Mississippi State, MS
- 3:30 PM 152 Characterizing defects of microbe-free mosquitoes.  
**Ruby Harrison** (reh21923@uga.edu), Mark Brown and Michael Strand, Univ. of Georgia, Athens, GA
- 3:45 PM 153 Volatile world of olfactory signals and reception in mosquitoes.  
**Zainulabeuddin Syed** (zainulabeuddin.syed@uky.edu), Univ. of Kentucky, Lexington, KY
- 4:00 PM Concluding Remarks

### ***Helicoverpa zea*: Genetic Population Structure, Life History Traits, Susceptibility and Economic Impact on Bt Crops, and Management Alternatives**

Grand Bay Ballroom (Renaissance Mobile Riverview Plaza Hotel)

Organizer: Silvana Paula-Moraes, Florida Univ., Jay, FL

- 2:00 PM 154 *Helicoverpa zea*: Genetic population structure, life history traits, susceptibility and economic impact on Bt crops, and management alternatives.  
**Silvana Paula-Moraes** (paula.moraes@ufl.edu), Univ. of Florida, Jay, FL
- 2:10 PM 155 Susceptibility of corn earworm populations in the southeast region of the U.S. to Cry1Ab and Vip3A proteins.  
**Fangneng Huang** (fhuang@agcenter.lsu.edu)<sup>1</sup>, Isaac/Olatunji Oyediran<sup>2</sup>, Jianguo Guo<sup>3</sup>, Ying Niu<sup>4</sup>, Francis Reay-Jones<sup>3</sup>, Don Cook<sup>4</sup>, Xinzhi Ni<sup>5</sup>, Dominic Reisig<sup>6</sup>, Silvana Paula-Moraes<sup>7</sup>, Sebe Brown<sup>8</sup>, Marcelo Dimase<sup>1</sup> and Wenbo Yu<sup>1</sup>, <sup>1</sup>Louisiana State Univ., Baton Rouge, LA, <sup>2</sup>Syngenta Biotechnology Inc., Research Triangle Park, NC, <sup>3</sup>Clemson Univ., Florence, SC, <sup>4</sup>Mississippi State Univ., Stoneville, MS, <sup>5</sup>USDA - ARS, Tifton, GA, <sup>6</sup>North Carolina State Univ., Plymouth, NC, <sup>7</sup>Florida Univ., Jay, FL, <sup>8</sup>Louisiana State Univ., Winnsboro, LA

- 2:28 PM 156 Impact of corn earworm injury on yield of Bt corn.  
**Francis Reay-Jones** (freayjo@clemson.edu)<sup>1</sup>, Thomas Bilbo<sup>1</sup> and Dominic Reisig<sup>2</sup>, <sup>1</sup>Clemson Univ., Florence, SC, <sup>2</sup>North Carolina State Univ., Plymouth, NC
- 2:46 PM 157 Nutritional impacts on susceptibility to Bt in *Helicoverpa zea*.  
**Carrie Deans** (dean0179@umn.edu)<sup>1,2</sup>, William D. Hutchison<sup>3</sup>, Spence Behmer<sup>3</sup>, Gregory Sword<sup>3</sup> and Marianne Pusztai-Carey<sup>4</sup>, <sup>1</sup>Univ. of Minnesota, Minneapolis, MN, <sup>2</sup>Univ. of Minnesota, St. Paul, MN, <sup>3</sup>Texas A&M Univ., College Station, TX, <sup>4</sup>Case Western Reserve Univ., Cleveland, OH
- 3:04 PM Break
- 3:24 PM 158 Temporal genetic variation in migratory bollworm populations in Pennsylvania.  
**Omaththage Perera** (op.perera@ars.usda.gov), USDA - ARS, Stoneville, MS
- 3:42 PM 159 RNAi + Lepidoptera = no effects, but why?  
**Ana Velez** (avelezarango2@unl.edu), Univ. of Nebraska, Lincoln, NE

### **Contributed Papers: Plant-Insect Ecosystems 1**

Jubilee Suite (Renaissance Mobile Riverview Plaza Hotel)

Moderator: Fred Musser, Mississippi State Univ., Mississippi State, MS

- 2:00 PM Welcoming Remarks
- 2:05 PM 160 Surviving the late summer dearth: Abundance and diversity of bees in soybeans in southern Mississippi.  
**Chris Werle** (chris.werle@ars.usda.gov)<sup>1</sup>, Blair Sampson<sup>1</sup>, Scott Stewart<sup>2</sup>, Katherine Parys<sup>3</sup>, Ned Edwards<sup>1</sup> and John Adamczyk<sup>1</sup>, <sup>1</sup>USDA - ARS, Poplarville, MS, <sup>2</sup>Univ. of Tennessee, Jackson, TN, <sup>3</sup>USDA - ARS, Stoneville, MS
- 2:17 PM 161 Soybean insect management and losses during 2018.  
**Fred Musser** (fm61@msstate.edu), Mississippi State Univ., Mississippi State, MS
- 2:29 PM 162 Does a change in vector abundance alter plant disease epidemiology? The curious case of the sugarcane aphid.  
**Jeff Davis** (JeffDavis@agcenter.lsu.edu), Sunil Paudel and Christopher Clark, Louisiana State Univ., Baton Rouge, LA
- 2:41 PM 163 Evaluation of miticides for management of sugarcane rust mites (Actinieda: Eriophyidae) in Florida sugarcane.  
**Matthew VanWeelden** (mvanweel1@ufl.edu), Julien Beuzelin and Gregg Nuessly, Univ. of Florida, Belle Glade, FL

**2:53 PM 164 Timing of insecticide termination for rice stink bug, *Oebalus pugnax* (F.), in rice.**  
**Aaron Cato** (ajcato@uark.edu)<sup>1</sup>, Gus Lorenz<sup>2</sup>, Jarrod T. Hardke<sup>3</sup>, Nick Bateman<sup>4</sup>, Ben Thrash<sup>5</sup>, Nicki Taillon<sup>2</sup>, Andrew Plummer<sup>2</sup>, Layton McCullars<sup>1</sup>, Tara Clayton<sup>4</sup> and Kevin Mcpherson<sup>6</sup>, <sup>1</sup>Univ. of Arkansas, Fayetteville, AR, <sup>2</sup>Univ. of Arkansas, Lonoke, AR, <sup>3</sup>Univ. of Arkansas, Stuttgart, AR, <sup>4</sup>Univ. of Arkansas Division of Agriculture, Stuttgart, AR, <sup>5</sup>Mississippi State Univ., Mississippi State, MS, <sup>6</sup>Univ. of Arkansas Division of Agriculture, Lonoke, AR

**3:05 PM Break**

**3:25 PM 165 Refining chemical control strategies for lepidopteran stem borers in Louisiana sugarcane.**  
**Blake Wilson** (bwilson@agcenter.lsu.edu), James Michael Villegas and Megan Mulcahy, Louisiana State Univ., Baton Rouge, LA

**3:37 PM 166 Spotted wing drosophila spatial distribution and movement on an organic strawberry farm in Florida.**  
**Elena Rhodes** (erhodes@ufl.edu), Carlene Chase, Xin Zhao and Oscar Liburd, Univ. of Florida, Gainesville, FL

## Contributed Papers: Plant-Insect Ecosystems 2

Schooner Suite (Renaissance Mobile Riverview Plaza Hotel)

Moderator: Sriyanka Lahiri, Univ. of Georgia, Tifton, GA

**2:00 PM Welcoming Remarks**

**2:05 PM 167 Evaluation of biorational insecticides against twospotted spider mite (Acari: *Tetranychidae*) on tomato.**  
**Gamze Mertoglu** (gzm0033@auburn.edu), Rammohan Rao Balusu and Henry Fadamiro, Auburn Univ., Auburn, AL

**2:17 PM 168 Virulence of a new strain of *Isaria fumosorosea*.**  
**Shaohui Wu** (shaohui.wu@uga.edu)<sup>1</sup>, Michael Toews<sup>1</sup>, David Shapiro-Ilan<sup>2</sup>, Louela Castrillo<sup>3</sup> and Apurba Barman<sup>1</sup>, <sup>1</sup>Univ. of Georgia, Tifton, GA, <sup>2</sup>USDA - ARS, Byron, GA, <sup>3</sup>USDA - ARS, Ithaca, NY

**2:29 PM 169 Biocontrol agents of the brown marmorated stink bug in woodlands and crops in the Southeast.**  
**Glynn Tillman** (glynn.tillman@ars.usda.gov)<sup>1</sup>, Michael Toews<sup>2</sup>, Ted Cottrell<sup>3</sup>, Brett Blaauw<sup>4</sup>, Ashfaq Sial<sup>4</sup>, G. David Buntin<sup>5</sup> and Rammohan Rao Balusu<sup>6</sup>, <sup>1</sup>USDA - ARS, Tifton, GA, <sup>2</sup>Univ. of Georgia, Tifton, GA, <sup>3</sup>USDA - ARS, Byron, GA, <sup>4</sup>Univ. of Georgia, Athens, GA, <sup>5</sup>Univ. of Georgia, Griffin, GA, <sup>6</sup>Auburn Univ., Auburn, AL

**2:41 PM 170 Evaluation of the non-target effects of OMRI listed chemicals on insidious flower bug, *Orius insidiosus* (Hemiptera: Anthocoridae) an important natural enemy of arthropod pests.**  
**Nupur Sarkar** (nupur.sarkar@ufl.edu)<sup>1</sup>, Elena Rhodes<sup>1</sup>, Ashfaq Sial<sup>2</sup> and Oscar Liburd<sup>1</sup>, <sup>1</sup>Univ. of Florida, Gainesville, FL, <sup>2</sup>Univ. of Georgia, Athens, GA

**2:53 PM Break**

**3:13 PM 171 A new take on augmentative biocontrol: Exploring the use of drones to release predatory mites in pecan orchards.**  
**Angelita Acebes** (aacebes@uga.edu)<sup>1</sup>, David Shapiro-Ilan<sup>2</sup>, Ted Cottrell<sup>2</sup>, William Hudson<sup>3</sup> and Glen Rains<sup>1</sup>, <sup>1</sup>Univ. of Georgia, Tifton, GA, <sup>2</sup>USDA - ARS, Byron, GA, <sup>3</sup>Univ. of Georgia, Athens, GA

**3:25 PM 172 Elucidating the role of roseau cane scale in the *Phragmites australis* die-offs in the Mississippi River Delta: Varietal response to biotic and abiotic stressors.**  
**Ian Knight** (iknight@agcenter.lsu.edu), James T. Cronin, Madeline Gill, John Nyman, Blake Wilson and Rodrigo Diaz, Louisiana State Univ., Baton Rouge, LA

**3:37 PM 173 Role of natural enemies, HPR, and insecticidal application in the management of *Melanaphis sacchari* (Zehntner) (Hemiptera: Aphididae) in grain sorghum.**  
**Sriyanka Lahiri** (sriyanka.lahiri@uga.edu)<sup>1</sup>, Xinzhi Ni<sup>2</sup>, G. David Buntin<sup>3</sup> and Michael Toews<sup>1</sup>, <sup>1</sup>Univ. of Georgia, Tifton, GA, <sup>2</sup>USDA - ARS, Tifton, GA, <sup>3</sup>Univ. of Georgia, Griffin, GA

## WEDNESDAY, MARCH 6, 2019, MORNING

### Application of Molecular Techniques in Forest Health

Jubilee Suite (Renaissance Mobile Riverview Plaza Hotel)

**Moderators and Organizers:** Robert M. Jetton, North Carolina State Univ., Raleigh, NC and Jessica Hartshorn, Clemson Univ., Clemson, SC

- 8:00 AM 174** Potential of molecular genetic tools for improving insect and disease resistance in Fraser fir Christmas trees.  
*Robert M. Jetton* ([robert\\_jetton@ncsu.edu](mailto:robert_jetton@ncsu.edu)), Jack Wang and John Frampton, North Carolina State Univ., Raleigh, NC
- 8:17 AM 175** Population dynamics of laurel wilt disease.  
*Jason A. Smith* ([jasons@ufl.edu](mailto:jasons@ufl.edu)), Univ. of Florida, Gainesville, FL
- 8:34 AM 176** Molecular genetics and the effort to conserve eastern North American hemlocks decimated by the exotic hemlock woolly adelgid.  
*Kevin M. Potter* ([kpotter@ncsu.edu](mailto:kpotter@ncsu.edu))<sup>1</sup>, Robert M. Jetton<sup>2</sup>, Lia Campbell<sup>2</sup>, Valerie Hipkins<sup>3</sup>, John Hastings<sup>4</sup>, Sedley Josserand<sup>5</sup> and C. Nelson<sup>6</sup>, <sup>1</sup>North Carolina State Univ., Research Triangle Park, NC, <sup>2</sup>North Carolina State Univ., Raleigh, NC, <sup>3</sup>USDA - Forest Service, Placerville, CA, <sup>4</sup>USDA - APHIS, Raleigh, NC, <sup>5</sup>USDA - Forest Service, Saucier, MS, <sup>6</sup>USDA - Forest Service, Lexington, KY
- 8:51 AM** Break
- 9:09 AM 177** Potential for biological control of an invasive woodwasp using a native nematode.  
*Jessica Hartshorn* ([jhartsh@clemson.edu](mailto:jhartsh@clemson.edu))<sup>1</sup>, Larry D. Galligan<sup>2</sup> and Fred M. Stephen<sup>2</sup>, <sup>1</sup>Clemson Univ., Clemson, SC, <sup>2</sup>Univ. of Arkansas, Fayetteville, AR
- 9:26 AM 178** Evaluating gene silencing as a tool for emerald ash borer management.  
*Thais B. Rodrigues* ([trodriques@greenlightbio.com](mailto:trodriques@greenlightbio.com))<sup>1</sup> and Lynne Rieske-Kinney<sup>2</sup>, <sup>1</sup>Universidade Federal de Lavras, Guaxupé, Brazil, <sup>2</sup>Univ. of Kentucky, Lexington, KY
- 9:43 AM 179** Molecular tools for understanding dispersal, gene flow and range expansion dynamics of the southern pine beetle (*Dendroctonus frontalis*).  
*Ryan Garrick* ([rgarrick@olemiss.edu](mailto:rgarrick@olemiss.edu))<sup>1</sup>, Anthony Cognato<sup>2</sup> and Nathan Havill<sup>3</sup>, <sup>1</sup>Univ. of Mississippi, Univ., MS, <sup>2</sup>Michigan State Univ., East Lansing, MI, <sup>3</sup>USDA - Forest Service, Hamden, CT

### Basic and Applied Research in Sustainable Pest Management: Lessons from the Past and Directions for the Future

Grand Bay Ballroom (Renaissance Mobile Riverview Plaza Hotel)

**Organizers:** Joseph Disi, Univ. of Georgia, Athens, GA and Ashfaq Sial, Univ. of Georgia, Athens, GA

- 8:00 AM 180** Prescription pesticide applications and their compatibility with the principles of IPM.  
*Scott Stewart* ([sdstewart@utk.edu](mailto:sdstewart@utk.edu)), Univ. of Tennessee, Jackson, TN
- 8:20 AM 181** Exploring and improving integrated techniques to manage plum curculio, *Conotrachelus nenuphar* Herbst (Coleoptera: Curculionidae), in peaches.  
*Jackie Lee* ([jalee@uaex.edu](mailto:jalee@uaex.edu))<sup>1</sup>, Michael Brown<sup>1</sup> and Taunya Ernst<sup>2</sup>, <sup>1</sup>Univ. of Arkansas, Little Rock, AR, <sup>2</sup>Univ. of Arkansas Fruit Research Station, Clarksville, AR
- 8:40 AM 182** Developing sustainable IPM programs for spotted-wing drosophila in organic systems: A continuing battle.  
*Ashfaq Sial* ([ashsial@uga.edu](mailto:ashsial@uga.edu))<sup>1</sup>, Rufus Isaacs<sup>2</sup>, Matthew Grieshop<sup>2</sup>, Christelle Guédot<sup>3</sup>, Vaughn Walton<sup>4</sup>, Kelly Hamby<sup>5</sup>, Mary Rogers<sup>6</sup>, Oscar Liburd<sup>7</sup>, Donn Johnson<sup>8</sup>, Frank Zalom<sup>9</sup>, Hannah Burrack<sup>10</sup>, Jana Lee<sup>11</sup>, Tracy C. Leskey<sup>12</sup>, Andrew Petran<sup>6</sup>, Dalila Rendon<sup>4</sup>, Philip Fanning<sup>2</sup>, Steven Van Timmeren<sup>2</sup>, Benjamin Jaffe<sup>3</sup>, Arielle Arseneault-Benoit<sup>5</sup>, Janine Spies<sup>7</sup>, Brian Gress<sup>9</sup> and Craig Roubos<sup>1</sup>, <sup>1</sup>Univ. of Georgia, Athens, GA, <sup>2</sup>Michigan State Univ., East Lansing, MI, <sup>3</sup>Univ. of Wisconsin, Madison, WI, <sup>4</sup>Oregon State Univ., Corvallis, OR, <sup>5</sup>Univ. of Maryland, College Park, MD, <sup>6</sup>Univ. of Minnesota, St. Paul, MN, <sup>7</sup>Univ. of Florida, Gainesville, FL, <sup>8</sup>Univ. of Arkansas, Fayetteville, AR, <sup>9</sup>Univ. of California, Davis, CA, <sup>10</sup>North Carolina State Univ., Raleigh, NC, <sup>11</sup>USDA - ARS, Corvallis, OR, <sup>12</sup>USDA - ARS, Kearneysville, WV
- 9:00 AM 183** The scale of the problem: Evaluating IPM in southeastern peach production.  
*Brett Blaauw* ([bblaauw@uga.edu](mailto:bblaauw@uga.edu)), Univ. of Georgia, Athens, GA
- 9:20 AM 184** Bee natural history traits affect pollinator sensitivity to imidacloprid - specialists versus generalists.  
*Blair Sampson* ([blair.sampson@ars.usda.gov](mailto:blair.sampson@ars.usda.gov))<sup>1</sup>, Ales Gregorc<sup>2</sup>, Mohamed Alburaki<sup>3</sup>, Chris Werle<sup>1</sup>, Shahid Karim<sup>3</sup>, John Adamczyk<sup>1</sup> and Patricia Knight<sup>2</sup>, <sup>1</sup>USDA - ARS, Poplarville, MS, <sup>2</sup>Mississippi State Univ., Poplarville, MS, <sup>3</sup>The Univ. of Southern Mississippi, Hattiesburg, MS

- 9:40 AM 185 Sustainability, IPM and urban pest management.  
*Nan-Yao Su* (*nysu@ufl.edu*), Univ. of Florida, Davie, FL
- 10:00 AM Break
- 10:16 AM 186 Little changes big impacts - a comparison between CDC and RAPID bottle bioassays for testing insecticide activities.  
*Joseph Disi* (*joseph.disi@uga.edu*) and *Ashfaq Sial*, Univ. of Georgia, Athens, GA
- 10:36 AM 187 Mating disruption and mating delays as sustainable pest management strategies for *Lasioderma serricorne* (F.).  
*Rizana M. Mahroof* (*rmahroof@scsu.edu*), South Carolina State Univ., Orangeburg, SC
- 10:48 AM 188 Recent developments in biotechnology and insect pest management.  
*Blair Siegfried* (*bsiegfried1@ufl.edu*), Ke Wu, Ke Wu and *Daniele Pinheiro*, Univ. of Florida, Gainesville, FL
- 11:08 AM 189 Resistance to *Bt* plants - lessons learned and future directions.  
*Michael Caprio* (*mcaprio@entomology.msstate.edu*), Mississippi State Univ., Mississippi State, MS
- 11:28 AM 190 Insecticide resistance: The impact, challenge, and perspectives.  
*Nannan Liu* (*liunann@auburn.edu*), Auburn Univ., Auburn, AL
- 11:48 AM 191 Field implementation of a multimodal attract-and-kill device for Asian citrus psyllids.  
*Stephen L. Lapointe* (*sl113@cornell.edu*)<sup>1</sup>, *Justin George*<sup>2</sup> and *Lukasz Stelinski*<sup>2</sup>, <sup>1</sup>USDA - ARS (Retd.), Fort Pierce, FL, <sup>2</sup>Univ. of Florida, Lake Alfred, FL

## Contributed Papers: Medical, Urban and Veterinary; Physiology, Biochemistry, and Toxicology; Systematics, Evolution, and Biodiversity

Jubilee Suite (Renaissance Mobile Riverview Plaza Hotel)

Moderator: Jeremy Pickens, Auburn Univ., Mobile, AL

- 10:30 AM Introductory Remarks
- 10:35 AM 192 Mississippi Bug Blues – 2017-2018 Overview.  
*Jason Sanders* (*jsanders@entomology.msstate.edu*), Mississippi State Univ., Mississippi State, MS
- 10:47 AM 193 Arthropods as vectors of human pathogens in animal agriculture.  
*Nancy C. Hinkle* (*nhinkle@uga.edu*)<sup>1</sup>, *Yumin Xu*<sup>2</sup>, *Jinru Chen*<sup>2</sup>, *Sha Tao*<sup>3</sup>, *Mark Harrison*<sup>1</sup> and *Aubree Kelly*<sup>4</sup>, <sup>1</sup>Univ. of Georgia, Athens, GA, <sup>2</sup>Univ. of Georgia, Griffin, GA, <sup>3</sup>Univ. of Georgia, Tifton, GA, <sup>4</sup>CDC, Atlanta, GA
- 10:59 AM 194 Stakeholder resources for management of the tawny crazy ant, *Nylanderia fulva* (Mayr).  
*Jeremy Pickens* (*pickej@auburn.edu*)<sup>1</sup>, *Fudd Graham*<sup>2</sup> and *Kelly Palmer*<sup>3</sup>, <sup>1</sup>Auburn Univ., Mobile, AL, <sup>2</sup>Auburn Univ., Auburn, AL, <sup>3</sup>Alabama Cooperative Extension System, Bay Minette, AL
- 11:11 AM 195 Phylogenomic insights into the global origins, diversification, and invasion of *Nylanderia* crazy ants (Hymenoptera, Formicidae).  
*Jason Williams* (*jwilli81@ufl.edu*)<sup>1</sup>, *Miles Zhang*<sup>2</sup>, *Michael Lloyd*<sup>3</sup>, *John S. LaPolla*<sup>4</sup>, *Ted Schultz*<sup>3</sup> and *Andrea Lucky*<sup>1</sup>, <sup>1</sup>Univ. of Florida, Gainesville, FL, <sup>2</sup>Univ. of Central Florida, Orlando, FL, <sup>3</sup>Smithsonian Institution, Washington, DC, <sup>4</sup>Towson Univ., Towson, MD

# INDICES

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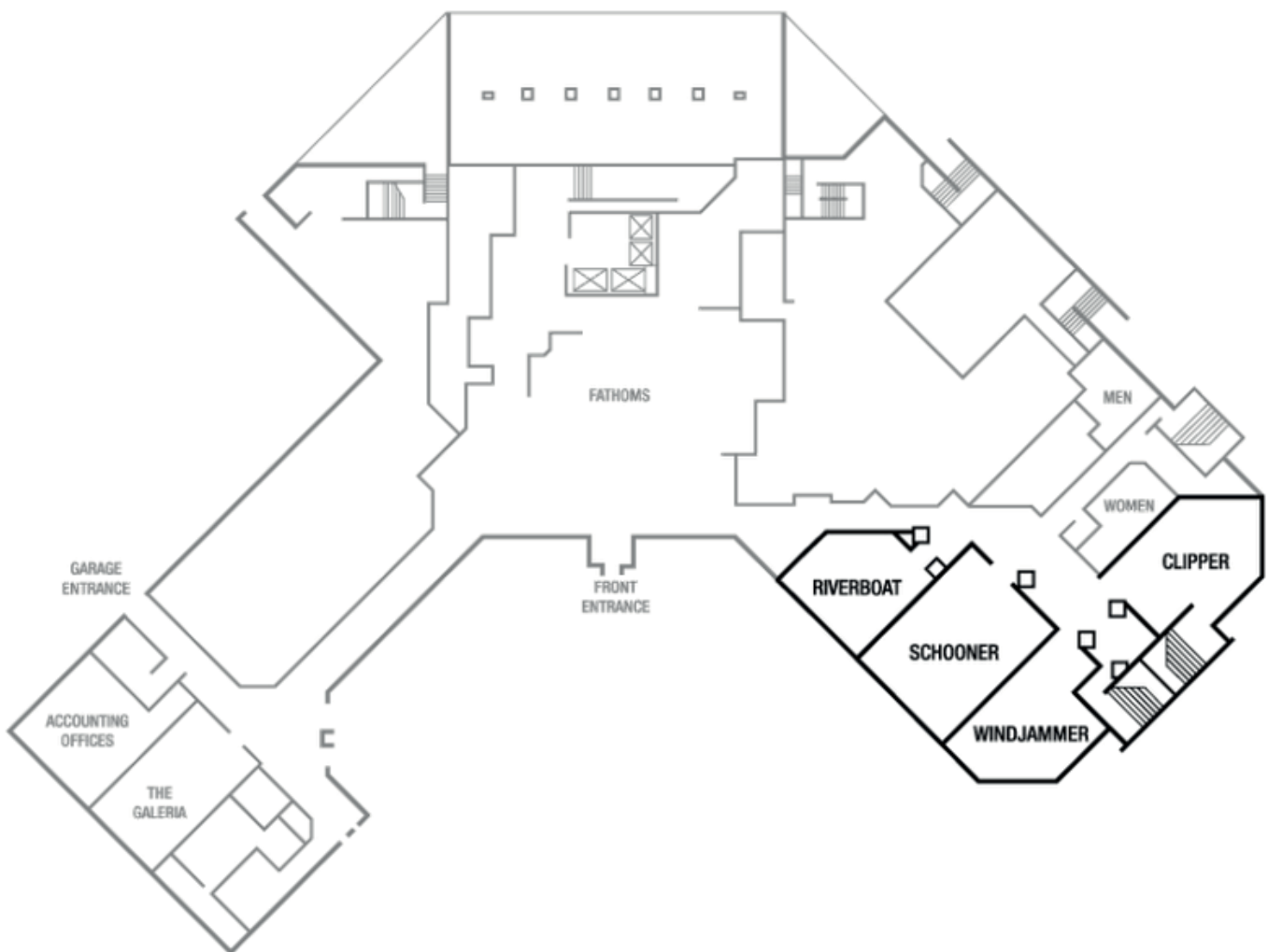
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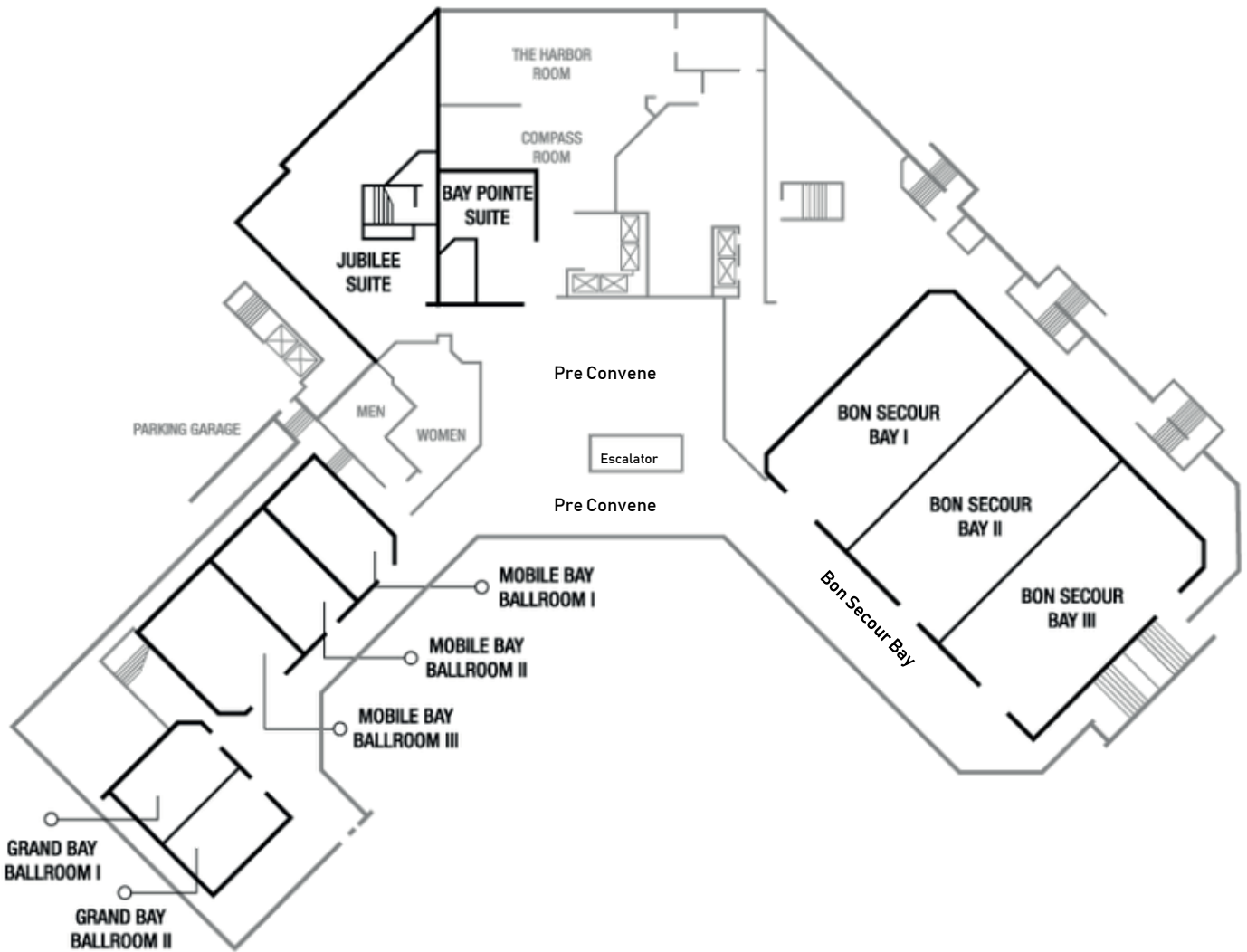
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# 1st Floor Level

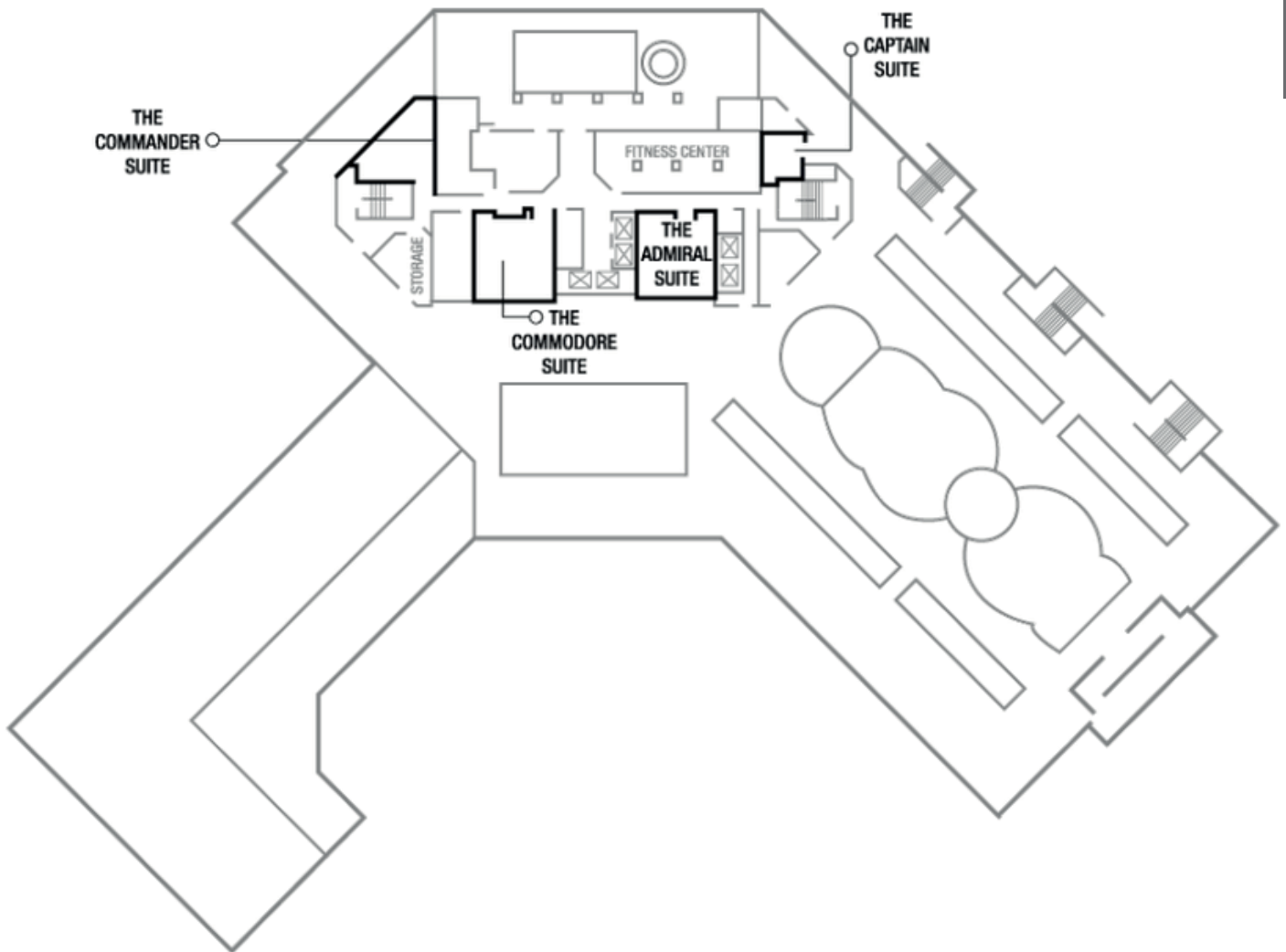




# 2nd Floor Level



# 4th Floor Level



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