



Entomology

NEWSLETTER



College of
Agriculture

2025

News from the LSU Department of Entomology

FROM THE DEPARTMENT HEAD

Alumni, supporters and friends of LSU Entomology,

Land-grant universities in the United States have a unique mandate to generate new knowledge that addresses practical societal challenges and to make that knowledge accessible to students and other residents who can benefit from it. As part of this system, the LSU Department of Entomology has a proud history of developing innovative solutions to insect-related problems and disseminating these solutions to Louisianans and beyond. This tradition of service to Louisiana and the world continued in 2024, and I am pleased to present this newsletter summarizing the activities and accomplishments of faculty, staff and students of the LSU Department of Entomology.



Dr. Michael Stout

As I write this greeting in early 2025, the LSU Department of Entomology is in a better position than ever to provide solutions to insect-related problems that have a global impact. Over the past three years, the department has hired six new full-time faculty and has also added two additional faculty with partial appointments in the department. Two of these new faculty, Drs. Stephen Baca and Dawson Kerns, are profiled in this newsletter. Our new faculty will bring energy, new skills and fresh perspectives as they establish their programs of research, teaching and extension.

See more, Page 3 ►

2024 Camp Crisp

Christine Gambino, an LSU AgCenter entomology extension associate, hosted Camp Crisp — a two-week summer camp designed to introduce high school students and their teachers to diverse career opportunities in agriculture. Camp Crisp was supported by a U.S. Department of Agriculture National Institute of Food and Agriculture grant, Climate Resilient Innovations for the Sustainable Production of Rice, CRISP-Rice.

With support from Dr. Michael Stout, head of the LSU Department of Entomology, participants visited research stations, including the H. Rouse Caffey Rice Research Station in Crowley, Louisiana, where they learned about insect pests affecting rice. They also toured multiple labs across the Baton Rouge campus, exploring topics ranging from animal science with Dr. Fabian Diaz to plant breeding with Dr. Prasanta Subudhi. A highlight of the camp was to tour the different disciplines of the College of Agriculture, with a particularly memorable visit to the Meat Sciences Laboratory with Manuel “Boo” Persica, research associate.

Stout and Gambino plan to continue offering this summer camp in the coming years of their grant.



Camp Crisp participants and leadership include, front row from left, Sincere Thomas, Jessica Damico, Christine Gambino, Adriana Dimas and Naduni Jayasinghe; and second row, Dr. Michael Stout, Samuel Dunn, Megan Hall, Rainie Adams, Paul Pittman, Italia Sterling, Stephen Kampen, Aimee Bourgeois and Dr. Prasanta Subudhi. Photo by Isabella Frank

LSU experts present at Research Summit	2
Support excellence in entomology.....	3
Extension activities	4
Spotlight on Huang's Lab	6
Meet Dr. Stephen Baca	8
Meet Dr. Dawson Kerns	8

Aaron Ashbrook: Helping with insect issues.....	9
Entomology Club	10
Student artwork	11
2024 Entomology Award Winners.....	12
2024 Entomology Graduates.....	16
Faculty activities	17



Attending the Roseau Cane Research Summit are, first row from left, Aaron DeVries, Joshua Broussard, Kelin Hu, Emily Shapiro, Logan Herbert, Flaminia Mariani, Karina Nolasco and Rodrigo Díaz; second row, Joshua Snook, Andrew Nelson, Ivan Grijalva, Bijaylaxmi Sahoo, Veronica Manrique, Zoie Harris, Derrick Boast and Tracy Quirk; and third row, Mike Martinson, Tanner Sparks, Dane Shackelford, Morgan Carrere, Olivia Hurley, Jonathan Richards, Vinson Doyle, Muzahidul Islam, Ethan Guardado, Matt Hiatt, Kory Konsoer, Jim Cronin, Mizbah Sresto, Sarah Brannum, Andy Nyman, Andrea Glassmire, Emily Steen and Basant Awashi. Photo by Amori Bieller

LSU entomology experts present at Roseau Cane Research Summit

Students and faculty from the LSU Department of Entomology attended the Seventh Annual Roseau Cane Research Summit held Jan. 8 at the LSU Hilltop Arboretum.

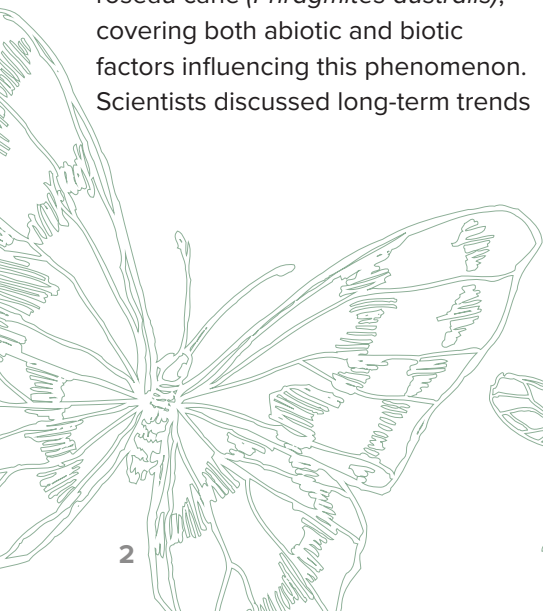
The summit featured 28 oral and poster presentations on the die-off of roseau cane (*Phragmites australis*), covering both abiotic and biotic factors influencing this phenomenon. Scientists discussed long-term trends

in wetland dynamics, soil salinity impacts and the role of abiotic factors in roseau cane dieback and recovery. The impact of the roseau cane scale infestation was explored through multi-sensor analyses, ecological studies and remote sensing techniques. Additionally, presentations highlighted the genetic diversity of roseau cane in the Mississippi River Delta, its metabolomic responses to environmental stressors and

restoration strategies using aerial imagery and planting techniques. The summit concluded with discussions on hydrodynamics, vegetation dynamics and the competitive interactions mediated by microbes post-dieback.

This yearly summit highlights the importance of bringing a strong multidisciplinary approach to address coastal restoration.

Rodrigo Díaz ■



Continued from Page 1

These new faculty, together with our more established faculty, published over 40 refereed articles in respected scientific journals in 2024 along with dozens of extension publications, videos and other nontechnical and general-interest articles. Our faculty and students presented over 250 talks at scientific meetings and to lay audiences. Research and extension expenditures, which measure the activity of a department by measuring how much money was spent on salaries, supplies and equipment, totaled approximately \$6.2 million, and over \$3 million in new funding was obtained by faculty in 2024. The department graduated six master's degree and two doctoral students, showing the continuing strength of our graduate programs. Several of our faculty members delivered presentations internationally, demonstrating the global reputation of our faculty.

It was a privilege to serve Louisiana in 2024 and we look forward to another successful year in 2025. This newsletter, in addition to providing information about departmental activities and achievements, serves as an invitation to our

alumni and friends to participate with us in our efforts. We welcome suggestions for improving our programs, and invite you reach out to us by email, phone, remote conference or, even better, by visiting us on campus. In addition, if you would like to donate to monetarily support any of our programs, details for doing so can be found in this newsletter.

Again, the Department of Entomology sincerely appreciates your support.

Michael J. Stout ■



HELP US TO ENSURE EXCELLENCE IN ENTOMOLOGY

While the department receives monetary support for its core research, extension and teaching programs, private financial support is vital for enhancing our existing programs, providing additional financial support for our students and beginning new initiatives. Please consider contributing to help support our programs.

You may help to support the Entomology Department by donating to one of the funds below:

- #100162 – Entomology Development Fund
- #100166 – Entomology Research Support Fund
- #104126 – Extension Entomology Development Fund
- #104131 – Louisiana State Arthropod Museum Fund
- #104133 – Entomology and Alternate Uses
- #104134 – Integrated Pest Management Research Fund
- #104135 – Arthropod Pest Management Program Support Fund
- #105260 – Louisiana Mosquito Control Association Endowed Scholarship

Donations can be made by accessing the LSU Foundation site at www.lsufoundation.org or by sending a personal check made out to the LSU Foundation with a letter stating which fund you would like to donate to. Address the letter to:

Entomology Department
404 Life Sciences Building
LSU Campus
Baton Rouge, LA 70810
225-578-1628

For more information contact:
Michael J. Stout
Professor and Department Head
mstout@agcenter.lsu.edu



Extension activities include BugFest, College of Ag Day and more



Extension activities for the year included a trip to Barefoot University held in Moncus Park in Lafayette to teach attendees how to create an insect collection. Photo by Victoria Bayless

In October, Drs. Aaron Ashbrook, Stephen Baca and Michael Stout along with Christine Gambino, extension associate, presented at a booth at the 2024 New Orleans BugFest, hosted by the New Orleans Mosquito, Rodent and Termite Control Board. This was the second time that LSU entomology has attended the event. There were over 1,800 attendees and 40 exhibitors with many great interactions at the event.

Ashbrook dressed as a cockroach and interacted with guests, in addition to sharing information on how to prevent cockroaches indoors.

One highlight was when an attendee held a Madagascar hissing cockroach and stated, "This is so calming, that I could meditate with the cockroach in my hand."

Many BugBiz and other entomology produced fact sheets were distributed. Baca brought drawers from the

Louisiana State Arthropod Museum and showed some of Louisiana's native fauna as well as other insects from around the world. Gambino taught attendees about agricultural pests in rice field and best practices in agriculture.

LSU Entomology will be at the 2025 BugFest which will focus on insects and rodents in the movies.

See you there!

Aaron Ashbrook ■



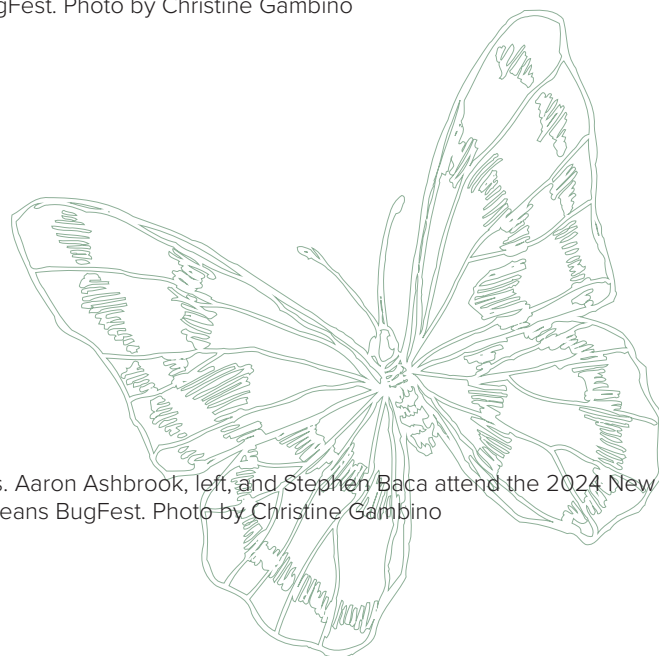
The Department of Entomology showcased insects at the College of Ag Day at the Hill Farm Teaching Facility in Baton Rouge. At the event are, from left, Dr. Michael Stout, Andrew Sandford, Christine Gambino, Danyal Khan and Schyler Lee Thibodeaux. Photo by Isabella Frank



Dr. Aaron Ashbrook, left, and Timmy Madere, pest control specialist with the New Orleans Mosquito, Rodent and Termite Control Board, dress as cockroaches during the 2024 New Orleans BugFest. Photo by Christine Gambino



Dr. Michael Stout shows a bug to table visitors at the New Orleans BugFest. Photo by Christine Gambino

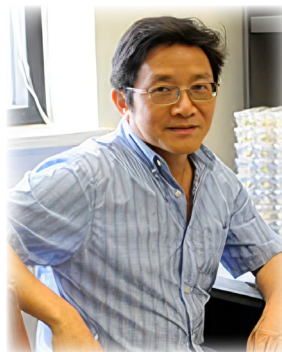


Drs. Aaron Ashbrook, left, and Stephen Baca attend the 2024 New Orleans BugFest. Photo by Christine Gambino

Spotlight on Huang's Corn and Small Grain Insect Research Lab

Field corn and small grains represent substantial acreage and contribute significant crop value to agriculture in Louisiana. Compared to other regions of the United States, the weather conditions and complex agricultural ecosystems in Louisiana create a unique environment that results in development of significant pest infestations of corn and small grain crops. Two technological revolutions in management of field crop insect pests are responsible for major agroecological changes in modern agricultural systems in the U.S.: transgenic plants and seed treatments.

Huang's Lab in the Department of Entomology at the LSU AgCenter has focused on the use of these two technologies in managing corn and small grain insect pests. During the past two decades, Huang's research team has maintained a strong research program that has received national and international recognition in management of corn/small grain pests and Bt resistance. Specifically, the lab's research program combines four main aspects: 1) risk assessment, monitoring and management of insect resistance to transgenic Bt crops to ensure the long-term success of the biotechnology as an effective integrated pest management tool; 2) assessment of new Bt toxins and transgenic crop traits with novel Bt genes for managing above-ground lepidopteran pests; 3) evaluation of seed treatment technologies for managing soil and seedling insect pests of corn and grain sorghum; and 4) characterization of laboratory and field biology/ecology of corn and small grain insects.



■ **Dr. Fangneng Huang** is the L.D. Newsome Professor for IPM in the department. Huang was born and grew up in a farming family in southwest China. He received his Bachelor of Science in 1983 and a Master of Science in 1986 from Southwest Agricultural University in Chongqing, China, and earned his doctorate in 1998 from Kansas State University in

Manhattan, Kansas. He was a faculty member for seven years at Nanjing Agricultural University, Nanjing, China, and a research scientist (postdoc or senior scientist) for six years at K-State. He joined LSU as an assistant professor in 2004 and was promoted to full professor in 2014. As of 2024, Huang, along with his students and other colleagues, have more than 300 publications including 161 referred journal articles, seven book chapters and four books/special issues, and have delivered more than 300 formal oral presentations, including more than 80 invited, and poster displays at professional meetings. Many of the referred articles were published in top national and international journals including one in *Science* and one in *Nature Biotechnology*. In recognition of Huang's outstanding work in IPM, he was the 2013 recipient of the Award for Excellence in IPM of the ESA-Southwestern Branch, the recipient for the 2011 LSU AgCenter's G&H Seed Company Research Excellence Award and earned the 2023 LSU AgCenter's Doyle Chambers Research Award. In 2017, he was selected to be the L.D. Newsom Endowed Professor for IPM. Since 2019, Huang has been listed among the world's top 2% scientists by Stanford University's scientist rankings.



■ **Tiago Henrique da Silva** was born in Brazil and spent his early years in Santa Cruz das Palmeiras, São Paulo, where he developed a deep passion for nature. He earned his Bachelor of Science in agronomy from Unicastelo University, graduating in 2018. With professional experience at companies such as Monsanto/Bayer, where he worked on insect resistance management, and Bequisa, where he was involved in the international trade of insecticides, Silva solidified his interest in entomology. This passion led him to join Huang's Lab as a master graduate student in the fall of 2021. His Master of Science research focused on 1) investigation of the susceptibility of fall armyworm populations in the southern U.S. to four commonly used Bt proteins expressed in transgenic corn, and 2) evaluation of the larval survival and development of dual-gene Cry1A.105/Cry2Ab2-susceptible, heterozygous and resistant corn earworm genotypes on various non-Bt and pyramided Bt corn traits. His Master of Science research documented the first case that resistance to a Bt crop in the field can be reverted to susceptible status. Results generated from his master's study

See more, Page 7 ►

HUANG'S CORN AND SMALL GRAIN INSECT RESEARCH LAB

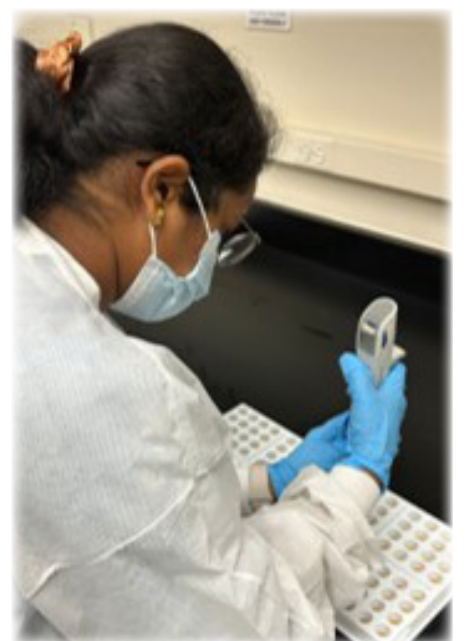
Continued from Page 6

have been published in two international journals. In May 2023, Silva successfully defended his master's thesis. Following his graduation, he worked as a researcher at the Centro de Tecnologia Canavieira (CTC) in Brazil until he rejoined the Department of Entomology as a research associate in 2024. He plans to further his academic journey by starting his doctoral studies in Huang's Lab in the fall.

■ **Shucong Lin** was born in Fujian, China. In 2015, he was admitted to the College of Forest Protection at the China Agricultural University in Guangzhou, China. During his college studies, he joined Dr. Cai Wang's Lab and participated in several research programs related to insect behavior. In 2019, he received his Bachelor of Science and continued his master study in Huang's Lab at the LSU AgCenter. His Master of Science study at LSU included two objectives: 1) determine the resistance allele frequencies to Cry1Ab and Vip3A proteins in the corn earworm populations in the southeastern United States, and 2) investigate the phenotypic performance of Cry1A.105/Cry2Ab2 single- or dual-gene resistant corn earworm populations on non-Bt diet and diet treated with low-dose Bt proteins. The data generated from his Master of Science research has been published in two referred journal articles. He finished his master's program in 2021 and rejoined Huang's Lab to continue his doctoral study in 2022. His research project aims to: 1) investigate the mating and reproductive behaviors of the corn earworm under varied biotic factors in lab conditions to improve laboratory rearing and maintenance of the insect; and 2) analyze the confounded effects of heterogeneous genetic backgrounds among corn earworm genetic populations on the measurement of fitness costs and dominance levels of Bt resistance. To date, he has completed most of the lab work of his doctoral research project. He has received two awards from doctoral student presentation competitions at Entomology Society of America and ESA Southeastern Branch conferences.



■ **Bhavana Patla** was born and grew up in Hyderabad, India. Her upbringing in this vibrant city instilled in her a deep appreciation for tradition and innovation, fostering her interest in agriculture and its potential for sustainable development. Alongside her love for agriculture, Patla has also dedicated herself to the classical art of Kuchipudi dance, achieving notable success and recognition for her talent and dedication in this traditional art form. She earned her Bachelor of Science (honors) in agriculture from Professor Jayashankar Telangana State Agricultural University in India in 2022. She then began her master's program in the Department of Entomology at LSU. She conducted her thesis research in Huang's Lab to evaluate the susceptibility of fall armyworm and corn earworm populations in the southern United States to common chemical insecticides, showcasing her dedication to advancing knowledge in agricultural entomology. She received her Master of Science degree in August. Because of her excellent graduate work, Patla was the recipient of the Boethel Scholarship M.S. Graduate Student Award in Entomology in 2024. Planning to utilize her newfound expertise to make meaningful contributions to agricultural development, Patla started her doctoral study in the fall in Huang's Lab. With a deep-rooted passion for sustainability and innovation, she aims to apply her knowledge and skills towards addressing some pressing challenges in agriculture.



Meet Dr. Stephen Baca, new assistant professor of insect systematics and director of the Louisiana State Arthropod Museum



Dr. Stephen Baca

I am the new assistant professor of insect systematics and director of the Louisiana State Arthropod Museum. I study the biodiversity and evolution of aquatic insects, with a strong focus on aquatic beetles. I was a nontraditional student, working different jobs before earning my associate degree at Central New Mexico Community College and transferring to the University of New Mexico to complete a Bachelor of Science in biology. There, I began research in aquatic beetle taxonomy with Dr. Kelly Miller. I attended the University of Kansas for graduate studies, earning both my Master of Arts in entomology and doctorate in ecology and evolutionary biology under the advisement of Dr. Andrew Short. My graduate work focused on integrating taxonomy with molecular phylogenetics and genomics to study the systematics and biogeography of aquatic beetles across evolutionary time. As an NIH-IRACDA postdoc, I joined Dr. Rob Moyle's avian systematics lab at KU where I applied advanced genomic methods to study phylogeography in beetle and avian systems while instructing courses at Haskell Indian Nations University.

At LSU, my research will focus on using aquatic insects as model systems for investigations of biodiversity, evolution and environmental impacts. As the LSAM director, I will steward the collection and its continued service as a posterity-focused resource for LSU, Louisiana and the global entomological research community.

Meet Dr. Dawson Kerns, assistant professor of entomology

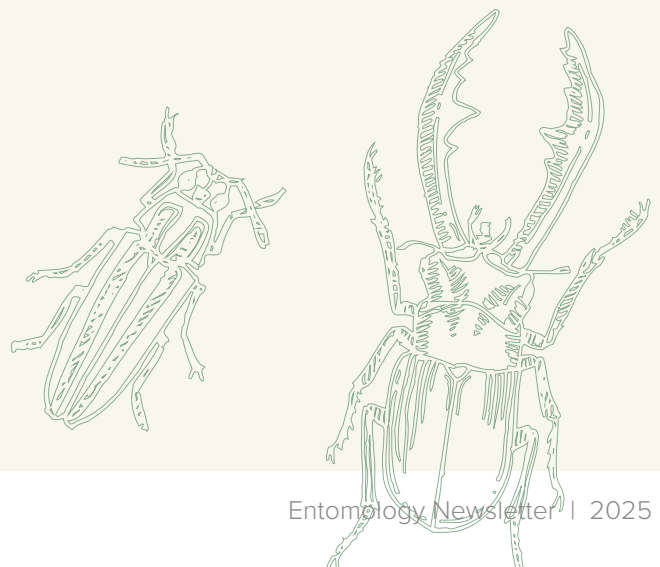


Dr. Dawson Kerns

I am a new assistant professor in the Louisiana State University Department of Entomology, and I am a field crops entomologist with the LSU AgCenter. I have been involved in agriculture since I was young, and I want to do all I can to support agriculture in the state of Louisiana.

In 2018, I earned my Bachelor of Science in entomology from Texas A&M University. At the University of Tennessee, I earned my Master of Science in entomology under the guidance of Dr. Scott Stewart in 2020 and my Ph.D. in entomology under Dr. Scott Stewart and Dr. Juan Luis Jurat-Fuentes in 2024. My graduate work focused on monitoring and characterizing resistance to Bt corn and cotton in corn earworm.

My research will focus on integrated pest management of insects in corn, cotton, soybean and sorghum. My goal is to enhance our knowledge of agricultural pests in Louisiana and develop long-term solutions that are effective, economical and applicable for growers.



Aaron Ashbrook: Helping others with insect issues is a fascinating challenge



As an extension entomologist, researcher and teacher, Aaron Ashbrook helps Louisiana residents and pest control operators learn the best ways to treat the insects that have become a nuisance. Photo by Kyle Peveto

For entomologist Aaron Ashbrook, the insect-rich environment of Louisiana is a fascinating place to work.

“We have more insects in this climate,” he said. “Subtropical areas, like we are in, that warmer temperature and humidity allows for insects to be alive longer, allows them to reproduce more and have more generations per year.”

It’s also a challenge. Staying on top of the state’s insects means continually investigating and conducting research.

“It’s good for us in pest management,” he said. “There’s always something to do.”

As an extension entomologist, researcher and teacher, Ashbrook regularly helps Louisiana residents and pest control operators learn the best ways to treat the insects that have become a nuisance. He leads training sessions and answers inquiries from AgCenter agents.

“His expertise in entomology is exceptional, particularly in his ability to quickly identify insects and provide effective responses,” said Ed Brooks, an account manager for a pest control service based in Baton Rouge. “His extensive knowledge of industry-specific products and treatment

procedures has been crucial in addressing challenging pest infestations.”

Growing up in Coloma, Michigan, near the banks of Lake Michigan, Ashbrook loved animals. He likes to fish, he earned his Boy Scouts insect collection merit badge and he admits to being enamored with dinosaurs as a kid. His favorite was the triceratops or the ankylosaurus (their armoring and spikes were awesome, he said).

In college at Grand Valley State University in western Michigan, Ashbrook started out pre-med and then switched to biology. His heart was in insects.

“I wanted to have a job that wasn’t necessarily work,” he said.

Because Grand Valley lacked an entomology major, Ashbrook took all the courses he could that helped him gain knowledge in the field and worked in research labs for experience. One summer he collected butterflies in a restored prairie, and in another project, he pinned insects to prepare them for measurement.

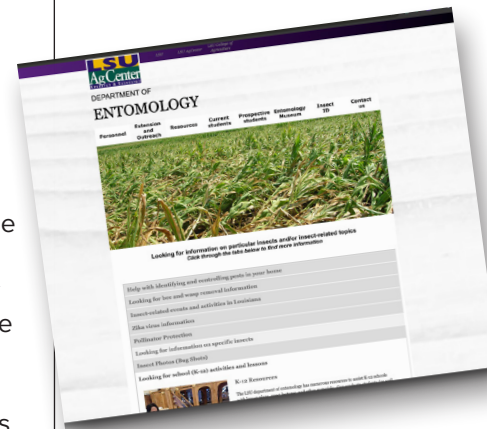


Aaron Ashbrook holds a cockroach in his hand. Photo by Kyle Peveto

Ashbrook didn’t dream of becoming a professor when he went to Purdue University in Indiana to start his master’s degree.

“I was just interested in it, and I enjoyed it,” he said.

At Purdue, Ashbrook delved into urban entomology,



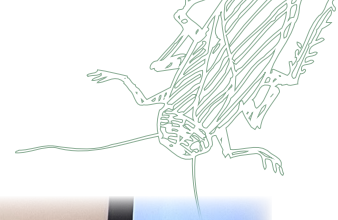
THE LSU AGCENTER CAN HELP WITH PESTS AT HOME

Insects or other arthropod pests can become a nuisance in and around your home. Aaron Ashbrook, assistant professor of urban and peri-urban entomology, can help identify problem pests and give advice on how best to treat them.

Ashbrook and the Entomology Department staff can identify pests through pictures or dead specimens and recommend the correct treatment. In difficult-to-solve cases, a diagnostician will inspect the affected property to properly understand the pest.

To learn more, visit the Entomology Department website at <https://www.lsu.edu/departments/entomology/extension.html>.

See more, Page 11 ►



News from LSU Entomology Club



The officers for the Entomology Club are, from left, Brandi Misiaszek, Christine Gambino, Jyoti Sharma, Anjana Duwal, Vanshika Jindal and Dr. Aaron Ashbrook. Photo by Allyson Martin Ewert

In 2024, the LSU Entomology Club continued its mission of promoting entomology through a mix of social events and educational outreach. The club has been shifting to include more undergraduate students though a lot of graduate students participate. The 2024-2025 officers are Christine Gambino, president; Jyoti Sharma, vice president; Brandi Misiaszek, social media manager; Anjana Duwal, treasurer; Vanshika Jindal, secretary; and Dr. Aaron Ashbrook, faculty adviser.

In the past year, members of Entomology Club have done multiple community education events including giving a talk demonstrating insect collections to a group of homeschooled students at Moncus Park in Lafayette and hosting educational booths at community events including the LSU AgCenter

Spring Garden Show, AgMagic and an insect-themed Halloween Art and Nature Festival. Through these events, the club inspired interest and excitement about insects in young students by leading hands-on learning activities. The club also participated in several entomological expeditions, a group collection hike at the Botanic Gardens at Burden and a black lighting event at the LSU Hilltop Arboretum. Other club events included a shirt-making competition, making Mardi Gras jewel beetle masks, a spring crawfish boil, a fall tailgate for the LSU vs. Auburn football game and a Halloween screening of the 1986 movie "The Fly."

Overall, it was an un-bee-lievable year for the entomology club, and we're buzzing with excitement for next year!



Entomology Club members hunt bugs at the Idlewild Research Station. Participants included, from left, Anjana Duwal, Christine Gambino, Jyoti Sharma, Madeline Phillips, Bandana Shrestha and Vanshika Jindal. Photo by Tanner Sparks

STUDENT ARTWORK

“Libélula”

In many cultures, dragonflies symbolize transformation, adaptability and self-realization, mostly because they spend the early time of their life underwater as nymphs and through a dramatic metamorphosis emerge to take flight, rising from the depths to the sky. They can fly in any direction — up, down and sideways — showing flexibility and adaptation. They have a short adult life which reminds me of living the moment and enjoying the present.



Carlos Jose Rivera
Stippling technique with ink pen on
black watercolor paper
IG: @art.by.carlos_
March 2024

Continued from Page 9

learning ways to improve pest management by “exploiting insect behavior,” he said. He studied bed bugs and German cockroaches, two of the most feared insects that may invade homes.

Ashbrook considered working in the pest control industry, but he chose to keep researching and earned a doctorate at Purdue. He continued studying cockroaches and bed bugs in a postdoctoral research role at North Carolina State University.

In 2022, Ashbrook joined LSU and the AgCenter as an assistant professor of urban and peri-urban entomology.

Over the past two and a half years, Ashbrook has worked with entomologists from the University of Tennessee and University of Georgia who led a working group researching delusory infestations — a neuropsychological condition that occurs when people become convinced that insects are infesting them when no insects are present.

“It’s a challenge,” he said. “You must be careful. They are people that are suffering from a real condition.”

Ashbrook helped develop a protocol for extension agents and pest control operators for handling these delicate situations. He teaches them to trap insects or help guide the affected person to collect potential specimens. The agent or operator also gives a list of possible irritants that could cause the condition. If no solution is found, the person is encouraged to contact a doctor.

“What usually happens is these individuals, they just get moved around from entomologist to pest control operator to doctor because the doctor thinks they have a real pest issue,” Ashbrook said.

Spreading the word about this affliction offers an opportunity to truly help, he said.

“One of the cool things about being in extension is the people,” Ashbrook said. “I get to help people with their problems.”

This article appeared in the fall 2024 edition of Louisiana Agriculture magazine. Kyle Peveto ■



2024 ENTOMOLOGY AWARD WINNERS

96th Annual Meeting of the Southeastern Branch Entomological Society of America

March 2024, Augusta, Georgia

John Henry Comstock Award

- **Dr. Ethan Doherty** is a postdoctoral fellow at Clemson University, split between the Department of Mathematical and Statistical Sciences and the Department of Forestry and Environmental Conservation. Collaborating with the U.S. Department of Agriculture Animal and Plant Health Inspection Service on a multi-institutional project, he is modeling the spread of invasive Asian long-horned beetles throughout the U.S. Doherty received his Ph.D. from LSU in 2023, supervised by Drs. Blake Wilson and Qian (Karen) Sun. His dissertation took an interdisciplinary approach towards stored rice pest management by exploring pest behavior, chemical ecology, biological control, hostplant resistance and chemical control. During his Ph.D., he served as president of the LSU Entomology Student Association. Previously, he had received a Master of Science in entomology and nematology from the University of Florida, where he also served as fundraising chair of the student organization. While originally from Chapel Hill, North Carolina, he earned his Bachelor of Arts in biology from The College of Wooster in Ohio. His diverse research background has allowed him to work in a variety of fields, from entomology to primatology to microbiology. Outside the office, he enjoys a few creative pursuits, including music composition, writing, game design and digital illustration.

Kirby Hays Memorial Award

- **Garima Setia** is a research technician at Memorial Sloan Kettering Cancer Center, examining selfish genes and small RNAs involved in sex ratio distortion in *Drosophila*. She recently completed her Master of Science in molecular entomology from LSU, investigating the potential role of termites as pathogen vectors in ironwood tree decline in Guam. Her thesis integrated extensive field work collecting termites, lab bioassays examining termite feeding preferences and high-throughput 16S rRNA sequencing and analysis of termite gut microbiomes to elucidate microbial community patterns. She has coauthored several publications from this work and presented at various conferences. Additionally, Setia obtained training in molecular biology techniques during her undergraduate program at Punjab Agricultural University. Setia is passionate about unraveling evolutionary mysteries in the natural



Dr. Rodrigo Diaz, left, and Dr. Michael Stout, right, join the 10-Minute Oral Presentation Master's I winners, from left, Reuel Pablo, Victoria Ayala and Jayvee Bruno. Photo by Tyler Ray T. Musgrove



Dr. Rodrigo Diaz, left, and Dr. Michael Stout, right, join the 10-Minute Oral Presentation Master's II winners, from left, Celeste Mejia, Brandi Misiaszek and Vanshika Jindal. Photo by Tyler Ray T. Musgrove



Dr. Rodrigo Diaz, from left, poses with 10-Minute Oral Presentation Ph.D. I winners Tyler Ray T. Musgrove and Jyoti Sharma, along with Dr. Michael Stout. Photo by Schyler Lee

See more, Page 13 ►

2024 ENTOMOLOGY AWARD WINNERS

Continued from Page 12



Dr. Rodrigo Diaz, left, and Dr. Michael Stout, right, present certificates to the 10-Minute Oral Presentation Ph.D. II winners Arjun Khadka, from left, and Schyler Lee. Photo by Tyler Ray T. Musgrove



Karina Nolasco, center, shows the certificate as the first-place winner of the 3-Minute Oral Proposals with Drs. Rodrigo Diaz, left, and Michael Stout. Photo by Tyler Ray T. Musgrove



Dr. Michael Stout, right, presents the L.D. Newsom Memorial Graduate Student Award in Entomology (Ph.D.) to Arjun Khadka. Photo by Tyler Ray T. Musgrove

world through multidisciplinary research leveraging multi-omics tools. Setia has remained active in science outreach efforts, enthusiastically volunteering to share her excitement for entomology. Beyond academics, she pursues interests including reading, teaching students from diverse backgrounds and traveling to experience new cultures and destinations.

Outstanding M.S. Oral Presentations

- **Christine Gambino** – Second place, Session I, Influence of insect pest infestations in the main and ratoon crops on rice yields in Louisiana
- **Joel DuBois** – Second place, Session III, Underutilized characters in Acmaeoderini (Coleoptera: Buprestidae)

LSU Graduate Research Conference

April 2024

Poster Presentation

- **Vanshika Jindal** – Third place, Assessing Response of Two Biological Control Agents of the Emerald Ash Borer to Five Species of Ash Trees
- Oral Presentation
- **Hasim Hakanoglu** – First place, Differences in Lifespan and Behavioral Maturation Between Honey Bee (*Apis mellifera*) Workers From Varroa Resistant and Sensitive Stocks

International Temperate Rice Conference

May 2024

Oral Presentation

- **Jyoti Sharma** – Second place, Effect of Silicon Uptake Capacity and Herbivory on Silicon Accumulation in Rice at Local and Systemic Levels. **Jyoti Sharma**, Thomas Tai, Michael J. Stout

14th Annual LSU Entomology Department Graduate Student Symposium

October 2024

10-Minute Oral Presentations Master's I

- **Victoria Ayala** – First place, A real-time giant salvinia (*Salvinia molesta*) detection tool to improve targeted manipulation of salvinia weevil (*Cyrtobagous salviniae*) populations in Southern Louisiana. **Victoria Ayala**, David Kinsler, Ivan Grijalva, Rodrigo Diaz
- **Reuel Pablo** – Second place, Is cannabis aphid a vector of sweetpotato feathery mottle virus? **Reuel Pablo**,

See more, Page 14 ►

2024 ENTOMOLOGY AWARD WINNERS

Continued from Page 13

Jeffrey A. Davis

- **Jayvee Bruno** – Third place, Evaluating the role of silicon soil amendments in managing insect pests of soybean. **Jayvee Bruno**, James Villegas, Michael Stout, Jeff Davis, Brenda Tubana, Saurav Ranabhat, Leroy Lopez, Edward O’Neal

10-Minute Oral Presentations Ph.D. I

- **Jyoti Sharma** – First place, Investigating the impact of silicon accumulation on constitutive and herbivore-induced gene expression using OsLsi1 deficient mutant rice lines. **Jyoti Sharma**, Rajat Pruthi, Thomas Tai, Michael Stout
- **Tyler Musgrove** – Second place, Determining the impact of cultivar resistance against the rice billbug (*Sphenophorus pertinax* Olivier) in furrow-irrigated rice (*Oryza sativa* L). **Tyler Musgrove**, James Villegas, Michael Stout, Blake Wilson

10-Minute Oral Presentations Master’s II

- **Brandi Misiaszek** – First place, Phenology of the Non-Native Ligustrum Weevil *Ochyromera ligustri*: Insights and Implications for Biological Control. **Brandi Misiaszek**, Emily Steen, Amy Roda, Rodrigo Diaz
- **Celeste Mejia** – Second place, Efficacy of nano-formulated azadirachtin in controlling green peach aphid (*Myzus persicae*). **Celeste Mejia**, Carlos E. Astete, Cristina M. Sabliov, Jeffrey A. Davis
- **Vanshika Jindal** – Third place, Assessing the impact of physiological condition on the response of two biological control agents of the emerald ash borer to a known attractant. **Vanshika Jindal**, Todd Johnson

10-Minute Oral Presentations Ph.D. II

- **Schlyer Lee** – First place, Population dynamics of the Mexican rice borer, *Eoreuma loftini* (Dyar), in commercial Louisiana sugarcane. **Schlyer Lee**, Blake Wilson
- **Arjun Khadka** – Second place, Molecular regulation of age polytheism in the Formosan subterranean termite, *Coptotermes formosanus*. **Arjun Khadka**, Hasim Hakanoglu, Sang-Bin Lee, Qian Sun

3-Minute Oral Proposals

- **Karina Nolasco** – First place, Harnessing *Phragmites australis* genetic diversity to promote coastal restoration. **Karina Nolasco**, Josh Snook, Rodrigo Diaz, James Cronin, Jonathan Richards



Dr. Michael Stout, right, presents the L.D. Newsom Memorial Graduate Student Award in Entomology (Master's) to Bandana Shrestha. Photo by Tyler Ray T. Musgrove



Dr. Michael Stout, right, presents the David J. Boethel Graduate Student Award in Entomology (Master's) to Bhavana Patla. Photo by Tyler Ray T. Musgrove



Dr. Michael Stout, right, presents the David J. Boethel Graduate Student Award in Entomology (Ph.D.) to Jyoti Sharma. Sharma also won the John and Grace Roussel Graduate Fellowship Award in Entomology. Photo by Tyler Ray T. Musgrove



Dr. Rodrigo Diaz, from left, poses with poster session winners, Christine Gambino, Allyson Martin Ewert and Srabani Saha. With them is Dr. Michael Stout. Photo by Tyler Ray T. Musgrove

See more, Page 15 ►

2024 ENTOMOLOGY AWARD WINNERS

Continued from Page 14

Poster Session

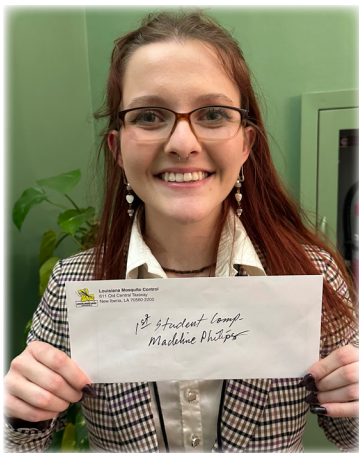
- **Allyson Martin Ewert** – First place, Enhancing honey bee immunity with microalgal feed additives. **Allyson Martin Ewert**, Alexander McMenamin, Daniela Adjaye, Victor Rainey, Claudia Husseneder, Vincent Ricigliano
- **Srabani Saha** – Second place, Harnessing miRNAs to combat stinkbug infestations in soybeans. **Srabani Saha**, Honglin Feng
- **Christine Gambino** – Third place, Effects of Soil Health on Pest Resistance in Rice. **Christine Gambino**, Blake Wilson, Michael Stout

2024 Annual Meeting of the Entomological Society of America

November 2024, Phoenix, Arizona

10-Minute Paper Competition

- **Schyler Lee Thibodeaux** – First place, Population dynamics of the Mexican rice borer, *Eoreuma loftini* (Dyar), in commercial Louisiana sugarcane. **Schyler Lee Thibodeaux**, Blake Wilson
- **Tyler Ray T. Musgrove** – Second place, Determining the impact of resistant cultivars against the rice billbug (*Sphenophorus pertinax*) in furrow-irrigated rice (*Oryza sativa* L)



Madeline Phillips won first place in the oral presentation competition at the Louisiana Mosquito Control Association's annual meeting. Photo by Katie Kelly

Society of Overseas Nepalese Entomologists Annual Meeting

November 2024

3-Minute Oral Presentation

- **Anjana Duwal** – Second place, Do foliar insecticides applied for stink bug adults impact stink bug egg eclosion and nymphal survival?

Louisiana Mosquito Control Association Annual Meeting

December 2024

Oral Presentation

- **Madeline Phillips** – First place, A Risk Assessment of Alpha gal Syndrome in Louisiana

Louisiana Division, American Society of Sugar Cane Technologists Fellowship

- **Schyler Lee Thibodeaux**

Department Awards

David J. Boethel Graduate Student Award in Entomology

- **Jyoti Sharma** – Ph.D.
- **Bhavana Patla** – Master's

John and Grace Roussel Graduate Fellowship Award in Entomology

- **Jyoti Sharma** – Ph.D.

The L.D. Newsom Memorial Graduate Student Award in Entomology

- **Arjun Khadka** – Ph.D.
- **Bandana Shrestha** – Master's ■



Schyler L. Thibodeaux attended the Entomological Society of America annual meeting in Phoenix, Arizona. Photo by Tyler Ray T. Musgrove

2024 ENTOMOLOGY GRADUATES



Tanner Sparks being hooded by Dr. Blake Wilson. Photo by Aaron Ashbrook

Alexia Desoto, M.S. – Spring 2025

[Settling Preference of *Nipponaclerda biwakoensis* \(Hemiptera: Acleridae\) on *Phragmites australis* Stems](#)
Advised by Drs. Michael Stout and Andrea Glassmire

Junyan Chen, Ph.D. – Summer 2024

[Investigation of the core microbiota of the Formosan subterranean termite, *Coptotermes formosanus* \(Blattodea: Rhinotermitidae\): its impact on pair formation, changes during early colony development and geographic diversity of bacteriophages](#)
Advised by Dr. Claudia Husseneder

Mollie Dimise, M.S. – Summer 2024

[Cold Tolerance Evaluations of *Culex quinquefasciatus* and *Culex pipiens* with the Ice Nucleator *Pseudomonas fluorescens*](#)
Advised by Dr. Kristen Healy

Joel Dubois, M.S. – Summer 2024

[Revisionary Taxonomy within the *Acmaeoderini*](#)
Advised by Drs. Jeff A. Davis and Nathan Lord

Bhavana Patla, M.S. – Summer 2024

[Susceptibility of *Spodoptera frugiperda* and *Helicoverpa zea* populations in the Southern region of the United States to common chemical insecticides](#)
Advised by Dr. Fangneng Huang

Evan Davies, M.S. – Fall 2024

[Southern house mosquito \(*Culex Quinquefasciatus* Say\): association with onsite wastewater treatment systems in St. Tammany Parish, Louisiana, its tolerance to ammonium hydroxide, and the effects of ammonium hydroxide on its life history traits, oviposition choice and behavior](#)
Advised by Dr. Kristen Healy

Bandana Shrestha, M.S. – Fall 2024

[Determining the impact of lethal temperature and relative humidity when combined with various insecticide classes against a bed bug \(*Cimex lectularius*\) population.](#)
Advised by Dr. Aaron Ashbrook

Tanner Sparks, Ph.D. – Fall 2024

[Biological control of roseau cane scale with parasitoid wasps in Louisiana](#)
Advised by Dr. Rodrigo Diaz

FACULTY ACTIVITIES

Aaron R. Ashbrook

Invited Presentations

- Management of Louisiana Cockroach Species. LSU Winter Institute. January 2024.
- Management and Behavior of Bed Bugs. LSU Winter Institute. January 2024.
- Biology and Management of Louisiana Turf Pests. LSU Turf Association Annual Conference. January 2024.
- Delusory Parasitosis Training for Agents and Pest Control Operators. LSU Winter Institute. January 2024.
- Biology and Management of Louisiana Cockroach Species. Louisiana Pest Management Association. January 2024.
- Delusory Parasitosis Training for Entomologist, Agents, and Pest Control Operators. LSU Department of Entomology Seminar. January 2024.
- Controlling Pest Arthropods with Everyday Household Items. Hammond Research Station. February 2024.
- Protecting Yourself from Biting Arthropods while Landscaping. Burden Botanical Gardens. March 2024.
- Management of Louisiana Cockroach Species. Louisiana Sanitarian Annual Conference. March 2024.
- Pesticide Labels and Safety. LSU AgCenter Termite School. March 2024.
- Management of Garden Pests. Lake Charles Spring Garden Show. March 2024.
- Inspections and Management of Bed Bugs. Harmony Center. March 2024.
- Common Biting and Stinging Arthropods of Medical Importance. LSU AgCenter Recertification: Schools, Government Housing and Antimicrobial Pest Control. April 2024.
- Surveying Termite Diversity in the Southern U.S. A. Ashbrook, S.J. Portugal, A. Sharma. National Conference of Urban Entomology. May 2024.
- Moderator for the Pesticide Research Update session. Nation Conference on Urban Entomology. May 2024.
- Step-by-step protocol for interacting with suspected DI individuals. E. Benson, N. Hinkle, A. Ashbrook, X.P., Hu., M. Schrader, W. Brown, M. Deinhart, K. Vail, F. Oi. National Conference of Urban Entomology. May 2024.
- Delusory Parasitosis Training for Agents and Pest Control Operators. Mandeville, Louisiana. June 2024.
- Household Pest Insects, Mansura, Louisiana, presentation. LSU Quarterly Extension Agent Training, Mansura, Louisiana. June 2024.
- Household Pest Insects, Mansura, Louisiana, presentation. LSU Quarterly Extension Agent Training, Covington, Louisiana. June 2024.
- Advanced Master Gardner's Training (three-hour session). LSU AgCenter, Natchitoches, Louisiana. July 2024.
- Beneficial and Pest Arthropods in the Garden. Master Gardner's Series, Baton Rouge, Louisiana. July 2024.
- Delusory Parasitosis Training for Agents and Pest Control Operators Acadiana Pest Management Association Lunch and Learn, Lafayette, Louisiana. August 2024.
- Bed Bug In-service. Harmony Center, Louisiana. August 2024.
- Delusory Parasitosis Training for Agents and Pest Control Operators. Baton Rouge, Louisiana. August 2024.
- Basic Master Gardner's Training (two-hour session). LSU AgCenter, Lafayette, Louisiana. September 2024.
- Bed Bugs, Ants, Termites and their Management. LSU AgCenter SW ANR Parish Agent Training. September 2024.
- Pesticide Labels and Safety. LSU AgCenter Termite School. September 2024.
- Common Arthropods of Medical Importance. LSU AgCenter Ornamental and Turf Recertification, Opelousas, Louisiana. October 2024.
- Basic Master Gardner's Training (two-hour session). LSU AgCenter, Scott Research Center, Louisiana. October 2024.
- Are Bed Bugs Dodging the Heat Trail? National Pest Management Association, PestWorld 2024, Denver, Colorado. October 2024.
- Navigating new territories: An extension entomologist's journey from the Midwest to the Bayou. Phoenix, Arizona. November 2024.
- Advanced Master Gardner's Training (three-hour session). LSU AgCenter, Point Coupe Parish. November 24.
- Red Imported Fire Ant and Tawny Crazy Ant Management. LSU AgCenter Recertification for RUP Salespersons, Alexandria, Louisiana. November 2024.
- ENTM 7008 – Guest Lecture, Development of an assay to study the response of bed bugs to their alarm pheromone blend. November 2024.
- ENTM 7001 – Guest Lecture, Biology and Management of Louisiana Pest Ants, How to Use a Simple Dichotomous Key. November 2024.
- Louisiana Mosquito Control Research Update 2024.

FACULTY ACTIVITIES

Louisiana Mosquito Control Association, New Orleans, Louisiana. December 2024.

- Moderator for the Student Competition. Louisiana Mosquito Control Association, New Orleans, Louisiana. December 2024.
- Biology and Management of Several Ant Species. LSU AgCenter Ornamental and Turf Recertification, New Orleans, Louisiana. December 2024.

Other Presentations

- Gulf South Vector and LSU AgCenter operated the Louisiana Sanitarian Training Tour. The tour entailed nine full-day training events offered in each region of Louisiana for sanitarians. I presented “Gulf South Vector Updates,” “Biology and Management of Cockroaches and Bed Bugs” and “Management of Louisiana Bats” for a total of 27 presentations. Surveys and pre/post assessments were conducted. A. Ashbrook, E. Guidry, M. Devlin. July 2024.
- Crane Fly Interview. Louisiana Radio Network interview. February 2024.
- Emerging cicada brood could mean noisier than average summer. Interview by Kyle Peveto, LSU AgCenter. February 2024.
- Billions of cicadas will emerge in 2024 in a historic event. Will any appear in Louisiana? The Advocate interview. March 2024.
- Nine Bugs That Look Like Bed Bugs. Home Gnome interview. March 2024.
- Bed Bug Bites vs. Mosquito Bites: How to Identify Them. Home Gnome interview. March 2024.
- How Do You Get Bed Bugs? Home Gnome interview. March 2024.
- How Do You Check For Bugs? Home Gnome interview. April 2024.
- How Do You Prevent Bed Bugs? Home Gnome interview. April 2024.
- Where are the Lovebugs? BRProud interview. April 2024.
- Emergence of Periodical Cicadas in Louisiana. American Press interview. April 2024.
- Watch your step! Stinging caterpillars in Louisiana are active in spring. BRProud interview. May 2024.
- Formosan Subterranean Termite Swarm Season. HTV10 interview. May 2024.
- Formosan Subterranean Termite Swarm Season. Audacy Radio interview. May 2024.
- Formosan Subterranean Termite Swarm Season.

Hearst interview. May 2024.

- Formosan Subterranean Termite Swarm Season, Emergence of Cicadas. New Orleans NPR. May 2024.
- Fall Webworm Biology and Management. LSU AgCenter Get it Growing video interview. May 2024.
- Red Imported Fire Ant Biology and Management. LSU AgCenter Get it Growing video interview. May 2024.
- Fall Webworm. Louisiana Radio Network interview. June 2024.
- Fall Webworm. The Advocate interview. June 2024.
- Fall Webworm and Buckmoth. Unfiltered With Kiran interview. June 2024.
- Pink Katydid. Louisiana Radio Network. June 2024.
- Pink Katydid. Unfiltered With Kiran. June 2024.
- Cockroaches in Louisiana. BRProud interview. July 2024.
- Fall Webworm. BRProud interview. July 2024.
- Common Stinging Insects in Louisiana. LSU AgCenter video interview. September 2024.
- Life After People, Insects. Cream Productions interview. October 2024.

New Committees

- North American Termite Survey, PI.
- Louisiana Structural Pest Control Commission board member.
- Louisiana Pest Management Association education committee.
- Entomological Society of America Southeastern Branch 2024 local arrangements committee.
- Pi Chi Omega Gives Back committee.
- Gulf South Vector academic subcommittee.
- Gulf South Vector training guide subcommittee.
- Gulf South Vector field guide subcommittee.
- Gulf South Vector evaluation subcommittee.

New Grants and Contracts

- CDC grant, Co-PI, submitted by New Orleans Mosquito, Rodent, Termite Control Board. CDC-RFA-CDC-RFA-CK-23-0005. Coordinated training and evaluation of pest management, vector control district, public health, sanitary, and animal health professionals to achieve an integrated workforce to mitigate community vector-borne disease risk in the Gulf Coast region. \$1,643,463 for five years. \$25,667 subaward for year one, funded. \$60,000 sub award for year two, funded. Ongoing.

FACULTY ACTIVITIES

- Housing and Urban Development, Co-PI, Biologically-Based Integrated Pest Management (IPM) of Bed Bugs and German Cockroaches, \$241,692, funded, May 2024. Ongoing.
- LSU Seed Grant, PI, Basic Insect Identification Training and Collection Making for AgCenter Extension Agents. \$5,000, November 2024, funded. Ongoing.
- USDA-Crop Protection Pest Management-Extension Implementation Program, Co-PI, IPM Extension Implementation for Louisiana. \$281,116 for three years, \$35,200, June 2024, funded. Ongoing.
- Department of Defense-Armed Forces Pest Management Board-24-02, A. Ashbrook and C. Schal. Evaluation of Food Safe and Pharmaceutical Amorphous Silicas for Protecting Military Personnel Against Bed Bugs (*Cimex lectularius*) and German cockroaches (*Blattella germanica*). \$967,916 for 3 years. The pre-proposal was accepted for a full proposal but unfunded, and we were encouraged to resubmit.
- Argentine ant product study on bait efficacy, \$2,000, 2024.
- American cockroach study on bait efficacy, \$8,000, 2024.
- German cockroach study on secondary and tertiary kill, \$12,000, 2024.
- Bed bug trap trial, \$4000, 2024.
- Aged and fresh bait efficacy testing for American and German cockroaches, \$16,000, 2024.

New Collaborations (University, Industry, Other)

- Dr. Anamika Sharma, FAMU.
- Jerrod Penn, LSU Agricultural Economics.
- Hannah Penn, USDA-ARS.
- Jose Pietri, Purdue University.
- Mike Banfield, Banfield Biological.
- John Borden, Banfield Biological.
- Mayor Tim Kerner.
- Celeste Robin, LaHouse.

Graduated Students

- Bandana Shrestha, M.S., 2024. Thesis title: Determining the impact of lethal temperature and relative humidity when combined with various insecticide classes against a bed bug (*Cimex lectularius*) population.

Publications

- Ashbrook, A.R., Schwarz, M., Schal, C., Mikaelyan, A. 2024. Lethal disruption of the bacterial gut community in Eastern subterranean termite caused by boric acid. *Journal of Economic Entomology*. <https://doi.org/10.1093/jee/toae221>.
- Ashbrook, A.R., J.L. Feder, G.W. Bennett, M.D. Ginzel, and A.D. Gondhalekar. 2024. Lethal and sublethal heat exposure of bed bugs (*Cimex lectularius* L.) causes alarm pheromone emission and elicits a movement response in nearby recipients. *Scientific Reports*. doi: 10.1038/s41598-024-57925-y.
- Ashbrook, A., Abdi, D., Fields, J. S., Leaf Mulch Benefits Soil Health and Arthropod Communities, GNO Gardening, February 2024.
- Ashbrook, A., What's Bugging You? It's Crane Fly Season!, GNO Gardening, March 2024.
- Ashbrook A.R., C. Carlton. Finding Brood XIX in Louisiana and how to differentiate them from Annual Cicadas, LSU AgCenter GNO Gardening, April 2024.
- Ashbrook A.R., C. Carlton. Annual and Periodical Cicadas of Louisiana, LSU AgCenter Extension Series, May 2024.
- Portugal, S., Ashbrook, A., Sharma, A. Scientists, PMPs Collaborating to Map Termite Distribution in Southern U.S., *Pest Control Technology*, May 2024.
- E. Benson, N. Hinkle, A. Ashbrook, X.P., Hu., M. Schrader, W. Brown, M. Deinhart, K. Vail, F. Oi. Step-by-step protocol for interacting with suspected DI individuals, Southern Region Delusory Infestations Working Group Publication, May 2024.
- Ashbrook, A., Abdi, D., Fields, J. S., Carlton, C. E. Leave It Be: Maintaining Leaf Litter in the Landscape. LSU AgCenter Extension publication, September 2024.
- Ashbrook, A., Fall Webworm Invasion this Summer, LSU AgCenter GNO Gardening, October 2024.
- Kyle Peveto, Louisiana Agriculture special feature, Aaron Ashbrook: Helping Others with Insect Issues Is a Fascinating Challenge, December 2024.

FACULTY ACTIVITIES

Stephen Baca

Other Presentations

- Noterid phylogeography provides insights into geographic drivers of neotropical diversity (Coleoptera: Noteridae). Baca, S.M., Wrixon, L., DeRaad, D., Moyle, R., Short., A.E.Z. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Phylogenomics and morphology reciprocally delimit species in the aquatic *Suphisellus nigrinus* complex (Coleoptera: Noteridae). Wrixon, L., Baca, S.M. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. Presidents Prize (first place), ESA Undergraduate Poster Competition SysEB: Social Insects, Genetics, and Molecular Biology.
- 2024 Halloween Art and Nature Festival. Public outreach and engagement with LSAM at insect-themed event. Atelier de la Nature, Arnaudville, Louisiana. Oct. 26, 2024.
- 2024 NOLA BugFest 2024. Collaborative public outreach event. New Orleans Mosquito, Termite and Rodent Control Board. New Orleans, Louisiana. Oct. 12, 2024.
- KLFY News 10 (Local CBS, Lafayette, Louisiana). Why are spider webs falling from the sky? TV news interview. Nov. 20, 2024.
- KATC News 3 (Local ABC, Lafayette/Acadiana). Weaving a mystery: Why you are seeing more spider webs? An expert explains. Nov. 20, 2024.
- 2024 tours and visits to LSAM for Dept. of Entomology, LSU faculty, and stakeholders.

New Grants and Contracts

- \$19,723, LSU AgCenter COE Program for Enhancement of External Competitive Funding. Establishing a rapid, field-deployable workflow for invasive species detection and reference genome assembly. Spring 2025-fall 2026. PI: Baca.
- \$5,000, LCES Seed Grant. Basic Insect Identification Training and Collection Making for AgCenter Extension Agents, Spring 2025-spring 2026. PI. Ashbrook. Co-PI: Baca, Bayless, Carlton, Gambino.

New Collaborations (University, Industry, Other)

- Collaboration with NAILS lab, Northern Arizona University, PI: Grey Gustafson.

Publications

- Urcola, J.I., Baca, S.M., Rodriquez, G., and Michat, M.C. (2024) Discovery of the genus *Prionohydrus* Gómez and Miller, 2013 (Coleoptera: Noteridae) in southern South America: description of *P. cambyreta* sp. n. from Iberá wetlands. *Zootaxa*, 5523 (4), 483-493.

Jeff A. Davis

New Lab Members

- Dr. Berenice Romero joined the LSU AgCenter as a postdoctoral researcher in October 2024. Her work will examine aspects pertaining to the transmission of aphid-vectored viruses in sweetpotatoes. Prior to joining LSU, her doctoral research focused on the interactions between a bacterial pathogen (phytoplasmas), plants (crops and wild species) and an insect vector (aster leafhoppers) in the Western Canadian Prairies. Romero examined behavioral responses of aster leafhoppers, including aster leafhoppers' oviposition, feeding and host choice selection behavior, and how those responses could be affected by phytoplasma infection. She also has experience with secondary metabolites and plant defense signaling pathways mediating plant-insect interactions in soybeans.

Graduated Students

- Joel W. Dubois, M.S., 2024. Thesis title: Revisionary taxonomy within the Acmaeoderini. Co-advised with Dr. Nathan Lord.

Awards and Honors

- Austin C. Thompson Distinguished Professorship. Jan. 1, 2024.

Talks/Posters/Infographics

- Bruno, J., J. Villegas, M. Stout, J.A. Davis, B. Tubaña, S. Ranabhat, L. Lopez, E. O'Neal. 2024. Evaluating the role of silicon soil amendments in managing insect pests of soybean. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Davis, J.A. 2024. Biology and management of stink bugs in soybean. 2024 Soybean Breeders Workshop: Entomology and Breeding Innovation, St. Louis, Missouri. Feb. 13, 2024 (invited).

FACULTY ACTIVITIES

- Davis, J.A. 2024. Building protective and productive partnerships for sustainable farming: a vision for the future. Symposium: Across the Boot: Novel Approaches in Plant Science for Sustainable and Resilient Agriculture amidst the AI Revolution. LSU Plant Science Symposium, Baton Rouge, Louisiana. Dec. 6, 2024. (invited)
- Davis, J.A. 2024. Can stylet oils reduce non-persistent virus transmission in sweetpotato? National Sweetpotato Collaborators Group Annual Meeting, New Orleans, Louisiana. Jan. 19, 2024.
- Davis, J.A. 2024. Host plant resistance to a complex of stink bugs: protecting yield and quality in southern soybean. 2024 Soybean Breeders Workshop: Entomology and Breeding Innovation, St. Louis, Missouri. Feb. 13, 2024 (invited).
- Davis, J.A. 2024. Influence of neem derivatives on development, survival, and reproduction of *Myzus persicae*. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 19, 2024.
- Davis, J.A. 2024. Keep It SIMPLE: a sweetpotato weevil integrated management plan for environmental and economic sustainability. U.S. Department of Agriculture National Institute of Food and Agriculture Crop Protection and Pest Management ARDP Update Meeting, online. May 1, 2024 (invited).
- Davis, J.A. 2024. The challenge of stink bug control in soybean: a case for acephate. Office of Pesticide Programs EntSoc Webinar Series, online. Sept. 18, 2024 (invited).
- Davis, J.A. 2024. The probing behavior and vector potential of *Melanaphis sacchari* in transmitting Sorghum mosaic virus. 2024 International Electropenetrography (EPG) Conference, Lake Alfred, Florida. Feb. 1, 2024.
- Davis, J.A. 2024. The probing behavior and vector potential of *Melanaphis sacchari* in transmitting Sorghum mosaic virus. Symposium: Cross-disciplinary Innovations in EPG Science to Address Current and Emerging Issues. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 12, 2024 (invited).
- Duwal, A., and J.A. Davis. 2024. Do foliar insecticides applied for stink bug adults impact stink bug egg eclosion and nymphal survival? 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 11, 2024.
- Duwal, A., and J.A. Davis. 2024. Do foliar insecticides applied for stink bug adults impact stink bug egg eclosion and nymphal survival? 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Duwal, A., and J.A. Davis. 2024. Do foliar insecticides applied for stink bug adults impact stink bug egg eclosion and nymphal survival? LSU Plant Science Symposium, Baton Rouge, Louisiana. Dec. 6, 2024 (poster).
- Duwal, A., S.T. Lee, and J.A. Davis. 2024. Impacts of hedgerow plantings on arthropod community abundance and movement in Louisiana soybean. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 18, 2024.
- Martinez, C.M., and J.A. Davis. 2024. Assessing host plant resistance to stink bugs in commercial soybean (*Glycine max*) varieties. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 18, 2024.
- Martinez, C.M., and J.A. Davis. 2024. How well does *Euschistus quadrator* survive and reproduce on soybean (*Glycine max*)? 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Martinez, C.M., and J.A. Davis. 2024. Population dynamics of *Euschistus quadrator* on soybean. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 11, 2024.
- Mejia-Gonzalez, C., C. Astete, C. Sabliov, and J.A. Davis. 2024. Efficacy of nano formulated azadirachtin in controlling green peach aphid (*Myzus persicae*). 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 11, 2024.
- Mejia-Gonzalez, C., C. Astete, C. Sabliov, and J.A. Davis. 2024. Efficacy of nano formulated azadirachtin in controlling green peach aphid (*Myzus persicae*). 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Munagala, P.K., C. Sabliov, C. Astete, and J.A. Davis. 2024. Evaluating the effects of copper sulfide (CuS) nanoparticles on plant health and insect management. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- O'Hara, F.M., J.A. Davis, and D.R. Swale. 2024. Utilizing EPG to identify nuanced feeding behaviors and to guide

FACULTY ACTIVITIES

the development of novel antifeedant insecticides. 2024 International Electropenetrography (EPG) Conference, Lake Alfred, Florida. Feb. 1, 2024 (poster).

- O'Hara, F.M., S. Navarro, J.A. Davis, and D.R. Swale. 2024. Novel approaches to manage the virus complex present in sweet potato virus disease (SPVD). 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 11, 2024.
- O'Hara, F.M., S. Navarro, J.A. Davis, and D.R. Swale. 2024. Two-pronged approach to manage the virus complex present in sweet potato virus disease (SPVD). American Chemical Society Fall 2024 Meeting, Denver, Colorado. Aug. 19, 2024.
- Pablo, R., and J.A. Davis. 2024. Is cannabis aphid a vector of sweetpotato feathery mottle virus? 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 11, 2024.
- Pablo, R., and J.A. Davis. 2024. Is cannabis aphid a vector of sweetpotato feathery mottle virus? 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Patla, B., S. Lin, J.A. Davis, G. Head, X. Ni, D. Cook, F. Reay-Jones, S. Brown, Y. Niu, and F. Huang. 2024. Susceptibility of *Helicoverpa zea* in the southeastern United States to eight common insecticides. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 18, 2024.
- Patla, B., T. Silva, S. Lin, J.A. Davis, G. Head, X. Ni, D. Cook, F. Reay-Jones, S. Brown, and F. Huang. 2024. Corn earworm populations in the southeastern United States varied in the susceptibility to common insecticides in laboratory bioassays. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 12, 2024.
- Romero, B, R. Pablo, and J.A. Davis. 2024. CleanSEED overview and preliminary data. 88th Annual Meeting of the Louisiana Sweet Potato Association. Winnsboro, Louisiana. Dec. 5, 2024.
- Sabliov, C.M., C.E. Astete, J.A. Davis, J. White, M. Kah, Y. Wang. 2024. Tunable Polymeric Nanoparticle Platform for Contact/Systemic CuS Delivery for Crop Disease Management. GRC. Manchester, New Hampshire. June 2024 (invited).
- Saha, S., J.A. Davis, and H. Feng. 2024. Harnessing miRNAs to combat stinkbug infestations in soybeans. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18,

2024 (poster).

- Sibakwe, C.A., and J.A. Davis. 2024. Efficacy of insecticides and host plant resistance in halting stink bug damage and enhancing soybean seed quality. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Velez, A., and J.A. Davis. Can insecticides protect soybean seed quality? 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 18, 2024.

Grants

- Louisiana Soybean and Grain Research and Promotion Board. IPM for Louisiana soybean insect pests. 2024-2025. J.A. Davis. \$75,000.
- Louisiana Soybean and Grain Research and Promotion Board. Fungicide Seed Treatment with Lignin Nanoparticles. 2024-2025. C.M. Sabliov (Lead PI), C.E. Astete, P.P. Price, V. Doyle, and J.A. Davis. \$30,000.
- Bayer CropScience. Bayer SIP4 Open Field Efficacy Trial. 2024. J.A. Davis. \$46,800.
- Corteva. 2024 Canola Biodiversity Protocol. 2024. J.A. Davis. \$49,840.
- MidSouth Soybean Board. Enhancing stink bug resistance in Midsouth soybean. 2024-2025. J.A. Davis. \$86,000.
- United Soybean Board. Developing a Resilient Soybean IPM Program for Stink Bugs. 2024-2025. J.A. Davis (Lead-PI) and F. Lin. \$97,780
- USDA AFRI EIP Program. IPM Extension Implementation for Louisiana. 2024-2025. R. Singh (Lead PI), J. Villegas, T. Watson, A. Ashbrook, C. Webster, and J.A. Davis. \$281,116.
- LA Board of Regents. Identification, characterization, and development of insecticidal microRNAs for soybean stink bug control. 2024-2027. H. Feng (Lead PI) and J.A. Davis. \$39,229.

Publications

- Paudel, S., R. Valverde, and J.A. Davis. 2024. Bell pepper endornavirus alters green peach aphid (Hemiptera: Aphididae) host choice and population dynamics. J. Econ. Entomol. <https://doi.org/10.1093/jee/toae256>.
- Sisson, A., F. Musser, W. Crow, E. Bick, S. Brown, J.A. Davis, C. DiFonzo, C. Floyd, S. H. Graham, J.K. Greene, K. Hamby, D. Kerns, S. Malone, D. Owens, D.D. Reisig, P. Roberts, N. J. Seiter, B. Thrash, K. Tilmon, and R.T.

FACULTY ACTIVITIES

Villanueva. 2024. Soybean invertebrate loss estimates from the United States – 2023. Crop Protection Network. CPN 1029-23. <https://cropprotectionnetwork.org/publications/soybean-invertebrate-loss-estimates-from-the-united-states-2023>.

- Musser, F.R., E. Bick, S. Brown, W. Crow, J.A. Davis, C. DiFonzo, C. Floyd, S.H. Graham, J.K. Greene, K. Hamby, D. Kerns, S. Malone, D. Owens, D.D. Reisig, P. Roberts, N.J. Seiter, B. Thrash, K. Tilmon, and R.T. Villanueva. 2024. 2023 Soybean insect losses in the United States. *MidSouth Entomol.* 17: 6-30.
- Keyser, C.A., F.S. Walters, H. Turner, E. Armstrong, J. Davis, B. Bissinger, B. Johnson, A. Alajo, P. Musana, J. Odongo, B. Yada, and M.A. Otema. 2024. Tailoring IPM plans to fight a cloaked pest: helping smallholder farmers combat the sweetpotato weevil in sub-Saharan Africa. *CABI Agric. Biosci.* 5:28. <https://doi.org/10.1186/s43170-024-00231-4>.

Videos

- Davis, J.A., and C. Gautreaux. 2024. Watch for redbanded stink bugs when desiccating soybean plants. <https://www.youtube.com/watch?v=b68HMPTq-Eo>.
- Davis, J.A., and C. Gautreaux. 2024. Destroy unharvested soybean plants for increased stink bug control. <https://www.youtube.com/watch?v=T9aEr2fbCmk>.

Rodrigo Diaz

Invited Presentations

- Development of a real-time monitoring tool for Roseau cane health in the Lower Mississippi River Delta. Rodrigo Diaz, David Kinsler, Joshua Snook, Xuelian Meng. Fifth Annual Roseau Cane Summit, Baton Rouge, Louisiana. Jan. 10, 2024.
- Optimizing Phragmites stem planting techniques for restoration of the Mississippi River Delta. Joshua Snook, Karina Nolasco, Jonathan Richards, Rodrigo Diaz. 6th Annual Roseau Cane Summit, Baton Rouge, Louisiana. Jan. 10, 2024.
- Surveying the Mississippi River Delta: Assessing the Impact of the Roseau Cane Scale and Salinity on Phragmites Performance. Logan Herbert, Joshua Snook, Morgan Carrere, Rodrigo Diaz. Roseau Cane Summit, Baton Rouge, Louisiana. January 2024.
- Opportunities for using real-time satellite monitoring to improve the impact of weed biological control. Rodrigo Diaz, Victoria Ayala, Logan Herbert, and David Kinsler. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 17-20, 2024.
- Save Phragmites: Multidisciplinary approach to address roseau cane dieback in the Lower Mississippi River Delta. Rodrigo Diaz, on behalf of Roseau cane team. Management of invasive species in wetlands, LSU, Baton Rouge, Louisiana. April 12, 2024
- Surveying the Mississippi River Delta: Assessing the Impact of the Roseau Cane Scale and Salinity on Phragmites Performance. Logan Herbert, Joshua Snook, Morgan Carrere, Rodrigo Diaz. Management of Invasive Species in Wetlands Workshop, Baton Rouge, Louisiana, April 2024.
- BioControl meets AI: Implementation of real-time satellite monitoring for detection and management of giant salvinia (*Salvinia molesta*). Ayala, V., Herbert, L., Kinsler, D., Gentimis, A., Díaz, R. Third International Congress of Biological Control, San Jose, Costa Rica. June 2024.
- Lessons on recovery: Contrasting the impact of biological control of giant salvinia in tropical and subtropical regions. Rodrigo Diaz, Charles Wahl, Steven Woodley, David Kinsler, Victoria Ayala. IOBC. San Jose, Costa Rica. June 25, 2024.
- Detection of *Ochyromera ligustri* in *Ligustrum* spp. Using Newly Developed PCR Primers. Brandi Misiaszek, Ilgoo Kang, Amy Roda, Tanner Sparks, Rodrigo Diaz. Third International Congress of Biological Control, San Jose, Costa Rica. July 2024.
- Phenology of the Non-Native *Ligustrum* Weevil *Ochyromera ligustri*: Impacts and Implications for Biological Control. Brandi Misiaszek, Emily Steen, Amy Roda, Rodrigo Diaz. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- A real-time giant salvinia (*Salvinia molesta*) detection tool to improve targeted manipulation of salvinia weevil populations (*Cyrtobagous salviniae*) populations in Southern Louisiana. Ayala, V., Kinsler, D., Grijalva, I., Díaz, R. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Impact of *Phragmites australis* genetic diversity on coastal restoration in the Mississippi River Delta. Nolasco, K., Snook, J., Richards J., Diaz, R. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.

FACULTY ACTIVITIES

- Development of real-time web application for early detection and management of giant salvinia. Ayala, V., Shackelford, D., Diaz, R. St. Tammany Aquatic Invasive Plant Management Workshop, Slidell, Louisiana. Oct. 2024.
- Understanding the interactions between commercial biopesticides and local coccinellids for crapemyrtle bark scale management. Rodrigo Diaz, Giovana Matos Franco, Vinson Doyle and Yan Che. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 11, 2024.
- How biological control of weeds can reduce mosquito populations? Rodrigo Diaz, Mollie Davies. BEACONS, Invasive Species Meeting, New Orleans, Louisiana. Nov. 18, 2024.
- Opportunities for improving biological control of giant salvinia (*Salvinia molesta*) in subtropical and temperate regions. Rodrigo Diaz, Dane Shackelford, and Victoria Ayala. North American Invasive Species Association. Annual Meeting, Zoom seminar. Dec. 5, 2024.
- Harnessing the genetic diversity of *Phragmites australis* to promote coastal restoration. Nolasco, K., Snook, J., Richards J., Diaz, R. Workshop on Urban Aquatic Invasive Species control, Foundation for the Study of Invasive Species (FuEDEI). Buenos Aires, Argentina. Dec. 2024.
- Remote sensing for detection and management of Giant Salvinia (*Salvinia molesta*) and improvement of biological control strategies. Ayala, V., Kinsler, D., Diaz, R. Workshop on Urban Aquatic Invasive Species control, Foundation for the Study of Invasive Species (FuEDEI). Buenos Aires, Argentina. Dec. 2024.
- Management of the aquatic weed *Salvinia molesta*: Biological control and application of new technologies. Ayala, V., Kinsler, D., Diaz, R. Proposals for the management of aquatic weeds and cyanobacteria in urban wetlands of the Ramsar Site Humedales Chaco. Training sessions for provincial and municipal employees of Chaco. Resistencia, Argentina. Dec. 2024.
- Harnessing the genetic diversity of *Phragmites australis* to promote coastal restoration in Louisiana. Nolasco, K., Snook, J., Richards J., Diaz, R. Training sessions for provincial and municipal employees of Chaco on invasive species. Resistencia, Argentina. December 2024.
- Efficient management strategies using the biological

control agent *Cyrtobagous salviniae* with remote sensing applications in coastal Louisiana. Dane Shackelford, Victoria Ayala, Rodrigo Diaz. Aquatic Invasive Plant Workshop, Slidell, Louisiana. 2024.

- LSU AgCenter salvinia weevil landowner webinar. Dane Shackelford, Victoria Ayala, Rodrigo Diaz. LSU webinar, Baton Rouge, Louisiana. 2024
- Giant salvinia: How to identify and manage with biological control. Shackelford, D.D. LSU Botany Club Meeting, Baton Rouge, Louisiana. 2024.

Awards and Honors

- 2024 LSU AgExcellence Award. Recognized for work on Roseau cane dieback.

New Committees

- Director of the Center of Excellence for the Study of Invasive Species.

New Grants and Contracts

- United States Department of Agriculture, Animal and Plant Health Inspection Service. 2024-2026. Roseau Cane Die-off Research Support. \$701,673. James Cronin (LSU Biology), Vinson Doyle, Ivan Grijalva, Rodrigo Diaz (LSU AgCenter). Co-PIs. (Diaz portion \$374,936).
- Barataria-Terrebonne National Estuary Program. 2024-2026. Using satellite imagery and a web-based application for early detection and management of giant salvinia in the BTNEP region. Rodrigo Diaz. \$81,000.
- United States Department of Agriculture, Animal and Plant Health Inspection Service. USDA-APHIS. 2024-2025. Biological Control of Chinese tallowtree. Rodrigo Diaz. \$68,200.
- United States Department of Agriculture, ARS. USDA-ARS. 2024-2026. Synergies in aquatic plant biological control: translating research between the Southern and Western USA. Rodrigo Diaz. \$46,700.

Visiting Scientists/Students

- Karina Nolasco, Universidad Zamorano, Honduras.
- Victor Lee Mejia, Universidad Nacional Autónoma de Honduras, Honduras.

New Collaborations (University, Industry, Other)

- Centro de Ecología Aplicada del Litoral, Corrientes, Argentina.

FACULTY ACTIVITIES

Graduated Students

- Tanner Sparks, Ph.D. 2024. Thesis title: Biological control of roseau cane scale with parasitoid wasps in Louisiana.

Publications

- Villegas, J.M.; Diaz, R.; Stout, M.J.; Papitchaya, F.; Wilson, B.E. Influence of Temperature and Photoperiod on Survival and Development of *Eoreuma loftini* (Lepidoptera: Crambidae). *Insects* 2024, 15, 915. <https://doi.org/10.3390/insects15120915>.
- Glassmire, A.E.; Salgado, A.L.; Diaz, R.; Johnston, J.; Meyerson, L.A.; Snook, J.S.; Cronin, J.T. The Effects of Anthropogenic Stressors on Above- and Belowground Phytochemical Diversity of the Wetland Grass, *Phragmites australis*. *Plants* 2024, 13, 3133. <https://doi.org/10.3390/plants13223133>.
- Herbert, L.; Zanga, A.; Kinsler, D.; Ayala, V.; Takoukam-Kamla, A.; Diaz, R. Optimizing aquatic weed management in Lake Ossa, Cameroon: Harnessing the power of biological control and real-time satellite monitoring. *Biological Control* 2024, 199, <https://doi.org/10.1016/j.biocontrol.2024.105650>.
- Mariani, F.; Pratt, P.; Cristofaro, M.; Ceschin, S.; Kang, I.; Diaz, R. Natural enemies of *Lemna minuta* in its native range and their potential as biological control agents for Europe. *Biocontrol Science and Technology* 2024. DOI:10.1080/09583157.2024.2393383.
- Kang, I.; Roda, A.; Misiaszek, B.; Sparks, T.; Diaz, R. Detection of *Ochyromera ligustri* (Coleoptera: Curculionidae: Curculioninae) in *Ligustrum* spp. (Oleaceae) Using Newly Developed PCR Primers. *Insects* 2024, 15, 320. <https://doi.org/10.3390/insects15050320>.
- Elsey-Quirk, T.; Lynn, A.; Jacobs, M.D.; Diaz, R.; Cronin, J. T.; Wang, L.; Huang, H.; Justic, D. Vegetation dieback in the Mississippi River Delta triggered by acute drought and chronic relative sea-level rise. *Nat Commun* 2024, 15, 3518 (2024). <https://doi.org/10.1038/s41467-024-47828-x>.
- Lee, H., Diaz, R. and Cronin, J.T. Dieback and dredge soils of *Phragmites australis* in the Mississippi River Delta negatively impact plant biomass. *Sci Rep* 2024, 14. <https://doi.org/10.1038/s41598-024-52488-4>.

Honglin Feng

Other Presentations

- Serine proteinase inhibitors from *Nicotiana benthamiana*, a non-preferred host plant, inhibit the growth of *Myzus persicae* (green peach aphid). 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Exploring miRNA in host symbiont interactions in aphids for novel pest management strategies. Gonzales A.D. and Feng H. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Harnessing microRNAs to combat stinkbug infestations in soybeans. Saha S., Davis J.A., Feng H. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Profiling miRNAs and their target mRNAs in aphid-*Buchnera* symbiosis via CLIP-Seq. Ding Y., Vourekas A., Feng H. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Identification of cardiac glycoside biosynthetic genes through differential gene expression analysis of *Asclepias* species. Norton A.J.*, Feng H., Powell A.F., Wang F., Younkin G.C., Jander G. The Annual Plant Biology Meeting, Honolulu, Hawaii. 2024. (* REU student)
- Developing insecticidal microRNAs targeting symbiosis for aphid control. Gonzales A.D., Feng H. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 17-20, 2024.

New Grants and Contracts

- 2024-2027. Identification, characterization, and development of insecticidal microRNAs for soybean stinkbug control. Louisiana Board of Regents, Research Competitiveness Subprogram (RCS), \$117,687.
- 2024-2025. Developing insecticidal microRNAs targeting symbiosis for aphid control. LSU AgCenter, Center of Research Excellence in Plant Biotechnology and Crop Development (COE), \$30,000.
- 2024. Functional characterization of insecticidal miRNAs targeting symbiosis for aphid control. Brown Foundation, \$14,250.

New Collaborations (University, Industry, Other)

- Zhi-Yuan Chen, LSU AgCenter.
- Anastasios Vourekas, LSU.

FACULTY ACTIVITIES

Publications

- Yao Y., Lin H., Chen Y., Chen L., Zhang H., Fu H., Gao S., Wang R., Feng H., Wang J., (2024) Salivary protein SfApyrase of *Spodoptera frugiperda* stimulates plant defense response. Plant, Cell and Environment, 48(1):406-420: <https://doi.org/10.1111/pce.15121>.
- Qu Y., Li X., Dong H., Wang W., Li X., Feng H., Zhang S., Cao Y., Yin J., and Li K., (2024) Identification and field verification of the aggregation pheromone components produced by male *Holotrichia parallela* Motschulsky (Coleoptera: Scarabaeidae), Pest Management.
- Feng H. and Wilson A.C.C. (2024) Experimental uncoupling of hosts and endosymbionts. mBio, <https://doi.org/10.1128/mbio.01116-24>.
- Li X., Guo M., Li K., Li S., Feng H., Fan J., (2024) Selection of host plants for production of *Clanis bilineata* (Lepidoptera: Sphingidae). PloS ONE, 19(6), <https://doi.org/10.1371/journal.pone.0303017>.
- Feng H., Jander G., Serine proteinase inhibitors from *Nicotiana benthamiana*, a non-preferred host plant, inhibit the growth of *Myzus persicae* (green peach aphid). (2024) Pest Management Science, <https://doi.org/10.1002/ps.8148>.

Lane D. Foil

Publications

- Michael Becker, Glen Gentry, Claudia Husseneder, Lane Foil. 2024. Seven-year prospective study on yearly incidence of Orbivirus infection of captive white-tailed deer and potential Culicoides vectors. Journal of Medical Entomology, 1–8. <https://doi.org/10.1093/jme/tjae006>.
- Valdes, Sabrina, Sean Simonson, Christine Scott-Waldron, Gary Balsamo, Britton J. Grasperge, Lane D. Foil, Udeni Balasuriya, Kevin R. Macaluso. 2024. Surveillance of tick-borne pathogens present in ticks (Acari: Ixodidae) removed from companion animals in Louisiana, USA. Journal of Medical Entomology, 1–8 <https://doi.org/10.1093/jme/tjae122>.

Kristen Healy

Invited Presentations

- Delusory Parasitosis. Louisiana Pest Management

Institute. January 2024.

- Controlling Bees and Wasps. Louisiana Pest Management Institute. January 2024.
- Community Engagement 101. American Mosquito Control Association. March 2024.
- Field workshop in insect collection at a crime scene. Louisiana State Crime Lab. April 2024.
- Collecting Insects at Crime Scenes. Louisiana - International Association for Identification. May 2024.
- Protecting Pollinators. Exxon Mobile. June 2024.
- Update on LSU projects. Louisiana Mosquito Control Association. November 2024.

Other Presentations

- AMCA Presidential Address. American Mosquito Control Association. March 2024.
- Insect Biology. Louisiana Mosquito Control Association Annual Workshop. March 2024.
- Teaching with Maggots. Louisiana Mosquito Control Association. November 2024.

Awards and Honors

- American Mosquito Control Association, recognition for contributions as president.

New Committees

- American Mosquito Control Association, chair of the PR committee.

New Collaborations (University, Industry, Other)

- New project with Bradley Whittenberg, University of Central Florida, to evaluate a product for mosquito feeding.

Graduated Students

- Molly Dimise, M.S., 2024. Thesis title: Cold Tolerance Evaluations of *Culex quinquefasciatus* and *Culex pipiens* with the Ice Nucleator *Pseudomonas fluorescens*.
- Evan Davies, M.S., 2024. Thesis: Southern house mosquito (*Culex quinquefasciatus* Say): association with onsite waste water treatment systems in St. Tammany Parish, Louisiana, its tolerance to ammonium hydroxide, and the effects of ammonium hydroxide on its life history traits, oviposition choice and behavior.

Publications

- Relative impacts of *Varroa destructor* (Mesostigmata: Varroidae) infestation and pesticide exposure on

FACULTY ACTIVITIES

honey bee colony health and survival in a high-intensity corn ... F.D. Rinkevich, R.G. Danka, T.E. Rinderer, J.W. Margotta, L.J. Bartlett, K.B. Healy. *Journal of Insect Science* 24 (3), 18.

- Effects of honey bee queen exposure to deformed wing virus-A on queen and juvenile infection and colony strength metrics. S. Lang, M. Simone-Finstrom, K. Healy. *Journal of Apicultural Research* 63 (2), 233-244.

Fangneng Huang

Invited Presentations

- Lessons from more than two decades of global IRM for Bt crops. Department of Entomology, Michigan State University. Nov. 18, 2024 (online).
- Susceptibility/resistance of field populations of corn earworm and fall armyworm in the southeastern U.S. to several common insecticides. Huang, F. and B. Patla. FMC, USA, Nov 14, 2024.
- Bt crop resistance management in the United States: lessons and implications for Bt sugarcane IRM in Brazil. XXIX Congresso Brasileiro de Entomologia e XIII Congresso Latino Americano. Uberlândia-MG, Brazil, Sept 22-26, 2024.
- Bt Crop IRM in the United States and CTC Research needed for Bt sugarcane IRM. Piracicaba, São Paulo, Brazil. Sept 18, 2024.
- Implications for IRM from the reversal of practical resistance of *Spodoptera frugiperda* to Cry1F corn in the southeastern coastal region of the U.S. 2024 Annual Meeting of ESA-Pacific Branch, Waikoloa, Hawaii. April 14, 2024.

Other Presentations

- Diverse mechanisms of Vip3Aa resistance in fall Armyworm: A tale of two strains. Roy, R., D. Kerns, F. Huang, F. Yang, D. Kerns and J.L. Jurat-Fuentes. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. Oral.
- Susceptibility of *Helicoverpa zea* in the southeastern United States to eight common insecticides. Patla, B., S. Lin, J. Davis, G. Head, X. Ni, D. Cook, F. Reay-Jones, S. Brown, Y. Niu, F. Huang. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 17-20, 2024. Oral.
- Confounded effect of hybrid vigor on the measurement of fitness costs and dominance levels

of Bt resistance in *Helicoverpa zea*. Shucong Lin, Graham Head, Tiago Silva, Bhavana Patla, Niu Ying, Fangneng Huang. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 17-20, 2024. Oral.

- Corn Earworm Populations in the Southeastern United States Varied in the and Susceptibility to Common Insecticides in Laboratory Bioassays. Patla, B., T. Silva, S. Lin, J. Davis, G. Head, X. Ni, D. Cook, F. Reay-Jones, S. Brown, F. Huang. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. Poster.
- Early Emerged Female Adults Contribute to the Higher Success of Mating and Reproduction of the Corn Earworm, *Helicoverpa zea* in the laboratory. Lin, S., G.P. Head, T. Silva, B. Patla, and F. Huang. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. Poster.
- Hybrid vigor influences the estimated fitness costs and dominance levels of Bt resistance in *Helicoverpa zea*. Lin, S., G.P. Head, T. Silva, B. Patla, and F. Huang. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. Poster.

Awards and Honors

- Bhavana Patla earned the Boethel Scholarship M.S. Graduate Student Award in Entomology.
- Listed among the world's top 2% scientists by Stanford University's scientist rankings.

Graduated Students

- Bhavana Patla, M.S., 2024. Thesis title: Susceptibility of *Spodoptera frugiperda* and *Helicoverpa zea* populations in the Southern region of the United States to common chemical insecticides.

Publications

- Huang, F., Y. Niu, Q. Song, S. Stewart, B. Wilson, G. Headd, S. Brown, W. Yu, T. Silva, C. Sakuno, S. Lin. 2024. An extended investigation of Bt maize resistance allele frequency in the southwestern corn borer and sugarcane borer (Lepidoptera: Crambidae) in the mid-south region of the United States. *Crop Protect.* <https://doi.org/10.1016/j.cropro.2024.106842>.
- Ni, X.; Huffaker, A.; Schmelz, E.A.; Xu, W.; Williams, W.P.; Guo, B.; Li, X.; Huang, F. 2024. Field evaluation of experimental maize hybrids for resistance to the fall armyworm (Lepidoptera: Noctuidae) in a warm

FACULTY ACTIVITIES

temperate climate. *Insects* 2024, 15, 289. <https://doi.org/10.3390/insects15040289>.

- Silva, T., G.A. Sword, A. Miller, J.A. Qureshi, G.P. Head, D.D. Kerns, J.-L. Jurat-Fuentes, J. Villegas, T.B. Towles, X. Ni, F.P. F. Reay-Jones, D. Carrillo, D.R. Cook, C. Daves, M. J. Stout, B. Thrash, S. V. Paula-Moraes, S. Lin, B. Patla, Y. Niu, C. I.R. Sakuno, and F. Huang. 2024. Reversal of practical resistance in fall armyworm to Cry1F maize: A case report on the resistance to susceptibility in Bt crops from the southeastern United States. *J. Pest Sci.* <https://doi.org/10.1007/s10340-024-01804-y>.
- Sakuno, C.I.R., F. J.B. Francischini, K.M.A. Komada, M. Basso and F. Huang. 2024. Transgenic sugarcane expressing *Bacillus thuringiensis* Cry1Ac protein offers new possibilities for controlling the giant borer, *Telchin licus* (Drury), a pest difficult to control. *Crop Protection*. 175, 106469: <https://doi.org/10.1016/j.cropro.2023.106469>.

Claudia Husseneder

Other Presentations

- Enhancing honey bee immunity with microalgal feed additives. Martin-Ewert, A., McMenamin, A., Adjaye, D. Rainey, V., Husseneder, C. Ricigliano, V. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.

Awards and Honors

- Doyle Chambers Award.

New Collaborations (University, Industry, Other)

- Dr. Elahe Rostami, Fujian Academy of Agricultural Sciences, China.

Graduated Students

- Junyen Chen, Ph.D., 2024. Thesis title: [Investigation of the core microbiota of the Formosan subterranean termite, *Coptotermes formosanus* \(Blattodea: Rhinotermitidae\): its impact on pair formation, changes during early colony development and geographic diversity of bacteriophages](#).

Publications

- Setia, G. Chen, J., Schlub, R., and Husseneder, C. 2024. Assessment of bacterial communities of *Coptotermes gestroi* termite workers attacking Ironwood trees (*Casuarina equisetifolia*) in Guam

for the presence of Ironwood Tree Decline-associated pathogens. *Frontiers in Microbiology*, Sec. Terrestrial Microbiology, Volume 15 - 2024. Impact Factor 4.0.

- Jin, T., Schlub, R.L., and Husseneder, C. 2024. Illumina 16S rRNA Gene Sequencing Dataset of Bacterial Communities of Soil Associated with Ironwood Trees (*Casuarina equisetifolia*) in Guam. *Data* 2024, 9, 54. <https://doi.org/10.3390/data9040054>. Impact Factor: 3.0.
- Becker, M., Gentry, G., Husseneder, C., and Foil, L. 2024. Seven-year prospective study on yearly incidence of Orbivirus infection of captive white-tailed deer and potential Culicoides vectors, *Journal of Medical Entomology* 61(2), 465–472, <https://doi.org/10.1093/jme/tjae006>. Impact Factor: 2.1.
- Rostami, E., Shi, M. Z., Abbasipour, H., Cuthbertson, A. G. S., Husseneder, C., Madadi, H., and Fu, J. W. 2024. The invasive papaya mealybug *Paracoccus marginatus* Williams and Granara de Willink, 1992 (Hemiptera: Pseudococcidae) - a review of its ecology and control methods. *Oriental Insects*, 1–24. <https://doi.org/10.1080/00305316.2024.2356001>.

Todd Johnson

Invited Presentations

- Characterizing ecological interactions of arthropods in forests under global change. Department of Entomology, University of California Davis, Davis, California.
- A year later in Louisiana — ongoing and developing projects to characterize ecological interactions in Southeastern forests. East Texas Forest Entomology Seminar, Lake Kurth, Texas.
- Describing and harnessing the chemistry of ash trees (Oleaceae: *Fraxinus* spp.) to protect a critically endangered genus from the invasive emerald ash borer (Coleoptera: *Agrilus planipennis* Fairmaire). In: Small molecules shaping big interactions: interdisciplinary perspectives from early career botanists bridging biochemistry, physiology, animal behavior, ecology, and evolution. Botanical Society of America National Meeting, Grand Rapids, Michigan.
- Can increased emphasis on the foraging ecology of classical biological control agents improve the management of invasive pests in managed and natural ecosystems? In: Forecasting invasive insect species: integrating climate change dynamics of today and tomorrow. T.D. Johnson, R. Paul, P. Abram. 96th

FACULTY ACTIVITIES

Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 17-20, 2024.

- Time Management Strategies. Ahmad, S., Johnson, T.D., B. Londono, B. Romero, A. Stewart (all equal contribution). Entomological Society of America Early Career Professionals Committee. <https://www.entsoc.org/events/webinars/archive/ecp-time-management>.

Other Presentations

- Progress in characterizing the ecology of native and non-native longhorned beetles and their associates in subtropical Louisiana. T.D. Johnson, D. Debutts, R. Willis, J. McKeey, E. Grossman, R. Diaz. Southern Forest Health Work Conference, Greenville, South Carolina.
- Assessing coleopteran communities in three ash species prior to emerald ash borer invasion in southeastern Louisiana. Sanford, A.P., C. Wood Johnson, T.D. Johnson. Southern Forest Health Work Conference, Greenville, South Carolina.
- Assessing the impacts of bottom-up effect on larval development and reproductive ecology of two species of longhorn beetles. Sharma, C., T.D. Johnson. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Assessing the impact of physiological condition on the response two biological control agents of the emerald ash borer to a known attractant. Jindal, V., T.D. Johnson. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Assessing the impact of physiological condition on the response two biological control agents of the emerald ash borer to a known attractant. Jindal, V., T.D. Johnson. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Abundance and diversity of Coleoptera in three ash species prior to emerald ash borer invasion in southeastern Louisiana. Sanford, A.P., C. Wood Johnson, T.D. Johnson. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Assessing the impacts of bottom-up effect on larval development and reproductive ecology of two species of longhorn beetles. Sharma, C., T.D. Johnson. East Texas Forest Entomology Seminar, Lake Kurth, Texas.
- Assessing response of two biological control agents of the emerald ash borer to five species of ash trees. Jindal, V., T.D. Johnson. East Texas Forest Entomology Seminar, Lake Kurth, Texas.
- Abundance and diversity of true bugs (Hemiptera) associated with Carolina ash (Oleaceae: *Fraxinus caroliniana*) in Southeastern Louisiana. Graugnard, R., A.P. Sanford, T.D. Johnson. East Texas Forest Entomology Seminar, Lake Kurth, Texas.
- How of different soil types affect growth and volatile production of *Pinus taeda* and *Pinus palustris*. Debutts, D., T.D. Johnson. East Texas Forest Entomology Seminar, Lake Kurth, Texas.
- Assessing the impacts of bottom-up effect on larval development and reproductive ecology of two species of longhorn beetles. Sharma, C., T.D. Johnson. Louisiana State University Graduate Research Conference, Baton Rouge, Louisiana.
- Assessing response of two biological control agents of the emerald ash borer to five species of ash trees. Jindal, V., T.D. Johnson. Louisiana State University Graduate Research Conference, Baton Rouge, Louisiana.
- Assessing the impacts of bottom-up effect on larval development and reproductive ecology of two species of longhorn beetles. Sharma, C., T.D. Johnson. Southern Forest Health Work Conference, Greenville, South Carolina.
- Assessing the role of physiology on the response of biological control agents of the emerald ash borer to green ash trees of different ages. Jindal, V., T.D. Johnson. Southern Forest Health Work Conference, Greenville, South Carolina.
- Assessing the impacts of bottom-up effect on larval development and reproductive ecology of two species of longhorn beetles. Sharma, C., T.D. Johnson. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Abundance and diversity of true bugs (Hemiptera) associated with three species of ash (Oleaceae: *Fraxinus*) in Southeastern Louisiana. Graugnard, R, A. Sanford, T.D. Johnson. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Assessing the influence of different soil types on the growth and volatile production of loblolly pine (*Pinus taeda* L.) and longleaf pine (*Pinus palustris* Mill.), two hosts of southern pine beetle (*Dendroctonus frontalis* Zimmermann). Debutts, D., L. Gaston, T.D. Johnson. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Developing and ongoing projects on woodboring

FACULTY ACTIVITIES

insects and their associates in the forest entomology group at LSU. Grossman, E., T. Johnson, C. Johnson. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.

New Grants and Contracts

- 2024-2026. Southern pine beetle counting. Louisiana Department of Agriculture and Forestry (Contract No. 2000802432, Louisiana State University) \$100,000.
- 2025-2027. Identification of critical attractants to improve monitoring of classical biological control agents of the emerald ash borer within the Barataria-Terrebonne National Estuary. Barataria Terrebonne National Estuary Program (BTNEP) (Louisiana State University) \$123,629.

Publications

- J.J. Duan, Johnson, T.D., J.K., O'Dea, T.R. Petrice, R.A. Haack. 2024. The Ecology, Economics, and Management of Agrilus beetles. Curr. For. Rep. <https://doi.org/10.1007/s40725-024-00230-8>.

Media

- Johnson, T.D. and C. Gautreaux. 2024. Entomologists determining what insects are present and utilizing native ash trees.
- Johnson, T.D. and Mitchell, D. 2024. These tiny insects have been tearing up Louisiana trees. Homeowners may also be at risk. https://www.theadvocate.com/baton_rouge/news/environment/louisiana-beetles-trees-environment-forestry-drought-wildfires/article_97a64484-9225-11ef-9ef2-53bf45718c6f.html.
- Johnson, T.D. and Triche, R. 2024. Conserving Earth: August 2024. <https://www.redriverradio.org/show/conserving-earth/2024-10-25/conserving-earth-august-2024>.

Dawson Kerns

Invited Presentations

- Cotton Bollworm: What Does the Future Hold? Row Crop Short Course, Starkville, Mississippi. Dec. 10, 2024.
- Molecular characterization of Bt resistance in *Helicoverpa zea*. National Cotton States Arthropod Working Group Meeting, Custer, South Dakota. Oct. 15, 2024.
- Corn and Cotton Insect Pest Identification and Management. ANR Agent Corn and Cotton Training, Winnsboro, Louisiana. Dec. 16, 2024.

- Insect Pest Update. Louisiana Farm Bureau Advisory Committee Meeting, Ferriday, Louisiana. Nov. 6, 2024.
- Field Crop IPM. FFA Research Station Tour, Winnsboro, Louisiana. Sept. 16, 2024.
- Insect Pest Update. Nutrient On-Farm Field Day, Jonesville, Louisiana. Aug. 14, 2024.
- Insect Cover Crop Green Bridge. Row Crop Field Tour, St. Joseph, Louisiana. July 23, 2024.
- IPM Basics. Insect Scout School, Alexandria, Louisiana. June 14, 2024.
- IPM Basics. Insect Scout School, St. Joseph, Louisiana. June 7, 2024.

Other Presentations

- Diversity of Vip3Aa resistance mechanisms in fall armyworm (*Spodoptera frugiperda*). Roy, R., D.D. Kerns, et al. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.

New Committees

- Louisiana Agricultural Consultants Association, program planning committee.

New Grants and Contracts

- Cotton State Support Committee. 2024: Economic Value of Bt Cotton Traits and Insecticides in Louisiana. PI: D. Kerns, \$10,000.
- Louisiana Soybean and Grains Research and Promotion Board. 2024: Enhancing Soybean Insect Pest Management Strategies for Northeast Louisiana. PI: D. Kerns, \$15,000.
- Louisiana Soybean and Grains Research and Promotion Board. 2024: Reevaluation of Sampling Methodology for the Redbanded Stink Bug in Louisiana Soybeans. PI: D. Kerns, \$70,000.
- Louisiana Soybean and Grains Research and Promotion Board. 2024: Determining Early and Late Season Impacts of Stink Bugs in Soybeans. PI: D. Kerns, \$28,750.

New Collaborations (University, Industry, Other)

- Corn Leafhopper and Corn Stunt Working Group.
- Midwest Suction Trap Network.

Publications

- Silva, T., G.A. Sword, A. Miller, J.A. Qureshi, G.P. Head, D.D. Kerns, et al. 2024. Reversal of practical resistance in fall armyworm to Cry1F maize: a case report on

FACULTY ACTIVITIES

the resistance to susceptibility in Bt crops from the southeastern USA. *Journal of Pest Science*. 1-17.

- Yang, F., G.P. Head, D.D Kerns, J.L. Jurat-Fuentes, D.L. Kerns. 2024. Diverse genetic basis of Vip3Aa resistance in five independent field-derived strains of *Helicoverpa zea* in the U.S. *Pest Management Science*. 80: 2796-2803.

Michael Stout

Invited Presentations

- Global Trends in Pest Management in Rice: Implications for U.S. Rice. 30-minute keynote talk in Member Symposium, Tomorrow's Rice Pests Are on the Move, how can our Entomology Science Stop Them Today? Michael Stout, B.E. Wilson and J.A. Villegas. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Biology and management of the fall armyworm in Southern U.S. rice. 45-minute talk, remote. Philippine Rice Research Institute, Lifelong Learning Series, no. 11. Sept. 25, 2024.

Other Presentations

- Susceptibility of U.S. rice varieties to stem-boring Lepidopterans in Louisiana. Michael Stout, B.E. Wilson, J.M. Villegas, and K. McCarter. 2024 International Temperate Rice Conference, New Orleans, Louisiana. June 5-8.
- Compatibility of insecticidal seed treatment and host plant resistance in management of stem borer in rice. M. Danyal Khan, M.J. Stout and B.E. Wilson. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Elucidating the key volatiles involved in rice-rice stink bug interactions (poster). Laila Santos and M.J. Stout. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Elucidating the key volatiles involved in rice-rice stink bug interactions (poster). Laila Santos and M.J. Stout. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Investigating the impact of silicon accumulation on constitutive and herbivore-induced gene expression using OsLsi1 deficient mutant rice lines. 15-minute oral presentation in Member Symposium, Tomorrow's

Rice Pests Are on the Move, how can our Entomology Science Stop Them Today? Jyoti Sharma, R. Pruthi, T. Tai, and M.J. Stout. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.

- Investigating the impact of silicon accumulation on constitutive and herbivore-induced gene expression using OsLsi1 deficient mutant rice lines. Jyoti Sharma, R. Pruthi, T. Tai, and M.J. Stout. 14th Annual LSU Entomology Department Graduate Student Symposium, Baton Rouge, Louisiana. Oct. 18, 2024.
- Effect of Silicon Uptake Capacity and Herbivory on Silicon Accumulation in Rice at Local and Systemic Levels. Jyoti Sharma, T. Tai, and M.J. Stout. 2024 International Temperate Rice Conference, New Orleans, Louisiana. June 5-8, 2024.
- Investigating the impact of silicon on the constitutive and herbivore-induced volatiles using OsLsi1 mutant rice lines. Jyoti Sharma, A. Gaffke, T. Tai, and M.J. Stout. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 17-20, 2024.

New committees

- Louisiana Agriculture editorial board, co-chairman.

New Grants and Contracts

- USDA-ARS Honeybee Breeding, Genetics, and Physiology Research Unit, Cooperative Agreement (ARS PI, A. Avalos), Sept. 1, 2024-Aug. 31, 2025, Tech Transfer of IPM strategies for Varroa through Breeding and Miticide Resistance Management, \$225,000.

Awards and Honors

- Jyoti Sharma earned the John and Grace Roussel Graduate Fellowship Award in Entomology (Ph.D.).
- Jyoti Sharma earned the David J. Boethel Graduate Student Award in Entomology (Ph.D.).

Graduated Students

- Alexia DeSoto, M.S., 2024. Thesis title: [Settling Preference of Nipponaclerda biwakoensis](#) (Hemiptera: Acleridae) on *Phragmites australis* Stems. Co-advised with Dr. Andrea Glassmire.

Visiting Scientist

- Dr. Panna Ali, Bangladesh Agricultural Research Council.

Publications

- Villegas, J.M., R. Diaz, M.J. Stout, F. Papitchaya,

FACULTY ACTIVITIES

and B.E. Wilson. 2024. Influence of temperature and photoperiod on survival and development of *Eoreuma loftini* (Lepidoptera: Crambidae). *Insects* 15, 915. <https://www.mdpi.com/2075-4450/15/12/915>.

- Silva, T., G.A. Sword, A. Miller, J.A. Qureshi, G.P. Head, D.D. Kerns, J.-L. Jurat-Fuentes, J. Villegas, T.B. Towles, X. Ni, F.P. F. Reay-Jones, D. Carrillo, D.R. Cook, C. Daves, M. J. Stout, B. Thrash, S. V. Paula-Moraes, S. Lin, B. Patla, Y. Niu, C. I.R. Sakuno, and F. Huang. 2024. Reversal of practical resistance in fall armyworm to Cry1F maize: A case report on the resistance to susceptibility in Bt crops from the southeastern United States. *J. Pest Sci.* <https://doi.org/10.1007/s10340-024-01804-y>.
- Stout, M.J., K. McCarter, J. Villegas, and B.E. Wilson. 2024. Natural incidence of stem borer damage in U.S. rice varieties. *Crop Protection* 177, March 2024, 106565.
- Stout, M.J., L. Bernaola, and F. Acevedo. 2024. Recent History and Future Trends in Host-Plant Resistance. *Annals of the Entomological Society of America*, 117: 139-149. <https://academic.oup.com/aesa/article/117/3/139/7616019>.

Qian “Karen” Sun

Invited Presentations

- From cannibalism to burial: corpse management in termite societies. International Symposium on Comparative Evolutionary Thanatology, Kyoto, Japan (hybrid event, attended virtually).
- Behavior, ecology and management of termites. Louisiana Department of Agriculture and Forestry, Structural Pest Control Commission Research Committee Meeting, Baton Rouge, Louisiana.

Other Presentations

- Molecular regulation of age polytheism in the Formosan subterranean termite, *Coptotermes formosanus*. Khadka A., Hakanoglu H., Lee S.-B., Sun Q. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- A step towards understanding the link between honey bee (*Apis mellifera*) worker longevity and Varroa resistance. Hakanoglu H., Ihle K., Sun Q. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- A step towards understanding the link between honey bee (*Apis mellifera*) worker longevity and

Varroa resistance. Hakanoglu H., Ihle K., Sun Q. IUSSI Breakout Meeting, Prescott, Arizona.

- Age polytheism regulates foraging in the Formosan subterranean termite, *Coptotermes formosanus*. Khadka A., Hakanoglu H., Lee S.-B., Sun Q. LSU Graduate Research Conference, Baton Rouge, Louisiana.
- Differences in lifespan and behavioral maturation between honey bee (*Apis mellifera*) workers from Varroa resistant and sensitive stocks. Hakanoglu H., Ihle K., Sun Q. LSU Graduate Research Conference, Baton Rouge, Louisiana
- Influence of environmental conditions on shelter tube construction in the Formosan subterranean termite. Floyed P., McCarthy J., and Sun Q. LSU Discover Day, Baton Rouge, Louisiana.
- Effects of menadione on food consumption and survival of the Formosan subterranean termite, *Coptotermes formosanus*. Green M., Khadka A., Sun Q. LSU Discover Day, Baton Rouge, Louisiana.

Awards and Honors

- Hasim Hakanoglu received a \$5,000 research grant from the Louisiana Beekeepers Association.
- Arjun Khadka earned the L.D. Newsom Memorial Graduate Student Award (Ph.D.) in Entomology.

New Committees

- The North American Termite Survey (NATS) working group.
- LSU College of Agriculture Undergraduate Research Committee.

New Grants and Contacts

- NSF, Mechanisms of acclimation for desiccation resistance in subterranean termites, August 2024-July 2027, \$613,556. PI: Qian Sun.
- Louisiana Department of Agriculture and Forestry, Structural Pest Research, July 2024-June 2025, \$50,000. PI: Qian Sun (contract).
- Donation from Louisiana Pest Management Association in 2024, \$9,006.

James Villegas

Additional Role

- State IPM Coordinator.

FACULTY ACTIVITIES

Invited Presentations

- Entomology Panel. Mid-South Solutions Summit, Jonesboro, Arkansas, Feb. 21, 2024.
- Insect pest update in row crops. Louisiana Agricultural Technology and Management Conference, Marksville, Louisiana, Feb. 7-9, 2024.
- Efficacy of Plinazolin for tarnished plant bug control. Louisiana Agricultural Technology and Management Conference, Marksville, Louisiana, Feb. 7-9, 2024.
- Thrips control in ThryvOn cotton. Louisiana Agricultural Technology and Management Conference, Marksville, Louisiana, Feb. 7-9, 2024.
- Observations and insights – panel discussion. Crow, W., R. Leonard, J. Villegas, T. White. Louisiana Agricultural Technology and Management Conference, Marksville, Louisiana, Feb. 7-9, 2024.

Other Presentations

- Insect pest management in row crops – soybean, corn, and cotton. Franklin Production School, Winnsboro, Louisiana, Dec. 17, 2024.
- Soybean insect pests identification. LSU AgCenter Field Crops Insect Scout School, Alexandria, Louisiana, June 14, 2024.
- Soybean insect pests identification. LSU AgCenter Field Crops Insect Scout School, Winnsboro, Louisiana, June 7, 2024.
- Hessian fly update. LSU AgCenter Wheat and Oat Field Day, Winnsboro, Louisiana, April 23, 2024.
- Insect populations cover crops. LSU AgCenter Soil Health and Cover Crop Field Tour – Implementing Best Management Practices on Your Farm, St. Joseph, Louisiana, March 28, 2024.
- Insect pest management in soybean and corn. Franklin Production School, Winnsboro, Louisiana, March 5, 2024.
- Insect pest management in soybean, corn, and cotton. East Carroll Production School, Lake Providence, Louisiana, Feb. 6, 2024.
- Insect pest management in soybean and corn. Point Coupee Farm Forum, New Roads, Louisiana, Feb. 5, 2024.
- Insect pest management in row crops – soybean, corn, and cotton. Catahoula Parish Production School, Jonesville, Louisiana, Feb. 5, 2024.
- Insect pest management in row crops – soybean, corn, cotton, and sorghum. CenLa Crops and Cattle Forum, Alexandria, Louisiana, Jan. 30, 2024.

- Insect pest management in agronomic crops. West Carroll Parish Production School, Oak Grove, Louisiana, Jan. 23, 2024.
- Insect pest management in agronomic crops. Madison Parish Production School, Richmond, Louisiana, Jan. 23, 2024.
- Insect pest management in row crops. Avoyelles Parish Soybean and Feed Grain Clinic, Jan. 9, 2024.
- Insect Control in soybean. Evangeline/St. Landry Rice and Soybean School, Mamou, Louisiana, Jan. 3, 2024.

Pesticide Recertification and Extension Agent Training

- Seed treatment on field crops. Recertification for Categories 4, 7C(1-3) Seed Treatment/Stored Grain, Alexandria, Louisiana, May 9, 2024.
- Insect pest management strategies for field crops – soybean, rice, and sugarcane. Recertification for Cat. 1 (AgPest Control) and 10 (Demonstration and Research), Alexandria, Louisiana, Jan. 25, 2024.
- Corn and cotton insect pest identification and management. Villegas, J. and D. Kerns. LSU AgCenter Corn and Cotton Agent Training, Winnsboro, Louisiana, Dec. 16, 2024.
- Insect pests of agronomic crops: identification and damage. LSU AgCenter Central Region ANR Meeting, Avoyelles, Louisiana, July 11, 2024.

Conference

- Lopez, L., J. Villegas, O. Edward, S. Ranabhat, and J. Bruno. 2024. Exploring alternative insecticides for managing redbanded stinkbug infestation in Louisiana soybean crops. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. Poster.
- Ranabhat, S., J. Villegas, R. Price, J. Bruno, O. Edward, and L. Lopez. 2024. Enhancing insect pest management in soybean and cotton using sprayer drones. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. Oral.
- Musgrove, T., J. Villegas, M. Stout, and B. Wilson. 2024. Determining the yield loss/injury relationship between the rice billbug (*Sphenophorus pertinax* Olivier) and rice (*Oryza sativa* L.) as influenced by rice cultivar. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. Oral.
- Bruno, J., J. Villegas, S. Ranabhat, L. Lopez, and O. Edward. 2024. Evaluating the impact of silicon soil

FACULTY ACTIVITIES

amendments on insect pests of soybean. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. Oral.

- Musgrove, T., J. Villegas, and B. Wilson. 2024. Assessing varietal resistance to the sugarcane borer (*Diatraea saccharalis*) in Louisiana sugarcane. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 17-20, 2024.
- Gambino, C., B. Wilson, K. Landry, T. Musgrove, and J. Villegas. 2024. Influence of insect pest infestations in the main and ratoon crops on rice yields in Louisiana. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 17-20, 2024.

New Committees

- Entomological Society of America Annual Meeting Program Committee, student competition co-chair, 2024, Phoenix, Arizona.
- Student Awards Committee, Entomological Society of America – Southeastern Branch, vice-chair.
- Southern Region Information and Exchange Group for IPM (SERA3).

New Grants and Contracts

- USDA NIFA Crop Protection and Pest Management Competitive Grants Program – Extension Implementation Program. PI: Villegas, J. and Singh, R.; co-PIs: Davis, J., Watson, T., Ashbrook, A., Webster, C. 2024-2025. IPM Extension Implementation Program for Louisiana. Funding: \$281,116.
- Louisiana Soybean and Grain Research Promotion Board:
 - PI: Villegas, J. 2024. Enhancing Management Strategies for Key Insect Pests Affecting Soybeans in Central Louisiana. Funding: \$57,900.
 - PI: Villegas, J. 2024. Refining Insect Pest Management Approaches for Field Corn in Central Louisiana. Funding: \$14,575.
 - PI: Villegas, J. 2024. Management Strategies for Sugarcane Aphids and Headworm Complex in Grain Sorghum. Funding: \$1,000.
 - PI: Randy P.; co-PI: Moseley, D., Padgett, G., Villegas, J. 2024. Development of UAV Technologies for Soybean Crops. Funding: \$20,000.

Cotton Incorporated

- PI: Villegas, J. 2024. Insect Management in Mid-South Cotton. Funding: \$20,000.
- PI: Villegas, J. 2024. Enhancing Management Strategies for Important Arthropod Pests of Louisiana Cotton. Funding: \$5,000.

Visiting Scientist

- Leroy Lopez, Zamorano University, visiting research associate

Publications

- Villegas, J., R. Diaz, M. Stout, F. Papitchaya, and B. Wilson. 2024. Influence of temperature and photoperiod on survival and development of *Eoreuma loftini* (Lepidoptera: Crambidae). *Insects* 15 (12): 915. <https://doi.org/10.3390/insects15120915>.
- Horgan, F., A. Ramal, J. Villegas, A. Jamorain, J. Pasang, B. Hadi, E. Mundaca, and E. Crisol-Martinez. 2024. Rice bund management by Filipino farmers and willingness to adopt ecological engineering for pest suppression. *Agriculture* 14 (8): 1329. <https://doi.org/10.3390/agriculture14081329>.
- Wilson, B., T. Musgrove, J. Villegas, and K. Landry. 2024. Influence of insect pest infestations in the main and ratoon crops on rice yields in Louisiana. *Crop Protection* 184: 106855. <https://doi.org/10.1016/j.cropro.2024.106855>.
- Silva, T., G. Sword, A. Miller, J. Qureshi, G. Head, D. Kerns, J. Jurat-Fuentes, J. Villegas, T. Towles, X. Ni, F. Reay-Jones, D. Carillo, D. Cook, C. Daves, M. Stout, B. Thrash, S. Moraes, S. Lin, B. Patla, Y. Niu, C. Sakuno, F. Huang. 2024. Reversal of practical resistance in fall armyworm to Cry1F maize: a case report on the resistance to susceptibility in Bt crops from the southeastern USA. *Journal of Pest Science*. <https://doi.org/10.1007/s10340-024-01804-y>.
- Stout, M., K. McCarter, J. Villegas, B. Wilson. 2024. Natural incidence of stem borer damage in U.S. rice varieties. *Crop Protection* 177: 106565. <https://doi.org/10.1016/j.cropro.2023.106565>.

Extension

- Villegas, J., A. Ashbrook, J. Davis, R. Diaz, B. Fitzpatrick, C. Gregorie, B. Gueltig, K. Healy, F. Huang, T. Johnson, T. Reagan, T. Smith, M. Stout, Q. Sun, B. Wilson. 2024 Louisiana Insect Pest Management Guide. Louisiana State University Agricultural Center Publication 1838: 1-324.

FACULTY ACTIVITIES

- Moseley, D., B. Padgett, T. Price, M. Kongchum, D. Stephenson, R. Parvej, J. Villegas, J. Davis, T. Watson, D. Burns, C. Roider, G. Williams, R. Anderson, B. Waltman, B. Woolam, T. Monaghan, F. Collins, K. Fic, R. Tullos, J. Uddin, M. Rahman, M. Purvis, D. Ezell, A. Wahid, E. Moni, B. Garner, M. Carriere, R. Frazier, V. Deshotel, K. Miller, R. Castro, J. Dufour, J. Terrell, C. Pinnel-Alison, and R. Mallette. 2024 Soybean variety yields and production practices. Louisiana State University Agricultural Center Publication 2269: 1-24.
- Mosely, D., D. Stephenson, D. Miller, and J. Villegas. 2024. Applying harvest aids in soybean. Louisiana Crops Newsletter Volume 14, Issue 5.
- Villegas, J. 2024. Early-season insect pest control for soybean and cotton. Louisiana Crops Newsletter Volume 14, Issue 2.
- Davis, J. and J. Villegas. 2024. Estimating the redbanded stink bug threat for the 2024 soybean growing season. Louisiana Crops Newsletter Volume 14, Issue 1.
- Musgrove, T., J. Villegas, K. Landry, and B. Wilson. 2024. Foliar-applied chlorantraniliprole efficacy against rice pest complex, 2021. Arthropod Management Tests 49; doi: 10.1093/amt/tsae095.
- Villegas, J. 2024. Louisiana granted 24(c) special local need renewal for 2 lb. ai/acre use limit of acephate in soybeans. <https://www.lsuagcenter.com/articles/page1707187306345>.

Media Interview/Press Release/News

- LSU AgCenter. AgCenter entomologist are thinking outside the box for integrated pest management strategies. Article by Tobie Blanchard. <https://www.lsuagcenter.com/articles/page1727193470569>. Sept. 24, 2024.
- Delta Farm Press. Hessian fly: generational challenge for Delta wheat growers, breeders. Article by Raney Rapp. <https://www.farmprogress.com/wheat/hessian-fly-generational-challenge-for-delta-wheat-growers-breeders>. June 5, 2024.
- LSU AgCenter. Gains of knowledge: wheat, oat field day provides producers the latest crop updates. News article by V. Todd Miller. <https://www.lsuagcenter.com/articles/page1714744641120>. May 3, 2024.
- Louisiana Farm Bureau News. Agronomic crops school gives producers a chance to interact with AgCenter Researchers. News article by V. Todd Miller.

Blake Wilson

Invited Presentations

- Rice storage and fumigation practices. Invited featured speaker, USA Rice Trade Delegation, Amman, Jordan. Aug. 14, 2024.
- Enhancing Sustainability of Louisiana Sugarcane and Rice IPM. Invited University Seminar, Department of Entomology, Rhodes University, South Africa. April 26, 2024.
- Methods and Applications for the Control of Apple Snails in Rice-Crawfish systems. Wilson, B.E. and C. Wiggins. LSU/USDA Apple Snail Research Meeting, Crowley, Louisiana. April 9, 2024.
- Integrated Pest Management for Vegetable Production. Sprout NOLA Organic Farmers Convention, Ville Platte, Louisiana. Jan. 22, 2024.
- Apple snails in and out of Louisiana. Louisiana Farm Bureau Convention, New Orleans, Louisiana. June 29, 2024. Invited guest speaker.
- Apple snails: Successful invaders on a global scale. Horticultural Inspection Society- Southern Chapter Annual Meeting, Baton Rouge, Louisiana. Sept. 25, 2024. Invited guest speaker.

Other Presentations

- Enhancing the role of cultivar resistance in IPM of sugarcane stem borers. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Efficacy of soil applied insecticides for control of wireworms. Rivera, C.J., C.J. Wiggins, B.E. Wilson, H.J. Penn, and R.T. Richard. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Population dynamics of the Mexican rice borer, *Eoreuma loftini*, in commercial Louisiana sugarcane. Thibodeaux, S.L. and B.E. Wilson. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. *Best student presentation award.
- Determining the yield loss/injury relationship between rice billbug (*Sphenophorus pertinax*) and rice (*Oryza sativa* L.) as influenced by rice cultivar. Musgrove, T.M. and B.E. Wilson. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024. *Best student presentation award.

FACULTY ACTIVITIES

- Host plant resistance against Mexican rice borer in rice: Effectiveness, economic benefits, and compatibility with other IPM tactics. Khan, M.D., M.J. Stout, and B.E. Wilson. 2024 Annual Meeting of the Entomological Society of America, Phoenix, Arizona. Nov. 9-13, 2024.
- Optimizing integrated controls for sugarcane stem borers in Louisiana, USA. International Congress of Entomology, Kyoto, Japan. Aug. 29, 2024.
- New chemistries for wireworm control. Wilson, B.E. and H. Penn. Joint Annual Meeting. New Orleans, Louisiana. June 28, 2024.
- Effects of fall and spring defoliation on plant cane growth. Thibodeaux, S.L. and B.E. Wilson. American Society. of Sugarcane Technologists. Joint Annual Meeting. New Orleans, Louisiana. June 27, 2024.
- The value of insecticidal seed treatments to U.S. rice. International Temperate Rice Conference, New Orleans, Louisiana. June 7, 2024.
- Louisiana agriculture: Striving for food security and balanced nutrition in a changing world. Pennington Biomedical Research Center Scientific Symposium, Baton Rouge, Louisiana. April 15, 2024. Invited guest speaker (\$500 honorarium).
- The value of insecticidal seed treatments to U.S. rice production. 96th Annual Meeting of the Southeastern Branch of the Entomological Society of America, Augusta, Georgia. March 17-20, 2024.
- Incorporating sugarcane borer varietal resistance into integrated management programs. Louisiana Agriculture Technology and Management Conference. Marksville, Louisiana. Feb. 8, 2024.

Awards and Honors

- Management and Development Institute (LSU AgCenter, MDI) Cohort 2024.

New Grants and Contracts

- Louisiana Sea Grant, 2024-2026, Population dynamics and trophic interactions of invasive apples snails (*Pomacea maculata*) in crawfish production systems. Wilson – Lead PI and M. Polito (Co-PI, LSU Coastal Sciences). Funded, \$200,000.
- USDA NIFA, Crop Protection and Pest Management, 2024–2027, Development of decision tools and cultural practices for mitigating the impact of the Mexican rice borer (*Eoreuma loftini*) in Gulf Coast rice. Bernaola (Texas A&M) – Lead PI. Wilson Co-PI. Funded, \$300,000 (\$89,880 to LSU AgCenter).

Publications

- Villegas, J.M., R. Diaz, M.J. Stout, F. Papitchaya, and B.E. Wilson. 2024. Influence of temperature and photoperiod on survival and development of *Eoreuma loftini* (Lepidoptera: Crambidae). *Insects* 15: 915.
- Brijesh, A., S. Linscombe, C. Webster, M. Kongchum, F. Dalla Lana, B.E. Wilson, R. Zaunbrecher, V. Dartez, B. Williams, B. Theunissen, and A. Famoso. 2024. Registration of 'Avant' rice. *J. Plant. Reg.* 19: e20411.
- Richardson, B.M., R.H. Cowie, B.E. Wilson, K.A. Hayes, J.E. Byers, J. Qiu, T.G. Posser, C.C. Mischke, R.L. Burks, J.M. Lucero, and A.L. Roda. 2024. Apple snails: Discussion of past problems and future solutions for an emerging pest in United States Agriculture/ Aquaculture. *World Aquaculture* 55(1): 48–50.
- Wilson, B.E., T.R.T. Musgrove, J.M. Villegas, and K.J. Landry. 2024. Influence of insect pest infestations in the main and ratoon crops on rice yields in Louisiana. *Crop Prot.* 184: 106855.
- Huang, F., Y. Niu, Q. Song, S. Stewart, B.E. Wilson, G. Head, S. Brown, W. Yu, T. Silva, C. Sakuno, and S. Lin. 2024. An extended investigation on allele frequency of resistance to Bt. Maize in the southwestern corn borer and sugarcane borer (Lepidoptera: Crambidae) in the mid-south region of the United States. *Crop Prot.* 184: 106842.
- Stout, M.J., K. McCarter, J.M. Villegas, and B.E. Wilson. 2024. Natural incidence of stem borer damage in U.S. rice varieties. *Crop Prot.* 177: 106565.
- Todd, J.R., A.L. Hale, Y.-B. Pan, T.L. Tew, W.H. White, E.O. Dufrene, M.P. Grisham, J.W. Hoy, H. Penn, B.E. Wilson, A. Orgeron, H. Waguespack, M. Pontif, K.A. Gravois, W. Jackson, M.J. Duet, C. Landry, and D.L. Verdun. 2024. Registration 'Ho 13-739' sugarcane. *J. Plant Reg.* 18(1): 89–103. ■

FACULTY ACTIVITIES



We build teams that win. Those include, from left, Ravi Kondi, School of Plant, Environmental and Soil Sciences student; Christine Gambino, extension associate; and Drs. Prasanta Subudhi, Michael Stout and Jong Ham, from the Department of Entomology. Photo by Eddy Perez



Visit our website: www.LSUAgCenter.com

Pub. 3836-25 (online) 5/25

The LSU AgCenter and LSU provide equal opportunities in programs and employment.