

# EntNem

## Nov - Dec Newsletter

UF/IFAS Entomology and  
Nematology Department

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# Farewell From Heather McAuslane

**H**ow do you measure the passage of time? This Shumard Oak was planted by the loading dock area of Steinmetz Hall soon after I began my tenure in the Entomology & Nematology Department as Visiting Assistant Professor. An overzealous grounds-person weed-whacked the original tree, killing it. A root shoot developed; I sawed off the dead top and put a protective plastic collar around the struggling shoot. Thirty-two years later, this is the state of “my” tree. Its beautiful structure is a metaphor for the connections and collaborations formed during my professional career that led to new shoots and new directions. I’ve welcomed enthusiastic and innovative new faculty colleagues and celebrated the impactful careers of others who left our department, either to retirement or to new opportunities. I’ve had the pleasure of influencing hundreds of graduate students through my courses and service as Graduate Coordinator and seeing them go on to fulfilling careers. I’ve also had the honor of working with the best, most caring, and competent academic and administrative staff that a graduate coordinator and interim chair could hope for. Now, I’m ready to start a new branch on this tree and move into 100% administration in



the service of graduate education in our great college (the best at UF!). It will be my pleasure to continue to advocate for graduate students and their faculty mentors to ensure their mutual success. I am indebted to Dan Hahn for his support as Interim Associate Chair and know he will serve you all well as Interim Chair until Andrew Short arrives. This is an exciting time in the department, and I look forward to seeing how it grows and evolves over the next few years. While I will miss working with you on a daily basis, I’ll be sure to come back to visit you (and my tree). Happy holidays everyone and Go UFBugs!

*Dr. Heather McAuslane*



## Letter from the Interim Chair



Welcome to the start of 2023! We have many great things in store for our department over the next 12 months as well as much to celebrate from our collective successes in 2022. I also want to formally thank Heather McAuslane for all that she has done for us in this department. Heather has spent 32 years of her life with us in this department, and much of her time over these decades has been spent serving the needs of others. Although we all know about Heather's long service as our grad coordinator and then the hard work she has done the last 15 months spent at interim department chair, she has done so much more for faculty, staff, and students than I can list

in this one newsletter. Like many of you, Heather has contributed much to my career development. I list her among my cherished mentors and I wish Heather the best as a new Associate Dean.

As I reflect on 2022, I am reminded that we were joined by multiple new faculty, both established faculty and early career faculty. We have hired four new staff members and enrolled more new graduate students into our regular MS and PhD programs than some of our peer programs have all together, not to mention the gains we have had in recent years in our distance MS and undergraduate programs. As other peer departments around the country are shrinking and being merged with other units, we sit in an enviable position. More than twenty of our faculty are pre-tenure, some of our peer departments around the country do not even have that many entomology and nematology faculty total! As you will see below in this newsletter our students are winning national awards, we are publishing well, and we are serving our stakeholders.

The great people we have here at all levels, students, staff, and faculty, have me energized to enter 2023 knowing that more great things are in store for each of us as well as across the department as a whole. With Andrew Short coming in as our new chair in May 2023, we will have the opportunity to embrace this year of change and make the most out of it. I look forward to all of us collaborating to renew our departmental vision and goals and taking the opportunity to push for further excellence in research, teaching, extension, and service. I look forward to serving all of you as interim chair until Andrew arrives.

Happy New Year!

**Dr. Dan Hahn**

Professor and Interim Department Chair

Please welcome our  
*Newest*  
members!

*Devan Rawn*

Field Technician



*Daniel McNamara*

Research Assistant



*Andrew Mongue*

Assistant Professor  
Gainesville

*De-Fen Mou*

Assistant Professor  
Everglades REC



## Insect ID LAB

A couple samples of minute brown scavenger beetles (family Latridiidae) have been received in the Insect ID Lab lately. They are tiny, about 1.5 mm long, but they can be an annoyance when found in large numbers in homes. They feed on fungal spores and hyphae, so in buildings they are associated with a moisture problem where mold is growing. *Eufallia seminiveus* is the one with a white waxy exudate on its head and pronotum. The other species is *Adistemia watsoni*.





## Faculty and Staff News



ENSO celebrates Dr. Heather McAuslane's tenure as Interim Department Chair with cake and a photo, signed by students, of her favorite insect, the Polka-dot wasp moth.

The Insect Collection Grading Pizza Party took place on Wednesday, November 30th, when an abundance of local taxonomic experts from UF and the Division of Plant Industry / the Florida State Collection of Arthropods descended upon Steinmetz Hall to review Insect Classification student submissions. This year there were no new county or state records, but high praise was given to the quality of collections.

Thank you to everyone who joined us!



Photo: Collections grading in action! From L to R: Gareth Powell, Andrea Lucky, Kyle Schnepf, Elijah Talamas, Akito Kawahara, Jiri Hulcr, Toby and Sabina Lucky, Andrew Short, Jason Williams, Susan Halbert, Lyle Buss, Paul Skelley, Lillie Dieter, Anthony Auletta, and Catherine White. Not pictured: Aswaj Punath.





Steinmetz Hall's faculty, staff, students, and guests celebrated the end of the semester and the holidays on December 15th. The administration staff assembled the festivities, and Pisanoes provided the meals. Partygoers provided desserts and donated a variety of items to be gifted. These gifts were awarded to those randomly selected by raffle tickets called by Cheryl Jones, the front desk receptionist. Decorations were made and set up by Glinda, Kay, Feenix and Randy. We had an incredible turnout and despite some challenges, we all left with our stomach full and smiles on our faces.

Happy Holidays!

[Dr. Carey Minter](#) presented a talk on the "Biological Control of Earleaf Acacia in Florida" at the 30th Annual Conference of the North American Invasive Species Management Association in Kissimmee, FL.

[Dr. Lary Reeves](#) organized the Florida Medical Entomology Laboratory, FMEL, Halloween potluck where members and their family enjoyed good food, pumpkin carving, and night hike.



[Dr. Eric Caragata's](#) Lab students (Daniel Perez-Ramos and Leena Salama) won the pumpkin carving contest (the one sticking its tongue out with red light in the attached picture).



## 2023 Global Fellows Program Awards



The Global Fellows Program provides an opportunity for early-career UF faculty to kick-start an international research program. A series of workshops and training sessions, along with a seed grant of \$5,000, provides fellows an opportunity to lay the groundwork for an international research project.

Dr. Yoosook Lee, Ph.D., Assistant Professor, Florida Medical Entomology Laboratory, Institute of Food and Agricultural Sciences. Research in Zambia. Mentor: Dr. Chelsea Smartt, Ph.D.



After Hurricane Ian traveled through Central Florida, there a noticeable increase in pests. Professor of Urban Entomology, Dr. Mike Scharf, interviewed by Tampa Bay Newspapers about the more frequent encounters of pests because of the terrestrial rain.



Inzecto Mosquito Trap is an easy-to-use, environmentally friendly, and effective mosquito-killing device. It was co-created by Dr. Phil Koehler, a UF emeritus professor from the Entomology and Nematology department. The Gainesville-based company donated 1,000,000 traps this week to communities struggling with large populations of mosquitoes caused by flooding from hurricane Ian.







ENSO (Entomology and Nematology Student Organization) would like to express its gratitude for the generosity of Tammie Rooney, a retiree from Mayo, FL, who has donated a variety of hand-painted flowerpots and other crafts to the department's students for fundraising purposes. Profits from these sales belong entirely to ENSO and are allocated towards spring and fall student travel awards. Mrs. Rooney states that she has been crafting since childhood and has had more time to focus on her passion since retirement. She has continuously supported primary and secondary education through decades of volunteer work and her former employment as a teacher's assistant. Doing art brings Mrs. Rooney great fulfillment and she is thrilled by the opportunity to support graduate students through her craft.



# Entomological Society of America Awards

The Entomological Society of America (ESA) annual meeting was held in Vancouver, BC, Canada (ESBC) this year. Our student and post-doc attendees participated to compete with posters and/or give an oral presentation of their research. UF/IFAS Entomology and Nematology Department was well represented.



**Erik Roldan**  
P-IE: Microbes &  
Molecular Tools  
1st place



**Maricé Lopez**  
P-IE: Chemical Ecology  
& Host-Plant Resistance  
2nd place



**Joseph Velenovsky**  
MUVE: Molecular  
and Cellular Biology  
1st Place



**Yasmin Tavares**  
P-IE: Vector Surveillance  
2nd place



**Clancy Short**  
P-IE: Behavior & Ecology  
2nd place



**Kathryn Naherny**  
P-IE: Social Insects &  
Conservation  
2nd place



**John Ternest**  
Overall Best  
Debate Team



**Aswaj Punmath**  
P-IE: Ecology  
2nd place



**Dr. Maya Saar**  
Science Communication  
Award Runner-up



**Jacqueline Buenrostro**  
P-IE: Ecology  
2nd place

## No photos:

Amanda Markee - SysEB: Evolution 2 - 1st place

Dr. Morgan Pinkerton - ECP Extension Award

Lillian Hendrick - SysEB: Biodiversity and Ecology- 2nd place

Alina Lorenzo - SysEB: Behavior and Ecology - 2nd place



## Student News



Above: Parr McQueen & Kaitlin Gattoni

Research Abroad for Doctoral Students (RAD) program provides funding for travel and travel-related expenses for doctoral students to go abroad to collect data or to access resources not available on campus partner institutions. Both Kaitlin Gattoni and Parr McQueen were awarded to travel abroad.

PhD candidate, Abdullah Alomar, was the 2022 award recipient of the Cyrus R. Lesser Memorial Scholarship by the Florida Mosquito Control Association Foundation, to foster future learning in the field of mosquito control and vector biology.

Dr. Kelly Carruthers, a recent graduate from Dr. Carey Minter's lab, received the 2022 International Organization for Biological Control Nearctic Section's Robert J. O'Neil Outstanding PhD in Biological Control Award. Congratulations Kelly!

Emily Le Falchier, a Master's student in Carey Minter's lab, presented her research on "Ecological host range and potential non-target impacts of *Pseudophyllothrips ichini* (Thysanoptera: Phlaeothripidae) on plants native to Australia and the United States" at the joint meeting of the Entomological Society of America and the Entomological Society of Canada.



Above: Abdullah Alomar



Above: Dr. Mark Hoddle and Kelly Carruthers





Above: Jae Sarner, Sara Prater, Jayro Gutierrez, Eva Frost and Dr. Peter DiGennaro.

On December 7th, 23 students in [Drs. Anthony Auletta](#) and [DiGennaro's](#) Insect Research CURE course (ENY 2890) presented the results of their semester-long research project at a poster symposium in Steinmetz Hall. This symposium was well-attended by faculty, staff, and students in the Entomology & Nematology Department; thank you to everyone who came out to support the students and learn more about their research!

CUREs (short for Course-Based Undergraduate Research Experiences) are immersive, hands-on courses that engage undergraduate students in meaningful, authentic research. The students spend the semester working in collaborative teams on a novel research project, generating publishable data and thus providing new knowledge to their discipline. The Entomology & Nematology CURE, ENY 2890, is led by Dr. Anthony Auletta every fall and spring semester. In the fall, he partners with Dr. Peter DiGennaro to engage students in invertebrate genome research. This semester, the students' project focused on using genomic data to address questions about the potential spread of an invasive ant (Little Fire Ant, *Wasmannia auropunctata*) in Florida and beyond; this work was done in collaboration with [Dr. Andrea Lucky](#), Dr. Maya Saar (postdoc, Lucky lab), and Dr. Shova Mishra (postdoc,

DiGennaro lab), with TA support from Yichen Li (graduate student, Miller lab).

Since 2020, our CURE has introduced nearly 90 students to the world of entomology and nematology research. Faculty and research staff who are interested in participating in future CUREs are encouraged to reach out to Dr. Auletta for more information!

# CURE



# DPM



Hannah Talton and Heather Kalaman received their Doctor of Plant Medicine (DPM) degrees at commencement on Friday, December 16th. Hannah previously received her Master's degree in Entomology and Nematology under the direction of Dr. Oscar Liburd before joining the DPM program. Hannah's DPM degree was directed by [Dr. Amanda Hodges](#), and Hannah completed internships with BASF and with DPM and Entomology and Nematology alumnae Dr. Lisbeth Espinosa in Ecuador prior to graduation. During the week of graduation, Hannah accepted a position with BASF. Heather Kalaman completed a Master's degree in Environmental Horticulture under the direction of [Dr. Sandy Wilson](#), and Dr. Wilson also directed Heather's DPM degree. Heather completed her industry internship with Bartlett Tree Experts in North Carolina. Heather is interested in focusing her DPM degree to employment related to ornamental horticulture.



# BRAVO GRADUATES!



Jean-Yves Berisse



Sarah Patricia Birkmire



Clemen Junior De Oliveira



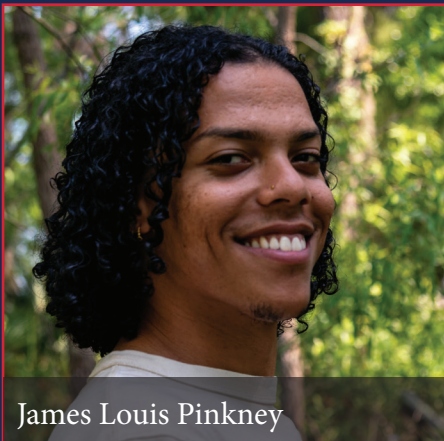
Amanda Mei Furuya



Joey Gonsiorek



Heather Rae Kalaman



James Louis Pinkney



Jennifer Standley



Hannah Talton



Yasmin Tavares

## No photos:

Alam Asif Khan  
Melissa Mayer John  
Aaron James Mullins



# EDUCATION & OUTREACH:

The Minter lab hosted a booth at the 2022 Indian River Lagoon Science Festival. The lab had informational displays on some of Florida's worst invasive plant species and their biological control agents. The festival was attended by over 5,000 people!

FMEL students, a postdoc, and faculty participated at the Indian River Lagoon Science Festival on October 22nd. Daniel Perez-Ramos organized the booth activities and volunteer schedule. Hannah Atsma, Daniel Perez-Ramos, Sangwoo Seok, Leena Salama, Xiaodi Wang, Morgan Rockwell, Vilma Montenegro, Dr. Yoosook Lee, Abdullah Alomar, and Amy Bauer (not shown in the picture).

We had lots of outreach events in November and December that reached over 650! Additionally, 6th grade classes had a day at Ichetucknee Springs State Park where they learned about different sciences including entomology with our arthropod petting zoo. We also did a bug program at Fort White Elementary school where 185 fourth and fifth grade students learned about our insects and entomology.

We are always looking for volunteers, please sign-up to help and have lots of fun!

[Vashti Tatman.](#)  
Outreach Coordinator



Above, from left to right: Sara Salgado, Emily Le Felchier, and Dr. Telmah Telmadarrehei



Above, from left to right: Hannah Atsma, Daniel Perez-Ramos, Sangwoo Seok, Leena Salama, Xiaodi Wang, Morgan Rockwell, Vilma Montenegro, Yoosook Lee, and Abdullah Alomar



# Student Highlights



Marielle M. Berto is a second year PhD student at UF's Tropical Fruit Entomology Lab (TREC-Homestead), under the supervision of [Dr. Daniel Carrillo](#). She has been studying mites since 2013, when she started college in Brazil. In 2017, she had the opportunity to pursue an internship at UF-TREC, working on the citrus leprosis vector, *Brevipalpus* sp. (Acari: Tenuipalpidae). After her internship, Marielle returned to Brazil to finish her undergraduate studies at University of Sao Paulo. She returned to UF as a M.S. student in 2019. Upon graduating, she started her PhD with Dr. Daniel Carrillo. Currently, her research focuses on utilizing phoretic mites associated with ambrosia beetles (Coleoptera: Curculionidae) as vectors of beneficial microbial agents to aid the control of wood-boring pests. She believes that mites are underexplored and might offer sustainable pest management solutions for challenging pest systems. After her PhD, Marielle

would like to continue doing research, but not necessarily in academia. She likes to keep an open mind and consider different opportunities.

Marielle is also TREC's Inclusion, Diversity, Equity, and Access, IDEA, Committee graduate student representative since March 2021. She has organized several events for TREC members in support of all aspects of Diversity and hopes to help build a more inclusive and safer academic environment.

## Fun Fact:

Besides doing science and catching bugs, Marielle enjoys drawing, hiking and gaming. As an art and biology aficionada, she currently has more than 20 nature-themed tattoos (she does not count them anymore at this point), two of which were tattooed by her.



## Publications

- **Smith, H. A., N. A. Peres, and S. Lahiri. 2022.** Potential of UV-C for management of two-spotted spider mites and thrips in Florida strawberry. Pest Management Science DI [10.1002/ps.7263](https://doi.org/10.1002/ps.7263)
- **Kim, D., N. D. Burkett-Cadena, L. E. Reeves. 2022.** Pollinator biological traits and ecological interactions mediate the impacts of mosquito-targeting malathion application. Scientific Reports DI [10.1038/s41598-022-20823-2](https://doi.org/10.1038/s41598-022-20823-2)
- **Tavares, C. S, R. Mishra, P. N Ghobrial, B. C Bonning. 2022.** Composition and abundance of midgut surface proteins in the Asian citrus psyllid, *Diaphorina citri*. Journal of Proteomics DI [10.1016/j.jprot.2022.104580](https://doi.org/10.1016/j.jprot.2022.104580)
- **Tavares, C. S, B. C Bonning. 2022.** “Mpp51Aa1 toxicity to *Diaphorina citri* nymphs demonstrated using a new, long-term bioassay method. Journal of Invertebrate Pathology.” [10.1016/j.jip.2022.107845](https://doi.org/10.1016/j.jip.2022.107845)
- **Mishra, R., A. K. Arora, J. Jimenez. C. D. Tavares, R. Banerjee, S. Panneerselvam, B. C. Bonning. 2022.** “Bacteria-derived pesticidal proteins active against hemipteran pests. Journal of Invertebrate Pathology.” [10.1016/j.jip.2022.107834](https://doi.org/10.1016/j.jip.2022.107834)
- **Archer, L., J. Quereshi, U. Albrecht. 2022.** “Efficacy of Trunk Injected Imidacloprid and Oxytetracycline in Managing Huanglongbing and Asian Citrus Psyllid in Infected Sweet Orange (*Citrus sinensis*) Trees.” Agriculture-Basel. [10.3390/agriculture12101592](https://doi.org/10.3390/agriculture12101592)
- **Castellano-Hinojosa, A., J. W. Noling, H. X. Bui, J. A. Desaegeer, S. L. Strauss. 2022.** “Effect of fumigants and non-fumigants on nematode and weed control, crop yield, and soil microbial diversity and predicted functionality in a strawberry production system.” Science of The Total Environment. [10.1016/j.scitotenv.2022.158285](https://doi.org/10.1016/j.scitotenv.2022.158285)
- **Kariuki, E. M., E. E Lovo, T. Price, V. Parikh, E. B Duren, P. B Avery, C. R Minteer. 2022.** “The consumption and survival rate of *Lilioceris cheni* (Coleoptera: Chrysomelidae) on air potato leaves exposed to *Cordyceps javanica* (Hypocreales: Cordycipitaceae).” Florida Entomologist. [0015-4040](https://doi.org/10.0015-4040)
- **Kleckner, K., A. De Carolis, C. Jack, C. Stuhl, G. Formato, J. D Ellis. 2022.** “A Novel Acute Toxicity Bioassay and Field Trial to Evaluate Compounds for Small Hive Beetle Control.” Applied Sciences-Basel. [10.3390/app12199905](https://doi.org/10.3390/app12199905)
- **Schumacher, L. A, Z. J. Grabau, D. L. Wright, I. M. Small, H. L Liao. 2022.** “Effects of Grass-Based Crop Rotation, Nematicide, and Irrigation on the Nematode Community in Cotton.” Journal of Nematology. [10.2478/jofnem-2022-0046](https://doi.org/10.2478/jofnem-2022-0046)

Click here to view the full list of publications. [Link.](#)



## Grants



**Dr. Xavier Martini** Received a \$25,000 grant from the National Watermelon Association for his proposal titled “Increasing pollinator visitation and controlling whiteflies during bloom with kaolin and magnesium oxide.”



**Kirsten Pelz-Stelinski** (PI), **Bryony Bonning** and **Lukasz Stelsinki** received a grant of \$793,286 for 2 years from the USDA Emergency Citrus Research and Extension program for the project “Toward a reliable, insect cell culture-based technique for culturing CLas bacteria”. This project is based on the significant advances made by **Dr. Ke Wu** in Bonning’s lab for establishment of cell cultures derived from the Asian citrus psyllid, *Diaphorina citri*. As the Asian citrus psyllid vectors the causative agent of citrus greening (CLas), and as CLas replicates in psyllid tissues, the team will address whether the optimized cell culture medium and / or the cultured psyllid cells will support replication of the CLas bacterium. The inability to culture CLas has been a major constraint for citrus greening research, which the team hopes to resolve.



**USDA NIFA Beginning Farmer and Rancher Development Program**. Leveling Up: Providing Innovative Tools and Resources for Beekeepers to Improve Business Success. Grant amount: \$625,821. PI: **Amy Vu**, CoPI: **Dr. Jamie Ellis**, **Dr. Cameron Jack**, **Dr. Kimberly Morgan**, **Dr. Kevin Athearn**, **Dr. John Diaz** More.



**Dr. Carey Minter** and collaborators at the USDA-ARS (Dr. Melissa Smith) and The Commonwealth Scientific and Industrial Research Organisation (Dr. Matt Purcell) were awarded Florida Fish and Wildlife Conservation Commission funding of \$131,397 to develop biological control agents for the invasive plant earleaf acacia.



## Grants



Congratulations to three pre-tenure faculty on their successful Archer Early Career Seed Grant proposals. The award was recently renamed in honor of Dr. Douglas Archer, who was UF/IFAS Associate Dean for Research and a staunch champion of faculty development. The intent of the funding is to “jumpstart” their programs and provide a platform for future success. **Panpim Thongsripong** (FMEL) - “Elucidating the mechanisms of temperature-driven changes in mosquito-borne disease transmission via host-mosquito contact rate” - \$50,000 **Alexandra Revynthi** (TREC) - “Acaricide resistance on ornamentals: characterization and management” - \$49,815 **Peter DiGennaro** (Gainesville) - “A parasitic nematode solution to plant nutrient use efficiency” - \$49,389



