Greetings Friends of Entomology! What a semester we have had in the Department of Entomology. You will notice a lot of pictures of smiling faces in this newsletter as we highlight our department's award winners from this spring. Our department awards committee, chaired by Dr. Sarah Short, has been busy nominating our amazing faculty, staff, and students for awards at the departmental, college, university, and society levels and their efforts have paid off this spring. While all of these awards were deserved and are points of pride, I want to highlight the OSU Alumni Award for Distinguished Teaching that both Dr. Joe Raczkowski and Dr. Frances Sivakoff won this year. These two awards highlight the dedication of our faculty to providing the best instruction possible for our students. In addition to those awards, the Entomology Graduate Student Association was awarded with both The Ohio State University Student Life Leadership Award for Outstanding Graduate Student Program and the CFAES Student Organization Collaboration Award. These underscore the work our students have dedicated to building a strong program and community of students that serves each other, the department, and the broader community.

I further want to recognize three faculty who have earned promotions this year. Dr. Reed Johnson was promoted to Professor, Dr. Joe Raczkowski was promoted to Associate Professor of Practice, and Dr. Ellen Klinger was promoted to Associate Professor of Practice. Finally, I want to recognize Dr. Bruce McPheron who is retiring in June. Bruce has served at all levels in this university and his leadership will be missed.

Please join me in congratulating all those who have accomplished great things this spring, we truly are a department focused on excellence.
Graduate Student Thesis Defenses

Spring 2024

Master of Science, Entomology
Valerie Anderson, Advisor: Canas

Doctor of Philosophy, Entomology
Lydia Fyie, Advisors: Meuti & Gardiner
Grace Sward, Advisor: Canas

Entomology Graduate Student Association Awards

EGSA received two significant awards for the 2023-2024 academic year: The Ohio State University Student Life Leadership Award for Outstanding Graduate Student Program and the CFAES Student Organization Collaboration Award.

Congratulations

to our 2023-24 Graduates!

SUMMER 2023
Iliana Moore, MS
Alden Siperstein, PhD

AUTUMN 2023
Ellen Danford (ESGP), MS
Grace Sward, PhD

SPRING 2024
Mia Centuori, BS
Anne Gill, BS
Abbie Korn, BS
Valerie Anderson, MS
Yeaun Park (ESGP), MS
Lydia Fyie, PhD

Entomology Graduate Student Association Awards

EGSA President, Dom Magistrado & Entomology Chair Jamie Strange with 2024 OSU Student Life Leadership Award for Outstanding Graduate Student Program.
Awards & Honors

Graduate Student Honors & Awards

Honors

Lydia Fyie, Advisors: Meuti & Gardiner, Graduate Associate Teaching Award, OSU Graduate School

Erick Martinez, Advisor: Piermarini, CFAES Graduate Student Advisory Council Vice Chair, 2023-24

Erick Martinez, Advisor: Piermarini, 1st place Hollandsworth Prize $2,500, American Mosquito Control Association Student Paper Competition

Department of Entomology Graduate Student Awards for Research, Teaching & Service

Valerie Anderson, Advisor: Canas, David J. Horn Service Award

Liam Whiteman, Advisor: Strange, Susan W. Fisher Teaching Award

Lydia Fyie, Advisor: Advisors: Meuti & Gardiner, Lowell R. (“Skip”) Nault Research Award

Dominque Magistrado, Advisor: Short, Lowell R. (“Skip”) Nault Research Award

Department of Entomology Research Presentation Awards

Tom Paul, Advisor: Ward, DeLong Award for Best Oral Presentation, Established in 1985 to honor CFAES Entomology Professor Emeritus Dwight DeLong

Arnol Gomez, Advisor: Leach, DeLong Award for Best Poster Presentation, Established in 1985 to honor CFAES Entomology Professor Emeritus Dwight DeLong

Brooke Donzelli, Advisor: Strange, Root Award for Excellence in Agricultural Entomology, Established in 2003 by Jack and Helen Root

Yeaeun Park, Advisor: Piermarini, ESGP, Jones Award for Excellence in Urban Entomology

Entomological Society of America, North Central Branch

Graduate Poster

Arnol Gomez, Advisor: Leach, 1st place MS, P-IE

Graduate 10-Minute Oral Presentation

Brooke Donzelli, Advisor: Strange, 2nd place PhD, P-IE

Angel Haller, Advisor: Michel, 3rd place, PBT-P-IE
Awards & Honors

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Graduate Student Grant Awards

External Grants

Dante Centouri, Liam Whiteman, $150,000: Exploring the impacts of agricultural intensification on bee health. Greenacres Foundation. Advisor: Strange

Lucy Guarnieri, $10,000: Investigating the value of urban greening for moth conservation in a growing city. Joan Mosenthal Dewind Award, Xerces Society. Advisor: Gardiner

Lillian Johnson, Adam Foster, $75,300: Examining the effects of pesticides on bee diversity and abundance in key Ohio crops using audio analysis techniques. One Hive Foundation. Advisor: R. Johnson

Angel Haller, $2,500: Ohio Soybean Council Foundation Scholarship. Advisor: Michel

Erick Martinez, $1,000: American Mosquito Control Association Young Professionals Industry Sponsored Travel Program, AMGUARD Environmental Technologies. Advisor: Piermarini

Brandon Shannon, $450: John T Ambrose Student Award, North Carolina State Beekeepers Association. Advisor: R. Johnson


Erika Wright, $7,500: Garden Club of America Zone VI Fellowship in Urban Forestry. Advisor: Gardiner

CFAES Internal Grants Program

Lillian Johnson, $5,000: Can clover planted within soybean fields increase honey bee visitation and crop yield? Advisor: R. Johnson


Amber Stiller, $5,000: Can augmentative biological control suppress populations of the invasive crapemyrtle bark scale? Advisor: Ward

Adam Foster, $5,000: Comparing the toxic effects of pesticides on squash bees and honey bees. Advisor: R. Johnson

Angel Haller, $5,000: Do Transposable Element Regulators Impact Insect Adaptation to Plant Defenses? Advisor: Michel

Jonathan Lee-Rodriguez, $4,963: Development of Environmental DNA Assay for Green Peach Aphid (Myzus persicae) Detection in Greenhouses. Advisor: Canas

Yamikani Ng’ona, $5,000: The genetic basis of Bt corn Resistance in European Corn Borer. Advisor: Michel

Afsoon Sabet, $4,894: Population genetics of the Gulf Coast tick in Ohio. Advisor: Ward

Erika Wright, $5,000: Evaluating oaks as climate-resilient reservoirs for urban biodiversity. Advisor: Gardiner

Undergraduate Honors and Awards


Addison Copen, right photo, Advisors: Gardiner & Guarnieri, 1st place, Entomology, UG Competition, CFAES Research Forum Poster Competition

David Narayanan, Advisor: Gardiner, 2nd place, Undergraduate 10-Minute Oral Presentation, Entomological Society of America, North Central Branch
Awards & Honors

Faculty Awards

OSU Awards

Joe Raczkowski, OSU Alumni Award for Distinguished Teaching
Frances Sivakoff, OSU Alumni Award for Distinguished Teaching

CFAES Awards

Mary Gardiner, Distinguished Senior Faculty Research Award
Ashley Leach, Distinguished Early Career Extension Faculty Award
Megan Meuti, Distinguished Undergraduate Academic Advisor/Mentor Award
Joe Raczkowski, Rodney F. Plimpton Distinguished Early Career Teacher Award

Luis Canas, 20 years of CFAES service
Joe Raczkowski, 15 years of CFAES service
Carol Anelli, 10 years of CFAES service
Sarah Short, 5 years of CFAES service

External Awards

Mary Gardiner, Distinguished Alumnus Award, Michigan State University Department of Entomology
Ellen Klinger, Educator Award, North America Colleges and Teachers of Agriculture
Sarah Short, 1st place, Creative Works & Media, Epsilon Sigma Phi Alpha Eta Chapter/OH Joint Council of Extension Professionals

Shaohui Wu, Outstanding Recent Graduate Alumni Award, Virginia Tech Department of Entomology

Grant Awards

James Jasinski, Amy Stone - OSU Extension, Andrew Michel, Ashley Leach - Entomology, $39,975: EPA Spotted Lanternfly Outreach, Environmental Protection Agency

Ashley Leach, $74,444: Intercepting invaders: Keeping spotted lanternfly out of OH grape, Ohio Department of Agriculture

Ashley Leach, $736,956: Bees & the bottom line: Uncovering the effects of insecticides on crop pollination and yield, National Institute of Food and Agriculture

Kayla Perry, Jamie Strange, $300,000, US Fish and Wildlife Service

Smith, M., M. Mangan, with Frances S. Sivakoff as International Collaborator, £ 239,886: Using Data Driven Artificial Intelligence to Reveal Pesticide Induced Changes in Pollinator Behaviour. Biotechnology and Biological Sciences Research Council for The International Partnering Award Plus (IPAP) on Artificial Intelligence (AI) for Bioscience.

Samuel Ward, $73,119: Bolstering Biosecurity by Identifying Shortcomings in the Sanitation of Wood Packaging Material, CFAES Internal Grants Program, New Researcher Incentive Program
Awards & Honors

Staff Honors & Awards

CFAES Awards

Nuris Acosta, Piermarini & Canas Lab, Distinguished Research Technical Staff Award, CFAES

Erin Parker, Wooster Office Manager, Shirley Brooks-Jones Citizenship Award, CFAES Staff Advisory Council

Janna Thompson-Chordas, Academic Program Manager, Key Values Award, CFAES Staff Advisory Council

Scott Wolfe, Building & Safety Coordinator, Innovation Award, CFAES Staff Advisory Council

Sarah DeVilbiss, CFAES Staff Advisory Council Chair, 2023-2024

Erin Parker, CFAES Wooster Campus Staff Council Chair, 2024

Erin Parker, 5 years of CFAES service

Grant Awards

Pinar Barkan, Mo Christman (post-docs) & Liam Whiteman (grad student), $150,000: Developing therapeutic tools for the control of bumble bee parasites. One Hive Foundation. Strange Lab

Chia Lin, $9,998: Can mustard pollen mitigate Vairimorpha (Nosema) infection in honey bee colonies? North American Pollinator Protection Campaign. R. Johnson Lab

Entomology Awardees w/ Department Chair, Jamie Strange, and Associate Dean & Wooster Campus Director, Andy Michel: CFAES Awards Ceremony, April 25, 2024

L-R: Andy Michel, Nuris Acosta, Megan Meuti, Mary Gardiner, Ashley Leach, Joe Raczkowski, Janna Thompson-Chordas, Scott Wolfe, Erin Parker, Jamie Strange

Photos: Ken Chamberlain, CFAES Marketing & Communications
Outreach Highlights

**Pollinator Education Programs**

*Contributed by Denise Ellsworth, program director, Pollinator Education*

**The Private Life of Bees display at the OSU SENR’s Earth Day Celebration**

Over 500 participants including students, environmental professionals, naturalists, families, and others attended the April 22nd Earth Day event hosted by the School of Natural Resources held at OSU’s Fawcett Center on the Columbus campus. The Private Life of Bees display was staffed by OSU graduate students Brooke Donzelli (Entomology), Lizzy Sakulich (EEOB) and Maddison Elliot (Anthropology) along with 9 other professionals and pollinator volunteers. At ten interactive tables filled with images, specimens under microscopes, live bees, native plants and even honey tasting, participants learned about bee diversity, bee senses, plant/pollinator interactions, the vital relationship between bees and native plants, and bee research at OSU. Participants left with bee cards, native plant handouts, a native perennial plant to enhance bee habitat at home, and a greater appreciation for the essential role of bees in our lives. The Private Life of Bees display was coordinated by Denise Ellsworth, director of pollinator education.

**Plant by Numbers: two new garden themes launched in 2024!**

Thanks to an Integrated Pest Management grant, two new “Plant by Numbers” themes were unveiled this spring: Hummers and Singers (for the Birds!), and Good Garden Bugs. The Plant by Numbers program focuses on the use of native plants and a sample design to promote habitat for bee, birds, butterflies and other beneficial creatures. Plants in the Hummers and Singers theme provide nectar for hummingbirds, seeds and nesting habitat for adult birds, and act as host plants for caterpillars gathered by birds to feed their young. The plants in Good Garden Bugs offer accessible flowers for beneficial predatory insects needing pollen and nectar, provide nectar throughout the season in extrafloral nectaries, and attract aphids and other prey to draw good garden bugs to the landscape. All five Plant by Numbers garden designs and handouts can be found at: https://u.osu.edu/plantbynumbers/

**Entomology members & visitors at the CFAES-COSI We Grow Scientists Event, May 1, 2024**
Outreach Highlights

Wooster United Titanium Bug Zoo (UTBZ)

*Contributed by Jeni Filbrun program manager & Carrie Elvey community outreach specialist*

The UTBZ had a fun-filled and busy Spring with lots of new programs.

We hosted our first-ever *Mugs and Bugs* series for the general public. The series ran for 5 weeks and participants enjoyed a fun program, donuts, and coffee served in mugs designed by our own recent Ph.D. graduate, Grace Sward. We plan on another series for the Fall. Adults also enjoyed the new *Art with Arthropods* series. Each month, participants gather at the bug zoo for an insect-inspired art project like painting with cockroaches or creating “love bug” Valentine collages. Participants complete two canvases: one to keep, and one will be part of the annual 6x6 Show at the Wayne Center for the Arts. These canvases are sold, and proceeds will be split between the art center and bug zoo.

We rolled out the new *Program Guide* for schools and other groups, full of new and updated educational offerings like Cockroach Conundrums & Isopod Investigations.

The bug zoo worked with many groups this season, but hands-down our favorite was the collaboration with the **Wooster Township Leadership Team**. Students visited the bug zoo, learned about our animals, then chose to offer a bug day for their school. Student groups chose an insect, created interpretive slides, then handled the bugs and introduced them to the entire school. They also created public service announcement posters and videos (watch for these on the department Facebook page coming soon!).

The UTBZ ran a chilly but successful dip-netting station at the annual *Shreve Spring Migration Sensation* event in March. Over 100 kids and parents came to explore the Killbuck Marsh Wildlife Area and learn about the importance of aquatic insects. We also participated in the *Environmental Education Council of Ohio’s Winter Snow Conference*, providing evening entertainment and a class on keeping insects in the classroom.

**The United Titanium Bug Zoo recently released their seasonal newsletter for Spring 2024.**

Read more about what’s new at the zoo (bug babies!) and recent UTBZ activities and events.

[go.osu.edu/UTBZ-newsletter-spring24](go.osu.edu/UTBZ-newsletter-spring24)
Outreach Highlights

Columbus BUGmobile and Insectary
Contributed by Jeni Ruisch, program director, Insectary and BUGmobile

The BUGmobile and Insectary Outreach team kept busy through the winter as our programming continued to grow by leaps and bounds! We have made lasting connections with visiting student groups, as well as individuals interested in majoring in Entomology and working with the critters in the Insectary.

In February at North High Brewing in Westerville we celebrated the release of Scorpion VS Subzero. This is a cold IPA created in honor of our tiny traveler, Klaus. Klaus is an Arizona bark scorpion that somehow made his way across the country and showed up at North High’s brewery in the dead of winter. (We surmise he rode in on a pallet...) They emailed Jeni Ruisch about their find, and the rest is history!

The event was a hit!

Jeni spraypainted toy scorpions with UV reactive paint and made tiny rock outcroppings using craft supplies. These were placed all around the event space, where children with UV lights were encouraged to go scorpion hunting. Klaus enjoys his little penthouse with desert plants and plenty of bark to hide under.

Columbus outreach has made ready for their biggest day of the year! The BUGmobile was present at COSI’s Big Science Celebration for the third year in a row, with some new displays and some new faces. This summer is shaping up to be our biggest yet!

Research Publications

**Bold:** current department member. *Indicates student, post-doc, or visiting scholar formerly advised by CFAES Entomology faculty.

Research Publications

Spring 2024


Extension Materials

3D Extension Products
Basnagala S., and Perry, K.I. 2024. 3D printed Elm Zigzag Sawfly leaves. https://oied.osu.edu/node/3411

Basnagala S., and Perry, K.I. 2024. 3D printed Hemlock Wooly Adelgid key tag https://oied.osu.edu/node/3410

Fact Sheets, ohioline.osu.edu

Printed Products

Buckeye Yard & Garden Online Posts, bygl.osu.edu
Entomology Graduate Student Association

Contributed by Dom Magistrado, EGSA President, Erick Martinez, Vice President & Carlee Shepard, Treasurer

Entomology Graduate Student Association (EGSA) Receives CFAES and University Awards

CFAES Student Organization Excellence Award in Collaboration:
EGSA received this award for involvement in the Fall 2023 Pumpkins & Pillbugs Halloween Bug Zoo Bash, an impressive collaboration between CFAES Graduate Student Advisory Council, the Wooster Staff Council, the United Titanium Bug Zoo, and EGSA. The event had ~500 attendees from OSU and the surrounding community and was focused on community-building and inclusivity.

Ohio State University Outstanding Student Organization Program:
EGSA received this award for the 2023 iteration of the annual Insect Night Walk Event, an outreach event organized primarily by grad students which has become highly anticipated by the surrounding community in recent years and had ~250 attendees. At this event, families had fun with entomology-themed arts and crafts activities, getting to pet fuzzy bumblebees, and tasting honey straight from the honeycomb. Folks also enjoyed the nighttime insect light trap tours, interactive passports, using microscopes in the Bug Zoo, and enjoying a free beverage for all. EGSA also sold popular merch and hosted an ento-themed raffle.

EGSA Social Events
Grad students gathered together for various social events this semester, including a Game Day at the Bee Lab in Columbus; a Game Night, an Acres of Fun + Coffee Hour event, & celebration gathering at the brewery in Wooster, and a trip to the OSU Marion Campus to view the total solar eclipse!

New EGSA Committee: Merch & Fundraising
Following another year of successful merch and fundraising within the department and at conferences and outreach/community events, EGSA voted to formalize our efforts through a Merch & Fundraising Committee. The Committee will oversee and organize all future merch and fundraising efforts.
EGSA, continued

EGSA ranks 4th in OSU Student Organization Involvement Program

This year, EGSA participated in OSU’s pilot Student Organization Advantages and Rewards (SOAR) Program. EGSA ranked 4th out of 150 participating student organizations, reflecting our engagement with the university community and its resources. As a reward for achieving Top 5 status, EGSA will receive a $500 Member Development Grant to be used for a developmental/team-building experience for our EGSA members. Three EGSA members will also receive sponsorship at OSU’s 4-day overnight LeaderShape Institute retreat during Winter Break 2024.

EGSA hosts speakers at DeLong Memorial Lecture and Career Café mini-Series

This spring, EGSA continued the long-standing tradition of hosting a member-voted DeLong Memorial Speaker as part of the departmental seminar series. We welcomed Dr. Thomas Powell of Binghamton University for a research talk titled "Climate change and temporal specialist insects: diapause as both a vulnerability and target for rapid adaptation." During Dr. Powell’s visit, students organized networking meals with the speaker, meetings with other faculty members, and various tours around campus.

EGSA also hosted a “Career Café” mini seminar series this spring. Here, we invited recent graduates of entomology and related disciplines to join students for an hour to discuss their paths from graduate students to professionals with diverse careers outside of academia. We welcomed four guests this semester with careers in industry and government, including three recent OSU Entomology graduates. Special thanks to this semester’s guests for sharing their time and knowledge: Nathan Byer, PhD (Research and Database Manager, Cleveland Metroparks), Edna A Alfaro Inocente, MS (Regional Entomologist, Sprague Pest Solutions), Carlos J. Esquivel, PhD (Global Regulatory Sciences, Seeds and Traits, Bayer CropScience LP), and Alexander Tyrpak, MS (Research and Development Technician III at EnviroFlight LLC).

Chrysalis Undergraduate Entomology Student Association

It was a busy year for Chrysalis, maintaining their student organization status and providing connection for undergraduates throughout the year. Recruiting for new membership was strong, increasing numbers to over 160 members at events like the department’s annual Back2School BBQ.

Events Chrysalis held included:
Back to School Bash
Weekly Thursday night meetings
Second annual collection trip AND the Cedar Bog Walk
Deepwoods Collecting Trip in Hocking County, Ohio
Bug Documentary Night
Collection at Whetstone Park in Clintonville
collecting bugs at Chadwick Lake

To join Chrysalis, contact CFAES Entomology undergraduate advisor Joe Raczkowski.2@osu.edu.