

SPRING 2025

BUGGED

Department of Entomology Newsletter



Department of Entomology
MICHIGAN STATE UNIVERSITY



Photo by Bill Ravlin

From the Chair

BY HANNAH BURRACK

A season of celebration is underway for MSU Entomology! This semester, the excitement kicks off at the North Central Entomological Society of America branch meeting. Among the awardees being recognized in Lincoln, Nebraska are: Dr. Anthony Cognato, who will receive the Legacy Contribution Award; Dr. Marianna Szucs, who will receive the Distinguished Achievement Award in Integrated Pest Management; Dr. Amanda Lorenz & Dr. Henry Chung, who will be recognized with the Educational Program Award; and DeShae Dillard, who received honorable mention for the Graduate Student Scholarship.

After a busy branch meeting celebration, we will next recognize our 2025 MSU Entomology Department awards winners! Highlights from the awards celebration, a full list of awards, and profiles of awardees will appear in our Summer Issue of Bugged, but I am particularly excited to welcome Dr. Joseph Noling back to MSU Entomology as our Distinguished Alumnus recipient. Dr. Noling received his BS and MS from MSU Entomology with a focus on nematology, followed by a PhD at UC Riverside. Following his graduate work, Noling served as a faculty member at the University of Florida from 1985 through his retirement in 2018. His work on nematode management in strawberries and vegetables was instrumental in supporting the growth and development of these thriving Florida industries. I am excited to welcome him back home to Michigan and MSU Entomology for this recognition!

Continuing the cause for celebration is Spring Commencement. This year, we will award 6 graduate degrees in the spring and expect three additional graduates this summer. We are also excited that two of our undergraduate majors and two students minoring in Entomology will graduate this spring. All of our graduating students are listed on Page 9 of this issue.

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In addition to new beginnings for graduate students, we are also recognizing a next chapter with mixed emotions. Dr. Doug Landis will mark his retirement from MSU Entomology at the end of Spring Semester. Doug has been a highly valued member of MSU Entomology since 1988. In that time, Doug has been a leader in biological control and in long-term landscape ecology and ecosystem service research at the state, regional, and national scales. Doug’s work has been cited nearly 30,000 times, he has advised or served on the committees of 108 graduate students, and he has been recognized by MSU as a University Distinguished Professor and AAAS as a fellow. In addition to his scientific excellence, Doug has been an exceptional department citizen and colleague. He is generous with his time and diligent in honoring commitments. It has truly been my pleasure to work with him for the last three years, and I look forward to continued connections as Doug moves on to new adventures.

While one journey with MSU Entomology is coming to a close, I am equally excited for another to start! Dr. Anders Huseth will join the department as our AgInformatics Entomologist this fall. You can read more about Anders and his goals at MSU on Page 3 of Bugged.

Before I close, I also want to recognize the unique and shifting landscape that we find ourselves navigating. While MSU Entomology is well positioned to be resilient to changes in federal policy, we have not been untouched. Projects with international elements, an area of focus that we are very proud of, have been paused or cancelled, and the long-term prospects for federal funding remain uncertain. We are committed to supporting our students and the entomological needs of residents of Michigan and beyond. In these uncertain times, I welcome the chance to connect with our alumni and friends. Your support and engagement help us continue to do work that drives new entomological discoveries, supports sound management decisions, and trains the next generation of insect excellence. My door is open. Thank you, and happy spring!



Hannah J. Burrack
Chairperson

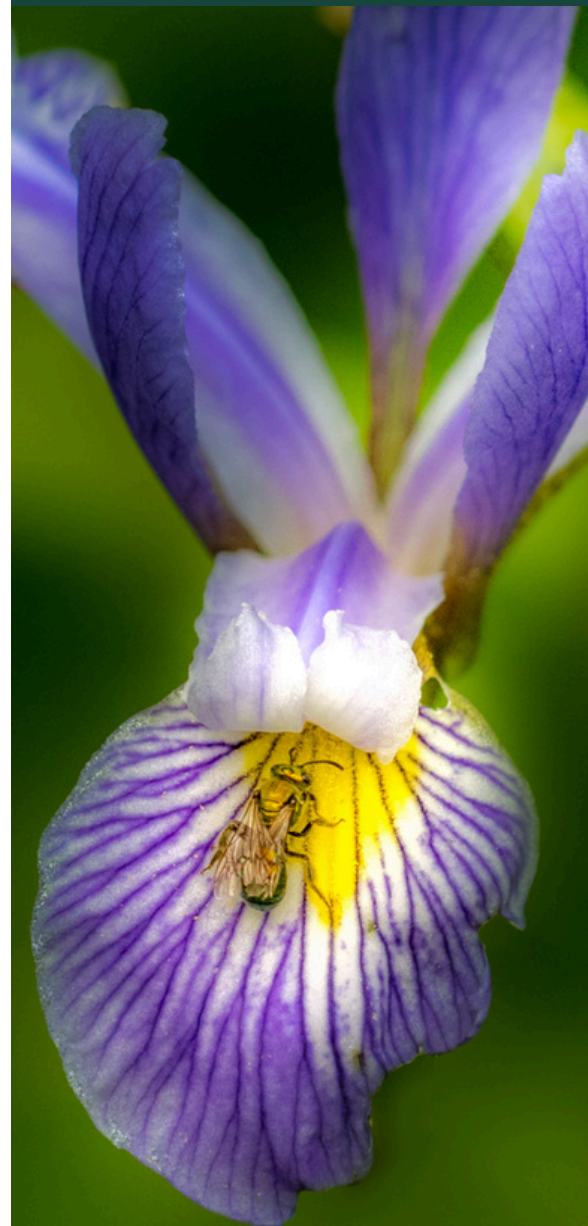


Photo by Bill Ravlin



Anders Huseth joins MSU Entomology

Anders Huseth will be joining the Michigan State University Department of Entomology in fall 2025 as an assistant professor of AgInformatics.

Huseth comes to MSU from North Carolina State University, where his research focused on using landscape-level approaches and foundational knowledge of insect biology and ecology to develop innovative, data-driven integrated pest management strategies.

"We are very excited to welcome Dr. Huseth to MSU Entomology!" Said Hannah Burrack, professor and chairperson of the department. "His experience in a wide range of cropping systems and collaborative approach to research and extension are tremendous assets for us and our stakeholders."

With his strong commitment to sustainability, Huseth's expertise aligns perfectly with the [Agriculture Climate Resiliency Program](#), a program established in 2024 to help Michigan agriculture tackle long-term climate- and water-related issues. This new position was created specifically as part of the program, and a key aspect of the role will involve a collaborative effort that brings faculty together to address the complex agricultural challenges facing Michigan farmers.

Huseth's position is one of six new faculty roles in the College of Agriculture and Natural Resources that will be hired through the Agricultural Climate Resiliency Program, in addition to two MSU Extension educators.



Since 2017, Huseth has led the Precision Pest Ecology program in the Department of Entomology and Plant Pathology at North Carolina State University. His team combined applied and basic research approaches to study how pests are distributed across agricultural landscapes and the risks they pose to specific crops. Huseth's research has focused on developing sustainable pest management strategies that protect natural enemies and the surrounding environment.

"We have made contributions toward a better understanding of climate-associated risks for pest range expansion and helped farmers transition away from broad-spectrum insecticides," Huseth said of his work with the program.

Huseth's expertise will be especially valuable to the Agricultural Climate Resiliency Program as he applies his knowledge to the Great Lakes region. With a strong commitment to extension, Huseth will work to deliver solutions directly to Michigan's growers.

"Improving the stability of these production systems will be crucial to meeting the needs of an interconnected population spanning rural to metropolitan areas in the Great Lakes region and beyond," he said.

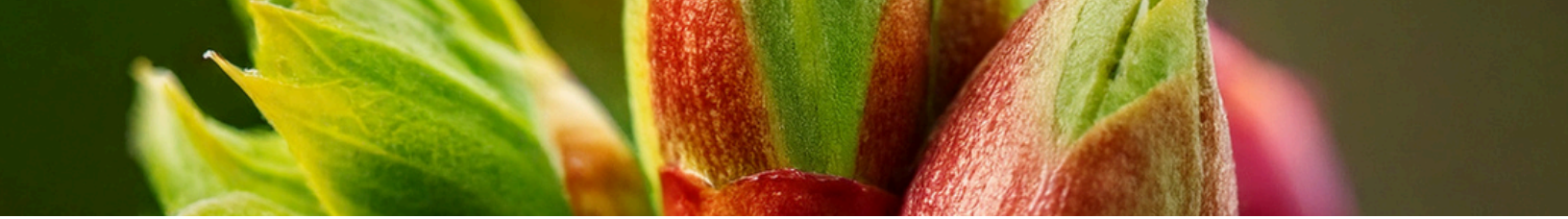


Photo by Bill Ravlin

Dr. Meghan Milbrath and Heather Chapman Lead Efforts in Honey Bee Medicine Training

Dr. Meghan Milbrath and Heather Chapman of MSU's Department of Entomology were featured in The National Land-Grant Impacts Database for their work training veterinarians in honey bee medicine. Their programs, including hands-on workshops, online modules, and student training, address critical challenges like disease and pests while meeting federal requirements for veterinary oversight in beekeeping. These efforts have significantly improved veterinarians' confidence in supporting pollinator health and highlight MSU's leadership in advancing honey bee medicine. [Read Training Veterinarians to Support Beekeeping Health and Hive Management here >](#)

New Paper by MSU Entomology Faculty Explores Long-Term Farming Practices and Declines in Carabid Beetles

A study from Cynthia Fiser, Nathan Haan and Doug Landis was recently published in ScienceDirect. The study explores how long-term farming practices affect Carabid beetles. Over 30 years, researchers found a significant decline in beetle numbers, with some species dropping by up to 98%. The study compared two conservation-oriented treatments: one with reduced agrochemical inputs and the other using no synthetic inputs at all. The results showed that while both methods saw fewer predatory beetles, the method with no synthetic inputs supported more beetle diversity and activity, particularly among seed-eating species. [Read the full paper here >](#)



Photo by Bill Ravlin



MSU Entomology Studies on Pollinators and Corn Earworm Among Most Cited in Environmental Entomology Journal

Two 2023 studies with significant contributions from Michigan State University Entomology researchers have recently been recognized as some of the most read and cited articles in the *Environmental Entomology* journal, published by the Entomological Society of America.

These studies, one focusing on the foraging behaviors of managed honey bees and bumblebees, and the other on the pupation of the Corn Earworm, provide critical insights that can shape future agricultural practices. By applying these findings, farmers can enhance productivity while supporting environmental sustainability, contributing to the long-term health of both crops and ecosystems. Continue reading >

Overuse of Bt Corn Leads to Pest Resistance in U.S. Corn


A new study co-authored by MSU Entomologist Christina DiFonzo found that corn that has been genetically modified to resist a common pest has been overplanted, resulting in a decrease in its efficacy as pests evolve to resist its effects.

In the study "Too Much of a Good Thing: Lessons From Compromised Rootworm Bt Maize in the U.S. Corn Belt," the authors examined Bt corn seeds engineered to resist corn rootworm (*Diabrotica virgifera virgifera*), a pest that damages corn roots and reduces both standability and yield. Continue reading >





Welcome to MSU Entomology!

A stylized illustration of a bee, positioned to the left of the main title. The bee is shown in profile, facing right, with its wings spread slightly. It has a yellow and black striped abdomen and a brown thorax and head. The illustration is set against a dark green background that matches the title's background.

Blake Dawson

Role: research associate, working on climate resilient pest management strategies under Rufus Isaacs and Julianna Wilson

Joining us from: University of New England in Armidale, Australia

Fun Fact: While not an arthropod, my favourite 'bug' would be velvet worms, which just won the New Zealand 2025 bug of the year award.

Sadique Uddin

Role: Outreach Specialist in CANR, supporting the South Asia Partnership initiative

Joining us from: Dhaka, Bangladesh

Fun Fact: In a culture where cooking isn't always a shared responsibility, I find immense joy and therapeutic release in preparing Bengali cuisine. Cooking serves as my personal therapy, helping me recharge after a draining day. I find it incredibly creative and fulfilling, and I love how food has the power to transport you through memories, connecting you to people, places, and moments in time.



Andrea Glassmire

Role: Assistant Professor of Chemical Ecology with joint appointments in the Departments of Entomology and Plant Biology, as well as being part of the Plant Resilience Institute.

Joining us from: I held two postdoctoral positions—one here at MSU and another at Louisiana State University

Fun Fact: Outside of the lab, I stay busy as a mom of two toddlers. When I find a moment to unwind, I love cross-country skiing, dancing to bluegrass music, and hiking with my dog.



Kat Yoskowitz

Role: Graduate Research Assistant in Benbow Lab

Joining us from: Michigan State University

Fun Fact: Kat majored in Entomology at MSU, and we're excited she's sticking around!



Fang Liu

Role: Postdoctoral researcher in Zachary Y. Huang lab

Joining us from: Guangdong Academy of Sciences in Guangdong Province, China

Fun Fact: I study honeybees, which is my favorite insect. My main area of research is bee behavior, including bee foraging, brooding, swimming and olfactory behavior. At MSU, I focus on the effects of transportation on bee health, such Nosema and microbiome.

Tyler Reisig

Role: Research Assistant to Zsofia Szendrei

Joining us from: Michigan State University

Fun Fact: I developed an interest in plant-insect interactions while working as an undergrad research assistant in the Szendrei lab. As a research technician I am excited to help with ongoing research and help growers find solutions related to pest management.





Congrats to Peter Fowler

Peter Fowler, DVM, and current PhD candidate at MSU's College of Veterinary Medicine, has won the American Association of Professional Apiculturists (AAPA) PhD Presentation Award at this year's American Bee Research Conference (ABRC). Peter's research bridges veterinary science and insect biology, emphasizing the vital connections between pollinator health and ecosystem resilience. Along with a \$250 cash prize, the award includes the honor of representing AAPA at an upcoming stakeholder conference, such as the American Honey Producers Association (AHPA) or the American Beekeeping Federation (ABF). As a student ambassador, Peter will advocate for pollinator health and foster collaboration with key industry stakeholders.



Q&A With Eric Benbow

Check our Q&A with Dr. Eric Benbow. In this interview, Dr. Benbow discusses his research, the intersection of ecology and human behavior, and the importance of community involvement in ecological studies. [Read the full Q&A here >](#)

MSU Shines at the 2025 North Central Branch Awards

Congratulations to our winners of the [2025 North Central Branch Awards](#) which will be presented at the NCB Entomological Society of America (ESA) meeting in April:

- Educational Project Award: Amanda Lorenz and Henry Chung
- Excellence in Integrated Pest Management: Marianna Szűcs
- Legacy Contribution Award: Anthony Cognato

We are proud to see MSU researchers recognized for their outstanding contributions to the field of entomology!





Congrats to our Upcoming Graduates!

Undergraduate Students:

Majors

- Josh Striegler (CANR)
- Loren Campbell (LBC), Entomology

Minors

- Alex Laskowski (Forestry)
- Ada Varga (Env Bio/Plant Bio)

Graduate Students:

- Max Ferguson – Master’s Degree with Deb McCullough
- Brian Groll – Master’s Degree with Eric Benbow
- Saniya Henderson – Master’s Degree with Henry Chung
- Solo Mercene – Master’s Degree with David Mota-Sanchez
- Nick Zoller – Master’s Degree with Deb McCullough
- Cynthia Fiser – Ph.D. Degree with Doug Landis

Expected to Graduate Summer Semester:

- River Mathieu – Master’s Degree with Deb McCullough
- Abigail Palmisano – Master’s Degree with Marisol Quintanilla-Tornel
- Paige Payter – Master’s Degree with Deb McCullough



E Inch

Hometown: Lake Orion, MI

Major advisor: Dr. Amanda Lorenz

What inspired you to choose entomology as your area of study?

I was drawn to entomology because there is always something more to learn from the arthropod world! Entomology offers so many different avenues to explore, and the plethora of opportunities at MSU allows me to explore those avenues.

Are there any specific projects, research, or extracurricular activities you're involved in related to entomology?

I have the fantastic opportunity to work at the MSU Bug House and take work with our collection of arthropods and the public! I also act as the treasurer for the Bug Club, which gives me more fun opportunities to work with my peers outside of school.

What do you enjoy doing outside of your studies? Do you have any hobbies or interests you're passionate about?

I have always loved entomophagy! I find the sustainability aspect very motivational, it has a long and storied history, as well as a continued and growing market today. Experimenting with new kinds of insects in food is a fun way to intersect my field with my hobbies.

Do you have any advice for other students considering a major in entomology?

They should go for it! Not only is entomology an interesting field with a ton of opportunities, you can go so many directions with an entomology degree.

What's been one of your most rewarding experiences in your studies so far?

Working at the Bug House's Monday Night Open Houses has been one of the most long-term rewarding experiences. It's been so interesting to see how people I've met before change their view on bugs. It's also a great way to interact with the community and keep relatively up-to-date with public views on bugs.



River Mathieu

Hometown: Canterbury, New Hampshire

Previous education: Environmental Studies and Biology; St. Lawrence University

Major advisor: Dr. Deborah McCullough



What or who inspired your interest in entomology?

During my undergrad, I worked as a pathways intern for the US Forest Service in Durham, NH. During this internship, I was fortunate to work with a team of forest health researchers who worked on forest insect pests and diseases. I primarily worked under Dr. Nate Siegert, a forest entomologist and MSU alum, on projects focusing on emerald ash borer and spongy moth. The forest insect related projects sparked my initial interest in forest entomology, and I continue to be fascinated by the role insects play in forest ecosystems.

What are you researching?

My research explores the ecological impacts that emerald ash borer (*Agrilus planipennis*) (EAB), an invasive phloem feeding beetle, has on black ash (*Fraxinus nigra*) forests in Michigan. Black ash is a foundational wetland tree species, and a cultural keystone species due to its importance to Native American and First Nations peoples who use black ash for traditional basketry practices. We are specifically investigating the potential for young black ash trees to grow following the EAB-caused death of mature black ash, in the hope of providing insight into how landscapes could be managed to preserve black ash forests. I am also studying the diversity of Cerambycidae (longhorn beetles) in black ash forests of Michigan's Upper Peninsula.

What is your favorite activity, class, or responsibility as part of your graduate studies?

My favorite aspect of my graduate work has been conducting field work. The majority of my study sites were in the Upper Peninsula, meaning I was able to spend a lot of time in the woods up north for the majority of my two summers as a grad student. Beyond fieldwork, I have enjoyed interacting with undergraduate research assistants and training them in forestry and entomology related methods.

What is your favorite thing about MSU?

Probably the River Trail, especially in the summertime and early Fall. It's the perfect place to take a break and enjoy a short walk! I also enjoy stopping at the Dairy Store while walking on the River Trail.

What are your plans after graduation?

After finishing my degree I will be joining the Wisconsin Department of Natural Resources Forest Health Division, where I will work as a Forest Health Specialist.



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Just as insects create the biological foundation for ecosystems, you provide the basis of support that allows our entomological work to continue. Your support provides access for students to hands on learning, advanced training, and travel to network and share their results. It empowers faculty to conduct innovative and impactful research, your support allows us to share the wonders of insects with children of all ages. To show our appreciation for your generous support this year, we will send you the second in our series of commemorative coins featuring *Sesia spartani*, which represents our theme for this year Embracing Diversity. Each year, when you submit your tax deductible donation to MSU Entomology, we will send you the next coin in the series. Collect all five by committing your support over five years, and we will send you a shadow box to display your collection. Entomology is a gateway to a more inclusive community. Not only does your gift support the department, but you are changing lives in the process. Become a part of Bugs Work! [Donate today.](#)