

Dr. Olivia M. Gearner

She/Her/Hers

Department of Entomology
Purdue University
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Education

- 2019–2023** **Doctor of Philosophy.** Entomology. Purdue University
Dissertation: *Untapped Potential: Systematics And Evolution Of The African Toktokkie Beetle (Tenebrionidae: Sepidiini)*
Primary Advisor: Dr. Aaron D. Smith
- 2018–2019** **Master of Science.** Biology. Western Kentucky University
Thesis: *A Phylogenetic Analysis of Bostrichoidea (Coleoptera) and Revisions of the Southern African Spider Beetle Genera Meziomorphum and Eutaphroptinus (Ptinidae: Coleoptera)*
Primary Advisor: Dr. T. Keith Philips
- 2014–2018** **Bachelor of Science.** Biology. Western Kentucky University

Professional Appointments

- 2025–** **Assistant Professor of Biology.** Department of Biology, DePauw University, Greencastle, IN
- 2023–2024** **Post-Doctoral Research Assistant.** Department of Entomology, Purdue University

Research Interests

Insect Biodiversity, Taxonomy and Systematics (Coleoptera), Phylogenomics, Evolution, Morphology, Biogeography

Research Experience

- 2025** **DePauw University**
Ongoing insect diversity survey of the DePauw Nature Park. In collaboration with students: Samantha Floyd, Sahit Liyanage, Thomas Manning, and Madison Stillabower. Using a variety of sampling methods (sweep netting, beat sheet, aquatic sampling, pan traps, malaise traps, berlese funnels). We have mounted over 4,000 specimens and hundreds have been identified to family. All of the mounted Coleoptera have been sorted to family with a majority determined to species. This data will be used to generate a species checklist of the park and to compare family level diversity in different habitats throughout the park.
- 2019–2024** **Purdue University**
Graduate Research Assistant and *Postdoctoral Researcher*, Advisor: Dr. Aaron Smith.
Darkling beetle (Tenebrionidae: Pimeliinae) systematics. Specimen collection and curation, morphological character state capture, molecular data acquisition (targeted enrichment sequencing) and assembly, and phylogenetic analyses

- 2018–2019 Western Kentucky University**
Graduate Research Assistant, Advisor: Dr. Keith Philips.
 Molecular Phylogenetics of Bostrichoidea (Coleoptera). Isolating, amplifying, and sequencing DNA from spider beetles and related families. Using 28S, 16S, and CO1 gene sequences to hypothesize relationships within this group.
- 2015–2019 Western Kentucky University**
Undergraduate Researcher, Advisor: Dr. Keith Philips.
 Spider beetle (Coleoptera: Ptinidae) Taxonomy. Identifying, documenting, and describing new species of spider beetles (including *Meziomorphum* and *Ptinus*).
- 2014–2015 Western Kentucky University**
Undergraduate Researcher, Instructors: Dr. Rodney King and Naomi Rowland.
 Genome Discovery and Exploration of Novel Bacteriophages. Isolated new bacteriophages of *Mycobacterium smegmatis*, imaged bacteriophages in a Transmission Electron Microscope, isolated phage DNA for gel electrophoresis and for submission for whole genome next generation sequencing. Analyzed genome of bacteriophage using bioinformatics techniques.

Significant Fieldwork Experience

- Summer 2025** Insect sampling in the DePauw Nature Park.
- July 2022** Darkling beetle (Tenebrionidae) sampling in South Africa and Namibia. Additionally, toktokkie beetles (Sepidiini) were collected live and audiovisual recordings of tapping behavior were obtained. Duration: One week
- January 2022** Darkling beetle (Tenebrionidae) sampling in South Africa. Additionally, toktokkie beetles (Sepidiini) were collected live and audiovisual recordings of tapping behavior were obtained. Duration: two weeks. Colleagues: Dr. Aaron Smith, Dr. Marcin Kamiński, Ryan Lumen
- June 2018** Spider beetle (Ptinidae) sampling in South Africa using dung-baited pitfall traps, dung collecting, leaf litter sifting, and Winkler extractors. Duration: Five weeks. Colleagues: Dr. Keith Philips

Entomological Collections Visited

Ditsong National Museum of Natural History, Pretoria, South Africa.
 Iziko Museum, Cape Town, South Africa.
 Namibia National Collection, Windhoek, Namibia
 Purdue Entomological Research Collection, West Lafayette, IN.
 South Africa National Collection, Pretoria, South Africa

Publications

11. Swichtenberg, K. L., Kamiński, M. J., **Gearner, O. M.**, Lumen, R., Kanda, K., and A. D. Smith. 2023. Preliminary phylogenomic analyses reveal multiple reversions to nocturnal behavior and morphology within the primarily diurnal tribe Adesmiini (Coleoptera: Tenebrionidae). *Insect Systematics and Diversity* 7. <https://doi.org/10.1093/isd/ixad013>
10. Sandhi, R. K., Pickens, V., Bello, K., Elzay, S., Salgada, S., Hauri, K. C., Ternest, J. J., Constancio, N., Gula, S., **Gearner, O. M.**, Anderson, M., Edebur, M., Hall, B., Maille, J., Toth, M., Khadka, A., Doherty, E., Musgrove, T., Silva, T., Alexia, D., Rampone, E., Jocson, D., Luppino, M., Pautzke, K., and C. Wagstaff. 2023. Entomology beyond research and education: 2022 student debates. *Journal of Insect Science* 23: 11. <https://doi.org/10.1093/jisesa/iead036>
9. Kamiński, M. J., **Gearner, O. M.**, Raś, M., Hunsinger, E. T., Smith, A. L., Mas-Peinado, P., Girón, J. C., Bilska, A. G., Strümpher, W. P., Wirth, C. C., Kanda, K., Swichtenberg, K., Iwan, D., and A. D. Smith. 2022. Female terminalia morphology and cladistic relations among Tok-Tok beetles (Tenebrionidae: Sepidiini). *Cladistics*. <https://doi.org/10.1111/cla.12510>

8. **Gearner, O. M.**, Lumen, R., and M. J. Kamiński. 2022. New Species of *Toktokkus* from Mozambique (Tenebrionidae: Sepidiini: Molurina). *Annales Zoologici* 72: 123–127. <https://doi.org/10.3161/00034541ANZ2022.72.1.010>
7. **Gearner, O. M.**, Kaminski, M. J., Kanda, K., Swichtenberg K., Smith, and A. D. Smith. 2021. Discovery of new genera challenges the subtribal classification of tok-tok beetles (Coleoptera: Tenebrionidae: Sepidiini). *Journal of Insect Systematics and Diversity* 5. <https://doi.org/10.1093/isd/ixab006>
6. **Gearner, O. M.**, and T. K. Philips. 2021. *Notaferrum* n. gen. (Coleoptera: Ptinidae): the first known spider beetle associated with weaver ants. *Zoosystema* 43: 29–36. <https://doi.org/10.5252/zoosystema2021v43a2>
5. Kaminski, M. J., **Gearner, O. M.**, Kanda, K., Swichtenberg, K., Purchart, L., and A. D. Smith. 2021. First insights into the phylogeny of tok-tokkie beetles (Tenebrionidae: Molurina, Phanerotomeina) and examination of the status of the *Psammodes vialis* species-group. *Zoological Journal of the Linnean Society* 191: 883–901. <https://doi.org/10.1093/zoolinnean/zlaa052>
4. Kaminski, M. J., Muller, R., Schawaller, W., **Gearner, O. M.**, and A. D. Smith. 2020. *Ocnodes kruegeri* (Coleoptera: Tenebrionidae), a new species from Namaqualand, southern Africa, with nomenclatural notes on Sepidiini. *Annals of the Ditsong National Museum of Natural History* 9: 1-5. https://hdl.handle.net/10520/ejc-nfi_ditsong-v9-n1-a1
3. Philips, T. K., Whorral, K. A., **Gearner, O. M.**, and J. B. Huchet. 2020. A new genus of spider beetle (Coleoptera, Ptinidae) from western Peru. *ZooKeys* 934: 81–91. <https://doi.org/10.3897/zookeys.934.38670>
2. **Gearner, O. M.**, Philips, T. K., and R. Neidlinger. 2019. A revision of the spider beetle genus *Eutaphroptinus* Borowski (Coleoptera: Ptinidae). *Tijdschrift voor Entomologie* 162: 33–39. <https://doi.org/10.1163/22119434-20192083>
1. **Gearner, O. M.**, Philips, T. K., and P. Koniar. 2019. New species of the bizarre South African endemic genus *Meziomorphum* Pic (Coleoptera: Ptinidae). *Annals of the Ditsong National Museum of Natural History* 8: 137–149. <https://hdl.handle.net/10520/EJC-141b99f32b>

Presentations

*Presenter

Symposia

1. **Symposium Organizer**, Illuminating Forms Most Numerous: Systematics and Diversity of the Tenebrionoidea. Entomological Society of America Annual Meeting, Phoenix, AZ.

Oral Presentations

21. **Gearner, O. M.***, Kamiński, M. J., and A. D. Smith. 2024. Progress in Sepidiini (Tenebrionidae: Pimeliinae) phylogeny. Entomological Society of America Annual Meeting, Phoenix, AZ.
20. **Gearner, O. M.***, Kamiński, M. J., Kanda, K., Swichtenberg, K., Lumen, R., Wirth, C. C., and A. D. Smith. 2023. Testing subtribal and generic concepts in a hyperdiverse tribe (Coleoptera: Tenebrionidae: Sepidiini). Entomological Society of America Annual Meeting, National Harbor, MD.
19. Wirth, C. C.*, **Gearner, O. M.**, Kamiński, M. J., and A. D. Smith. 2023. Repeated evolution of sound production in the darkling beetles (Coleoptera: Tenebrionidae) revealed through phylogenomics. Entomological Society of America Annual Meeting, National Harbor, MD.
18. **Gearner, O. M.***, Kamiński, M. J., Kanda, K., Swichtenberg, K., Wirth, C., and A. D. Smith. 2022. Untapped Potential: Evolution of Substrate Tapping in the African Tok-Tok Beetle (Coleoptera: Tenebrionidae: Sepidiini). The Coleopterists Society Third Annual Symposium, Virtual Conference
17. **Gearner, O. M.***, Kamiński, M. J., Kanda, K., Swichtenberg, K., Lumen, R., Wirth, C., and A. D. Smith. 2022. Taxonomic Revisions of Sepidiini (Tenebrionidae: Pimeliinae) using phylogenomic analyses and morphology. Entomological Society of America Annual Meeting, Vancouver, BC.

16. **Gearner, O. M.***, Kamiński, M. J., Kanda, K., Swichtenberg, K., Lumen, R., Wirth, C., and A. D. Smith. 2021. Let's Tok about Tok-Tok Beetles: Phylogenomic analyses reveal taxonomic problems within Sepidiini (Tenebrionidae: Pimeliinae). Entomological Society of America Annual Meeting, Denver, Virtual Talk
15. **Gearner, O. M.***, Kamiński, M. J., Kanda, K., Swichtenberg, K., Lumen, R., and A. D. Smith. 2021. Let's Tok about Tok-Tok Beetles: Phylogenomic analyses reveal taxonomic problems within Sepidiini (Tenebrionidae: Pimeliinae). International Tenebrionoidea Virtual Symposium VI, Virtual Conference.
14. Swichtenberg, K.* , Kanda, K., **Gearner, O. M.**, Lumen, R., and A. D. Smith. 2021. To bask, or not to bask, that is the question. A preliminary phylogenomic analysis of Adesmiini (Coleoptera: Tenebrionidae: Pimeliinae). International Tenebrionoidea Virtual Symposium VI, Virtual Conference.
13. Smith, A.D.*, Kamiński, M.J., Kanda, K., **Gearner, O.M.**, Swichtenberg, K., Wirth, C.C., Lumen, R., Bouchard, P., Flores, G.E., Kergoat, G.J., Condamine, F.L., Aalbu, R.L., Lamb, T., Purchart, L. 2021. Phylogeny of Pimeliinae: progress and surprises. International Tenebrionoidea Virtual Symposium VI, Virtual Conference.
12. Kamiński, M.J.* , **Gearner, O.M.**, Ras, M., Hunsinger, E.T., Smith, A.L., Mas-Peinado, P., Girón, J.C., Bilska, A.G., Strümpher, W., Wirth, C.C., Kanda, K., Swichtenberg, K., Iwan, D. and A. D. Smith. 2021. Evaluating informativeness of female terminalia morphology for reconstructing tok-tok beetle (Tenebrionidae: Sepidiini) phylogenies. International Tenebrionoidea Virtual Symposium VI, Virtual Conference.
11. Wirth, C.C.* , Swichtenberg, K., **Gearner, O. M.**, and A. D. Smith. 2021. Tenebrionidae Research in the Smith Insect Biodiversity Lab. International Tenebrionoidea Virtual Symposium VI, Virtual Conference.
10. **Gearner, O. M.***, Kamiński, M. J., Kanda, K., Swichtenberg, K., and A. D. Smith. 2020. Molurina and Phanerotomeina (Coleoptera: Tenebrionidae: Sepidiini) Revisited: Discovery of New Genera Highlights Delimitation Problems Between the Subtribes. Entomological Society of America Annual Meeting, Virtual Meeting.
9. Smith, A. D.* , Kamiński, M. J., Kanda, K., **Gearner, O. M.**, Swichtenberg, K., Wirth, C. C., and Lumen, R. 2020. Phylogeny of the desert darkling beetles (Coleoptera: Tenebrionidae: Pimeliinae) and its implications for biogeography and taxonomy within the subfamily. Entomological Society of America Annual Meeting, Virtual Meeting.
8. **Gearner, O. M.***, and T. K. Philips. 2019. The Enigmatic Evolution of the spider beetles and related families (Coleoptera: Bostrichoidea). Entomological Society of America Annual Meeting, St. Louis, MO.
7. Kamiński, M.J.* , Swichtenberg, K., Kanda, K., **Gearner, O. M.**, and A. D. Smith. 2019. Biodiversity and phylogeny of Sepidiini: preliminary findings and next steps. Entomological Society of America Annual Meeting, St. Louis, MO.
6. **Gearner, O. M.***, and T. K. Philips. 2019. The Enigmatic Evolution of the spider beetles and related families (Coleoptera: Bostrichoidea). Ohio Valley Entomological Association Conference, University of Kentucky.
5. **Gearner, O. M.***, and T. K. Philips. 2019. The Enigmatic Evolution of the Bostrichoids (Coleoptera). Western Kentucky University Student Research Conference.
4. **Gearner, O. M.*** 2018. New Discoveries of Relationships in Spider Beetles and Related Families Using Molecular Phylogenetics. Biology Graduate Student Research Symposium, Western Kentucky University. (Departmental Seminar)
3. **Gearner, O. M.***, and T. K. Philips. 2018. New Discoveries of Relationships in Spider Beetles and Related Families Using Molecular Phylogenetics. Kentucky Academy of Sciences Annual Scientific Meeting, Bowling Green, KY.
2. **Gearner, O. M.***, and T. K. Philips. 2018. New Discoveries of Relationships in Spider Beetles and Related Families Using Molecular Phylogenetics. Western Kentucky University Student Research Conference.
1. **Gearner, O. M.*** 2017. A phylogenetic analysis of Bostrichoidea (Coleoptera) and descriptions of South African species of *Meziomorphum* and *Ptinus* (Ptinidae: Coleoptera). Biology Graduate Student Research Symposium, Western Kentucky University.

Poster Presentations

3. **Gearner, O. M.***, and T.K. Philips. 2017. Documentation and Conservation of New Species of the Bizarre South African Endemic Genus *Meziomorphum* (Coleoptera: Ptinidae). Entomological Society of America Annual Meeting, Denver, CO.
2. **Gearner, O. M.***, and T.K. Philips. 2017. Documentation and Conservation of New Species of the Bizarre South African Endemic Genus *Meziomorphum* (Coleoptera: Ptinidae). Posters at the Capitol, Frankfort, KY.
1. **Gearner, O. M.***, and T.K. Philips. 2017. Documentation and Conservation of New Species of the Bizarre South African Endemic Genus *Meziomorphum* (Coleoptera: Ptinidae). Western Kentucky University Student Research Conference.

Awards (\$227,731)

Research Grants (\$66,000)

8. **Science Research Fellows. \$19,080.** DePauw University. Insect Biodiversity Study of the DePauw Nature Park. PI **Olivia Gearner**.
7. **AgSEED. \$50,000.** Purdue University. Revision and identification of Opatrini (Coleoptera: Tenebrionidae) darkling beetles using phylogenomics and machine learning. PI Aaron Smith; Key Personnel: **Olivia Gearner**, Adam Rork
6. **Graduate Student Research Enhancement Award. \$5000.** Coleopterists Society. Untapped Potential: Systematics and Evolution of the African Tok-Tok Beetle (Tenebrionidae: Sepidiini). 2021.
5. **SSB Graduate Student Research Award. \$3000.** Society for Systematic Biologists. Untapped Potential: Evolution of Substrate Tapping in the African Tok-Tok Beetle (Coleoptera: Tenebrionidae: Sepidiini). 2020.
4. **Ernst Mayr Travel Grant. \$1500.** Museum of Comparative Zoology. Systematics and Taxonomic Revisions of the Tok-Tokkie Beetles of Africa (Coleoptera: Tenebrionidae: Sepidiini): Travel to the Ditsong Museum of South Africa and Gorongosa National Park, Mozambique. 2020
3. **Research Support. \$500.** Western Kentucky University, Department of Biology. The Amazing Diversity of Spider Beetles and their Evolution in South Africa. 2018
2. **Graduate School Grant. \$3,000.** Western Kentucky University. The Amazing Diversity of Spider Beetles and their Evolution in South Africa. 2018
1. **Faculty-Undergraduate Student Engagement Grant. \$3,000.** Western Kentucky University. Systematics and Evolution of Bostrichoidea (Coleoptera). 2017

Competitive Travel Awards (\$1,731)

5. **Travel Grant. \$300.** Purdue Graduate Student Government. Travel to Entomological Society of America Annual Meeting. 2023.
4. **Professional Grant. \$750.** Purdue Graduate Student Government. Travel to the Entomological Collections Network Annual Meeting. 2022.
3. **Travel Grant. \$250.** Purdue Graduate Student Government. Travel to Entomological Society of America Annual Meeting. 2022.
2. **Professional Development Grant. \$281.** Purdue Graduate Student Government. Travel to the Entomological Collections Network Annual Meeting. 2019.
1. **Ogden College of Science and Engineering Travel Grant. \$150.** Western Kentucky University. Travel to Entomological Society of America Annual Meeting. 2017

Fellowships and Scholarships (\$160,000)

5. **Bilsland Dissertation Fellows Assistantship. \$50,000.** Purdue University. 2023
Awarded to outstanding PhD candidates in their final year of doctoral degree completion.
4. **Frederick N. Andrews Fellowship. \$58,000.** Purdue University. 2019-2021
The Frederick N. Andrews Fellowship is designed for the recruitment of outstanding PhD-track students to graduate programs at Purdue.
3. **Dr. Thomas A. Yungbluth Travel Abroad Scholarship. \$1,000.** Department of Biology, Western Kentucky University. 2016
Awarded to full-time junior or senior biology students studying abroad who possess the personal qualities of character, integrity, dependability, industriousness, and human compassion which produce leaders
2. **Florence and Basil C. Cole Scholarships in Biology. \$1,000.** Department of Biology, Western Kentucky University. 2015
Awarded to support students who give evidence of high academic achievement as reflected in their high school record and progress at the college level; who possess personal qualities of character, integrity, dependability, industriousness, and human compassion which produce leaders
1. **Hallmark Scholarship. ~\$50,000.** Western Kentucky University. 2014-2018
Awarded to National Merit semifinalists.

Honors and Awards

8. **First Place - Grad Competition SysEB: Phylogenetics, Student Competition for the President's Prize.** Entomological Society of America Annual Meeting. 2023.
7. **Runner Up - ESA Practice Talks: PhD Session.** Department of Entomology, Purdue University. 2023.
6. **Outstanding Doctoral Student.** Department of Entomology, Purdue University. 2022.
5. **Topic 1 and Overall Winner, Entomological Society of America Student Debates.** University of Florida-Purdue University-Michigan State University Team. 2022
4. **Graduate Teaching Award: Entomology.** Purdue University Teaching Academy. 2021
3. **Outstanding Teaching Assistant.** Department of Biology, Western Kentucky University. 2019
2. **Outstanding Graduate Student.** Department of Biology, Western Kentucky University. 2019
1. **Dillard/Hoyt Award for Outstanding 1st Year Graduate Student Award.** Department of Biology, Western Kentucky University. 2018.

Teaching Experience

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| 2025 | Assistant Professor of Biology. DePauw University
BIO 102: Evolution, Organisms, and Ecology (with lab)
Spring 2025: 1 section
Fall 2025: 1 section
BIO 290: Insect Biology (with lab)
Fall 2025: 1 section
BIO 344: Ecological and Evolutionary Genetics
Spring 2025: 1 section
BIO 490: Senior Seminar
Spring 2025: 1 section |
| 2020–2023 | Graduate Teaching Assistantship. Department of Entomology, Purdue University.
Course taught: ENTM 207: General Entomology Laboratory
Spring 2020: 2 Sections
Fall 2020: 2 Sections
Spring 2021: 2 Sections
Spring 2023: 2 Sections |

Instructor of record for the general entomology lab class. Labs included a short lecture then students worked through labs while I walked around and provided help as needed. I also graded lab work and administered and graded exams and quizzes. I helped redesign the lab course to a virtual course during the COVID pandemic, including creating online materials and exams. Other duties included lab preparation and clean-up, and I helped reorganize and label the laboratory materials so they would be easier to find for future TAs.

- 2018–2019** **Graduate Teaching Assistantship.** Department of Biology, Western Kentucky University
 Course taught: BIOL 121: Biological Concepts: Cell, Metabolism, and Genetics Lab
 Fall 2018: 3 Sections
 Winter 2019: 1 Section
 Spring 2019: 3 Sections
 Instructor for the lab sections. Labs included a short lecture then students worked through labs while I walked around and provided help as needed. I graded lab work and administered and graded exams and quizzes. I made necessary adjustments to the winter term section in order to fit the course into a 3-week term. I helped edit and provide suggestions for the lab manual. Duties for this teaching assistantship also include proctoring exams for other courses and other departmental services.
- 2015–2018** **Tutor.** Student Support Services, Western Kentucky University
 Subjects: Biology, Chemistry, Math, English, Spanish
 Student Support Services is part of the federal TRIO programs which are designed to provide services to students from disadvantaged backgrounds. Student Support Services provides support to low-income and first-generation college students to help them find success in college and complete their degrees. I worked as a tutor for the program and met with students weekly to help them with understanding course material, provide feedback on assignments, and help them develop skills in notetaking, studying, and time management.

Service and Outreach

Department of Entomology and College of Agriculture, Purdue University

Awards Committee member, College of Agriculture, Purdue University, 2022–2023

Presenter (live arthropods), 31st Annual Bug Bowl. April 9, 2022

Presenter (“How to Collect Insects”), 30th Annual Bug Bowl (virtual). April 12–17, 2021.

*Bug Bowl, hosted as part of the annual Purdue Spring Fest, is one of the largest insect festivals in the United States and draws in hundreds of people to come learn more about insects and other arthropods and interact with a variety of live animals.

Graduate Student Representative, Purdue Entomology Faculty Search Committee. 2021.

Student worker, Purdue Pest Management Conference. Jan 5–8, 2020; Jan 9–11, 2023. Paid

Presenter (live arthropods), Purdue Entomology Booth, Purdue Ag Fish Fry. Feb 1, 2020

Presenter (live arthropods), College Mentors Bug Barn Tour, Purdue. Oct 16, 2019.

Presenter (live arthropods), Purdue Entomology Booth, Rainbow Callout, Purdue. Sept 11, 2019.

Guest Lectures

ENTM 22840: Forensic Entomology. “The Role of Taxonomy and Systematics in Forensics”

Society Service

Student Councilor, The Coleopterists Society Executive Board, 2022–2024

Judging Panel, Nan-Yao Su Award for Innovation & Creativity in Entomology, Entomological Society of America, 2022–2024

Department of Biology, Western Kentucky University

Ogden College Preview Day Lab Tours. Spring 2018.

Test Proctor, Science Olympiad State Competition, Western Kentucky University. Spring 2018.

Exam Proctor for the WKU Biology Department. Fall 2018–Spring 2019

Miscellaneous

Milwaukee Public Museum Bioblitz 2025, at the Aldo Leopold Foundation, Insect Team. June 27 - 28, 2025.

Intensive 24 bioblitz, collected and identified insects with a focus on Coleoptera. Brought along four undergraduate student researchers.

Indiana Academy of Sciences Bioblitz 2023, Beetle Team. Collected and curated insect specimens, with a focus on Coleoptera, at Kankakee Sands Nature Preserve. June 3, 2023.

Course Assistant, North American Tenbrionidae identification and classification virtual workshop. May 17–19, 2021

Course Assistant, Governor's Scholars Program, Morehead State University. July 2014 and July 2017

Assisted Dr. Geoffrey Gearner with a project involving membrane filtration method for bacteriological analysis of water samples collected from local streams for Governor's Scholars Program class. The Governor's Scholars Program is a summer program for academically motivated high school students.

Manuscript Review

Zootaxa, Annales Zoologici, Journal of Insect Biodiversity, Systematic Entomology

Mentorship

DePauw University (Research)

Sahit Liyanage

Thomas Manning

Samantha Floyd

Madison Stillabower

Purdue University

Workshop series, Smith lab, Purdue University, Fall 2023. I led a series of workshops for my lab on using the high-performance computing cluster (HPC) hosted by Purdue, on assembling and aligning high throughput sequence data, and on analyzing sequences using various phylogenetic software (IQTree, MrBayes).

Western Kentucky University

Mentored undergraduates T. Keith Philips' lab in lab techniques, Western Kentucky University, 2017–2019. I mentored two undergraduate students in molecular laboratory techniques such as DNA extraction and PCR amplification.

Tutored several classmates in undergraduate Genetics, Western Kentucky University, 2017. I hosted regular informal study sessions for our undergraduate genetics and helped my classmates better understand the material.

Professional Societies

2025–	The American Association of University Professors
2018–	Entomological Society of America
	<i>Section:</i> Systematics, Evolution, and Biodiversity (SysEB)
2018–	The Coleopterists Society
2019–2023	Ohio Valley Entomological Association
2020–2021	Society for Systematic Biologists
2020–2021	American Academy for the Advancement of Science
2017–2019	Kentucky Academy of Science

Technical Skills

- Computer Programs: IQTree, RAxML, ExaBayes, MrBayes, TNT, PAUP*, Mesquite, FigTree, Trimmomatic, TrimAl, bbdduk, bbmap, HybPiper, MAFFT, Gblocks, R, jModelTest, DNAMaster, Geneious, Raven, Adobe Photoshop, GIMP, InkScape, AutoMontage, Zstack, ArcGIS 10.5
- Bash scripting, Linux coding
- DNA Isolation/Extraction
- Preparation of DNA for PCR and sequencing
- Preparation of Working Primers for PCR
- Probe design, primer design
- Gel Electrophoresis
- Eppendorf Vapo-Protect Thermocycler
- Nano-Drop ND-2000 spectrophotometer, Qubit Fluorometric Quantification
- ABI 3130 sequencer (sanger sequencing)
- Insect collection and preservation
- Insect Identification
- Insect dissection techniques
- Preparation of Specimens for TEM and SEM
- JEOL 1400Plus Transmission Electron Microscope (TEM)
- JEOL 6510LV Scanning Electron Microscope (SEM)

Relevant Coursework

*Included a Lab component

Undergraduate: Genome Discovery and Exploration*, Bioinformatics*, Zoology*, Ecology, Evolution, Botany*, Plant Taxonomy*, Entomology*, Genetics*, Microbiology*, Intro to Molecular and Cellular Biology*, General Chemistry* I & II, Organic Chemistry* I and II, Biophysics* I, Calculus I, Fundamentals of GIS*

Graduate: Electron Microscopy*, Advances in Systematics*, Population Ecology, Biometry, Host-Parasite Associations, Beetle Evolution, Tree Thinking - Understanding Phylogenetic Methods and Evolutionary Data for Modern Biological Research, Insect Toxicology, Analysis of Ecological Data*, Integrative Insect Taxonomy*, Science Writing I, Insect Genomics

Professional Development

FacDev Teaching Roundtable - Speaking Freely: Academic Freedom and Expression at DePauw. DePauw University, Apr. 15, 2025

Do the Work! Reading Group. DePauw University, Mar 27 - May 1, 2025 (Weekly)
Deconstructing Allyship Workshop. DePauw University, Mar 13, 2025
FacDev Teaching Roundtable: "Unlocking the Power of Rubrics: Enhancing Assessment Across Disciplines.
 DePauw University, Mar 12, 2025
Harm Reduction and Narcan Training. DePauw University, Mar 5, 2025
FacDev Teaching Round Table: Conjunction Junction What's This Executive Dysfunction? (on Neurodiversity). DePauw University, Feb. 20, 2025
Faculty Workshop: Anti-Racist Pedagogy. DePauw University, Jan. 24, 2025
Integrating Information Literacy Into Your Entomology Courses. Entomology Society of America Conference, 2024
Teaching Workshop Series. Department of Entomology, Purdue University. Mar–Apr 2023
Graduate Assistant Teaching Institute. Module 1. Western Kentucky University. 2018

Leadership Positions

2021–2022	Treasurer. Entomological Graduate Organization, Purdue University
2023	Vice President. Boiler ATA Martial Arts Club, Purdue University
2021–2023	President. Boiler ATA Martial Arts Club, Purdue University
2020–2021	Treasurer. Boiler ATA Martial Arts Club, Purdue University
2015–2017	Vice President. Microbiology Club, Western Kentucky University