

# CURRICULUM VITAE

**Samuel M. Owens, MSc**

[Integrative Ecology Lab](#) | Temple University  
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## **APPLIED SKILLS**

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### Programming and Data Techniques

- R data coding language: package development, function writing
- Rmarkdown / Quarto for preparation of scientific reports and workflow documentation
- Use of Python, SQL and JavaScript based cloud computing applications.
- Data management- version control, documentation, and use of a DMP
- Teaches R and data science techniques to undergraduates for “[gcsaR](#)” (see teaching)
- Use of generative AI best practices to troubleshoot code workflows

### Modeling Techniques

- Training, validation and tuning of ecological niche models
- Performed modeling at different spatial scales to perform risk analysis to viticulture due to climate change and invasive species
- Developed a species distribution modeling (SDM) workflow as an R package
- Applied the MaxEnt SDM algorithm to the invasive spotted lanternfly

### Software Proficiencies

- GitHub- collaboration, teaching, and version control
- ESRI ArcGIS Pro / ArcMap
- Google CoLab
- Graphpad Prism
- Microsoft Office 365, including extensive use of Excel for statistical analysis

### Management and Collaboration

- Managed a team of undergraduates to gather and analyze data and produce reports for the CA Dept of Food and Agriculture (CDFA)
- Collaborated with CDFA to improve project on assessing lanternfly transportation risk
- Developed and communicated R functions, graphics, and grant reports to the CDFA

## **EDUCATION**

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### **Temple University**

**MSc Biology** (2022 – Aug 2024)

Graduate Advisor: Matthew Helmus, Ph.D

Graduate Certificate: [Teaching in Higher Education](#)

### **Liberty University**

**BS Zoology** | (2015 – 2019)

Graduate of [Eagle Scholars Leadership Program](#)

Minor: Chemistry

## **PUBLICATIONS**

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Owens, SM. Multi-scale Modeling of the Spotted Lanternfly *Lycorma delicatula* (Hemiptera: Fulgoridae) Reveals Displaced Risk to Viticulture and Regional Range Expansion Due to Climate Change. [M.S.]. ProQuest Dissertations and Theses. Temple University; 2024.

Kaniper, S.; Lynch, D.; Owens, S.M.; Ibric, L.; Vabishchevich, Y.; Nyantakyi, N.; Chun, F.; Sam, L.; Fabrizio, C.; Hamad, E.; et al. Non-Cardiac Amyloidosis Findings Are Not Increased in African American Carriers of *TTR* V142I with Heart Failure and/or Arrhythmia. *J. Pers. Med.* **2024**, *14*, 271. <https://doi.org/10.3390/jpm14030271>

## **RESEARCH PROJECTS**

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- 2022 – 2024 MS Thesis** | Integrative Ecology Lab | Temple University  
“Multi-scale modeling of the Spotted Lanternfly *Lycorma delicatula* (Hemiptera: Fulgoridae) reveals displaced risk to viticulture and regional range expansion due to climate change.”
- 2018** Aquatic Ecotoxicology Research Lab | Liberty University  
“Toxicological effects of atrazine and glyphosate on a crayfish ectosymbiont (*C. ingens*).”
- 2015 – 2018** Aquatic Ecotoxicology Research Lab | Liberty University  
“Toxicological effects of atrazine on the Appalachian Brook Crayfish (*C. b. bartonii*).”

## **TEACHING EXPERIENCE**

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- 2024 – Present Adjunct Professor**  
Department of Biology | Temple University  
Course: [Introduction to Organismal Biology Lab](#)
- 2023 – 2024 Graduate Teaching Assistant | Instructor of Record**  
Department of Biology | Temple University  
Courses: [Global Change Science: Analytics with R \(gcsaR\)](#), Introduction to Organismal Biology
- 2023 – Present Guest Lecturer**  
Department of Biology | Temple University  
Lectures: Spatial data analytics with R (Spring 2023 and 2024); GitHub for biology and data science (Spring 2024)
- 2017 – 2019 Undergraduate Instructor**  
Department of Biology and Chemistry | Liberty University  
Course: Ecology, field lab
- 2018 – 2019 Undergraduate Teaching Assistant (head of prep)**  
Course: Zoology
- 2017 Undergraduate Teaching Assistant**  
Department of Biology and Chemistry | Liberty University  
Course: Organic Chemistry II (2019)

## **PROFESSIONAL EXPERIENCE**

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- 2023 – Present**      **Graduate Research Assistant**  
Department of Biology | Temple University
- 2022**              **Laboratory Manager**  
Department of Biology | Temple University
- 2020 – 2022**      **Laboratory Assistant**  
Department of Genetics and Biochemistry | Temple U School of Medicine
- 2019**              **Marine Ecotoxicology Summer Research Intern**  
Dauphin Island Sea Laboratory | University of South Alabama
- 2018**              **Intertidal Ecology Summer Research Intern**  
Shoals Marine Laboratory | University of New Hampshire  
**Won 2<sup>nd</sup> best poster at RARGOM conference**

### **GRANTS**

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- 2024**              TU College of Science and Technology Graduate Travel Award
- 2024**              TU Biology Graduate Student Society Travel Award
- 2017**              Virginia Academy of Science

### **ORAL PRESENTATIONS**

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- 2024**              “Multi-scale distribution modeling for the Spotted Lanternfly (*Lycorma delicatula*) reveals range expansion and increased risk to important viticultural regions under climate change.” Ecological Society of America, Mid-Atlantic Chapter Annual Meeting. Kutztown, PA.
- 2023**              “Where will they strike next? Predicting suitable habitat and the stage of the *Lycorma delicatula* invasion under climate change.” Entomological Society of Pennsylvania Annual meeting. Virtual.
- 2018**              “Low Level Atrazine Exposure Effects on Crayfish Development.” Big South Undergraduate Research Symposium, Spring 8<sup>th</sup> Annual Meeting. Lynchburg, VA.

### **POSTER PRESENTATIONS**

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- 2018**              “Replacement of a Foundation Species in the Lower Intertidal.” Regional Association for Research in the Gulf of Maine (RARGOM). Portland, ME.  
**Won Best Poster in Ecology/ Evolution/ Conservation Category.**  
(did not present, only contributed to research and poster design)
- 2018**              “Pollution Tolerance of Crayfish Ectosymbionts (Branchiobdellidans).” Virginia Academy of Sciences, Fall Undergraduate Research Proposal Meeting. Ferrum, VA.
- 2018**              “Low Level Atrazine Exposure Effects on Crayfish Development.” Association of Southeastern Biologists, 79<sup>th</sup> Annual Meeting. Myrtle Beach, SC.

- 2017** “The Effects of a Common Herbicide (Atrazine) on Juvenile Crayfish Growth and Development.” Ecological Society of America Annual Meeting. Portland, OR.  
(did not present, only contributed to research and poster design)
- 2017** “Low level Atrazine Exposure Effects on Crayfish Development.” Virginia Academy of Science, Fall Undergraduate Research Proposal Meeting. Hampden Sydney, VA.  
**Awarded a \$750 research grant.**
- 2016** “The Effects of a Common Herbicide (Atrazine) on Juvenile Crayfish Growth and Development.” Liberty University Research Week Undergraduate Meeting. Lynchburg, VA.  
**Won 2<sup>nd</sup> Place Recognition in the Basic Research Category.**
- 2016** “The Effects of a Common Herbicide (Atrazine) on Juvenile Crayfish Growth and Development.” Virginia Academy of Science, Fall Undergraduate Research Proposal Meeting.

#### **ACADEMIC MEMBERSHIPS**

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**Entomological Society of Pennsylvania** | Graduate Student Member  
**TU Biology Graduate Student Society** | Former Executive Treasurer

#### **VOLUNTEER EXPERIENCE**

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##### Peer-Reviews

- 2024**      **Agricultural and Forest Entomology**
- 2024**      **Ecology and Evolution**

##### Academic Involvement

- 2020**      **TRIO Upward Bound- High School Mentorship Program**  
Internship Mentor | Boise State University

##### Community Involvement

- 2022 – Present**      **TU IntersVarsity Graduate Fellowship**  
Chapter Leader and Male Mentor | Temple University
- 2023 – Present**      **“The Table” Homeless Food Ministry**  
Volunteer | Kensington, Philadelphia, PA
- 2023 – Present**      **Annual Community Easter Egg Hunt**  
Volunteer | Fishtown, Philadelphia, PA
- 2017 – 2018**      **Parkview Community Mission Food Pantry**  
Volunteer | Lynchburg, VA
- 2015 – 2016**      **Community Care Initiative**  
Volunteer | Lynchburg, VA