

# Olivia Guswiler (she/her)

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## EDUCATION

### **M. S. Natural Resources – Wildlife Conservation and Management**

University of Arizona, GPA 4.0

August 2025 – Present

### **B. S. Zoology – Ecology, Evolution, and Organismal Biology**

Michigan State University, GPA 3.14

September 2015 – May 2018

### **Undergraduate Program**

Grand Rapids Community College, GPA 3.40

August 2013 – April 2015

## EXPERIENCE

### **Wildlife Research Scientist**

School of Natural Resources and the Environment, University of Arizona · Tucson, AZ

May 12, 2025 – Present

Supervisor: Jesse Alston, PhD

- Manage and conduct a variety of wildlife studies including deployment, maintenance, data processing and analysis, and dissemination of findings
- Train, plan, and lead the work of lower-level staff and graduate/undergraduate students
- Coordinate, conduct, and delegate work and data/equipment management for several concurrent projects
- Develop/improve training procedures, data management, documentation, and techniques
- Research and author funding proposals

### **Lab/Project Coordinator**

Evelyn F. McKnight Brain Institute, University of Arizona · Tucson, AZ

January 1, 2021 – June 27, 2025

Supervisor: Carol Barnes, PhD

- Train, plan, and lead the work of lower-level staff and graduate/undergraduate students
- Coordinate, conduct, and delegate work and data/equipment management for several concurrent projects
- Make improvements to training procedures, data management, documentation, and techniques
- Design, conduct, and complete statistical analyses for moderately complex research projects
- Ensure and maintain compliance with the Institutional Animal Care and Use Committee (IACUC), American Association for Accreditation of Laboratory Animal Care (AAALAC), Research and Laboratory Safety Services (RLSS), and Drug Enforcement Administration (DEA)
- Author and present research findings at local and national conferences and collaborate in authoring manuscripts for peer-reviewed publications
- Serve as project liaison for internal and external collaborators on various projects
- Assist with IT services: manage presentations at conferences, troubleshoot issues with lab hardware/software, etc.

### **Field Technician**

National Ecological Observatory Network · Tucson, AZ

March 1 – August 28, 2020 / March 18 – November 27, 2019

Supervisors: Katherine Matthiessen and Hattie Oswald

- Worked in inclement weather conditions, often early/late hours of the day, hiking across variable terrain with heavy equipment
- Meticulously executed established, standardized procedures for sample collection, processing, and quality assurance and control for numerous fauna, aquatic, and flora protocols
- Regularly conducted small mammal trapping bouts and assisted with training new-hires on handling, identifying, collecting tissue samples, and recording morphometric data of a suite of rodents
- Collaborated with lead scientists at headquarters in Boulder, CO to update site-specific dichotomous keys for small mammal identification in NM and AZ
- Prepared identification guides for juvenile/adult herpetofauna occurring at study sites in NM and AZ

### **Lead Trapping/Telemetry Technician**

University of Delaware · Milton, DE

December 5, 2019 – February 20, 2020

Supervisor: Drake Hardman

- Oversaw day-to-day operations of project, supervised and trained crew members
- Conducted and coordinated daily deployment, retrieval, and maintenance of remote trail cameras on private and public lands
- Communicated with private landowners to gain access to private properties as well as maintained positive interactions with curious citizens encountered on public land
- Regularly employed radio telemetry techniques to locate and download data from over 40 turkeys
- Conducted necropsy of deceased turkeys to determine cause of death
- Safely operated and maintained rocket net set ups

- Conducted turkey trapping, morphometric data collection, and radio transmitter deployment

### **Trapping/Camera Technician**

January 1 – March 15, 2019

Louisiana State University · Coleman, TX

Supervisor: Dustin Golembiewski

- Responsible for daily deployment, retrieval, and maintenance of trail cameras on private lands
- Conducted turkey trapping, handling, and morphometric data collection and data entry
- Operated and maintained drop nets, walk-in traps, and GPS units on a daily basis
- Responsible for contacting and communicating with numerous private landowners

### **Small Mammal Technician**

August 1 – 31, 2018

University of Oklahoma · Green Valley, AZ

Supervisors: Matthew Rowe, PhD & Ashlee Rowe, PhD

- Conducted small mammal trapping, handling, identification, dissections, tissue extraction, and morphometric data collection
- Collected and identified a variety of chemically protected arthropods
- Video recorded behavioral interactions and maintained detailed notes

### **Research Technician**

June 5, 2017 – January 15, 2018

Michigan State University · East Lansing, MI

Supervisor: Ashlee Rowe, PhD

- Performed various molecular protocols (i.e. RNA extraction, reverse transcription, PCR, etc.) and interpreted results
- Responsible for maintenance of laboratory, shipping samples, ordering inventory, and the husbandry of numerous species of arthropods

### **Research Fellow**

December 1, 2016 – June 5, 2017

Michigan State University · Green Valley, AZ

Supervisor: Matthew Rowe, PhD

- Conducted small mammal trapping, handling, identification, and morphometric data collection
- Collected and identified a variety of chemically protected arthropods
- Designed protocols for and conducted behavioral experiments with wild-caught mice
- Video recorded behavioral interactions and maintained detailed notes
- Analyzed video recordings using Behavioral Observation Research Interactive Software (BORIS)
- Performed literature searches, constructed a working bibliography, and contributed to manuscript writing

### **Behavioral Research Assistant**

September 5, 2016 – May 1, 2017

Michigan State University · East Lansing, MI

Supervisors: Matthew Rowe, PhD & Ashlee Rowe, PhD

- Conducted and video recorded behavioral experiments following meticulous protocols and maintained detailed notes
- Regularly handled mice and scorpions
- Analyzed video recordings using VLC Media Player

### **Auditory Research Assistant**

August 28 – October 20, 2016

Michigan State University · East Lansing, MI

Supervisor: Pamela Rasmussen, PhD

- Examined, identified, and isolated numerous avian vocalizations using software programs Raven and Audacity
- Used GPS data to determine locality of observations
- Accurately entered data from the field and uploaded to online database (Avian Vocalization Center)

### **Undergraduate Research Apprentice Program**

May 5 – August 15, 2016

W. K. Kellogg Biological Station · Hickory Corners, MI

Supervisors: Sara Garnett, PhD & Danielle Zoellner, PhD

- Performed experimental set up and maintenance, measured and recorded daily water variables, and precise identification of anuran larval stages
- Developed experimental design, implemented, and interpreted results of an independent undergraduate project

### **Wildlife Intern**

November 20, 2015 – May 5, 2016

Fenner Nature Center · Lansing, MI

Supervisor: Jenny Mensch

- Responsible for husbandry and health of numerous herpetofauna
- Designed and implemented improved habitats for resident wildlife based on specific needs of each species

### **English Tutor**

December 2014 – May 2015

Grand Rapids Community College · Grand Rapids, MI

- Worked one-on-one with special needs students and students with English as a second language
- Devised individualized lesson plans and learning strategies

## **TRAINING AND SKILLS**

Computer Programs: AddaxAI; Adobe Photoshop, Illustrator, & Lightroom; Behavioural Observation Research Interactive Software (BORIS); Git; GraphPad Prism; MS Office Suite; RStudio; SolidWorks; Timelapse; Windows Subsystem for Linux (WSL)

Programming Languages: R, Bash

Adult and Pediatric First Aid/CPR/AED Certified (Valid 2019-2022)  
USFWS Electrofishing Safety (2022)  
Boating  
OHV  
Trailing

## AWARDS, APPOINTMENTS, AND MEMBERSHIP

### Active Memberships

The Wildlife Society  
Arizona Chapter  
Tucson Herpetological Society

**University Friend of the School of Natural Resources and the Environment** 2024  
University of Arizona

**Graduate Research Fellowship Program Honorable Mention** 2024  
National Science Foundation

**Ohio State Science Day Poster Judge** 2020  
The Ohio Academy of Science

**University Undergraduate Research and Arts Forum First Place Recipient** 2017  
Michigan State University

**Dr. Marvin Hensley Undergraduate Research Fellowship in Zoology (\$6000)** 2016  
Michigan State University

**Biodiversity Club – Treasurer** 2013 – 2014  
Grand Rapids Community College

**Dean's List** Fall 2014  
Grand Rapids Community College

**President's List** Summer 2014  
Grand Rapids Community College

## PUBLICATIONS, PRESENTATIONS, & REPORTS

Alston J, Guswiler O. Mapping wildlife connectivity in urban Tucson. Arizona Game and Fish Department Heritage Fund internal report. June, 2025; unpublished.

Zempare MA, Do L, Carey N, Ngyuen C, Young K, **Guswiler O**, Chawla M, Sinari S, Billheimer D, Huentleman MJ, Trouard T, Barnes CA. Multidomain Cognitive Assessment and High-Resolution MRI Across Age in the Male Fischer 44 Rat. *Behavioral Neuroscience*. In Review.

**Guswiler O**, Nether A, Bohne K, Barnes CA. Possible strain differences of the Fischer 344 rat in a temporal order object recognition task. Poster to be presented at: Neuroscience 2023; November, 2023; Washington, DC.

**Guswiler O**, Nether A, Bohne K, Barnes CA. Possible strain differences of the Fischer 344 rat in a temporal order object recognition task. Poster presented at: 2023 Arizona Alzheimer's Consortium Annual Scientific Conference; September, 2023; Phoenix, AZ.

Zempare MA, **Guswiler O**, Nether A, Maloney B, Bohne K, Delgado A, Huentelman MJ, Worley P, Barnes CA. Determining the age of onset of cognitive impairment in male and female TgF344-AD Rats. Poster presented at: 2023 Arizona Alzheimer's Consortium Annual Scientific Conference; September, 2023; Phoenix, AZ.

Sterzinar C, Srivathsa S, Church E, **Guswiler O**, Barnes CA. Age-associated deficits in spatial and working memory performance in rats. Poster presented at: 34<sup>th</sup> Annual Undergraduate Biology Research Program Conference; January, 2023; Tucson, AZ.

**Guswiler O**, Khattab S, Bohne K, Barnes CA. Age-related changes in performance on the frontal cortex-dependent temporal order memory task. Poster presented at: Neuroscience 2022; November, 2022; San Diego, CA.

**Guswiler O**, Khattab S, Bohne K, Barnes CA. Age-related changes in performance on the frontal cortex-dependent temporal order memory task. Poster presented at: 2022 Arizona Alzheimer's Consortium Annual Scientific Conference; September, 2022; Phoenix, AZ.

Ramamoorthy R, Srivathsa S, **Guswiler O**, Barnes CA, Cowen SL. Automated decision-making task for assessing age-associated

changes in neural function. Poster presented at: 10<sup>th</sup> Annual BME Research Expo; March, 2022; Tucson, AZ.

**Guswiler O**, National Ecological Observatory Network. Life at the Foothills of the Alaska Range: A virtual tour of the National Ecological Observatory Network's terrestrial site Healy (HEAL). ArcGIS StoryMap virtually published: December 2020. <https://storymaps.arcgis.com/stories/5df052331b974235b2ec7cb23b4d5ea7>

Niermann CN, Tate TG, Suto AL, Barajas R, White HA, **Guswiler O**, Secor SM, Rowe AH, Rowe MP. Defensive Venoms: Is Pain Sufficient for Predator Deterrence? *Toxins*. 2020; 12(4):260.

Suto A, **Guswiler O**, Pontius J, Rowe A, and Rowe M. Prey choice in the Southern grasshopper mouse (*Onychomys torridus*) when feeding on scorpions: pain versus calories. Poster presented at: University Undergraduate Research and Arts Forum; April, 2017; East Lansing, MI.

**Guswiler O**, Garnett S, Getty T. Compared behavior of unfamiliar kin and familiar kin in the American toad. Poster presented at: BEACON Congress; August, 2016; East Lansing, MI.

**Guswiler O**, Garnett S, Getty T. Compared behavior of unfamiliar kin and familiar kin in the American toad. Poster presented at: Undergraduate Internship and Research Symposium; August, 2016; Hickory Corners, MI.