

# Sarah K. Ortiz, Ph.D.

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## CONTACT

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[Google Scholar](#)  
CSU Fort Collins, Department of Biology

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## EDUCATION

### PH.D IN ECOLOGY, EVOLUTION, AND BEHAVIOR

Dissertation Title: *From Individuals to Ecosystems: The Role of Plant Species Interactions in Determining Ecosystem Processes*  
Advisor: Amy Wolf  
University of Texas at Austin | 2019 - 2025

### BACHELORS OF SCIENCE IN BIOLOGY: ECOLOGY, EVOLUTION, AND BEHAVIOR

Advisor: Caroline Farrior  
University of Texas at Austin | 2014 - 2018

### CERTIFICATE IN APPLIED STATISTICAL MODELING

University of Texas at Austin

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## ACADEMIC APPOINTMENTS

### POSTDOCTORAL RESEARCHER

Advisor: Anping Chen  
Colorado State University | 2025

### GRADUATE RESEARCH FELLOW

Advisor: Amy Wolf  
University of Texas at Austin | 2023-2024

### GRADUATE RESEARCH ASSISTANT

Advisor: Amy Wolf  
University of Texas at Austin | Spring 2022 & 2025

### GRADUATE TEACHING ASSISTANT

University of Texas at Austin | Fall 2019, 2020, 2021, 2022, 2024,  
Spring 2019, 2020, 2021, 2023

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## PUBLICATIONS

### 2025

Cinoglu D.\*, **Ortiz S. K.\***, Farrior. C.E., Wolf, A. A. Above and belowground trait decoupling enhances plant performance in low diversity. *In preparation*.

## 2024

**Ortiz S. K.**, Wolf, A. A. Nitrogen-fixing plants increase soil nitrogen and neighboring-plant biomass but decrease community diversity: A meta-analysis reveals the mediating role of soil texture. *Journal of Ecology*. 2024. <http://doi.org/10.1111/1365-2745.14402>

## 2023

Menge, D., Wolf, A. A. Funk, J., Perakis, S., Akana, P. R., Arkebauer, R., Bytnerowicz, T., Carreras P. K., Huddell, A., Kou-Giesbrecht, S., **Ortiz, S. K.** Tree symbioses sustain nitrogen fixation despite excess nitrogen supply. *Ecological Monographs*. 2023. <https://doi.org/10.1002/ecm.1562>

## 2022

Wolf, A. A, **Ortiz S. K.**, Rakowski, C. J. Ecosystems: An Overview. *The ecological and societal consequences of biodiversity loss*. 2022.

\* indicates equal authorship

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## FELLOWSHIPS AND GRANTS

### INDIVIDUALLY AWARDED FELLOWSHIPS

**The University of Texas at Austin**, Stengl-Wyer Fellowship. 2023-2024. (\$55,270)

**The University of Texas at Austin**, Rodeo Endowment Recruitment Summer Fellowship. 2020 – 2025. (\$24,000)

**The University of Texas at Austin**, Blattstein Fellowship. 2023. (\$3,000)

### GRANTS AND AWARDS

**The University of Texas at Austin**, Integrative Biology Department Research Award. 2020, 2023, & 2024. (\$5,565)

**The University of Texas at Austin**, Linda Escobar Award. 2024. (\$3,000)

**The University of Texas at Austin**, Integrative Biology Travel Award. 2023 & 2024. (\$2,200)

**The University of Texas at Austin**, Graduate School Summer Professional Development Award. 2023. (\$500)

**Ecological Society of America Soil Ecology Section**, Graduate Student Travel Award. 2023. (\$400)

**Texas Ecological Laboratory**, Texas Ecolab Research. 2022. (\$2,100)

**Native Plant Society of Texas**, Ann Miller Gonzalez Research Grant for Graduate Students. 2021 (\$2,500)

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## CONTRIBUTED TALKS AND POSTERS

## 2024

**Ortiz S. K.**, Cinoglu D., Farrior. C.E., Wolf, A. A. (August 2024) Investigating the relationship between plant functional traits and ecosystem productivity in the face of global change, *Ecological Society of America*, Contributed Talk.

## 2023

**Ortiz S. K.**, Cinoglu D., Farrior. C.E., Wolf, A. A. (August 2023) Water availability and diversity drive rooting strategies in herbaceous plants: insights from a biodiversity experiment, *Ecological Society of America*, Contributed Talk.

## 2022

**Ortiz S. K.** (November 2022) How informative are different metrics of diversity?: Results from a BEF experiment, Ecolunch, oral presentation.

**Ortiz S. K.** (September 2022) Biodiversity and Ecosystem Functioning from a Belowground Perspective, *Native Plant Society of Texas Fall Symposium*, oral presentation.

Cinoglu D.\*, **Ortiz S. K.\***, Farrior C.E., Wolf A. A. (September 2022) The effects of abiotic and biotic stress on carbon allocation in Native Texas plants, *Native Plant Society of Texas Fall Symposium*, poster presentation.

Cinoglu D.\*, **Ortiz S. K.\***. (May 2022) Linking above and below ground functional traits: A biodiversity-ecosystem functioning experiment, *BFL Celebration Symposium*, poster presentation.

## 2020

**Ortiz S. K.**, Wolf, A. A. (August 2020) Nitrogen-fixer facilitation and competition in the plant community: a meta-analysis, *Ecological Society of America*, Virtual conference, poster presentation.

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## MENTORING

### UNDERGRADUATE CAPSTONE PROJECTS

**Rachel Kondrat** – 2025 – Uncovering the influence of biodiversity and water availability on seedling mortality and how this impacts ecosystem dynamics. *Senior Thesis*.

**Casey Dinh** – 2023 – Trait-mediated seedling mortality across species loss and water availability. *EVS capstone*.

**Michael Hanson** – 2022 – The effect of biotic and abiotic changes on phenology and carbon investment strategy for herbaceous plants in central Texas. *EVS capstone*.

**Emma Rust** – 2022 – Carbon Sequestration in Texas Plant Species: The Effects of Climate Change and Biodiversity Loss on Resource Acquisition Traits. *InSTInCT REU*.

**Jessica Richards** – 2021 – Water Use Efficiency and Biomass Changes of Annual and Perennial Legume Species in Response to Arbuscular Mycorrhizal Fungi Under Drought Conditions. *EVS capstone*.

## UNDERGRADUATE MENTORING

**Elena Adams** – 2021 – 2022 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Sofia Bautista** – 2023 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Carole-Lynna Benhamou** – 2022 – 2023 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Sarah Bybee** – 2020 – 2021 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Diana Espinoza** – 2022 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Eli Galli-Anderson** – 2023 – 2024 – Analyzing plant-fungal interactions across water availability and richness

**Elena Garcia** – 2023 – Analyzing plant-fungal interactions across water availability and richness

**Gayathree Gopi** – 2023 – Exploring the effects of AMF on N-fixers under different resource gradients

**Inara Jiwani** – 2022 – 2023. Exploring the effects of AMF on N-fixers under different resource gradients. TEJAS Scholar.

**Abigal Jones** – 2023 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Brian Matibag** – 2022 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Laurel Miller** – 2023 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Mathew Nelson** – 2021 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Stephanie Nunez** – 2022 – 2023 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Serah Osborn** – 2022 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Eliana Patt** – 2023 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Josue Perez** – 2021 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Ash Romero** – 2023 – 2024 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Sora Sunby** – 2021 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Lynda Torres** – 2024 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Lanning Welsh** – 2023 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Margaret White** – 2023 – Biodiversity and Ecosystem Functioning of Texas grasslands

**Cain Yin** – 2023 – 2024 – Biodiversity and Ecosystem Functioning of Texas grasslands

## MENTORING PROGRAMS

- **Lead Coordinator and Mentor** – *The Biodiversity Scholars program* – Spring 2022, 2023, & 2024.
  - Co-designed and developed to support undergraduates from minoritized groups in STEM, focusing on academic success and professional development
  - Provided one-on-one mentoring to students, guiding them through research projects, coursework, and career planning
- **Mentor** – *Society for Advancing Gender Equity in STEM (SAGES)* program – 2022 & 2023
- **Mentor** – *Texas Excellence in Jobs And Services (TEJAS)* student – 2022
- **Mentor** – *Inclusive Student Training in Collections and field-based Topics (InSTInCT)* REU Program – Summer 2022
- **Mentor** – the Graduate Student Organization's First-year Mentorship Program – 2023
- **Mentor** – EEBuddies program – 2023 & 2024
- **Mentor** – SEEDS program at ESA 2024 Conference – Summer 2024

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## TEACHING

### GRADUATE TEACHING EXPERIENCE

**Science Literacy and Numeracy: Ecology and Evolution:** Fall 2019, 2020, 2021, & 2022

**Ecology:** Spring 2020, 2021, 2023, and Fall 2024

- Responsible for planning and teaching weekly discussion sections, holding office hours, grading assignments, and attending lectures.

### GUEST LECTURE

**"Biodiversity Loss: Why do we care?":** Fall 2021, 2022, & 2023

**"From the atmosphere to soils: the role of symbiotic nitrogen fixation in ecosystems and global cycles":** UT OLLI Dimensions of Integrated Biology, Zoology Faculty Forum Spring 2024

### WORKSHOPS

**Coordinator and Lead Instructor** – *Introduction into Meta-analysis* – Spring 2024.

- Coordinated and led a one-day workshop with a team of postdoctoral researchers, introducing participants to the fundamentals of conducting meta-analyses.
- Developed instructional materials covering key concepts, statistical tools, and best practices for data synthesis to provide hands-on guidance with real-world datasets to enhance participants' practical skills.

## UNDERGRADUATE TEACHING EXPERIENCE

**Introduction to Biology II:** Fall 2017, 2018, & Fall 2018

**Ecology:** Spring 2019

- Responsible for holding office hours, grading assignments, and attending lectures.

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## OUTREACH

Science Under the Stars Lecture: **From the Ground up: Exploring Biodiversity in your backyard**. Link to [recording here](#). – Spring 2024

**Host for Elementary School field trip at Brackenridge Field Lab** – Fall 2023.

- Organized and led a half-day educational field trip for 1st-6th grade students to explore local biodiversity.
- Taught hands-on lessons about ecological research methods and the importance of studying biodiversity.

**Poster judge** for The Symposium for Undergraduate Research Exploration (SURE) in the College of Natural Sciences – Fall 2022 & 2023

**Panelist** for InSTInCT REU Program Q&A session – Summer 2022

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## SERVICE

### DEPARTMENT SERVICE & COMMITTEES

**Graduate Representative** on the Integrative Biology Community and Well-Being Committee – 2023 – 2025

**Graduate Representative** on the Integrative Biology Plant Biodiversity and Evolution Faculty Search Committee – Fall 2023

### PEER REVIEWER FOR JOURNALS

- Journal of Ecology
- Tree Physiology
- Annals of Botany Plants
- Oecologia

### PROFESSIONAL MEMBERSHIPS

Ecological Society of America

- Soil Ecology Section – 2023 & 2024
- Early Career Ecologist Section – 2024
- Plant Population Ecology Section – 2024
- Inclusive Ecology Section – 2024