

Curriculum Vitae

Danielle Rios

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Education:

Texas A&M University San Antonio **Aug 2021-Aug 2024**

Graduate Degree

Master of Science in Biology

Texas A&M University San Antonio **Aug 2016-May 2020**

B.S. in Biology

Minor in Sociology

Research Experience:

Graduate Research Student **Aug 2021-August 2024**

Studying presence of phytoplasma bacterial disease in wild grass of the Hill Country and Blackland Prairie of Texas.

Job Experience:

National Park Service Amphibian survey Crew Leader **Summer 2025 – Present**

Gulf Coast Inventory and Monitoring Network, San Juan Mission, San Antonio, TX.

Leading amphibian field surveys for the National Park Service, coordinating data collection, species identification, and field protocols in support of long-term monitoring and conservation efforts.

Adjunct Faculty – Texas A&M University San Antonio **Fall 2024 - Present**

Adjunct faculty instructor teaching Ecology and Evolution laboratories, General Biology lecture, and Introduction to Life Sciences II lecture.

CE Instructor (Summer Programs) PAC **August 2023-August 2023**

Summer camp instructor for Palo Alto Community College. Enhanced student understanding of STEM through hands on experiments.

CE Instructor (Summer Programs) PAC **July-August 2022**

Summer camp instructor for Palo Alto Community College. Enhanced student understanding of STEM through hands on experiments.

Graduate Teaching Assistant **Aug 2021-Dec 2023**

Texas A&M University San Antonio

Worked as a graduate teaching assistant at TAMUSA. Supervising two Ecology labs per week per semester. Aiding in lab setups and takedowns for several practical labs.

Peer Leader

June 2018-October 2018

Texas A&M University San Antonio

Was a peer mentor to incoming freshman in university jaguar tracks courses. This course is designed to advance their experience as a new student and adjust to university culture and expectations.

Publications:

D.Rios, 2024."First Report of a '*Candidatus* Phytoplasma sacchari'-Related Strain Associated with Yellowing and Decline of Silver Bluestem in Texas, U.S.A."

Presentations:

"Plant-Insect-Microbe Interactions of Texas Grasslands." Poster. Presented at The Texas Society of Ecological Restoration Annual Conference (St. Edwards University, Austin, Tx, USA), 2022.

"Plant-Insect-Microbe Interactions of Texas Grasslands." Poster. Presented at the annual conference for the Society of Integrative and Comparative Biology (JW Marriot, Austin, Tx, USA), 2023.

"Plant-Insect-Microbe Interactions of Texas Grasslands." Poster. Presented at TAMUS Pathways Student Research Symposium (Texas A&M University – Galveston, Galveston, TX, USA), 2023.

"Investigating the Presence of Bacterial Phytoplasma Disease in Insects and Grasses of Texas." Presentation. Presented at the Student Research Symposium for Texas A&M University – San Antonio (Texas A&M University – San Antonio, San Antonio, TX, USA), 2023.

"Discovering New Phytoplasma Strains in Texas: A Study on Insects and Wild Grasses." Presentation. Presented at the Texas Society of Ecological Restoration Annual Conference (El Paso Convention Center, El Paso, USA), 2023.

"Detection of Phytoplasma in Wild Grasses and Hemipteran Insects of Texas." Presentation. Presented at the Ecological Society of America Annual Meeting (Oregon Convention Center, Portland, Oregon, USA), 2023.

"Discovering New Phytoplasma Strains in Texas: A Study on Insects and Wild Grasses." Presentation. Presented at the Student Research Symposium for Texas A&M University – San Antonio (Texas A&M University – San Antonio, San Antonio, TX, USA), 2024.

Skills:

Laboratory and Molecular Techniques

- DNA Extraction from plants, insects (Hemipterans), and environmental samples using commercial kits and in-house protocols.
- Quantitative PCR (qPCR) for phytoplasma detection.

- Sample preparation, contamination control, and molecular workflow organization.

Field and Ecological Research

- Amphibian survey methods and species identification.
- Insect collection, identification, and biodiversity monitoring.
- HOBO data logger deployment and environmental data collection.
- Field data recording, quality control, and long-term monitoring protocols.

Data Analysis and Computing

- Statistical analysis and data visualization in R.
- Data processing and scripting in Python.
- Spreadsheet-based data management (Excel/CSV formatting, cleaning, organization).

Teaching and Communication

- Undergraduate instruction (lecture and laboratory).
- Development of course materials, assessments, and rubrics.
- Scientific communication for diverse audiences (presentations, posters, outreach).

Professional Skills:

- Organized and self-directed.
- Adaptable to field, laboratory and classroom environments.
- Strong time management and attention to detail.

Memberships:

Alamo Area Master Naturalist Program	2022-Present
Society for Integrative and Comparative Biology	Jan 2023-Dec 2023
Ecological Society of America	March 2023-2024
American Society of Microbiology	March 2023-Present
Native Plant Society of Texas	Nov 2021-Present

Professional Development:

Phytoplasma DNA Extraction and qPCR Training	May 2025
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Completed week-long training in phytoplasma DNA extraction from Hemipteran insects, including implementation of quantitative PCR (qPCR) protocols for phytoplasma detection and analysis.

Native Landscape Certification Levels 1 and 3	Spring 2021-Spring 2024
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Competency certified in all 4 levels of the Native Plant Society of Texas' Native Landscape Certification.

Texas Master Naturalist Entomology Certification	May 2024
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Completed certified training specializing in insect identification, pest management, and IPM. Dedicated 20+ hours to a project on insect distribution and biodiversity monitoring in Bexar County, serving as a community resource educator.

Science Olympiad Coordinator **March 2024**

Science Olympiad Coordinator **March 2023**

Conference Judge at Pathways Symposium, Galveston, Tx **March 2023**

Volunteered as judge for undergraduate poster presentations of the Life Sciences category at the research symposium.

SAWS Rain to Drain Experience **Fall 2022**

Event in which the public were invited by the San Antonio Water Systems to observe the process of water filtration and wastewater treatment.

National Park Service Amphibian survey **2021 – Present**

Gulf Coast Inventory and Monitoring Network, San Juan Mission, San Antonio, TX

Native Landscape for Birds Course **Fall 2021**

A course hosted by the Native Plant Society of Texas, educating people on landscaping with native plants beneficial to native birds.

Alamo Area Master Naturalist **August 2022 - Present**

Texas Master Naturalist. Membership includes volunteering at several natural areas or nature-oriented tasks in or surrounding Bexar County.

Cibolo Nature Center Research Survey **April 2022**

Took part in citizen science research ant survey and placed traps out for ants, then collected them for species identification.

Science Olympiad Coordinator **March 2022**

Was a coordinator for Science Olympiad in which I oversaw a competition event called “mousetrap vehicle” and “gravity vehicle”. I made sure students were following instructions and took scores of competitors.

Volunteer Experience:

Vegetation Survey Volunteer -Rookery Project **September 2025**

Assisted with vegetation surveys for a rookery project, contributing to plant identification and habitat data collection.

Volunteer at ABK State Natural Area **2021- 2024**

The Albert and Bessie Kronkosky State area is an archaeological site and nature recreation area that welcomes volunteers for citizen science. Duties include soil and grass sampling of the various grasses that inhabit the area.

Headwaters Sanctuary

April 2019-2020

Helped with land management on several occasions at the Headwaters Sanctuary. Volunteer work included removing invasive plant species, clearing weeds from plants vulnerable to displacement and placed mulch on eroded trails.

Awards/Grants:

Texas A&M University - San Antonio Research Symposium

April 2023

3rd place oral presentation award in the Life Sciences category for masters' students.

Pathways Research Symposium, Galveston, Tx

March 2023

1st place for poster presentation in the Life Sciences category for masters' students.

ASM Future Leaders Mentoring Fellowship

Spring 2023

Fellowship awarded to master's and doctoral graduate students from underrepresented groups in the microbial sciences with mentorship, networking, and leadership development opportunity.

Native Plant Society of Texas - San Antonio Chapter Grant Program

Fall 2022

Awarded \$600 for the Native Plant Society's grant program.

President's Leadership Class

Spring 2017-May 2020

Scholarship granted by the President of Texas A&M University San Antonio. Developing essential networking skills, career readiness and student involvement in the community.