

Marissa Zaricor

612 Hitt St. 212 A Tucker Hall, Columbia, MO 65201

Phone: (719)351-5532

Email: zaricorml@mail.missouri.edu

Education

Doctor of Philosophy in Biology	expected 2026
University of Missouri, Columbia, Missouri <i>Major Advisor: Dr. Lauren Sullivan</i>	
Master of Science in Biology	2021
Kansas State University, Manhattan, Kansas <i>Committee: Dr. Jesse Nippert (Major advisor), Dr. Mark Ungerer, and Dr. Colby Moorberg</i> <i>Thesis: "A study of grass structure and function in response to drought and grazing"</i>	
Bachelor of Science in Biology	2017
Emphasis: Fisheries, Wildlife, and Conservation Kansas State University, Manhattan, Kansas <i>Advisor: Dr. Jesse Nippert</i>	

Research Experience

Graduate Research Assistant	2021- present
<i>PI: Dr. Lauren Sullivan, Division of Biology, University of Missouri, Columbia, Missouri</i>	
Graduate Research Assistant	2018- 2021
<i>PI: Dr. Jesse Nippert, Division of Biology, Kansas State University, Manhattan, Kansas</i>	
Research Lab Assistant : Plant EcoPhys lab and Stable Isotope Mass Spec Lab	2017- 2018
<i>PI: Dr. Jesse Nippert, Division of Biology, Kansas State University, Manhattan, Kansas</i>	
Biological Technician	2016- 2017
Konza Prairie Long-Term Ecological Research (LTER), Kansas State University, Manhattan, Kansas Supervisors: Amanda Kuhl and Rosemary Ramundo	

Research Interests

Plant ecology, ecophysiology, grasslands, disturbance (drought, fire, and grazing), restoration ecology, plant functional traits, root ecology, non-structural carbohydrates, conservation, stable isotopes, long term research

Publications

Pau, S., Nippert, J.B., Griffith, D., Bachle, S., Helliker, B., O'Conner, R., Riley, W., Still, C., **Zaricor, M.** (2021). Poor relationships between NEON AOP data and field-based measurements at a mesic grassland site. *Ecology*.

Bachle, S., **Zaricor, M.**, Qui, F., Griffith, D., Ungerer, M.C., Nippert, J.B. Submitted. Physiological responses to drought stress and recovery reflect differences in leaf function and microanatomy among grass lineages.

Zaricor, M., Bachle, S., O’Conner, R., Nippert, JB. In Prep. Grazing alters prairie grass root traits and nonstructural carbohydrates at varying soil depths.

Contributed Poster Presentations

Zaricor, M., Bachle, S., Nippert, J. “ Can we predict drought tolerance in *Poaceae* using plant traits?” Long Term Ecological Research (LTER), All Scientists Meeting, Pacific Grove, CA 1-4 October 2018

Zaricor, M., Bachle, S., Nippert, J. “ Can we predict drought tolerance in *Poaceae* using plant traits?”, Konza Prairie LTER Annual Meeting. 9 May 2018

Sharpe, S., Ungerer, M., Nippert, J., Bachle, S., **Zaricor, M.** 2018. “Effects of drought stress and life stage in wild foxtail millet *Setaria viridis*.” American Genetics Association Presidents Symposium. Toronto, Canada

Awards/Grants

Arts and Science Research Travel Award (\$800)	2018
Biology Graduate Student Association Travel Grant (\$500)	2018

Teaching Experience

BioSC 3650: General Ecology Lab	Fall 2021
Teaching assistant (Primary Instructor: Dr. Lauren Sullivan)	University of Missouri
Biology 501: Plant Physiology Lab	Fall 2018
Co-instructor with Dr. Seton Bachle, (Instructor of record: Dr. Jesse Nippert)	Kansas State University
Biology 198: Principles of Biology	Spring 2018
Teaching assistant (Primary instructors: Dr. Eva Horne and Dr. Chris Herren)	Kansas State University

Mentoring

Undergraduate Students (lab and field research assistants):

Greg Tooley, Fort Hays State University, 2019	Madison Lofing, Kansas State University, 2018-2019
Makenna (Miller) Hotz, Kansas State University, 2017-2019	Samuel Long, Kansas State University, 2018
Jessica Schauf, Kansas State University, 2018-2019	Jeremiah Ruiz, Kansas State University, 2017
Chase Torla, Kansas State University, 2018-2019	Lyndsey Swartz, Kansas State University, 2017-20
Sarah Inskeep, Kansas State University, 2018-2019	

Service/Outreach

- GROW: Girls Researching Our World Summer 2018
teaching stem activities to high school students, Kansas State University
- Docent training for Konza Environmental Education Program (KEEP), Manhattan, Kansas Fall 2018
- USO: fundraising/special events volunteer 2010- 2017
Fort Riley, Kansas; Camp Casey, South Korea; Colorado Springs, CO
- CASA: fundraising/special events volunteer; Colorado, Springs, CO 2007- 2009

Research and Technical Skills

- plant physiological measurements: gas exchange (LI-6400XT), chlorophyll fluorometer (Mini PAM), water potential (PMS Pressure Chamber), light intensity (LP-80 Ceptometer), plant canopy analyzer (LAI-2000), thermal imaging
- lab techniques: weighing, grinding, pipetting, packing, titrate, sterilize equipment, fix samples for microscopy
- field work: biomass, plant identification, plant cover, canopy height; soil and root sample collection using soil corers and geoprobe (540MT Geoprobe Systems hydraulic- push core); water sample collection and processing (for various chemical and isotope analysis)
- plant morphological analysis: LI-3100 Leaf Area Meter, Image J, WinRhizo, RhizoVision
- stable isotope lab experience: processing samples to be analyzed by Elemental Analyzer. Processing and running samples through Cryogenic Vacuum Extraction
- non-structural carbohydrate analysis: extraction and quantification of soluble sugars and starch from grass roots. Ethanol extraction and enzyme quantification of sugars; starch digestion using amyloglucosidase/ α -amylase and quantified using colorimetric method with GOPOD reagent.
- statistical analysis using R

Professional Development and Training

- | | |
|--|-------------|
| • Prairie Flora Workshop: Institute of Botanical Training, Springfield, MO | Spring 2021 |
| • PhysFest II : short course in plant ecophysiology techniques, Holden Arboretum, Kirkland, OH | Summer 2018 |
| • Docent training workshop, Konza Prairie, Manhattan, Kansas | Fall 2018 |

Professional Membership and Association

Society For Ecological Restoration	2021 - present
Society of Range Management	2021 - present
Long Term Ecological Network	2018 - present
Ecological Society of America	2018 - present

References

Lauren Sullivan, PhD email: sullivanll@missouri.edu
Jesse Nippert, PhD email: nippert@ksu.edu
Colby Moorberg, PhD email: moorberg@ksu.edu
Mark Ungerer, PhD email: mcungere@ksu.edu
Seton Bachle, PhD email: Seton.Bachle@colostate.edu
Rory O'Connor, PhD email: rory.oconnor@oregonstate.edu