

Dr. RACHEL E. GALLERY | rachelgallery.arizona.edu

Research leadership in ecosystem and microbial ecology, soil health, and the connections between biodiversity, ecosystem function, and system resilience to climate change and land use change. Academic and instructional leadership emphasizing inclusive, equitable, experiential, and interdisciplinary educational and research experiences.

PROFESSIONAL PREPARATION

- 2007–2009 **Research Fellow** of Wolfson College and Postdoc in Department of Zoology, University of Oxford, Oxford, United Kingdom, Mentor: Dr. Owen Lewis
- 2007 **Ph.D. Ecology and Evolutionary Biology**, University of Illinois, Urbana-Champaign, IL, USA, Advisor: Dr. James Dalling
- 1997 **B.S. Biology**, Cum Laude, American University, Washington, D.C., USA

PROFESSIONAL EXPERIENCE

- 2024 – **Thomas E. Lovejoy Endowed Chair in Biodiversity, Conservation Science, and Policy**, Arizona Institute for Resilience, University of Arizona, Tucson, AZ, USA
- 2024 – **Director, Lovejoy Center for Bridging Biodiversity, Conservation Science, and Policy**, Arizona Institute for Resilience, University of Arizona, Tucson, AZ, USA
- 2023 – **Professor of Microbial Ecology**, School of Natural Resources and the Environment (SNRE), University of Arizona, Tucson, AZ, USA
- 2019 – 2023 **Associate Director**, SNRE University of Arizona, Tucson, AZ, USA
- 2018 – 2023 **Associate Professor**, SNRE, University of Arizona, Tucson, AZ, USA
- 2018 – 2020 **Chair**, Watershed Management and Ecohydrology Academic Program (SNRE)
- 2012 – **Affiliated Faculty**, Four Graduate Interdisciplinary Programs (GIDP), Ecosystem Genomics, Global Change, Arid Lands Sciences, Genetics, University of Arizona
- 2011 – 2018 **Assistant Professor**, SNRE, University of Arizona, Tucson, AZ, USA
- 2011 – **Affiliated Faculty**, Ecology and Evolutionary Biology (EEB), University of Arizona
- 2009 – 2011 **Staff Scientist**, Microbial Ecology, National Ecological Observatory Network (NEON), Boulder, CO, USA

HONORS AND AWARDS

- 2020 **Outstanding Scholarly Achievement Award**, UA SNRE
- 2018 – 2019 **Fulbright Scholar**, U.S. Department of State, Project title: Effects of Climate Warming on Carbon Balance in Andean Alpine Ecosystems, Colombia
- 2017-2018 **Tucson Public Voices Fellow**, Women’s Foundation of Southern Arizona
- 2017 **David E. Cox Faculty Teaching Award**, UA College of Agriculture and Life Sciences
- 2017, 2016 **Outstanding Course** (Natural Resource Ecology), UA SNRE
- 2017 **Public Service and Outreach Award**, UA SNRE

HONORS AND AWARDS (CONTINUED)

2015	Research Development Award , UA College of Agriculture and Life Sciences
2014	Outstanding Scholarly Achievement Award , UA SNRE
2006 – 2007	Dissertation Completion Fellowship , American Association of University Women
2006	NSF Doctoral Dissertation Improvement Grant

SELECT AWARDED GRANTS AND CONTRACTS SINCE 2020 (>\$6.5M TOTAL AS PI OR CO-PI)

Years	Project	Award (\$K)	Title
2020-25	NFS: Geomicrobiology and biogeochemistry in Critical Zone	751,000	PI
2020-25	NSF NRT: BRIDGES Graduate Training Genes to Ecosystems	3,000,000	Co-PI
2022-25	National Park Service Cooperative Agreement: Beachgrass management	20,000	PI

PUBLICATIONS

Please see Google Scholar and ORCID for full list of publications

- ORCID: [0000-0002-9159-8778](https://orcid.org/0000-0002-9159-8778) Google scholar: <https://tinyurl.com/REGallery>

INVITED SPEAKER, WORKING GROUP PARTICIPANT (SELECT EXAMPLES)

- **Invited Participant**, National Center for Ecological Analysis and Synthesis (NCEAS), Jet Propulsion Lab (JPL) at NASA, and Carnegie Science working group on Biodiversity Science and Data Science. (2024 – current)
- **Invited Speaker**, 12 international and national conferences; 24 university seminars.
- **Invited Speaker**, Society for Advancement of Chicanos/Hispanics & Native Americans in Science. Honolulu, Hawai'i. (2019) Session: Education and Inspire in the Entrepreneur and Innovation Hub. “500 Women Scientists: From an Open Letter to a Movement.”
- **Invited Participant**, National Science Foundation (NSF)-funded: (1) LTER Synthesis Proposal: “Ecological Metagenome-derived Reference Genomes and Traits (EMERGENT).” PI: Jeffrey Blanchard. (2) NSF NEON: Complex Landscapes at Scale: Integrating our Understanding of Managed and Unmanaged Lands at Regional to Continental Scales. PI: Phil Robertson.
- **Invited Participant**, International Hosts: (1) Humboldt Institute, Bogotá, Colombia “Definitions, Sustainability, and Threats to Páramos.” (2) French Institute of Research for Development (IRD), “Páramos in a changing world: biodiversity and ecological properties.”
- **Presenter**, > 60 contributed research presentations as talks of posters at international conferences including: American Geophysical Union (AGU) Fall Meeting, Association for Tropical Biology and Conservation (ATBC), Ecological Society of America (ESA), International Symposium on Microbial Ecology (ISME), Soil Ecological Society (SES), Society for Ecological Restoration (SER), Soil Science Society of America (SSSA).

ADVISORY BOARD AND ADVOCACY EXPERIENCE (SELECT EXAMPLES)

- **Advisory Board Member**, 500 Women Scientists (500WS), a not-for-profit 501c3 promoting a diverse, inclusive scientific community that brings science-based solutions to local and global challenges. (2016-2023)
- **Advisory Board Member**, HSCT Warriors; 501c3 promoting HSCT as a treatment for autoimmune diseases through education, outreach, advocacy, and personal connection. (2021-current)
- **Representative**, AAAS-Sponsored Climate Science Day. Met with 10 Senate and Congressional offices to discuss impacts of climate change and offer resources. AAAS News release, "Climate scientists cautiously hopeful after a day of Congressional visits." (2011)

MEDIA COVERAGE OF RESEARCH AND OP ED CONTRIBUTIONS

- 2019 Interview, [Ciencia Café Pa' Sumercé YouTube Channel](#). "Los suelos paramunos son bodegas de carbono." I discussed the importance of soils in the alpine wetlands of the Andes mountains in Colombia and their crucial role in ecosystem services.
- 2019 Interview, [Times Higher Education](#) Virtual exchanges promise study-abroad experiences.
- 2019 Op Ed [Scientific American](#), "Infertility and the leaky pipeline"
- 2018 Op Ed [Arizona Daily Star](#), "UA must do more to help immigrant, DACA students."
- 2017 Op Ed [The Hill](#), "The tax bill endangers millions of lives."
- 2019 [U Arizona News](#) "HIVE Program Creates Classrooms of the Future."

EXTRAMURAL SERVICE (SELECT EXAMPLES)

- **Associate Editor**, *Functional Ecology*, Journal of the British Ecological Society (2016-2020)
- **Convener and Organizer**, American Geophysical Union (AGU) Fall Meeting. "Microbial Controls of Biogeochemical Cycling." My research group has convened this popular, highly attended session since 2015. Due to consistently high numbers of submissions, we are frequently assigned 2-3 oral sessions and a poster session. We solicit early career and underrepresented scholars as invited speakers.
- **Co-organizer**, NSF: Ecological Knowledge and Predictions Workshop, University of Arizona. (Feb 2018). Workshop of >50 attendees resulted in publication: Redmond, M.D., et al. (2019) Targeting Extreme Events: Complementing Near-Term Ecological Forecasting with Rapid Experiments and Regional Surveys. *Frontiers in Environmental Science* 7, 183.
- **Manuscript/proposal ad-hoc/panelist reviewer**, National Science Foundation, Department of Energy, Joint Genome Institute, American Association of University Women, >20 journals.

UNIVERSITY SERVICE (SELECT EXAMPLES)

- **Member**, Equity and Justice Working Group, U. Arizona Sustainability Climate Action Plan
- **Member**, Post-Tenure Review Audit Committee, College-level service
- **Search Committee Chair**, 4 hires, **Search committee Member**, 7 hires,
- **Member**, Faculty Status Committee for Promotion and Tenure, School-level service
- **Faculty Mentor**, Postdoctoral Mentoring Committee, University-level service

TEACHING AND MENTORSHIP

- Advised 4 Ph.D., 6 M.S., and >55 undergraduate students, served on 20 graduate committees, mentored 4 postdoctoral researchers, completed many mentor trainings.
- Developed and taught 6 courses and seminars to >1,470 students, generating 3,850 student credit hours since 2011. Topics in Natural Resource Ecology, Ecosystem Ecology, Microbial Ecology of Arid Lands, Ecosystem Genomics, Professional Development, and Course-based Undergraduate Research Experience (CURE) in Natural Resources. International Field Course Instructor for Organization for Tropical Studies (OTS), Costa Rica and NSF PASI-PIRE, Peru.

LEADERSHIP, SCIENCE COMMUNICATION, AND INSTRUCTION TRAINING

NSF Data Science Instruction Training Selected for a six-week training course through an NSF Harnessing the Data Revolution grant “Data Science pedagogy training workshop” to U. Arizona and Lewis & Clark College. Trained to integrate data science skills, formative, and summative assessments into undergraduate instruction. (May – June 2022)

Course-based Undergraduate Research Experience (CURE) Training Institute Selected for an intensive training program to develop experiential courses. My objectives for *Observing Nature in the face of Climate Change* are to broaden equity and access to research, enabling students to see themselves as scientists and knowledge producers. (2021)

Wright Brothers Leadership Experience, Battlefield Leadership Invited to leadership training focused on exploring the importance of intellectual curiosity and the innovation process, creating a work environment that fosters curiosity, innovation, balancing risk and reward, reevaluating data, rethinking strategy, and overcoming challenges. (October 21-23, 2019)

Tucson Public Voices Fellowship, Women’s Foundation of Southern Arizona Trained in writing and publishing opinion pieces in collaboration with the OpEd Project, whose mission is to elevate the ideas and knowledge of under-represented expert voices and change who writes history. See Publications section for my published pieces on equity in STEM.

Alan Alda Center for Communicating Science Workshop Immersive workshop training scientists in methods to identify and distill their message, improvisation, and media interview skills (Feb 7-10, 2017).

PROFESSIONAL SOCIETY MEMBERSHIP

American Geophysical Union (AGU, 2007-), American Association for the Advancement of Sciences (AAAS, 2020-), American Association of University Women (AAUW, 2006-), Association for Tropical Biology & Conservation (ATBC, 2003-), British Ecological Society (BES, 2007-), Ecological Society of America (ESA, 2002-), Soil Ecology Society (SES, 2014-), Society for Ecological Restoration (SER, 2020-), Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS, 2019-)