Emma Reich

School of Informatics, Computing, and Cyber Systems • Northern Arizona University

1295 Knoles Dr, Flagstaff, AZ 86011

Emma.Reich@nau.edu • (949) 633-3541

EDUCATION

In Progress	**Northern Arizona University**
	Ph.D. Informatics and Computing— Ecological and Environmental Informatics
	Advisor: Kiona Ogle
2019	**University of California, Berkeley**
	B.S. Molecular Environmental Biology— Ecology concentration
	3.6 GPA

RESEARCH

2020 — **Graduate Research Assistant**, Northern Arizona University
• Project— *Ecohydrological controls on evapotranspiration across a semiarid elevation gradient*, PI: Kimberly Samuels-Crow

2017-19 — **Research Assistant**, UC Berkeley, Ackerly Lab
• Collaborated on project on vulnerability to embolism in California oaks led by Dr. Robert Skelton and Dr. Leander Anderegg.
• Independent research on flower phenology and pollinator resources across a heterogeneous grassland landscape after fire disturbance.
• Assisted with project on phenology dynamics in California grassland communities as part of doctoral candidate Rachael Olliff Yang's dissertation.
• Assisted with project on genetic diversity in red oaks.

2018 — **Field Biologist/Student Researcher**, Richard B. Gump South Pacific Research Station, Mo'orea, French Polynesia
• Studied the effects of temperature on decalcification in crustose coralline algae and the susceptibility to grazing of crustose coralline algae from different thermal environments.

2017 — **Research Assistant**, UC Berkeley, Sousa Lab
• Prepared leaves for stable isotope analysis and determined soil chemical composition as a part of doctoral candidate Audrey Hayne's dissertation.

2016 — **Research Assistant**, UC Berkeley, Koehl Lab
• Recorded movement patterns of marine larvae in response to acceleration from videos on Image J and recorded data in Excel. Observed biomechanical response and larval settlement of organisms swimming in turbulent flow.

2016 — **Research Assistant**, UC Berkeley, Looy Lab
• Assisted with project on the diversity of tropical plant fossils from the Cretaceous period as part of Dr. Dori Contreras' dissertation.

TECHNICIAN POSITIONS

2019   **Field Technician,** National Ecological Observatory Network, Alaska
            • Collected vegetation diversity data in northern Alaska taiga and tundra ecosystems.

2018-19   **Prep Room Assistant**, UC Berkeley, Museum of Paleontology
            • Prepared marine vertebrate and invertebrate fossils from the Miocene as a part of the Calaveras Dam project.

PUBLICATIONS AND PRESENTATIONS

Skelton, R. P., Anderegg, L. D. L., Papper, P., **Reich, E.**, Dawson, T. E., Kling, M., Thompson, S. E., Diaz, J., and D. D. Ackerly. 2019. No local adaptation in leaf or stem xylem vulnerability to embolism, but consistent vulnerability segmentation in a North American oak. New Phytologist. doi.org/10.1111/nph.15886

Reich, E. The acclimatization and susceptibility to grazing of crustose coralline algae from thermally variable and stable environments. Poster presented at the Bay Area Conservation Biology Symposium (2019). Talk presented at UC Berkeley Integrative Biology department symposium (2018).

AWARDS & FELLOWSHIPS

2021-22   NAU T3 Fellowship ($68,000 + tuition)

2020-24   NAU Presidential Fellowship Award ($32,000 + $4,000 for travel/research)

SERVICE

2015-16   **Wonderworks Volunteer**
            • Taught children ages 7-8 the science behind basic science experiments in a classroom setting.

2016-17   **Cal Triathlon Club Sustainability Chair**
            • Represented California Triathlon Club at UC Berkeley sustainability meetings and worked with student government representatives to promote sustainability.

CONFERENCES ATTENDED

2019   Bay Area Conservation Biology Symposium

2018   California Native Plant Society Conference

PROFESSIONAL SOCIETIES

2018   California Native Plant Society

2018   California Botanical Society

CERTIFICATIONS

2019   Wilderness First Aid and CPR

2019   NSF Arctic Field Training

SKILLS

Plant identification
Stable isotope analysis
R
Some data analysis in Python
Image J
DNA extraction
Excel
Microsoft Office
Fieldwork
Data entry
Experimental design
Scientific writing and presenting