

Emily R. Paris

Education

2016 - 2020

B.S. Biochemistry & Cell Biology, UC San Diego

Minor in Marine Sciences, Scripps Institution of Oceanography
Cum Laude with Honors

2020 - Present

PhD Candidate, Stanford University

Doerr School of Sustainability, Department of Earth System Science

Research Experience

September 2020 - Present

Graduate Thesis

“Microbial metabolism in hypersaline brines on Earth and implications for other ocean worlds”

Advisor: Dr. Anne E. Dekas; Committee members:

Dr. Christopher A. Francis (Chair), Dr. Karen L. Casciotti, Dr. Jeff S. Bowman

June 2018 - June 2020

Undergraduate Honors Thesis

“Domesticating marine bacteria in micro-orbs for natural product discovery”

Advisors: Dr. Bradley S. Moore and Dr. Tristan de Rond

Center for Marine Biotechnology & Biomedicine

Scripps Institution of Oceanography & Skaggs School of Pharmacy and
Pharmaceutical Sciences

June - September 2018

STEM Student Assistant

Agrophotovoltaics: combining solar energy and food production

Energy Research and Development, Sacramento Municipal Utility District

Advisor: Kathleen Ave

Field Experience

July 2023

Orca Basin, Gulf of Mexico (2 weeks)

Oceans Across Space and Time

August 2022

Western Australia Transient Lakes (2 weeks)

Oceans Across Space and Time

July 2022

Salton Sea, California (1 day)

Bowman Lab, Scripps Institution of Oceanography

June 2022

Mediterranean Sea (1 day)

Stanford University and Mediterranean Institute of Oceanography

November 2019

Tromsø, Norway (1 week)

D'Spain Lab, Scripps Institution of Oceanography

August 2019

Hólar, Iceland (1 week)

Kurle Lab, UC San Diego

May 2019

Pacific Coast, California (1 day)

Taylor Lab, Scripps Institution of Oceanography

April 2019

Pacific Coast, California (1 day)

Rouse Lab, Scripps Institution of Oceanography

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Teaching Experience

January 2024 - Present

Teaching Assistant

ES 36N: "Life at the Extremes: From Deep-Sea to Deep Space"

Stanford University, Stanford, California

Attended biweekly lectures, graded assignments, prepared laboratory unit on bioluminescence, and gave lecture titled "Microbes and Climate" to 16 undergraduate students.

August 2014 - Present

Private Tutor

Online and In-Person

Helped multiple middle and high school students learn various subjects in individual and group settings, including math, sciences, and writing.

November 2023

SSTEP Program Mentor

Stanford University & Summit Tahoma, San Jose, California

Mentored a high school student in beginning research skills for 2 weeks.

March - August 2020

Homeschool Tutor

San Diego, California

Guided two students in kindergarten and fifth grade through stay-at-home learning through the beginning of the COVID-19 pandemic.

March 2019 - March 2020

STEAM Science Instructor and Assistant

Sally Ride Science Academy, San Diego, California

Led and assisted four, three-hour science workshops for 20-30 students, ages K-12.

January - March 2019

Science Education and Communication

Birch Aquarium, La Jolla, California

Organized an interactive display table on natural products from the sea for aquarium visitors of all ages.

Work Experience

June - August 2020

Laboratory Technician

Moore Lab, Scripps Institution of Oceanography

Jan 2019 - May 2020

Campus Ambassador

UC San Diego Admissions

March 2017 - June 2018

Resident Assistant

Revelle College, UC San Diego

Memberships & Service

2024 - Present

Stanford Nano Shared Facilities Outreach Events

2023 - Present

Co-chair of Northern California Geobiology Symposium

2021 - Present

Stanford Women's Community Center STEM Mentorship Program

2021 - Present

The Explorers Club

2021 - Present

Skype a Scientist

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2020 - Present	NASA Network for Life Detection (NfoLD)
2019 - 2022	Citizen Science Scuba Diver
2019 - 2020	Sedna Epic Expedition and Women's Leadership Workshop
2018 - 2020	Office for Students with Disabilities at UC San Diego
2018 - 2020	Judicial Review Committee at UC San Diego
2017 - 2019	College Council at UC San Diego
2016 - 2017	Emerging Leaders Program at UC San Diego, Project Manager

Invited Talks

2024	Invited Speaker, The Open University, UK
2024	Invited Speaker, COSPAR Inaugural Meeting
2024	Invited Speaker, UC San Diego Academic Honors Ceremony
2020	Commencement Speaker, Revelle College, UC San Diego
2020	Invited Panelist, International Women's Day, UC San Diego
2019	Invited Speaker, Oceanids, UC San Diego
2019	Invited Speaker, Town & Gown, UC San Diego

Seminars

2024	Speaker, Bug Club, Stanford University
2024	Speaker, ESScapades, Stanford University

Honors & Awards

2023	Outstanding Poster Award, Northern California Geobiology Symposium
2020	UC San Diego Alumni Association Outstanding Senior Award
2019	Eureka! Undergraduate Research Scholar, UC San Diego
2019	Town and Gown Scholar, UC San Diego
2019	Oceanids Outstanding Service Award, UC San Diego
2017-2019	Provost Academic Honors, UC San Diego
2018	SMUD Powering Futures Scholarship
2018	F. Thomas Bond Scholarship, UC San Diego
2018, 2018, 2019	Triton Experiential Learning Scholar, UC San Diego
2017	Ernest C. Mort Leadership Excellence Award, UC San Diego

Contributed Talks & Posters

E.R. Paris, J.S. Bowman, E.D. Ingall, C. Ross, P.T. Doran, M. Desmarais, C. Elbon, J.B. Glass, S. Buessecker, C. Pozarycki, J. McKaig, C. Sephus, V. Hegelein, M. Meister, A.D. Mullen, E. Quartini, B.E. Schmidt, A.E. Dekas, and the Oceans Across Space and Time Team. Rates of autotrophy peak in the anoxic interface of a deep hypersaline anoxic basin, Astrobiology Science Conference, Providence, Rhode Island (2024).

E.R. Paris, B. Klempay, J.S. Bowman, D. Bartlett, A. Odenheimer, P.T. Doran, E.D. Ingall, S. Buessecker, B. E. Schmidt, and A. E. Dekas. 'Stranger Things' in the acidic brines of Western Australia. *Poster*, Second Annual Northern California Geobiology Symposium, Stanford, California (2024).

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E.R. Paris, A. Odenheimer, P.T. Doran, E.D. Ingall, S. Buessecker, J.S. Bowman, B.E. Schmidt, A.E. Dekas. Environmental controls on microbial metabolism in the acidic brines of Western Australia. *Talk*, Astrobiology Graduate Conference, La Jolla, California (2023).

E.R. Paris, A. Odenheimer, P.T. Doran, E.D. Ingall, C. Pozarycki, C. Sephus, A. Schartup, B. Klempay, L. Fisher, J.S. Bowman, S.M. Som, M.M. Weng, M.A. Birmingham, S. Buessecker, J.M. Weber, T.A. Plattner, E. Quartini, B.E. Schmidt, A.E. Dekas, Esperance Tjaltjraak Native Title Aboriginal Corporation, and Oceans Across Space and Time Team. Environmental controls on microbial metabolism in the acidic brines of Western Australia. *Talk*, Ancient and Future Brines Conference, Reno, Nevada (2023).

E.R. Paris, A. Odenheimer, P.T. Doran, E.D. Ingall, S. Buessecker, J.S. Bowman, B.E. Schmidt, A.E. Dekas. Environmental controls on microbial metabolism in the acidic brines of Western Australia. *Poster*, Inaugural Northern California Geobiology Symposium, Stanford, California (2023).

E.R. Paris, N. Arandia-Gorostidi, J.B. Glass, A. Pontefract, P. Doran, B. Klempay, L. Fisher, M. Weng, S. Rundell, B.E. Schmidt, J.S. Bowman, A.E. Dekas, and The Oceans Across Space and Time Team. Single-Cell Analysis of Microbial Activity in Seawater-Sourced Hypersaline Brines Analogous to Other Ocean Worlds. *Talk*, Gordon Research Conference on Marine Microbes, Les Diablerets, Vaud (fr) Switzerland (2022).

E.R. Paris, N. Arandia-Gorostidi, J.B. Glass, A. Pontefract, P. Doran, B. Klempay, L. Fisher, M. Weng, S. Rundell, B.E. Schmidt, J.S. Bowman, A.E. Dekas. Single-cell analysis of microbial anabolic activity in hypersaline brines analogous to other ocean worlds. *Poster*, Astrobiology Science Conference, Atlanta, Georgia (2022).

E.R. Paris, N. Arandia-Gorostidi, J.B. Glass, A. Pontefract, P. Doran, B. Klempay, L. Fisher, M. Weng, S. Rundell, B.E. Schmidt, J.S. Bowman, A.E. Dekas. Single-cell analysis of microbial activity in seawater-sourced hypersaline brines analogous to other ocean worlds. *Talk*, Ocean Sciences Meeting, Virtual (2021).

Publications

Y. Raut, C.R. Barr, **E.R. Paris**, B.J. Kapili, A.E. Dekas, D.G. Capone, Autochthonous carbon loading of macroalgae stimulates benthic biological nitrogen fixation rates in shallow coastal marine sediments. *Frontiers in Microbiology*, **14**, 2024.

E.R. Paris, N. Arandia-Gorostidi, B. Klempay, J.S. Bowman, A. Pontefract, C. Elbon, J.B. Glass, E.D. Ingall, P.T. Doran, S.M. Som, B.E. Schmidt, A.E. Dekas, Single-cell analysis in hypersaline brines predicts a water-activity limit of microbial anabolic activity. *Science Advances*, **9**, 2023.

B.J. Kapili, **E.R. Paris**, A.E. Parada, N.R. Meyer, A.E. Dekas, *Deltaproteobacteria* dominate a widespread and complex assemblage of potential diazotrophs in continental shelf to abyssal plain sediments. *In Prep*.