Rebecca Cleveland Stout

CONTACT INFORMATION

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RESEARCH INTERESTS

Paleoclimate, sea level, climate variability, solid Earth deformation

EDUCATION

University of Washington, Seattle, Washington USA

Ph.D. Candidate, Atmospheric Sciences (expected graduation date: May 2025)

Thesis advisor: Gerard Roe

Harvard College, Cambridge, Massachusetts USA

A.B., Earth & Planetary Sciences, 2015-2020, *cum laude in field*. GPA: 3.75/4.

Thesis title: Leveraging Preservation Bias in Last Interglacial Coral Sea-Level Records to Refine Global Ice Volumes Over the Ice Age (*awarded Hoopes Prize*)
Thesis advisors: Peter Huybers, Jerry Mitrovica, Tamara Pico

ACADEMIC EXPERIENCE

University of Washington, Seattle, Washington USA

Graduate Student **August, 2020 - present**

Research focuses on constraining slow modes of climate adjustment using a combination of complex general circulation models, statistical-physical models and proxy system models.

California Institute of Technology, Pasadena, California USA

Visiting Scholar **March - April, 2020**

Conducted research on Bering Strait connectivity and ice sheet-atmosphere interactions during Marine Isotope Stage 3, using glacial isostatic adjustment models constrained with isotope data. Advised by Dr. Tamara Pico, guest in Prof. Michael Lamb's group.

Harvard University - Sea Level Group, Cambridge, Massachusetts USA

Research Assistant **September, 2017 - August, 2019**

Designed a coral proxy system model, which was combined with glacial isostatic adjustment models to assess systematic coral response to sea-level changes over the Last Interglacial. Detected spatial biases in preservation of coral sea-level records. Advised by Prof. Peter Huybers, Prof. Jerry Mitrovica, Dr. Tamara Pico.

NASA Goddard Space Flight Center, Greenbelt, Maryland USA

Universities Space Research Association Fellow **June - August, 2019**

Developed method using ICESat-2 satellite data to quantify seasonal ice sheet dynamics in Greenland marine-terminating outlet glaciers. Advised by Dr. Thomas Neumann, Dr. Denis Felikson.

Ceiba Foundation, University of Wisconsin-Madison, Tabuga, Ecuador

Water Quality Intern **June - August, 2016**

Identified effects of forest cover and agriculture on water quality in rivers along Ecuador coast. Established new sampling sites to investigate relationship between reforestation of floodplains and water quality. Developed K-12 education project on water quality.

Honors and Awards

Schlanger Ocean Drilling Fellow	2021
Program on Climate Change Graduate Fellow	2020
University of Washington Provost's Excellence Graduate Fellow	2020
National Science Foundation Graduate Research Fellowship Honorable Mention	2020
Cambridge Gates Foundation Finalist	2020
Hoopes Prize – *top 3 percent of Harvard class for outstanding scholarly research*	2019
Harvard University Earth & Planetary Sciences Departmental Research Grant	2018, 2018, 2019
Harvard Center for the Environment Research Grant	2018
Harvard Oceanography Committee Grant	2018, 2019
Harvard Scholar – *top 10 percent of Harvard class*	2017-2018
Harvard Rockefeller International Experience Grant	2016
United World College Davis Scholar	2015

Papers in preparation

Cleveland Stout, R., Proistosescu, C., Roe, G. Fingerprinting low-frequency Holocene temperature variability. (*in prep*)

Cleveland Stout, R., Pico, T., Huybers, P., Mitrovica, J.X., Austermann, J. Leveraging Preservation Bias in Last Interglacial Coral Sea-Level Records to Refine Global Ice Volumes Over the Ice Age (*submitted*)

Farmer, J., Pico, T., Underwood, O., **Cleveland-Stout, R.**, Granger, J., Cronin, T.M., Fripiat, F., Martínez-García, A., Haug, G.H., Sigman, D.M. The Bering Strait was flooded 10,000 years before the Last Glacial Maximum (*submitted*)

Invited Talks

Fingerprinting low-frequency Holocene temperature variability across spatial scales. Comer Climate Conference (virtual). September, 2022.

Fingerprinting low-frequency Holocene temperature variability across spatial scales. U.S. Advisory Committee for Scientific Ocean Drilling Summer Meeting, New York, NY. July, 2022.

Fingerprinting low-frequency Holocene temperature variability across spatial scales. Alfred Wegener Insitute for Polar and Marine Research - Earth System Diagnostics, MARUM University of Bremen (virtual). March, 2022.

Fingerprinting low-frequency Holocene temperature variability across spatial scales. CESM Paleoclimate Working Group (virtual). February, 2022.

Imprint of relative sea-level histories on Last Interglacial coral preservation. Columbia University Sea Level Group Meeting. November, 2021.

Presentations

Fingerprinting low-frequency Holocene temperature variability across spatial scales. American Geophysical Union Fall Meeting, New Orleans, LA. December, 2021. (poster).

(Presented by co-author Tamara Pico). Leveraging Elevation Distributions in Last Interglacial Coral Sea-Level Records to Refine Global Ice Volumes. American Geophysical Union Fall Meeting, San Francisco, CA. December, 2019. (poster).

Seasonal variability in Greenland outlet glaciers. Cryospheric Sciences Lab research talk, NASA Goddard Space Flight Center, Greenbelt, MD. August, 2019. (talk).

Modeling dynamic indicative mean of Last Interglacial coral fossils: Potential for systematic underestimation of sea level at sites with rapid sea level change. International Union of Quaternary Research, Dublin, Ireland. July, 2019. (poster).

Modeling dynamic indicative mean of Last Interglacial coral fossils: Potential for systematic underestimation of sea level at sites with rapid sea level change. PALeo constraints on SEA level rise annual meeting, Dublin, Ireland. July, 2019. (POSTER).

Leveraging preservation bias in Last Interglacial coral sea-level records to refine global ice volumes over the ice age. Harvard University Earth & Planetary Sciences Senior Thesis talks, Cambridge, MA. May, 2020. (TALK).

Leveraging preservation bias in Last Interglacial coral sea-level records to refine global ice volumes over the ice age. American Geophysical Union Fall Meeting, Washington, DC. December, 2018. (POSTER)

Assessing preservation bias in Last Interglacial coral records. CLIVAR-FIO Joint Summer School on Past, Present, and Future Sea Level Changes. Qingdao, China. June-July, 2018. (TALK)

Teaching and service

Mentor, Identity, Belonging and Inquiry in Science (IBIS) Program	2023-*present*
Co-Chair, UW-MIT Graduate Climate Conference	2022-2023
Executive organizing committee, UW-MIT Graduate Climate Conference	2021-*present*
Graduate student representative, Equity, Diversity and Inclusion Committee	2021-2023
Mentor, Atmospheric Sciences Undergraduate Mentoring Program	2021-*present*
Mentor, College of the Environment Interdisciplinary Mentorship Program	2020-2022
Organizer, Unlearning Racism in Geosciences, Earth and Space Sciences Department	2020-2021
Graduate student faculty representative, Earth and Space Sciences Department	2020-2021
Board member, Harvard Geology Society	2018-2019
Assistant to Events Coordinator, Harvard University Center for the Environment	2018-2020
Teaching assistant, MATLAB Intro to Programming (Harvard)	2018, 2019
National Campaign Organizer, Environment America Defend Our Environment	2017
Tutor, Mission Hill After-School Program	2017
Organizer and developer, K-12 water quality education project, Ceiba Foundation	2016