

# Ryan H. Glaubke, Ph.D.

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## **EDUCATION**

- 2024 **Ph.D. Oceanography**  
Rutgers University, New Brunswick, NJ, 08901
- 2019 **M.S. Ocean and Earth Sciences**  
Old Dominion University, Norfolk, VA, 23529
- 2016 **B.S. Ocean and Earth Sciences**  
Old Dominion University, Norfolk, VA, 23529

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## **PROFESSIONAL APPOINTMENTS**

- 2024 **Postdoctoral Research Associate | Sursum Fellow**  
The University of Arizona (Paleo<sup>2</sup> Laboratory), Tucson, AZ, 85712

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## **PUBLICATIONS**

### **Published:**

- 2025 **Glaubke, R. H.**, E. L. Sikes, S. M. Sosdian, N. E. Umling, A. Starr, P. L. Moffa-Sanchez, M. W. Schmidt (2025). Elevated Shallow Water Salinity in the Deglacial Indian Ocean was Sourced from the Deep. Accepted to *Nature Geoscience*.
- 2024 **Glaubke, R. H.**, M. W. Schmidt, J. E. Hertzberg, L. G. Ward, F. Marcantonio, D. Schimmenti, K. Thirumalai (2024). Divergent ENSO Responses to Northern Hemisphere Stadials during the Last Deglaciation. *Geophysical Research Letters*, 51(12), <https://doi.org/10.1029/2023gl107634>
- Glaubke, R. H.**, A. J. Wagner, and E. L. Sikes (2024). Characterizing the Stable Oxygen Isotopic Composition of the Southeast Indian Ocean. *Marine Chemistry*, 262, 104397.  
<https://doi.org/10.1016/j.marchem.2024.104397>  
| [Corrigendum (2024), 267, 104460. <https://doi.org/10.1016/j.marchem.2024.104460>]
- 2022 **Glaubke, R. H.** (2022). Taking the Temperature of Ancient Oceans with Foraminiferal Mg/Ca. *Nature Reviews Earth & Environment*. <https://doi.org/10.1038/s43017-022-00294-9>
- 2021 Williams, T. J., E. E. Martin, E. L. Sikes, A. Starr, N. E. Umling, **R. Glaubke** (2021). Neodymium Isotope Evidence for Coupled Southern Ocean Circulation and Antarctic Climate Throughout the Last 118,000 Years. *Quaternary Science Reviews*, 260, 106915.  
<https://doi.org/10.1016/j.quascirev.2021.106915>
- Glaubke, R. H.**, K. Thirumalai, M. W. Schmidt, J. E. Hertzberg (2021). Discerning Changes in High-Frequency Climate Variability using Geochemical Populations of Individual Foraminifera. *Paleoceanography and Paleoclimatology*, 36(2), e2020PA004065.  
<https://doi.org/10.1029/2020PA004065>

**Submitted or In Review:**

**Glaubke, R. H.**, E. L. Sikes, N. E. Umling, K. A. Allen. Core-top Constraints on the Ecology and Paleothermometry of Planktic Foraminifera in the Indian Ocean. In review at *Palaeogeography, Palaeoclimatology, Palaeoecology*.

Cresswell, J., S. M. Sosdian, P. L. Moffa-Sanchez, N. E. Umling, **R. H. Glaubke**, E. L. Sikes, A. Starr. Shifts in the Southern Indian Ocean Subtropical Front across the Last Deglaciation. In review at *Paleoceanography and Paleoclimatology*.

**In Preparation:**

**Glaubke, R. H.**, E. L. Sikes, N. E. Umling, A. Starr, E. E. Martin. Regional Heterogeneity in the Pace and Timing of Deglacial Deep-Sea Ventilation across the Southern Ocean. For *Geophysical Research Letters* — Summer 2025 submission.

**TALKS****Invited:**

2025 **Indian Institute of Science**, Centre for Earth Sciences (*forthcoming*)

2025 **Old Dominion University**, Dept. Earth and Ocean Sciences Weekly Seminar (*forthcoming*)

2023 **Woods Hole Oceanographic Institution**, Climate and Paleoceanography Seminar

2022 **American Museum of Natural History**, Dept. of Earth and Planetary Sciences Weekly Seminar

**Internal:**

2025 **The University of Arizona**, Geosciences Colloquium

2019 **Rutgers University**, Dept. Marine and Coastal Sciences Weekly Seminar

**CONFERENCE ACTIVITY****Panels Organized:**

2024 Chair and moderator. Session 13b: Geochemical Insights into Climate and Environmental Change from the Eocene to the Holocene and into the Future. Goldschmidt, Chicago, Ill.

**Presentations:**

\* denotes first-author abstracts given as an oral presentation at a meeting/conference

2025 **Glaubke, R. H.**, K. Thirumalai, and H. L. Ford. Insights into High Frequency Climate Variability of the Tropical Indian Ocean from the Pleistocene to the Pliocene. 15<sup>th</sup> International Conference on Paleoceanography, Bengaluru, Karnataka, India (*accepted*).

2024 Stirpe, C., T. J. Williams, E. E. Martin, E. L. Sikes, N. E. Umling, **R. H. Glaubke**. Propagation of Deglacial Changes in Water Mass Sourcing and Deep Ocean Carbon Storage in the Southern Indian Ocean during the Last Glacial Termination. AGU Fall Meeting, Washington, D.C.

**Glaubke, R. H.**, E. L. Sikes, N. E. Umling, A. Starr and E. E. Martin. Pan-Southern Ocean Compilation of Foraminiferal  $\delta^{13}\text{C}$  reveals Regional Heterogeneity in the Pace and Timing of Deglacial Deep Sea Ventilation. Goldschmidt, Chicago, Ill.

Umling, N. E., E. L. Sikes, N. F. Goodkin, G. Mollenhauer, H. Grotheer, **R. H. Glaubke**, T. J. Williams, A. Starr. Increased Glacial Presence of Aged Indo-Pacific Waters in the Southeast Indian Ocean since the Last Glacial Maximum. Goldschmidt, Chicago, Ill.

Wagner, A. J., A. Ryan, E. L. Sikes, **R. H. Glaubke**. Tracing South Pacific Water Masses using Stable Oxygen Isotopes from GEOTRACES GP17-OCE. Goldschmidt, Chicago, Ill.

- 2023 Sikes, E. L., **R. H. Glaubke**, N. E. Umling, A. Starr, and E. E. Martin. Evidence that Deep Gateway Effect Delayed Resumption of AMOC in the Southern Ocean relative to Deglacial CO<sub>2</sub> Release. AGU Fall Meeting, San Francisco, CA.
- Uy, M. A., M. Berke, J. Cresswell, Z. Chase, A. Starr, N. Umling, **R. H. Glaubke**, T. Williams, E. L. Sikes, and S. Sosdian. Productivity in the Indian Sector of the Southern Ocean since the Last Glacial Maximum. AGU Fall Meeting, San Francisco, CA.
- Wagner, A. J., **R. H. Glaubke**, E. L. Sikes, A. Croteau. Southeastern Indian Ocean Seawater Isotopes ( $\delta^{18}\text{O}$ ) across the Subtropical Front. Goldschmidt, Lyon, France.
- 2022 **Glaubke, R. H.**, E. L. Sikes, N. E. Umling, S. M. Sosdian, A. Starr, C. Stirpe, K. A. Allen, M. W. Schmidt. The (Salty) Blob: The Deep Indian Ocean as a Salt Source to the Atlantic during the Last Deglaciation. AGU Fall Meeting, Chicago, IL.
- Sikes, E.L., N. E. Umling, **R. H. Glaubke**, A. Starr, E. E. Martin. Evolution of  $\delta^{13}\text{C}$  of Surface Water Masses in the Southeast Indian Ocean over the last 50,000 years. AGU Fall Meeting, Chicago, IL.
- Wagner, A. J., **R. H. Glaubke**, and E. L. Sikes. High-precision measurements of Southern Indian Ocean seawater isotopes using laser adsorption spectroscopy. AGU Fall Meeting, Chicago, IL.
- Glaubke, R. H.**, N. E. Umling, S. M. Sosdian, E. L. Sikes, A. Starr, N. F. Goodkin. Changes in Upper Ocean Stratification of the Southeast Indian Ocean linked to Frontal Migration across the Last Deglaciation. 14<sup>th</sup> International Conference on Paleoceanography, Bergen, Norway.
- 2021 Sikes, E. L., **R. H. Glaubke**, N. E. Umling, T. J. Williams, A. Starr, and E. E. Martin. Deglacial CO<sub>2</sub> Release and Ventilation in the Indian Ocean sector attributed to a Southern Ocean Deep Gateway Effect. Goldschmidt (virtual).
- 2020 \***Glaubke, R. H.**, E. L. Sikes, N. E. Umling, T. J. Williams, and E. E. Martin. Evidence for Deglacial Venting of CO<sub>2</sub> from the deep Southeast Indian Ocean using Planktic and Benthic Stable Isotopes. AGU Fall Meeting (virtual).
- 2019 Hertzberg, J. E., M. W. Schmidt, **R. H. Glaubke**, D. Vaughn, T. S. Bianchi, and F. Marcantonio. Reduced ENSO Variability during Marine Isotope Stage 3. AGU Fall Meeting, San Francisco, CA.
- Glaubke, R. H.**, M. W. Schmidt, J. E. Hertzberg, L. G. Ward, and F. Marcantonio. Millennial-Scale Variations in ENSO Activity across the Last Deglaciation: Insights from Individual Foraminiferal Analysis. 13<sup>th</sup> International Conference on Paleoceanography, Sydney, Australia.
- Hertzberg, J. E., **R. H. Glaubke**, and M. W. Schmidt. Reconstructing El Niño – Southern Oscillation Variability over the last 60 kyr using Individual Foraminiferal Analyses. GSA Southeastern Section Meeting, Charleston, SC (*invited*).
- 2018 **Glaubke, R. H.**, M. W. Schmidt, J. E. Hertzberg, L. Warner, F. Marcantonio, and T. S. Bianchi. Utilizing Individual Foraminiferal Analysis to investigate the history of the El Niño – Southern Oscillation. 2018 International Symposium on Foraminifera, Edinburgh, Scotland, UK.
- 2017 **Glaubke, R. H.**, M. W. Schmidt, L. Warner, J. E. Hertzberg, F. Marcantonio, and T. S. Bianchi. Changes in Eastern Equatorial Pacific Thermocline Structure across the Last Deglaciation: Evidence from the Carnegie Ridge. AGU Fall Meeting, New Orleans, LA.
- Glaubke, R. H.** and D. B. Rodgers. The Pale Blue Dot: Utilizing Real World Globes in High School and Undergraduate Oceanography Classrooms. AGU Fall Meeting, New Orleans, LA.
- 2016 **Glaubke, R. H.** and M. W. Schmidt. Tropical North Atlantic Subsurface Temperatures: A Proxy for AMOC Variability. AGU Fall Meeting, San Francisco, CA.
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## **TEACHING EXPERIENCE**

### **Teaching Assistantships w/ solo lecture responsibilities:**

- 2016 Earth Sciences (Old Dominion University) — Two terms; introductory-level.  
2016 Introduction to Physical Geology (Old Dominion University) — Two terms; introductory-level.

### **Other Teaching Assistantships:**

- 2017 Field Studies in Ocean and Earth Sciences (Old Dominion University) — Four terms; capstone.

### **Curricula Developed:**

- 2023 How to Build a Habitable Planet (Rutgers University) — upper-level.

### **Guest Lectures:**

- 2024 Paleoclimatology (Utah Tech) — “Dirty Jobs: An Introduction to Paleoceanography and Sediment Coring”  
2024 Climate Politics: A Deep History (Rutgers University) — “Tapping into Earth’s Memory: Reconstructing Climate History”  
2019 Field Studies in Ocean and Earth Science (Old Dominion University) — “Communicating Science”  
2017 Introduction to Physical Geology (Old Dominion University) — “Marine sediments” and “Paleoclimatology”
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## **FIELD EXPERIENCE**

- 2022 Cruise AT49 (R/V *Atlantis*; 13 days): North Atlantic Ocean from Woods Hole, MA. Jumbo piston and gravity coring; multi-core deployment and post-processing; CTD operations.  
2018 Cruise TN362 (R/V *Thomas G. Thompson*; 46 days): South Indian and Southern Oceans from Fremantle, Australia. Jumbo piston and gravity coring; multi-core deployment and post-processing; CTD operations; RNA/DNA and alkenone extraction.  
2017 R/V *Fay Slover* (4 days cumulative): Chesapeake Bay mouth from Norfolk, VA. CTD operations; pigment and particle extraction; LIDAR operations.  
2016 R/V *Skiff* (3 days cumulative) — Lafayette River system from Norfolk, VA. YSI operations; water collection; sediment coring.
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## **AWARDS, GRANTS, AND FELLOWSHIPS**

- 2025 **Postdoctoral Research Development Grant** (Sursum Fellowship), University of Arizona  
2022 **Research and Travel Award**, Rutgers School of Graduate Studies  
**Student Support Fund**, Rutgers Climate Institute  
**ICP Travel Award**, PAGES and the International Conference on Paleoceanography  
2018 **Joseph A. Cushman Award for Student Travel**, The Cushman Foundation  
2017 **Neil and Susan Kelley Endowed Scholarship**, Old Dominion University  
2016 **Dorothy Brown Smith Scholarship**, Old Dominion University  
2013 **MetLife Foundation Pathways Scholarship**, The MetLife Foundation
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## **PROFESSIONAL DEVELOPMENT**

- 2024 **The Inclusive STEM Teaching Project:** a short course on evidence-based, student-centered strategies for cultivating an inclusive learning environment.

- 2021 **PaleoHack:** a workshop on emerging data standards and computational tools in the paleosciences offered by the LinkedEarth project.
- 2021 **Catalyzing Advocacy in Science and Engineering (CASE):** a workshop on the role of science in federal policymaking offered by the American Association for the Advancement of Science.
- 2021 **The Community Earth System Model Tutorial:** a workshop on simulating the climate system using the CESM offered through the National Center for Atmospheric Research.
- 2019 **Sharing Science:** a workshop on effective science communication offered through the American Geophysical Union.
- 2019 **Entering Mentoring:** a workshop on student mentoring offered through the College of Sciences, Old Dominion University.

## **SERVICE AND OUTREACH**

### **Department-level:**

Section Judge for the GeoDaze Geosciences Symposium at the University of Arizona (2025)

Mentor for the Dept. Marine and Coastal Sciences Graduate Ambassador program (2022 – 2024)

Vice President of the Dept. Marine and Coastal Sciences Oceanography Graduate Student Association (*elected*; 2021 – 2023)

| [Recognized as “Graduate Student Organization of the Year”](#) by Rutgers GSA both years in office.

Chair of the Dept. Marine and Coastal Sciences Seminar Organizing Committee (*elected*; 2020 – 2023)

Coordinator of the Dept. Marine and Coastal Sciences “Beyond Academia” seminar series (2020 – 2022)

President of the Dept. Ocean, Earth and Atmospheric Sciences Graduate Student Organization (*elected*; 2017 – 2018)

Founding Coordinator of the Dept. Ocean, Earth and Atmospheric Sciences graduate development workshop series (2017 – 2018)

Assistant Project Coordinator (2018) and Near-Peer Mentor (2017, 2018) for the Old Dominion University Research Experience for Undergraduates (REU) Program

Program Coordinator and Instructor for the Old Dominion University Building Leaders to Advance Science and Technology (BLAST) STEM program (2016, 2017)

### **University-level:**

Grant reviewer for the University of Arizona’s Research, Innovation, and Impact Office (2024 – present)

### **Broader Scientific Community:**

Manuscript reviewer ( $n = 7$ ): *Climate of the Past*; *Geochemistry*, *Geophysics*, *Geosystems*; *Nature Communications*; *Paleoceanography and Paleoclimatology*

Outstanding Student Paper Award (OPSA) Judge for the AGU Fall Meeting (2020, 2022)

### **General Public:**

Regular participant in the “Skype a Scientist” outreach initiative (2018 - present)

Lead Coordinator (2023 - 2024) and Public Speaker (2020 - 2024) for the Dept. Marine and Coastal Sciences Retention, Outreach, and Accessibility in Marine Sciences (DMCS ROAMS) program

Participant in Rutgers University’s annual “Rutgers Day” community outreach initiative (2019 - 2024)

Volunteer for the National Ocean Sciences Bowl Competition – Shore Bowl and Blue Crab Bowl Divisions (2016 - 2020)

Assistant Coordinator for the “Measure the Muk” Citizen Science Flood Mapping Project (2017 - 2018)

Lead Judge of the 67<sup>th</sup> Annual Tidewater Science and Engineering Fair (2018)

Lesson Plan Author for Real World Globes® (2017)

#### **Public Talks:**

Rutgers Geology Museum's Late Night — "The Motion of the Ocean" (2022)

American Museum of Natural History's BridgeUP STEM Program — "What Can Mud Tell Us About Our Future?" (2019)

Old Dominion University's Science Pubs Initiative — "Unnatural: How the Climate of the Past compares to the Climate of the Present" (2018)

Cape Henry Collegiate's AP Environmental Science Class — "When Oceans and Climate Collide: A Day in the Life of a Paleoceanographer" (2017)

Suburban Park Elementary School's STEM Career Development Camp — "Life as a Scientist" (2017)

#### **Non-Profit Activity:**

Member of the Union for Concerned Scientists' Science Network (2025)

Committee Chair of Environmental Justice and Sustainability at [Let's Do Good](#) (2024)

#### **Media Coverage:**

[Ryan H. Glaubke](#) — US Antarctic Interview Series by US SCAR (2024)

## **DIVERSITY, EQUITY, AND INCLUSION**

#### **Initiatives Led:**

2022 *DMCS Graduate Ambassador Program* — Student-led one-on-one mentorship program pairing senior undergraduate students with graduate mentors to help guide them through the final year of their degree and applying for jobs/graduate programs.

2021 *DMCS ROAMS* — Student-led outreach arm of the Rutgers Dept. Marine and Coastal Sciences committed to engaging students in the New Jersey community college system about ocean science, four-year and post-graduate educational opportunities, and potential career paths.

#### **Personal Development:**

2024 The Inclusive STEM Teaching Project (certified)

2022 Experiences of Underrepresented Groups in Academia workshop

2021 Equity Fundamentals workshop

2021 Unlearning Racism in Geoscience Education initiative

## **STUDENT MENTORING**

\* denotes undergraduate research assistants mentored and supervised in the laboratory

† denotes NSF-supported REU summer scholars co-advised alongside a primary faculty advisor

‡ denotes undergraduates mentored through the Rutgers Graduate Ambassador Program

#### **Rutgers University:**

Therese Apuzzo (B.S. Marine Science) \*

Dhruv Champaneri (B.S. Biotechnology) \*

Alexus Crespo (B.S. Marine Science) \*

Clara Danhof (via. RIOS program at Rutgers) †

| Winner of Best Presentation Award

Shiwei Deng (Undeclared) \*

Mohail Girgis (B.S. Marine Science) \*

Sena Kim (B.S. Marine Science)<sup>‡</sup>  
Ryan Minor (B.S. Marine Science)<sup>\*</sup>  
Sarah Montalvo (B.S. Animal Science)<sup>\*</sup>  
Sara Reinelt (via RIOS program at Rutgers)<sup>†</sup>  
Ivy Stempkowski (B.S. Environmental Science)<sup>\*‡</sup>

**Old Dominion University:**

Megan Agee (via REU Program at ODU)<sup>†</sup>  
Makayla Brown (B.S. Ocean and Earth Sciences)<sup>\*</sup>  
Darcy Caja (B.S. Ocean and Earth Science)<sup>\*</sup>  
Mayanni McCourty (via REU Program at ODU)<sup>†</sup>  
Lenzie Ward (B.S. Ocean and Earth Science)<sup>\*</sup>

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**PROFESSIONAL AFFILIATIONS**

American Geophysical Union  
Geochemical Society