Ryan H. Glaubke, Ph.D.

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Last Updated: January 2026

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

PROFESSIONAL APPOINTMENTS

2024 **Postdoctoral Research Associate | Sursum Fellow**
The University of Arizona, Tucson, AZ, 85712

PUBLICATIONS

Published:

2025 **Glaubke, R. H.,** E. L. Sikes, N. E. Umling, K. A. Allen, & M. W. Schmidt (2025). Core-top constraints on the ecology and paleothermometry of planktic foraminifera in the Indian Ocean. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 113190. https://doi.org/10.1016/j.palaeo.2025.113190

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. *Nature Geoscience*, https://doi.org/10.1038/s41561-025-01756-7

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

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* — Spring 2026 submission.

Uy, M., M. A. Berke, E. L. Sikes, **R. H. Glaubke**, N. E. Umling, J. Cresswell, Z. Chase, A. Starr, R. Williams. Seasonal Sea Surface Temperatures of the Indian Sector of the Southern Ocean since the Last Glacial Maximum. For *Paleoceanography and Paleoclimatology* — Spring 2026 submission.

Jacobel, A., **R. H. Glaubke**, K. Thirumalai, P. DiNezio, J. Lynch-Stieglitz. A More Extreme ENSO during the Last Interglacial Period. For *Science Advances* — Summer 2026 submission.

FUNDING

Proposals in Preparation:

2025 NSF-OCE Marine Geology & Geophysics Program, "Revisiting the Glacial Mean State of the Tropical Pacific Ocean." Lead PI w/ Co-PI K. Thirumalai (Arizona) ($426,557)

Pending Support:

2025 Moore Postdoctoral Fellowship, The Betty and Gordon Moore Foundation ($63,000)

Fellowships and Awards:

2025 Postdoctoral Research Development Grant (Sursum Fellowship), University of Arizona ($2,000)
2022 Research and Conference Award, Rutgers School of Graduate Studies ($1,000)
Student Support Fund, Rutgers Climate Institute ($500)
ICP Travel Award, PAGES and the International Conference on Paleoceanography ($1,500)
2018 Joseph A. Cushman Award for Student Travel, The Cushman Foundation ($1,500)
2017 Neil and Susan Kelley Endowed Scholarship, Old Dominion University ($5,000)
2016 Dorothy Brown Smith Scholarship, Old Dominion University ($3,000)
2013 MetLife Foundation Pathways Scholarship, The MetLife Foundation ($5,000)

Unfunded Proposals:

2023 NSF-OCE Postdoctoral Research Fellowship, "A Sputtering Deep-Water Tap? Developing a Novel Proxy for Preindustrial AMOC Variability using Single-Shell Analyses of Benthic Foraminifera." Lead PI ($167,800)
2017 NSF Graduate Research Fellowship Program, "Exploring the Evolution of Tropical Pacific Climate and the ENSO over the last 25,000 Years" Lead PI ($138,000)

TALKS

Invited:

2025 **Old Dominion University**, Dept. Earth and Ocean Sciences Weekly Seminar
2025 **Indian Institute of Science**, Centre for Earth Sciences Seminar
2023 **Woods Hole Oceanographic Institution**, Climate and Paleoceanography Seminar
2022 **American Museum of Natural History**, Dept. of Earth and Planetary Sciences Seminar

Internal:

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

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

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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:

*first-author abstracts given as an oral presentation

2025 **Glaubke, R. H.**, K. Thirumalai, H. L. Ford. Tropical Indian Ocean Variability from the Pleistocene to the Pliocene: Evidence from Ninety-East Ridge. AGU Fall Meeting, New Orleans, LA.

Uy, M., M. Berke, E. Sikes, N. Umling, **R. Glaubke**, J. Cresswell, C. Stirpe, Z. Chase, S. Sosdian, R. Williams. Upper Water Column Structure in the Indian Sector of the Southern Ocean since the Last Glacial Maximum. AGU Fall Meeting, New Orleans, LA.

Glaubke, R. H., K. Thirumalai, H. L. Ford. Insights into High Frequency Climate Variability of the Tropical Indian Ocean from the Pleistocene to the Pliocene. 15th International Conference on Paleoceanography, Bengaluru, Karnataka, India.

Jones, C. L., H. L. Ford, K. Thirumalai, **R. H. Glaubke**. Pliocene Insights into Indian Ocean Climate Variability. 15th International Conference on Paleoceanography, Bengaluru, Karnataka, India.

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 $\delta^{13}C$ 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_2 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 ($\delta^{18}O$) 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 $\delta^{13}C$ 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. 14th 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_2 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_2 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. 13th 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.

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:

2025 Stable Isotope Geochemistry (University of Arizona)
2024 Paleoclimatology (Utah Tech)
2024 Climate Politics: A Deep History (Rutgers University)

2019 Field Studies in Ocean and Earth Science (Old Dominion University)
2017 Introduction to Physical Geology (Old Dominion University)

FIELD EXPERIENCE

Marine:

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.

Terrestrial:

2025 Andhra Pradesh, India (3 days): Nakrallu and Yadiki Caves. Speleothem collection.

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:
Proposal referee for Research, Innovation, and Impact at the University of Arizona (2024 – present)

Broader Scientific Community:
Ad hoc proposal referee (*n* = 1):
- National Science Foundation

Journal referee (*n* = 10):
- *Climate of the Past*; *Geochemistry, Geophysics, Geosystems; Geo-Marine Letters*; *JGR: Oceans*;
- *Nature Communications*; *Paleoceanography and Paleoclimatology*; *Quaternary Science Reviews*

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 67th 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:
Features
Marine Geoscientists Link Warming with Ancient Ocean 'Salty Blob' — Rutgers Today (2026)
Ryan H. Glaubke – Interview Series by the US Scientific Committee for Antarctic Research (2024)

Appearances
Climate Change Pushes Arizona into 'Uncharted Territory' with Deadly Heat — The Arizona Mirror

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

University of Arizona:
Aniket Dhar (Ph.D. Geosciences)
Amanda Manoogian (M.S. Geosciences)
Alexandra O'Keefe (Ph.D. Geosciences)
Hayley McKenley (B.S. Geosciences) *
Oliff Doiron (B.S. Geosciences) *
Benjamin Mohler (B.S. Geosciences) *

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) †
Mohail Girgis (B.S. Marine Science) *
Sena Kim (B.S. Marine Science) ‡
Ryan Minor (B.S. Marine Science) *
Sarah Montalvo (B.S. Animal Science) *
Sara Reinelt (via RIOS program at Rutgers) †
Ivy Stempkovski (B.S. Environmental Science) * ‡

Old Dominion University:
Megan Agee (via REU Program at ODU) †
Makayla Brown (B.S. Ocean and Earth Sciences) *
Darcy Caja (B.S. Ocean and Earth Science) *
Mayanni McCourty (via REU Program at ODU) †
Lenzie Ward (B.S. Ocean and Earth Science) *

PROFESSIONAL AFFILIATIONS

American Geophysical Union
Geochemical Society