

Anya V. Hess



RUTGERS

Ph.D. Candidate
anya.hess@rutgers.edu
(609) 468-9068

Summary: Paleooceanographer with expertise in trace element and isotope geochemistry, micropaleontology, sedimentology, and stratigraphy. Advanced expertise in reconstructing ocean oxygenation during past warm periods.

Education and Research Experience

expected May 2023	Ph.D. in Earth and Planetary Sciences, Rutgers University
2021	Unlearning Racism in the Geosciences
July-Aug. 2019	Deep-sea coring expedition aboard the JOIDES Resolution
2019	IsoCamp (2-week isotope geochemistry short course), University of Utah
2020	Microbadge in Undergraduate Mentoring
2011	M.S. in Geology, University of Kansas
2008	B.S. in Geology, Bucknell University, <i>Suma cum Laude</i>
2007	Geologic Field Camp , Indiana University
2006	NSF Research Experience for Undergraduates , Mesa State University

Professional Experience

2018–2021	Rutgers University Teaching Assistant, Sedimentology and Stratigraphy (Fall 2018, Fall 2019, online Fall 2020), Sea Change (Spring 2019, Spring 2021), Planet Earth (online Spring 2019)
2017–2018	U.S. Geological Survey Geologic Map Editor
2016	Conservation Colorado Intern
2011–2016	Anadarko Petroleum Corporation Geologist
2010	Chesapeake Energy Geoscience Intern
2009–2010	University of Kansas Teaching assistant, Geology Fundamentals Lab. (Fall 2009–Spring 2010)
2005–2007	Bucknell University Physical Geology (Fall 2005, Fall 2006); Historical Geology (Spring 2006); Mineralogy (Spring 2007)

Awards

International Ocean Discovery Program Schlanger Fellowship, Fall 2022–Spring 2023 - \$30,000
Cushman Foundation for Foraminiferal Research Johanna M. Resig Fellowship, 2022–2023 - \$15,000
Rutgers Excellence Fellowship, Spring 2020, Fall 2021–Spring 2022 - \$15,000 each
Christopher J. Lombardi Award in Stratigraphy, 2021 - For special achievement in stratigraphy
Cushman Foundation for Foraminiferal Research William V. Sliter Student Research Award, 2020 - \$2984
Geological Society of America Research Grant, 2020 - \$1250
Rutgers Off-Campus Dissertation Development Award, 2019 - \$2000 of funding to be used for IsoCamp
Anadarko Thanks Award, 2015 - For open communication and knowledge sharing
Outstanding Poster Presentation 2nd Place, Rocky Mountain Rendezvous Geoscience Expo., 2010
University of Kansas Patterson Fellowship, 2008–2009
Bucknell University Richard P. Nickelsen Award for outstanding Senior in geology, 2008
Association for Women Geoscientists Brunton Award for excellence in field research, 2007

Selected Volunteer Activity

Association for Women Geoscientists

Brunton Award Scholarship Committee Chairperson 2019–present
Scholarship Committee Chairperson for Lone Star Chapter 2013–2016
Student Chapter Secretary Fall 2009–Spring 2010

Science Olympiad – Co-wrote Earth Sciences exams 2018–2019, graded national tournament 2021

Rutgers Earth and Planetary Sciences Department Graduate Student Org. – President 2019–2021

Aresty Rutgers Undergraduate Research Journal – Peer reviewer 2021

Rutgers Earth and Planetary Sciences Dept. Undergraduate Recruitment Field Trip – Co-led Fall 2019

Publications

* oral presentation ** poster presentation

- * **Hess, A.V.**, 2022, Collapse of the East Equatorial Pacific Oxygen Deficient Zone during the Miocene Climatic Optimum, **Invited Talk** at Rowan University, November 17, 2022.
- Hess, A.V.**, Auderset, A., Rosenthal, R., Miller, K.G., Zhou, X., Sigman, D.M., and Martinez-Garcia, A., in review., Collapse of the eastern equatorial North Pacific oxygen deficient zone during the Miocene Climatic Optimum: Evidence from I/Ca and nitrogen isotopes in foraminifera.
- Zhou, X., **Hess, A.V. (co-first authors)**, Bu, K., Sagawa, T., and Rosenthal, Y., accepted, Simultaneous determination of I/Ca and other elemental ratios in foraminifera using sector field ICP-MS, Geochemistry, Geophysics, and Geosystems.
- ** Asan, J., **Hess, A. (primary mentor)**, Riechelton, H., and Rosenthal, R., 2022, Paleo-redox Insights from restricted basins in the Philippines Archipelago, AGU Annual Meeting, December 12–16, 2022, poster presentation.
- ** **Hess, A.V.**, Auderset, A., Rosenthal, R., Miller, K.G., Sigman, D.M., and Martinez-Garcia, A., 2022, Collapse of the eastern equatorial North Pacific oxygen deficient zone during the Miocene Climatic Optimum: Evidence from I/Ca and nitrogen isotopes in foraminifera, ICP14 Meeting, August 29–September 2, 2022, poster presentation.
- * **Hess, A.V.**, 2022, Collapse of the East Equatorial Pacific Oxygen Deficient Zone during the Miocene Climatic Optimum, **Invited Talk** at Max Planck Institute for Chemistry, Mainz (virtual), May 23, 2022.
- ** Butler, M., Lewis, A., Pekar, S.F., **Hess, A.V.**, Rosenthal, Y., 2022, Investigating the Middle Miocene Climatic Transition & Climatic Optimum (16-13 Ma) on Zealandia: Isotopic & Mg/Ca ratio records from IODP Site U1510: Geological Society of America Northeast Section.
- Bova, S., Rosenthal, Y., Childress, L., and **Expedition 379T Scientists**, 2020, Digging Deeper with the JR100: Extending high resolution paleoclimate records from the Chilean Margin to the Eemian: Expedition 379T Preliminary Report, 109 p.
- ** **Hess, A.V.**, Rosenthal, Y., and Miller, K.G., 2020, Evolution of the eastern equatorial Pacific oxygen minimum zone during the Miocene Climatic Optimum and Mid-Miocene Climatic Transition—Insights from I/Ca of planktonic foraminifera: American Geophysical Union, AGU Annual Meeting 2020, poster presentation.
- Hess, A.V.**, and Trop, J.M., 2019, Sedimentology and carbon isotope ($\delta^{13}\text{C}$) stratigraphy of Silurian–Devonian boundary interval strata, Appalachian Basin (Pennsylvania, USA): PALAIOS, v. 34, p. 405–423.
- * **Hess, A.V.**, and Trop, J.M., 2018, Sedimentology and chemostratigraphy of Upper Silurian–Lower Devonian marine strata at Winfield quarry, central Pennsylvania: Geological Society of America Abstracts with Programs.
- ** **Hess, A.V.**, and Herrick, J.A., 2017, Reversing entropy—Preventing introduced errors in multi-step digital map generation, USGS Denver: Digital Mapping Techniques Annual Meeting, May 21–24, 2017, poster presentation.
- * Herrick, J.A., and **Hess, A.V.**, 2017, From the field to publication—Integration of GIS through the mapping process, USGS Denver: Digital Mapping Techniques Annual Meeting, May 21–24, 2017, presentation.
- Hess, A.**, 2011, Heterozoan carbonate facies in accommodation-limited areas—A study of Pliocene age strata of the Agua Amarga basin, Southeastern Spain: Lawrence, University of Kansas, M.S. thesis, 255 p.
- ** **Hess, A.V.**, 2010, Sequence stratigraphic stacking of heterozoan carbonates, southeastern Spain—A predictive model applicable to heterozoan reservoirs: Rocky Mountain Rendezvous Annual Meeting 2010, poster presentation.
- ** **Hess, A.**, Goldstein, R., and Franseen, E., 2010, Antecedent topography as a control on facies heterogeneity in a shallow heterozoan carbonate system: American Association of Petroleum Geologists, AAPG Annual

Convention and Exhibition, New Orleans, Louisiana, April 11–14, 2010, Search and Discovery Article #50360.

Hess, A., 2008, Paleoenvironmental analysis of the Silurian-Devonian boundary interval in central Pennsylvania: Lewisburg, Pennsylvania, Bucknell University, undergraduate thesis, 79 p.

** Cobin, P.F., Hayden, A.E., **Hess, A.V.**, Morgan, P.T., Pryor, A.L., Young, E.M., and Aslan, Andres, 2006, Holocene arroyo history of the Little Dolores River, western Colorado: Geological Society of America Abstracts with Programs, v. 38, no. 7, p. 61.