

Janet E. Burke, Ph.D.

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EDUCATION

Yale University, New Haven, Connecticut
Doctor of Philosophy, Geology and Geophysics 2020
Master of Philosophy, Geology and Geophysics 2016

Smith College, Northampton, Massachusetts
Bachelor of Arts, Biological Sciences, Cum Laude 2014

Montgomery College, Germantown, Maryland
Associate of Arts, General Studies, Valedictorian/Commencement Speaker 2011

SELECTED FELLOWSHIPS, AWARDS AND HONORS

National Science Foundation Ocean Sciences Postdoctoral Research Fellowship 2022-2024
National Science Foundation Graduate Research Fellowship 2015- 2019
Yale University Hammer Prize for Outstanding Geology Graduate Student 2019
Naturalis Biodiversity Centre Martin Fellowship, 2017
Bermuda Institute of Ocean Science Grant-in-Aid of Research 2016
Yale Institute for Biospheric Studies Doctoral Pilot Grant 2016
Paleontological Society MAPS Outstanding Student Research Award 2016
Cushman Foundation for Foraminiferal Research Sliter Research Award 2015
Phi Beta Kappa Society Inducted 2014
Phi Theta Kappa Hites Scholarship 2011
Montgomery College Board of Trustees Scholarship 2011

RESEARCH EXPERIENCE

Michigan State University, Department of Earth and Environmental Sciences
East Lansing, Michigan

NSF Ocean Sciences Postdoctoral Fellow January 2022 - Present
Advisors: Professor Dalton Hardisty (MSU) and Jennifer Fehrenbacher (Oregon State University)
Project: Development and Application of the Foraminiferal Iodine/Calcium Paleoredox Proxy

Postdoctoral Research Associate March 2020 – December 2021
Supervisor: Professor Dalton Hardisty
Project: Iodine-to-calcium Ratios of Planktonic and Benthic Foraminiferal Tests

Yale University, Department of Earth and Planetary Science (Formerly Geology and Geophysics)
New Haven, Connecticut

PhD. Candidate 2014-2020
Doctoral Research, "Physiological and Ecological Implications of Planktonic Foraminiferal Test Morphology"
Supervisor: Professor Pincelli Hull

TEACHING AND SUPERVISORY EXPERIENCE

Michigan State University

Supervisor 2020-Present
Undergraduate lab assistants in Hardisty Paleoceanography Laboratory

Project Advisor 2021
Jordan Pack, "Constraints on mid-Miocene seawater and sediment chemistry from foraminiferal tests of the eastern Pacific", 2021

Yale University

Teaching Fellow
Department of Geology and Geophysics
Courses:
G&G 274 "Fossil Fuels and Energy Transitions" (Fall 2014)
G&G 125 "History of Life" (Spring 2014)
G&G 010 "Earth, Energy, and Environment" (Fall 2018)

Intern Supervisor 2017
Yale Peabody Museum, EVOLUTIONS Internship Program

FIELD WORK AND WORKSHOP PARTICIPATION

AGU LANDInG - LANDInG Postdoctoral Research Fellows Program 2021-Present

DEI leadership training for NSF Fellows

University of Michigan - NEXTPROF Science Workshop 2022

Training and Guidance for future science faculty

Center for Integration of Research, Teaching and Learning 2021

An Introduction to Evidence-Based Undergraduate STEM Teaching

Field Work, Lead: Culturing Live-Caught Planktonic Foraminifera in Bermuda Foraminiferal Research Consortium (FRESCO) 2018

Living Benthic Foraminifera in Coastal Environments Summer School 2017

Field Work, Co-Lead: Culturing Live-Caught Planktonic Foraminifera in Bermuda Scientific Committee on Oceanic Research (SCOR) 2016

Final Workshop & Short Course on Culturing of Planktonic Foraminifera 2015

International Ocean Discovery Program 2014
Short Course: The Virtual Drillship Experience

INTERNSHIPS

Smithsonian Institution

National Museum of Natural History, Washington, DC
Natural History Research Experience Intern 2013
Supervisor: Anna K. Behrensmeyer

National Oceanic and Atmospheric Administration

National Centers for Coastal Ocean Sciences, Silver Spring, Maryland
Agnes Shedd Andreae Intern - Legislative Communications 2012
Supervisor: Rebecca Wynne

Potomac Review

Literary Journal, Rockville Maryland

Editorial Intern

Supervisor: Julie Wakeman-Linn

2010

LEADERSHIP EXPERIENCE

President, Dana Club, Yale University G&G Graduate Student Organization 2016-2017
President, Ada Comstock Class, Smith College, 2012-2013
House President, 150 Elm Residence, Smith College 2012-2013
Vice President, Phi Theta Kappa Honors Society, Montgomery College 2010-2011
Vice President, Green Club, Montgomery College
2010-2011

OUTREACH AND COMMUNITY CONTRIBUTIONS

Peer Reviewer:

Proceedings of the Royals Society B
PLoSOne
Journal of Foraminiferal Research
Geobiology
NSF Ocean Sciences Division
Geochemistry Geophysics, Geosystems

Committee Participation:

Pal(a)eoPERCS International Lecture Series, Steering Committee
Michigan State University College of Natural Sciences Annual Awards Committee
Michigan State University, Unlearning Racism in Geosciences (URGE) Pod

In-Class Mentor:

New Haven Public Schools, Science Fair mentor in-class mentor and judge

Scientist Volunteer:

Darwin Discovery Day, Michigan State University Museum
Michigan State University SciFest 2021
Yale Peabody Museum Dinosaur Days
Yale Peabody Museum PaleoBowl

PUBLICATIONS AND PRESENTATIONS

Burke, Janet E., Fehrenbacher, J., Hardisty, D. (2022). Experimental and Diagenetic Assessment of the Foraminiferal Iodine-to-Calcium Proxy. Oral Presentation. *AGU Fall Meeting 2022*. Chicago, IL.

Hashim, M. S., **Burke, J. E.**, Hardisty, D. S., & Kaczmarek, S. E. (2022). Iodine incorporation into dolomite: Experimental constraints and implications for the iodine redox proxy and Proterozoic Ocean. *Geochimica et Cosmochimica Acta*.

Chanchai, W., Smith, E., Nelson, L.L., Lonsdale, M., Hardisty, D., **Burke, J.**, Lau, K.V. A Carbonate Multi-Proxy Investigation of Oceanic Oxygenation across the Ediacaran–Cambrian boundary. Poster Presentation. *2022 Goldschmidt Conference*, Honolulu, HI.

Burke, Janet E., Elder L. E., Maas, Amy E., Gaskell, Daniel E., Clark, E.G., Hsiang, A. Y., Foster, G.L., Hull, P.M. Low Allometric Scaling of Respiration Rates May Explain Gigantism in Pelagic Protists. *Limnology and Oceanography* (in revision).

Burke, Janet E., and Dalton S. Hardisty. 2021. Foraminiferal I/Ca Reveals Regional Variation in Eastern Tropical Pacific Oxygen Deficient Zone Intensity Across the Miocene Climatic Optimum. Poster Presentation. *American Geophysical Union Fall Meeting 2021*, New Orleans, LA.

Hashim, M., **Burke, J.E.**, Hardisty, D.S., Kaczmarek, S.E. 2021. Iodine Incorporation into Dolomite: Insights from Dolomitization Experiments and Implications for the Iodine Redox Proxy. Oral Presentation. *American Geophysical Union Fall Meeting 2021*, New Orleans, LA.

Burke, Janet E., Elder L. E., Maas, Amy E., Gaskell, Daniel E., Clark, E.G., Hsiang, A. Y., Foster, G.L., Hull, P.M. 2020. Can Low Allometric Scaling of Respiration Rates May Explain Gigantism in Pelagic Protists? Oral Presentation. *Geological Society of America*, Virtual Meeting.

Burke, Janet E., Willem Renema, Ralf Schiebel, Pincelli M. Hull. Three-Dimensional Analysis of Inter- and Intraspecific Variation in Ontogenetic Growth Trajectories in Planktonic Foraminifera. *Marine Micropaleontology*, 101794.

Burke, Janet E., Renema, W., Schiebel, R., Hull, P.M. 2019. Growth Rate Dynamics Underlying Planktonic Foraminiferal Morphology. Oral Presentation. *North American Paleontological Conference 2019*, Riverside, CA.

Clark, Elizabeth, Fezzaa, K., **Burke, J.E.**, Racicot, R.A., Shaw, J.O., Westacott, S., Briggs, D.E.G. 2019. A farewell to arms: using x-ray synchrotron imaging to investigate autotomy in brittle stars. *Zoomorphology*, 138 (3), 419-424.

Burke, Janet E., Renema, W., Henehan, M.J., Elder, L.E., Davis, C.V., Maas, A.E., Foster, G.L., Schiebel, R., Hull, P.M. 2019. Correlates and Paleoecological Significance of Porosity of Planktonic Foraminifera. Oral Presentation, *Northeast Geobiology Symposium 2019*, Amherst, MA.

Burke, Janet E. 2018. Fossil Focus: Planktonic Foraminifera – Small Fossils, Big Impacts. *Palaeontology Online*: 8(2). <https://www.palaeontologyonline.com/>

Burke, Janet E., Renema, W., Henehan, M.J., Elder, L.E., Davis, C.V., Maas, A.E., Foster, G.L., Schiebel, R., Hull, P.M. 2018. Factors Influencing Porosity in Planktonic Foraminifera. Oral Presentation, *FORAMS 2018*, Edinburgh, UK.

Burke, Janet E., Renema, W., Henehan, M.J., Elder, L.E., Davis, C.V., Maas, A.E., Foster, G.L., Schiebel, R., Hull, P.M. 2018. Factors Influencing Porosity in Planktonic Foraminifera. *Biogeosciences*, 15(21), 6607-6619.

Hsiang, Allison Y., Nelson, K., Elder, L., Sibert, E., Kahanamoku, S., **Burke, J.E.**, Kelly, A., Liu, Y., Hull, P.M., AutoMorph: Accelerating morphometrics with automated 2D and 3D image processing and shape extraction, *Methods in Ecology and Evolution*, 9(3), 605-612.

Burke, Janet E. and Hull P.M. 2017. Effect of gross morphology on modern planktonic foraminiferal test strength under compression. *Journal of Micropaleontology*, 36(2): 174-182.

Burke, Janet E. and Pincelli M. Hull. 2016. Through the Walls: Biotic and Abiotic Determinants of Planktonic Foraminiferal Porosity in Core Top Assemblages. Poster. *International Conference on Paleoceanography*, Utrecht, The Netherlands.

Henehan, Michael. J., Evans, D., Shankle, M., **Burke, J.E.**, Foster, G. L., Durrant, J., Anagnostou, E., Chalk, T. B., Stewart, J. A., Alt, C. H. S., and Hull, P. M.: Size-dependent response of foraminiferal calcification to seawater carbonate chemistry, *Biogeosciences*, 14(13): 3287.

Burke, Janet E. and Pincelli M. Hull. 2015. Exploring Variation in Planktonic Foraminiferal Test Morphology: Community Level Porosity Trends and Implications. Poster Presentation. *SCOR Meeting and Workshop on the Culturing of Planktonic Foraminifera*, Santa Catalina Island, CA.

Burke, Janet E. and Pincelli M. Hull. 2015. Through the Walls: Biotic and Abiotic Determinants of Planktonic Foraminiferal Porosity in Core Top Assemblages. Poster. *Geological Society of America Conference*, Baltimore, MD.

Burke, Janet E., A.K. Behrensmeyer, C. Badgley, H. J. Barry, SK Lyons. 2014. "Assessing Biases of Sampling and Scale in Miocene Vertebrate Assemblages from Northern Pakistan". Poster. *North American Paleontological Convention*, Gainesville, FL.

Burke, Janet E. 2013. Reid Bertone-Johnson: A Life For Design. *{CEEDS Magazine}*, Smith College, Spring 2013.

ADDITIONAL PROFESSIONAL EXPERIENCE

Whole Foods Market , Rockville, Maryland Barista	2014
Public Company Accounting Oversight Board , Washington, DC Receptionist	2007-2011
National Environmental Trust , Washington, DC 2007 Congressional Energy Bill Campaign Aid	2007
Whitman Associates , Washington Temporary Agent (Administrative Assistant)	2005-2007