Rebecca L. Freeman

Curriculum Vitae

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306 Slone Research Building
Lexington, KY 40506-0053
Cell Phone: 504-453-0980; Office Phone: 859-257-6376
Rebecca.freeman@uky.edu; Website: https://ees.as.uky.edu/users/rlfr223

EDUCATION

2011, Ph.D., Geology: Tulane University, New Orleans, LA

Dissertation title: *Upper Cambrian (Sunwaptan) Linguliform Brachiopods from the Notch Peak Formation of Utah and Equivalent Strata in Texas* (Advisor: Ronald Parsley)

1994, M.S., Geology: University of Missouri-Columbia, Columbia, MO

Thesis title: *Upper Cambrian and Lowest Ordovician Articulate Brachiopods from the Arbuckle and Wichita Mountains, Oklahoma* (Advisor: James Stitt)

1988, B.S., Geoscience: Murray State University, Murray, KY

PROFESSIONAL APPOINTMENTS

2021–present, Associate Professor, Earth & Environmental Sciences, University of Kentucky
2015–2021, Assistant Professor, Earth & Environmental Sciences, University of Kentucky
2011–2015, Lecturer, Earth & Environmental Sciences, University of Kentucky
1997–2010, Instructor, Earth & Environmental Science, Tulane University

TEACHING

TEACHING EXPERIENCE

University of Kentucky

Dinosaurs & Disasters, *in development, Spring 2022*
Geoscience Orientation (Spring 2018, co-taught, Spring 2020)
Endangered Planet: Introduction to Environmental Geology (Spring 2012–Spring 2014)
Sustainable Planet: The Geology of Natural Resources (Fall 2011–Spring 2017)
Earthquakes & Volcanoes (Fall 2011–present)
Blue Planet: Introduction to Oceanography (Spring 2012–present)
Regional Historical Geology (Fall 2011–present)

Tulane University

Earth History/Historical Geology (2004–2010)

Earth History/Historical Geology Laboratory (1997–2011)

Physical Geology (2001–2010)

Invertebrate Paleontology Laboratory (1997–2010)

TEACHING EVALUATION: UNIVERSITY OF KENTUCKY

Semester	Course (*UK Core course)	# of Students	Course Quality	Teaching Quality
Spring 2021	EES 150: Earthquakes & Volcanoes*	172	4.0	4.3
	EES 170: Blue Planet*	143	4.2	4.3
Fall 2020	EES 150: Earthquakes & Volcanoes*	238	4.0	4.3
	EES 170: Blue Planet*	144	4.4	4.6
	EES 350: Regional Historical Geology	4	n/a	n/a
Spring 2020	EES 150: Earthquakes & Volcanoes*	166	4.5	4.8
	EES 170: Blue Planet*	133	4.3	4.5
	EES 295: Geoscience Orientation	18	4.7	4.9
Fall 2019	EES 150: Earthquakes & Volcanoes*	195	4.3	4.5
	EES 350: Regional Historical Geology	8	4.8	4.7
Spring 2019	EES 150: Earthquakes & Volcanoes*	166	4.4	4.6
	EES 170: Blue Planet*	114	3.9	4.3
Fall 2018	EES 150: Earthquakes & Volcanoes*	108	4.1	4.3
	EES 350: Regional Historical Geology	5	n/a	n/a
Spring 2018	EES 150: Earthquakes & Volcanoes*	134	4.3	4.6
	EES 170: Blue Planet*	85	4.0	4.2
	EES 295: Geoscience Orientation	25	4.4	4.7
Fall 2017	EES 150: Earthquakes & Volcanoes*	99	4.1	4.3
	EES 350: Regional Historical Geology	5	5	
Spring 2017	EES 120: Sustainable Planet*	26	4.2	4.7
	EES 170: Blue Planet*	100	3.6	4.0
Fall 2016	EES 120: Sustainable Planet*	52	4.3/5	4.6/5
	EES 150: Earthquakes & Volcanoes*	137	4.2/5	4.6/5
	EES 350: Regional Historical Geology	8	n/a	n/a
Note: change in maximum score in TCE's past Spring 2016				
Spring 2016	EES 120: Sustainable Planet*	32	3.6/4	3.6/4
	EES 150: Earthquakes & Volcanoes*	115	3/4	3.5/4
	EES 170: Blue Planet*	109	3.2/4	3.4/4
Fall 2015	EES 120: Sustainable Planet*	44	3.7/4	3.7/4
	EES 150: Earthquakes & Volcanoes*	198	2.6/4	3/4
	EES 350: Regional Historical Geology	15	3.9/4	3.9/4
Spring 2015	EES 120: Sustainable Planet*	40	3.7/4	3.8/4
	EES 150: Earthquakes & Volcanoes*	169	3.1/4	3.3/4
	EES 170: Blue Planet*	141	2.8/4	3.1/4

Fall 2014	EES 120: Sustainable Planet*	64	3.5/4	3.6/4
	EES 150: Earthquakes & Volcanoes*	167	2.9/4	3.2/4
	EES 350: Regional Historical Geology	9	4/4	4/4
Spring 2014	EES 110: Endangered Planet*	62	3.2/4	3.4/4
	EES 120: Sustainable Planet*	87	3.0/4	3.2/4
	EES 170: Blue Planet*	114	3.0/4	3.2/4
Fall 2013	EES 120: Sustainable Planet*	42	3.6/4	3.7/4
	EES 150: Earthquakes & Volcanoes*	78	3.1/4	3.2/4
	EES 350: Regional Historical Geology	13	3.8/4	3.9/4
Spring 2013	EES 110: Endangered Planet*	52	3.3/4	3.4/4
	EES 150: Earthquakes & Volcanoes*	42	3.5/4	3.6/4
	EES 170: Blue Planet*	29	3.6/4	3.8/4
Fall 2012	GLY 120: Sustainable Planet*	48	3.1/4	3.3/4
	GLY 150: Earthquakes & Volcanoes*	83	3.1/4	3.4/4
	GLY 350: Regional Historical Geology	12	3.8/4	3.9/4
Spring 2012	GLY 110: Endangered Planet*	71	3.0/4	3.4/4
	GLY 120: Earthquakes & Volcanoes	16	3.2/4	3.7/4
Fall 2011	GLY 120: Sustainable Planet*	91	3.1/4	3.3/4
	GLY 150: Earthquakes & Volcanoes	50	3.2/4	3.5/4
	GLY 350: Regional Historical Geology	19	3.5/4	3.8/4

FUNDING

2021, Ocean Observatories Data Exploration Project, $500

2020, Ocean Observatories Data Exploration Project, $3,000.

2018, Ocean Observatories Initiative Data Lab Project, $500.

2016, UK eLII (eLearning Innovation Initiative) Cohort 2, $4,000.

2012, CRAA Grant (College Research Activity Award), College of Arts and Sciences, University of Kentucky, $3,000.

TEACHING PUBLICATIONS

Post-tenure

2021, Smalley, G., **Freeman, R.**, and Lichtenwalner, S., 2020, Primary Production: Identify factors that control Primary Production the western temperate Atlantic Ocean. In Bristol, D.L. and Pfeiffer-Herbert, A. (Eds.), *Ocean Data Labs: Exploring the Ocean with OOI Data – Online Laboratory Manua (Version 2.0)l*. Rutgers, The State University of New Jersey. https://datalab.marine.rutgers.edu/ooi-lab-exercises/

2021, **Freeman, R.**, Smalley, G. and Lichtenwalner, S., 2020, Anoxic events: Solve the mystery of the dying crab. In Bristol, D.L. and Pfeiffer-Herbert, A. (Eds.), *Ocean Data Labs: Exploring the*

Ocean with OOI Data – Online Laboratory Manual (Version 2.0). Rutgers, The State University of New Jersey. https://datalab.marine.rutgers.edu/ooi-lab-exercises/

2020, O'Farrell, K., **Freeman, R.L.**, Teaching general education algebra for non-science majors in a geoscience department: a natural fit. *In the Trenches.*

Pre-tenure

2019, Browne, K., Sahl, L., **Freeman, R.**, Smalley, G., White, C., and Lichtenwalter, C.S. Anoxic Events. *OOI Data Labs Collection.* *https://datalab.marine.rutgers.edu/explorations/2019/anoxia.php*

2018, **Freeman, R.L.**, Leveraging student experience with water for active learning in a large introductory oceanography class room. *Oceanography* 31(4): 182–183. https://tos.org/oceanography/article/leveraging-student-experience-with-water-for-active-learning-in-a-large-int

TEACHING/OUTREACH CONFERENCE ABSTRACTS (*funded Research Assistant)

2019, **Freeman, R.L.**, Mystery marine organisms: teaching marine ecology with charismatic megafauna…and overlooked microorganisms. *Earth Educator's Rendezvous.*

2018, **Freeman, R.L.**, Leveraging prior student experience to understand the unique nature of water in an introductory oceanography class. *Earth Educator's Rendezvous.*

2018, Fryar, A.E., **Freeman, R.L.**, Hanley, C., and Sherman, A.R.*, Exploring water quality in eastern India and Kentucky: an integrated online and field project for place-based and cross-cultural geoscience education. *Geological Society of America Abstracts with Programs.*

2016, **Freeman, R.L.**, Bemis, S., Ettensohn, F.R., Idstein, P., and Yeager, K.M., A departmental open house for increased engagement and recruiting of general education geoscience students. *Earth Educator's Rendezvous, University of Wisconsin, Madison.*

2013, **Freeman, R.L.**, Can ninety-nine non-science majors design and execute research projects in an introductory Oceanography class? Using simple geographic visualization tools and real-world data to improve engagement and achieve mandated learning outcomes. *Geological Society of America, Abstracts with Programs,* 45(7), 435.

AWARDS & HONORS

2018, Nominated for College of Arts & Sciences Oustanding Teaching Award

2017, Nominated for College of Arts & Sciences "Award for Innovative Teaching"

2016, UK Department of Earth & Environmental Science Professor of the Year

2015, Runner-up, Omicron Delta Kappa "Outstanding Leadership and Student Enhancement Award"

2015, UK College of Education "Teacher Who Made a Difference" Award

2014–2015, National Academies Education Fellow in the Life Sciences

PROFESSIONAL DEVELOPMENT

2021, Earth Educator's Rendezvous, online: Presenter in Data Labs: Using Ocean Observatory (OOI) Data to Engage Students in Oceanography, Earth Educator's Rendezvous

2020, (7/27–31), Week of Teaching, UK CELT

2020, Scientific Teaching in Practice Seminar "Lightning Round Talks: 8 Great Apps for Online Teaching, STiP

2020, (7/13–7/14), Remote: The Connected Faculty Summit, Arizona State University

2020, (4/27–5/1), Week of Teaching, UK CELT

2020 (1/6–1/9), Invited participant, Ocean Observatories Initiative DataLab Workshop (online lab manual development), sponsored by the NSF through Rutgers University Center for Ocean Observation Leadership, Princeton, New Jersey.

2019, Smart Campus Series: Visual Activities and Assignments with iPads, UK CELT

2019, Smart Campus Series: Student Engagement and Actice Learning with iPads, UK CELT

2019, Earth Educator's Rendezvous, Nashville, TN: Presenter in Data Labs: Using Ocean Observatory (OOI) Data to Engage Students in Oceanography, Earth Educator's Rendezvous

2019 (3/8–3/13), Invited Participant, Ocean Observatories Initiative DataLab Workshop, sponsored by the NSF through Rutgers University Center for Ocean Observation Leadership, Princeton, New Jersey.

2018, Engaging Learners in Online Courses, UK CELT

2018, Paleontology Society Short Course: Pedagogy and Technology in the Modern Paleontology Classroom

2018, Universal Design in Earth Education: approaches to access and accommodation for a more inclusive STEM experience, Earth Educator's Rendezvous, Lawrence, Kansas

2018, Paleobiology Database Educational Resources, Earth Educator's Rendezvous, Lawrence, Kansas

2018, Promoting Cross-Disciplinary Self-Regulation, CELT, University of Kentucky

2017, A discussion about teaching large classes, CELT, University of Kentucky

2016–2017, Faculty Learning Community: Group Work, Teamwork, and Community Online, CELT, University of Kentucky

2016, SEC Academic Integrity Symposium, University of Kentucky

2016, Panel Discussion with Underrepresented Students in STEM, CELT, University of Kentucky

2016, Innovation + Design Lab, May 10–May 12, 8am–5pm, as part of participation in eLII (eLearning Innovation Initiative) Cohort 2, CELT, University of Kentucky

2016, Introducing Active Learning Strategies to Large Intro Courses, Earth Educator's Rendezvous, Madison, Wisconsin

2016, Documenting Your Teaching Activities: Assembling a teaching portfolio, CELT, University of Kentucky

2015, How do I Handle This? Challenging Situations In and Out of the Classroom, CELT, University of Kentucky
2015, Make, Break, Bend: The Potential of Digital Pedagogy, CELT, University of Kentucky
2015, STEM Teaching Enhancement Workshop and Scholarly Forum, University of Kentucky
2015, Actively Engaging Students in Large Classes, College of Arts and Sciences/ CELT, University of Kentucky
2015, Canvas Course Design, University of Kentucky Instructional Technology
2015, Why We Love the Classroom: A Conversation, CELT, University of Kentucky
2014, Cheating: Curbing, Catching, and Consequences, CELT, University of Kentucky
2014, Research on Learning, Implications for Teaching, CELT, University of Kentucky
2014, National Academies of Science/Howard Hughes Medical Institute Gulf Coast Summer Institute on Undergraduate Education, July 21–25, Louisiana State University
2013, College of Arts & Sciences Course Redesign Institute
2013, Using Group Work Effectively, CELT, University of Kentucky
2013, Energy 101—A Framework For an Interdisciplinary Undergraduate Course Teaching the Fundamentals of Energy", U.S. Department of Energy Webinar
2013, Field Trips, Guidebooks, and Apps: Exploring the Present, Past and Future of Geological Field Trips and Field Trip Guidebooks", Geological Society of America NC Meeting
2013, An Afternoon of Lecture Tools: Lecture with Dr. P. Sampson, UK Academic Planning, Analytics, and Technologies
2013, An Afternoon of Lecture Tools: Computer Lab Demonstration", UK Academic Planning, Analytics, and Technologies
2013, How Do I Handle This? Challenging Situations In and Out of the Classroom, CELT, University of Kentucky
2012, Rethinking the Design of Presentation Slides, CELT, University of Kentucky
2012, What's New in Blackboard 9.1 SP8?, University of Kentucky
2012, Who Are Our Students?, CELT & Office for First Generation Initiatives
2012, Teaching With Integrity: Challenges and Opportunities of Large Classes, CELT, University of Kentucky
2012, Active Lectures in Classrooms of All Sizes, Geological Society of America Annual Meeting Short Course,
2012, Making the Invisible Visible: Assessing Higher Order Thinking in your Students, Geological Society of America Annual Meeting Short Course
2012, Designing for the Next Semester, CELT, University of Kentucky
2011, Resources for Student Success, CELT, University of Kentucky
2011, Generation X Teaches the Millenials (Advice from a Boomer), CELT, University of Kentucky
2011, Re-imagining the Classroom: Gear Up for UK Core, CELT, University of Kentucky

PRESENTATIONS

2017, Learning about the world with Google Earth & Google Earth streetview, eLearning Innovation Initiative, University of Kentucky

2016, Quit Reading Your Slides: The Power of Assertion-Evidence Slide Design, University of Kentucky Earth and Environmental Sciences Women's Breakfast
2016, Life, College, Science, and Kentucky, UK 101 Guest Lecture
2016, The Science Behind the Price of Oil, UK Political Society Honors Club
2012, Conventional and Unconventional Sources of Oil and Gas, GEN 100 Guest Lecture
2012, Millennial Generation Students & Active Learning, Unversity of Kentucky Department of Earth and Environmental Sciences

GRADUATE COMMITTEE MEMBER

M.S.: Michelle Johnston, Betsy Herbert, Stephen Zotto (EES)
Ph.D.: Eva Lyon, Ann Harris (EES): Tyler Mahoney (Civil Engineering)

RESEARCH

FUNDING

2017–2018, US Department of State, Mission to India: Exploring Water Quality in India, with Carol Hanley (College of Agriculture, Food, and Environment) and Alan Fryar (UK Earth and Environmental Science), $149,740.

2016–2019, NSF IUSE GEOPATHS-IMPACT: GP-IMPACT: *Early High School Pathways to Geoscience Majors and Careers: Full STEAM Ahead!*, with Michael McGlue, Alan Fryar (UK Earth and Environmental Sciences), and Justin Bathon (UK College of Education), $297,389.

GEOSCIENCE EDUCATION RESEARCH/OUTREACH PUBLICATIONS: PEER REVIEWED

2020, Lyon, E.*, **Freeman, R.**, Bathon, J., Fryar, A., McGlue, M., Erhardt, A., Rosen, A., Sampson, S., Nelson, A., and Parsons, P., Attitudinal impediments to geoscience recruitment among ninth graders at a STEAM high school. *Journal of Geoscience Education.* *https://www.tandfonline.com/doi/abs/10.1080/10899995.2019.1700593*

2019, Hanley, C., **Freeman, R.L.**, Fryar, A.E., Sherman, A.R.*, and Edwards, E., Water in India and Kentucky: developing an online curriculum with field experiences for high school classes in diverse settings. *Journal of Contemporary Water Research and Education.* *https://onlinelibrary.wiley.com/doi/full/10.1111/j.1936-704X.2019.03322.x*

GEOSCIENCE RESEARCH PUBLICATIONS: PEER-REVIEWED

Post-tenure

2020, Stigall, A.L., **Freeman, R.L.**, Edwards, C.T., Rasmussen, C.M. Ø. A multidisciplinary perspective on the Great Ordovician Biodiversification Event and the development of the early

Paleozoic world. *Palaeogeography, Palaeoclimatology, Palaeoecology.*

2020, Brett, C.E., Aucoin, C.D., Dattilo, B.F., **Freeman, R.L.**, Hartshorn, K.R., McLaughlin, P.I., Schwalbach, C.E., Revised stratigraphy and chronostratigraphy of the upper Katian (Cincinnatian) strata in the Cincinnati Arch reference area. *Palaeogeography, Palaeoclimatology, Palaeoecology.* *https://www.sciencedirect.com/science/article/abs/pii/S0031018219302354*

2020, Paton, T., **Freeman, R.L.**, Dattilo, B.F., Brett, C.E., Sumrall, C. Edrioasteroids on corals: taphonomic feedback and sedimentary processes control the ecology of a Late Ordovician (Katian: Cincinnatian, Richmondian) community in central Kentucky, USA. *Palaeogeography, Palaeoclimatology, Palaeecology.* *https://www.sciencedirect.com/science/article/abs/pii/S0031018219302238*

Pre-tenure

2019, Dattilo, B.F., **Freeman, R.L.**, Zubevic, Y., Brett, C.E., Straw, A., Frauhiger, M., Hartstein, A., Shoemaker, L., Time richness and phosphatic microsteinkern abundance in the Cincinnatian (Katian) Ordovician, USA: an example of polycyclic phosphogenic condensation. *Palaeogeography, Palaeoclimatology, Palaeecology* 535, 109362. https://www.sciencedirect.com/science/article/pii/S0031018219300719

2019, **Freeman, R.L.**, Dattilo, B.F., Brett, C.E. An integrated stratinomic model for the genesis and concentration of "small shelly fossil"-style phosphatic microsteinkerns in not-so-exceptional conditions. *Palaeogeography, Palaeoclimatology, , Palaeecology* 535, 109344. https://www.sciencedirect.com/science/article/pii/S0031018218310125

2019, Stigall, A.L., Edwards, C.T., **Freeman, R.L**., Rasmussen, C.M.Ø., Coordinated biotic and abiotic change during the Great Ordovician Biodiversification Event: Darriwilian assembly of early Paleozoic building blocks. *Palaeogeography, Palaeoclimatology, Palaeecology* 530, 249 – 270. https://www.sciencedirect.com/science/article/pii/S0031018219302305

2018, Brett, C.E., Hartshorn, K.R., Waid, C.B.T., McLaughlin, P.I., Bulinski, K.V., Thomka, J.R., Paton, T.R., **Freeman, R.F.**, Dattilo, B.F., Lower to middle Paleozoic sequence stratigraphy and paleontology in the greater Louisville, Kentucky area. In, Florea, L.J., (ed.), Ancient Oceans, Orogenic Uplifts, and Glacial Ice: Geologic Crossroads in America's Heartland. *Geologic Society of America Field Guide* 51, p. 1–59.

2018, Paton, T.R., **Freeman, R.L.**, Dattilo, B.F., Brett, C.E., Encrusting on a coral graveyard: a reworked coral bed from the Upper Ordovician (Cincinnatian, Richmonida) of central Kentucky. In, Florea, L.J., (ed.), Ancient Oceans, Orogenic Uplifts, and Glacial Ice: Geologic Crossroads in America's Heartland. *Geologic Society of America Field Guide* 51, p. 34–36.

2018, Miller, J.F., Evans, K.R., **Freeman, R.L.**, Loch, J.D., Ripperdan, R.L., Taylor, J.F., Combining biostratigraphy, carbon isotope stratigraphy, and sequence stratigraphy to define the base of Cambrian Stage 10. *Memoirs of the Association of Australasian Paleontologists,* 51, 19–64. https://search.informit.com.au/documentSummary;dn=281754863211829;res=IELNZC

2018, **Freeman, R.L.**, Miller, J.F., Dattilo, B.F., Linguliform brachiopods across a Cambrian—Ordovician (Furongian—Early Ordovician) biomere boundary: the Sunwaptan/Skullrockian North American stage boundary in the Wilberns and Tanyard Formations of central Texas. *Journal of Paleontology*, 92, 751–767. https://www.cambridge.org/core/journals/journal-of-paleontology/article/linguliform-brachiopods-across-a-cambrianordovician-furongian-early-ordovician-biomere-boundary-the-sunwaptanskullrockian-north-american-stage-boundary-in-the-wilberns-and-tanyard-formations-of-central-texas/96CBE8B11473EC14ADC366810179B12F

2017, Johnston, M.N., Eble, C.F., O'Keefe, J.M.K., **Freeman, R.L.**, Hower, J.C., Petrology and palynology of the Middle Pennsylvanian Leatherwood coal bed, Eastern Kentucky: Indications for depositional environments, *International Journal of Coal Geology*, 181, 23–28. https://www.sciencedirect.com/science/article/abs/pii/S0166516217306274

2016, Miller, J.F., Evans, K.E., Ethington, R.L., **Freeman, R.L.**, Loch, J.D., Repetski, J.E., Ripperdan, R.L., Taylor, J.F., Proposed auxiliary boundary section and point (ASSP) for the base of the Ordovician System at Lawson Cove, Utah, USA, *Stratigraphy,* 12(3–4), 219–236. http://www.micropress.org/microaccess/stratigraphy/issue-323/article-1969

2016, Dattilo, B.F., **Freeman, R.L.**, Peters, W., Heimbrock, B., Deline, B., Martin, A., Kallmeyer, J., Argast, A., Reeder, J., Giant among micromorphs: were Cincinnatian (Ordovician, Katian) small shelly faunas dwarfed? *PALAIOS,* 31(3), 55–70. https://pubs.geoscienceworld.org/sepm/palaios/article-abstract/31/3/55/258683

Pre-tenure-track

2015, Miller, J.F., Dattilo, B.F., Ethington, R.E., **Freeman, R.L**., Polyfocal photos of microfossils using petrographic microscopes. *Annales de Palaeontologie,* 101, 179–184. https://www.sciencedirect.com/science/article/abs/pii/S0753396915000233

2015, Miller, J.F., Evans, K.R., **Freeman, R.L.**, Ripperdan, R.L., Taylor, J.F., Proposed GSSP for the base of Cambrian Stage 10 at the lowest occurrence of *Eoconodontus notchpeakensis* in the House Range, Utah, USA. *Annales de Palaeontologie*, 101, 199–211. https://www.sciencedirect.com/science/article/abs/pii/S0753396915000452

2014, Miller, J.F., Evans, K.E., **Freeman, R.L.**, Ripperdan, R.L., Taylor, J.F. The proposed GSSP for the base of the Lawsonian Stage (Cambrian Stage 10) at the First Appearance Datum of the conodont *Eoconodontus notchpeakensis* (Miller, 1969) in the House Range, Utah, USA. *GFF,*

136(1), 189–192.

2013, **Freeman, R.L.**, Dattilo, B.F., Morse, A., Blair, M., Felton, S., Pojeta, J., Jr. The "Curse of *Rafinesquina*": Negative taphonomic feedback exerted by strophomenid shells on storm-buried lingulids in the Cincinnatian Series (Katian, Ordovician) of Ohio. *PALAIOS*, 28(6), 359–372. https://pubs.geoscienceworld.org/sepm/palaios/article-abstract/28/6/359/146334/the-curse-of-rafinesquina-negative-taphonomic?redirectedFrom=fulltext

2012, **Freeman, R.L.**,Miller, J.F. Lingulate brachiopods from the Upper Cambrian (Sunwaptan) Hellnmaria Member of the Notch Peak Formation, western Utah. *Cambro–Ordovician Studies, Memoirs of the Australasian Paleontological Society,* 42, 37–74.

Graduate School

2011, Miller, J.F., Evans, K.R., **Freeman**, **R.L.,** Ripperdan, R.L., Taylor, J.F. Proposed stratotype for the base of the Lawsonian Stage (Cambrian Stage 10) at the First Appearance Datum of *Eoconodontus notchpeakensis* (Miller) in the House Range, Utah, USA. *Bulletin of Geosciences,* 86, 595–620.

2011, **Freeman, R.L.**, Miller, J.F. First report of a larval shell repair scar on a lingulate brachiopod: Evidence of durophagous predation in the Cambrian pelagic realm? *Journal of Paleontology*, 85(4), 697–704. https://www.jstor.org/stable/23020160?seq=1#metadata_info_tab_contents

1996, **Freeman, R.J.,** Stitt, J.H. Upper Cambrian and lowest Ordovician articulate brachiopods from the Arbuckle and Wichita Mountains, Oklahoma. *Journal of Paleontology*, 70(3), 355–372. https://www.cambridge.org/core/journals/journal-of-paleontology/article/upper-cambrian-and-lowest-ordovician-articulate-brachiopods-from-the-arbuckle-and-wichita-mountains-oklahoma/CC75D4A4CB61CBC9D091BC1D4619A9B4

SCIENCE PUBLICATIONS: EDITED VOLUMES

2019, Co-editor with Alycia Stigall, Cole Edwards, and Christian Rasumussen: IGCP-themed special issue of *Palaeogeography, Palaeoclimatology, Palaeecology.*

2018, Stigall, A.L., Hembree, D.I., and **Freeman, R.L.**, Eds., Trekking Across the GOBE: From the Cambrian to the Katian. *International Geoscience Programme 653, Third Annual Meeting, Program and Abstracts.* 70 p.

INVITED PRESENTATIONS

2019, Centre College Department of Biology, "Origins of the Great Ordovician Biodiversification Event: The Complexities of Diversity and Extinction"

2018, Kentucky Geological Survey, "The Cyclora Fauna: Misreading the Fossil Record"

2016, Falls of the Ohio State Park, Clarksville, IN, "The Afterlife of *Rafinesquina*"

2016, Burpee Museum of Natural History PaleoFest, Rockford, IL, "Overstudied or Overlooked? Surprising New Discoveries in Some of the World's Most Well-studied Rocks, the Ordovician of the Cincinnati Area"

2013, Tulane University, "Negative Taphonomic Feedback Exerted by Strophomenid Shells on Storm-Buried Lingulids in the Cincinnatian (Katian, Ordovician) Series of Ohio…The Curse of Rafinesquina"

2012, Indiana University-Purdue University Ft. Wayne, "Linguliform Brachiopod Extinction and Global Migration Coinciding with Three Laurentian Trilobite Extinction Events During the Late Cambrian–Earliest Ordovician"

2012, Indiana University-Purdue University Ft. Wayne, "The Curse of *Rafinesquina*"

GEOSCIENCE EDUCATION RESEARCH/OUTREACH ABSTRACTS (*funded graduate student)

2020, Fryar, A.E., Hanley, C.D., **Freeman, R.L.**, Sherman, A.R., Edwards, E.M., Incorporating place-based learning into an online curriculum on water for high schools in India and Kentucky. *36th International Geological Congress, Delhi, India.*

2018, Lyon, E.*, **Freeman, R.L.**, Nelson, A.*, Sampson, S., and Parson, J., Lack of exposure or lack of interest? Exploring 9th graders' perceptions of geoscience at a STEAM high school. *Geological Society of America Abstracts with Programs.*

2018, **Freeman, R.L.**, Lyon, E.*, Nelson, A.*, Sampson, S., and Parson, J. Geosciences versus Environmental Sciences: 9th graders' differing perceptions of two closely related disciplines. *Geological Society of America Abstracts with Programs.*

2018, Fryar, A.E., Hanley, C.D., **Freeman, R.L.**, Sherman, A.R.*, WIIKY (Water in India and Kentucky): integrating field experiences with an online platform for high school classes. *Geological Society of America Abstracts with Programs.*

2018, Lyon, E.*, Rosen, A., and **Freeman, R.L.**, A PBL approach to linking environmental awareness with geoscience content at a STEM high school. *Earth Educator's Rendezvous.*

2017, **Freeman, R.L**., Bathon, J., Fryar, A.E., Lyon, E.*, and McGlue, M.M., Early college STEM-focused high schools: a natural and overlooked recruitment pool for the geosciences. *American Geophysical Union Fall Meeting.*

2018, Fryar, A.E., Freeman, R.L., Hanley, C., and Sherman, A.R., Exploring water quality in eastern India and Kentucky: an integrated online and field project for place-based and cross-cultural geoscience education. *Geological Society of America Abstracts with Programs.*

2017, Lyon, E.*, Rosen, A., **Freeman, R.L.**, Fryar, A., McGlue, M.M., and Bathon, J., Elevating the standards: using the Next Generation Science Standards to promote geoscience awareness in STEM high schools. *Geological Society of America Abstracts with Programs.*

SCIENCE CONFERENCE ABSTRACTS (*presenting author, if not first author)

2021, Dattilo, B.F., **Freeman, R.L.**, Harrison, M., Meyer, D.L., Thomka, J., Overlooked exceptional crinoid preservation: "phosphatized" Ordovician versus modern stereom microstructure. *IGCP 653/735 Virtual Annual Meeting, Lille, France.*

2020, **Freeman, R.L.**, Late Cambrian BIMEs, Vicariance, and Extinction Patterns in Laurentian linguliform brachiopods. *IGCP 653: The Onset of the Great Orodvician Biodiversification Event, Annual (Virtual) Meeting, Copenhagen, Denmark.*

2020, Fryar, A.E., Hanley, C.D., **Freeman, R.L.**, Sherman, A.R., Edwards, E.M., Incorporating place-based learning into an online curriculum on water for high schools in India and Kentucky. *36th International Geological Congress, Delhi, India.*

2020, **Freeman, R.L.**, Invasive species in the Late Cambrian-earliest Ordovician of Laurentia: Analyzing patterns in linguliform brachiopods. *Geological Society of America Abstracts with Programs.*

2019, Stigall, A.L., **Freeman, R.L.**, Edwards, C., Rasmussen, C.M.Ø., Coordinated biotic and abiotic change during the Great Ordovician Biodiversification Event: Darriwilian assembly of Early Paleozoic building blocks. *Geological Society of America Abstracts with Programs.*

2019, Dattilo, B., Meyer, D.L., **Freeman, R.L.***, Thomka, J.R., Sheray, S., and Stebing, J. "Phosphatization" of echinoderm ossicles: insights from Ordovician and modern environments. *Geological Society of America Abstracts with Programs.*

2019, Brett, C.E., Aucoin, C.D., Dattilo, B.F., **Freeman, R.L.**, Hartshorn, K.R., Achwalbach, C.E., Revised Upper Ordovician, Cincinnatian (upper Katian) sequence stratigraphy in the Cincinnati Arch: implications for the tempo and patterns of biotic change. *North American Paleontological Convention 11, Riverside, California*.

2018, Frauhiger, M.J., Dattilo, B.F., **Freeman, R.L.**, Peters, W.S., Upper Middle Triassic “Small Shellies” from the Kleine Terrebratelbank of Muschelkalk, Bavaria, Germany: The role of “attention bias” in underestimating the distribution of phosphatic microsteinkerns. *Geological Society of America Abstracts with Programs.*

2018, **Freeman, R.L.**, and Dattilo, B.F., Über shell-beds: an integrated stratinomic model for the genesis and concentration of small shelly-style phosphatic microsteinkerns. *IGCP 653: The Onset of the Great Ordovician Biodiversification Event, Annual Meeting.*

2018, Dattilo, B.F., **Freeman, R.L.**, Straw, A., Brett, C.E., Aucoin, C., Farauhiger, M., Hartstein, A., Shoemaker, L., Testing the "über shell-bed" model for the origin of phosphatic microsteinkerns in the Ordovician (Katian) of Cincinnati. *IGCP 653: The Onset of the Great Ordovician Biodiversification Event, Annual Meeting.*

2018, Miller, J.F., Evans, K.R., **Freeman, R.L.**, Loch, J.D., Ripperdan, R.L., and Taylor, J.F., 2018. The proposed GSSP for the base of Cambrian Stage 10 at the First Appearance Datum of the conodont *Eoconodontus notchpeakensis* in the House Range, Utah, USA: a

summary. *International Meeting on Edicaran and Cambrian Sciences, Xi'an, China.*

2018, **Freeman, R.L.** and Dattilo, B.F., Comparative taphonomic petrography: a closer look at shell beds from the Cincinnati, Ohio area Ordovician (Katian). *Geological Society of America Abstracts with Programs.*

2018, Frauhiger, M.J, Hartstein, A.R., Carlson, J., Kline, J., Dattilo, B.F., Aucoin, C.D., **Freeman, R.L.**, Kalakay, M., and Brett, C.E., Petrographic clues to the Richmondian invasion of limestones from the Upper Ordovician (Upper Katian) from the Madison, Indiana area. *Geological Society of America Abstracts with Programs.*

2018, Dattilo, B.F., **Freeman, R.L.**, Aucoin, C.D., Brett, C.E., and Frauhiger, M.J., Disappearance of phosphatic microfossils in the Upper Cincinnatian (Upper Ordovician, Late Katian): water mass changes or facies tracking? *Geological Society of America Abstracts with Programs.*

2017, **Freeman, R.L.**, Miller, J.F., Evans, K.R., and Bassett, D.J., Linguliform brachiopods across the Steptoean/Sunwaptan (Late Cambrian) "biomere" boundary in the Great Basin, USA. *Geological Society of America Abstracts with Programs.*

2017, Paton, T., **Freeman, R.L.**, and Dattilo, B.F., Encrusting on a coral graveyard: a reworked coral bed from the Upper Ordovician (Cincinnatian, Richmondian) of Central Kentucky. *Geological Society of America Abstracts with Programs.*

2017, Frauhiger, M., Stebing, J., Carlson, J., Dattilo, B.F., Aucoin, C., **Freeman, R.L.**, and Brett, C.E., Cyclic alternation of Upper Ordovician limestone and mudstone strata from the Madison, Indiana area. *Geological Society of America Abstracts with Programs.*

2016, **Freeman, R.L.**, Miller J.F., Westrop, S.R., Adrain, J.M., Dattilo, B.F., and Evans, K.R., Extinction and migration patterns in Laurentian linguliform brachiopod "blooms" during the Cambrian–Ordovician transition. *IGCP 653 Opening Meeting, Durham University.*

2016**,** Dattilo, B.F., **Freeman, R.L.**, W.S. Peters, W.S., and Brett, C.E., Where have all the young *Rafinesquina* gone? Gone to taphonomic processes every one (mostly). *Geological Society of America Abstracts with Programs* 48(5).

2016, Dattilo, B.F., and **Freeman, R.L.** The mutual obligations between fossil enthusiasts and academic paleontologists. *Geological Society of America Abstracts with Programs* 48(3).

2015, Dattilo, B.F., Straw, A.M., **Freeman, R.L.**, Brett, C.E., and Argast, A., Phosphorites as uber-shell beds: the relationship between phosphate content and sediment maturity in Cincinnatian (Ordovician, Katian) limestones. *Geological Society of America, Abstracts with Programs*.

2015, Dattilo, B.F., Brett, C.E., Meyer, D.L., **Freeman, R.L.**, Hunda, B., Holland, S.M., Stigall, A.L., Deline, B., Sumrall, C.D., and Wilson, M.A., Non-academic paleontologists are essential to the survival of paleontology: lessons from the Cincinnati school. *Geological Society of America, Abstracts with Programs* 47(7), 582.

2015, **Freeman, R.L.**, Miller, J.F., and Dattilo, B.F., Brachiopods, biomeres, and biofacies: interpreting the cause of Late Cambrian–earliest Ordovician extinction in a shallow cratonic sea, central Texas. *Geological Society of America, Abstracts with Programs* 47(7), 231.

2015, Reeder, J.L., Dattilo, B.F., **Freeman, R.L.**, Argast, A., and Peters, W., Ordovician small shelly faunas from the Elgin Member of the Maquoketa: ecologically dwarfed or taphonomically biased? *Geological Society of America, Abstracts with Programs*.

2015, Dattilo, B.F., **Freeman, R.L.***, Reeder, J.L., Straw, A., Aucoin, C., Brett, C.E., and Argast, A. Taphonomic comparisons of two Laurentian Upper Ordovician epeiric sea "small shelly faunas". *Stratigraphy*, 12(2), 98–99.

2014, **Freeman, R.L.**, Ethington, R.E., Miller, J.F., and Dattilo, B.F., Tectonic complications in correlating the Sauk—Tippecanoe megasequence boundary between western and eastern Laurentia: clues from conodont biostratigraphy. *Geological Society of America, Abstracts with Programs*, 46(6): 788.

2014, Dattilo, B.F., **Freeman, R.L.**, Heimbrock, B., Martin, A., and Argast, A., Giants among micromorphs: phosphatic micro-steinkerns result from taphonomic bias, not ecological stress. *Geological Society of America, Abstracts with Programs*, 46(6), 629.

2014, Miller, J.F., Evans, K.R., **Freeman, R.L.**, Ripperdan, R.L., and Taylor, J.F., Alternatives for dividing Cambrian Stage 10 into substages. *International Subcommission on Ediacaran Stratigraphy/International Subcommission on Cambrian Stratigraphy Joint Meeting, Ouarzazate, Morocco.* p. 25–26.

2014, Miller, J.F., Dattilo, B.F., Ethington, R.E., and **Freeman, R.L**., Polyfocal photos of microfossils using petrographic microscopes. *International Subcommission on Ediacaran Stratigraphy/International Subcommission on Cambrian Stratigraphy Joint Meeting, Ouarzazate, Morocco.* p. 26–27.

2014, Sparr, J.P.*, and **Freeman, R.L.**, Rapid burial and unusual preservation of a crinoid garden in the Mississippian Borden Formation of south central Kentucky. *National Council on Undergraduate Research Annual Meeting.*

2014, Sparr, J.P.*, and **Freeman, R.L.**, Snapshot of phosphate nodule formation in the Mississippian Borden Formation, Kentucky: a crinoid obrution event as a source of phosphorus. *Geological Society of America, Abstracts with Programs*, 46(4), 1.

2014, **Freeman, R.L.**, and Dattilo, B.F., How many shells are in a shell bed? Mixed taphonomy and shell destruction in a time-rich storm-disturbed Cincinnatian (Ordovician, Katian) shell bed. *Geological Society of America, Abstracts with Programs*, 46(4), 1.

2013, **Freeman, R.L.,** Fischer, S., Dattilo, B.F., Schramm, T., Brett, C.E., Mosser, S., Blair, M., and Chakraborty, S., Can carbon-isotopes constrain high-resolution stratigraphy of Ordovician shallow water facies in the Cincinnati, Ohio region? *Geological Society of America, Abstracts with Programs,* 45(7), 585.

2013, Dattilo, B.F., **Freeman**, **R.L.,** Gerke, T., Brett, C.E., McLaughlin, P.I., Schramm, T.J., Meyer, D.L., Morse, A., and Mason, M., From lagerstätte to lag: preliminary bedding-scale taphonomic and geochemical analysis of phosphate distribution in the Cincinnatian. *Geological Society of America, Abstracts with Programs,* 45(4), 58.

2013, Miller, J.F., Evans, K.E., **Freeman, R.L.**, Ripperdan, R.L., and Taylor, J.F., The Proposed GSSP for the base of the Lawsonian Stage (Cambrian Stage 10) at the First Appearance Datum of the conodont *Eoconodontus notchpeakensis* (Miller, 1969) in the House Range, Utah, USA, in, Lindskog, A., and Melqvist, K., eds., *Proceedings of the 3rd IGCP 591 Annual Meeting*, p. 226–228.

2012, **Freeman, R.L**., Dattilo, B.F., Morse, A., Blair, M., Felton, S., and Pojeta, J., Jr., Stirred not shaken: using taphonomy to reconstruct paleoecological succession and taphonomic feedback in a Cincinnatian (Ordovician, Ohio) storm-disturbed shell bed. *Geological Society of America, Abstracts with Programs,* 44(7), 273.

2012, **Freeman, R.L**., Dattilo, B.F., Morse, A., Blair, M., Utesch, B.A., Felton, S., and Pojeta, J., Jr., The brachiopod trap: what their oldest (Upper Ordovician, Ohio) failed escape burrows tell us about the evolution of burrowing in lingulids. *Geological Society of America, Abstracts with Programs,* 44(5), 18.

2012, Ethington, R.L., Miller, J.F., Dattilo, B.F., and **Freeman, R.L.**, Conodont biostratigraphy across a conformable Sauk-Tippecanoe Megasquence boundary, western central Utah. *Geological Society of America, Abstracts with Programs*, 44(5), 1.

2012, Mosser, S. L., Schramm, T.J., Dattilo, B.F., Brett, C., **Freeman, R.L**., and Blair, M., Fine-scale lithologic variations in Late Ordovician (Katian) peritidal deposits of the Kentucky Bluegrass region suggest sea-level fluctuations as the primary mechanism for type Cincinnatian meter-scale cycles. *Geological Society of America, Abstracts with Programs,* 44(5), 16.

2012, Hassan, C.B.S.I., Schwalbach, C.E., Brett, C.E., Thomka, J.R., **Freeman, R.L.**, and Haneberg-Briggs, D.M., Ghosts of vanished shell beds: taphonomic and stratigraphic implications of an Upper Ordovician (450–455 million years old) bryozoan bonanza on a bivalve shell pavement, Central Kentucky. *International Geoscience Programme Project 591 2nd Annual Meeting Abstracts Volume*, p. 18.

2011, **Freeman, R. L.,** Miller, J. F., Holmer, L., and Streng, M., Lingulate brachiopod extinction and global migration coinciding with three Laurentian trilobite extinction events during the Late Cambrian-earliest Ordovician. *Geological Society of America, Abstracts with Programs,* 43(5), 543.

2011, Miller, J.F., Dattilo, B.F., Ethington, R.L., Evans, K.R., **Freeman, R.L.**, Loch, J.D., Repetski, J.E., Ripperdan, R.L., Runkel, A.C., and Taylor, J.F., Integrating bio-, chemo-, chrono-, gamma-ray, litho, and sequence stratigraphy in the Upper Cambrian and Lower Ordovician: progress towards a comprehensive framework. *Geological Society of America, Abstract with Programs,* 43(5), 376.

2011, Dattilo, B.F., Miller, J.F., **Freeman, R.L.**, and Ripperdan, R.L., How conodonts, brachiopods, carbon isotopes and sequence stratigraphy moved the Cambrian–Ordovician boundary in southern Nevada. *Geological Society of America, Abstract with Programs,* 43(5), 375.

2011, **Freeman, R.L.,** and Miller, J.F., New lingulate brachiopods from Upper Cambrian and lowest Ordovician (Millardan/Ibexian) strata in central Texas: correlations with the Great Basin, Wyoming and Beyond. *Geological Society of America, Abstracts with Programs,* 43(3), 5.

2011, Dattilo, B.F., **Freeman**, **R.L.,** Utesch, B.A., Felton, S., & Pojeta, J., Jr., An unusual association of *Pseudolingula* and *Rafinesquina* from the Upper Ordovician of Ohio. *Geological Society of America, Abstracts with Programs* 43(1), 69*.*

2010, **Freeman, R.L.** & Miller, J.F., Larval shell repair scar on a lingulid brachiopod: Evidence of shell-breaking predation in the Cambrian pelagic realm? *Geological Society of America, Abstracts with Programs* 42(2), 73–74.

2010, **Freeman, R.L.** & Miller, J.F., Global correlation potential of linguliform brachiopods from the Upper Cambrian (Sunwaptan) Hellnmaria Member of the Notch Peak Formation of western Utah. *Geological Society of America, Abstracts with Programs,* 42(5), 642.

2003, Turner, G.T., P.-C. Lin, Ruez, D., **Jones, R.,** and Whaley, P. W., Paleontological database for the geologic quadrangle maps of Kentucky using ArcView 3.3. *Geological Society of America, Abstracts with Programs,* 35(1), 67.

1993, Ruez, D., **Jones, R.**, and Whaley, P. W., Paleontological database in dBASE III Plus for geologic quadrangle maps of Kentucky. *Geological Society of America, Abstracts with Programs,* 25(4), 65.

CAMPUS/DEPARTMENTAL PRESENTATIONS

2018, Kentucky Geological Survey. "The *Cyclora* Fauna: Misreading the Fossil Record"

2017, UK College of Arts & Sciences Dean's Circle, "A World of Kentucky Geoscience"

2017, UK EES, "From the Cambrian Explosion to the Great Ordovician Biodiversification Event: The Role of Brachiopods"

2013, UK EES, "The Curse of *Rafinesquina*: Negative Taphonomic Feedback Exerted by Strophomenid Shells on Storm-buried Lingulids in the Cincinnatian Series (Katian, Ordovician) of Ohio"

2012, UK Plant and Soil Science Department, "Conventional and Unconventional Sources of Oil and Gas"

2012, UK EES, "Linguliform Brachiopod Extinction and Global Migration Coinciding with Three Laurentian Trilobite Extinction Events During the Late Cambrian–earliest Ordovician"

PROFESSIONAL DEVELOPMENT

2018, Advancing Transdisciplinary Dialogue in Geoscience Education Research, Earth Educator's Rendezvous, Lawrence, Kansas

2016, Getting started in GER: Designing an Effective Geoscience Education Research Protocol, Earth Educator's Rendezvous, Madison, Wisconsin

2016, Flügel International Course on Carbonate Microfacies, GeoZentrum Nordbayern, Friedrich-Alexander Universitat Erlangen–Nürnberg, Feb. 29–March 4, Erlangen, Germany

ADMINISTRATION

PROFESSIONAL APPOINTMENTS

2017–present, Associate Chair, Department of Earth and Environmental Sciences

2013–present, Director of Undergraduate Studies, Department of Earth and Environmental Sciences

2013–present, Advisor to all Geological Sciences majors (primary for juniors/seniors; secondary for first year/sophomore student), Department of Earth & Environmental Sciences

AWARDS

2017, Nominated for Ken Freedman Outstanding Faculty Advisor

2016, Nominated for Ken Freedman Outstanding Faculty Advisor

2015, Nominated for Ken Freedman Outstanding Faculty Advisor

2014, Nominated for Ken Freedman Outstanding Faculty Advisor

PROFESSIONAL DEVELOPMENT

2019, Earth Educator's Rendezvous, Nashville, TN: Heads and Chairs: Future of Undergraduate Geoscience Education, 7/15–7/17

2018, UK Office of Institutional Effectiveness New Program Development Workshop Series: 'Kickoff" (9/28)

2018, UK Office of Institutional Effectiveness New Program Development Workshop Series: "Program Design" (10/5)

2018, UK Office of Institutional Effectiveness New Program Development Workshop Series: "Markey Analysis Using Burning Glass" (10/19)

2018, UK Office of Institutional Effectiveness New Program Development Workshop Series: "Pitfalls" (10/30)

2018, Developing and Implementing Program Assessment, Earth Educator's Rendezvous, Lawrence, Kansas

2017, Nudging Student to Success: The Integration of Academic Advising and Motivational Psychology, UK Advising Network

2016, MY UK GPS Training, University of Kentucky

2015, Faculty Breakfast and Forum on Advising, University of Kentucky

2015, Advising Professional Development Day, University of Kentucky
2013, UK A&S Advising Training
2013, How to work with distressed and distressing students, UK Faculty Advancement Workshop

FUNDING

2017, "Rock, Mineral and Fossil Display Cases with Hallway Seating, 3rd Floor hallway of Slone Building", UK Herman Lee and Nell Stuart Donovan Memorial Trust. $15,000, with Pete Idstein (Academic Coordinator, EES)

SERVICE

SERVICE TO PROFESSION

2022, Co-chair, Joint Meeting of the North-Central and South-East sections of the Geological Society of America, Cincinnati, Ohio
2019–present, member, Northern Kentucky University Geology program Advisory Board
2019-present, RISE liaison, Geological Society of America (**R**epsectful **I**nclusive **S**cientific **E**vents)
2019-present, This IS PS liaison, Paleontological Society (**I**nclusive and **S**afe Paleontological Society)
2019-present, Member, Editorial Board, Journal of Systematic Palaeontology, Natural History Museum, London
2015–present, Corresponding Member, International Cambrian Zone 9/10 Stage Boundary Committee
2020, Panelist, NSF BIO, September
2020, Panelist, NSF Interdisciplinary panel, May
2019 (December), asked to be available for three upcoming NSF EHR review panels (National Science Foundation, Directorate for Education and Human Resources)
2019 (November), asked to be available for five upcoming NSF BIO review panels (National Science Foundation, Directorate for Biological Sciences)
2019, Co-chair, Topical Session, "The end of Cambrian "boom and bust" and the onset of the Great Ordovician Biodivrersification Event (GOBE): diversity patterns, paleoecology, and paleobiogeography", Combined IGCP 653/IGCP 668 symposium at North American Paleontological Convention
2019, Panelist, NSF GEO
2018–2019, Co-editor, Special Volume of Palaeogeography, Palaeoclimatology, Palaeoecology with ICGP 653 (The Onset of the Great Ordovician Biodiversification Event)
2018, (July), asked to be available for upcoming NSF EHR/CISE/ENG review panel (National Science Foundation Directorates of Education and Human Resources/Computer and Information Science Engineering/Engineering)
2018, Co-chair, Topical Session, "Taphonomy: The Good, The Bad, and The Ugly" Geological Society of America Southeast Section Meeting

2017–2018, Member, Organizing Committee, Annual Meeting of United Nations Educational, Scientific, and Cultural Organization (UNESCO) International Geoscience Programme (IGCP) 653 (The Onset of the Great Ordovician Biodiversification Event)

2017, Poster Judge, American Geophysical Union Annual Conference

2017, Ad hoc reviewer, NSF GEO

2017 (November), Panelist, NSF BIO

2017, Co-chair, Topical Session, "The Onset of the Great Ordovician Biodiversity Event (GOBE): Testing Hypotheses with Diverse Data Sets", Geological Society of America National Meeting, Seattle, Washington (IGCP 653 Regional Meeting)

2017 (January), Panelist, NSF BIO

2015, Poster Judge, Geological Society of America national meeting

2013–2015, Chair, North-Central Section of the Paleontological Society

2014, moderated three sessions, National Council on Undergraduate Research

2014, Poster Judge, Geological Society of America national meeting

2014, Poster Judge, North-Central section of the Geological Society of America

2014, Co-chair, Discipline Session, "Paleoclimatology, Paleoecology, and Evolution", GSA NC Meeting

2013, Organized symposium in honor of the retirement of Ronald Parsley, Tulane University,

2011, Co-chair, Topical Session, "Paleozoic Paleontology of Southern Central North America", GSA SC Meeting

2010, Co-chair, Discipline Session, Biostratigraphy and Ichnology, GSA National Meeting.

Peer Review: Alcheringa; Gondwana Research; Historical Biology; International Journal of STEM Education; Journal of Paleontology; Journal of Systematic Palaeontology; Memoirs of the Association of Australasian Paleontologists; Palaeoworld; Palaeogeography, Palaceoclimatology, Palaeoecology; Journal of Geoscience Education, Oceanography, Indiana University Press, Cambridge University Press

DEPARTMENTAL/COLLEGE/UNIVERSITY SERVICE

2021, Reviewer, UK Next Gen school applications for Dual Enrollment

2020, Panelist, College of Arts & Sciences Faculty Panel on Writing for International Students

2020–present, member, Provost's Committee on Advising

2018–present, member, Senate Retroactive Withdrawal Committee

2018–present, Chair, University Senate Advising Committee

2017–2020, Associate Chair, Department of Earth & Environmental Sciences

2016–present, elected representative, UK University Senate

2016–present, Faculty Advisor, UK Outdoors Club

2015–present, Faculty Advisor, UK KY AIPG Student Chapter

2013–present, member, EES Curriculum Committee

2013–present, Director of Undergraduate Studies, Department of Earth & Environmental Science
2013–present, Faculty Advisor, UK Rocks Geology Club
2013–present, primary advisor to Geological Sciences Junior and Senior majors; secondary advisor to Geological Sciences Freshmen and Sophomores
2011–present, member, EES Recruitment Committee
2018, Member Wildcat Foundations of Excellence Learning Dimension Subcommittee
2015–2016, UK "I am a Woman in STEM" mentor
2014–2018, organizer, UK EES Open House every semester
2014–2016, UKCore Assessment Pilot Project
2013–2017, UK EES "Women in Geology" monthly mentoring breakfasts
2015, K-Week Freshmen Mentoring
2014, Assessment Team for UKCore "Natural, Physical, and Mathematical Sciences"
2014, Senate Undergraduate Council 1 semester substitute appointment
2014, "How People Learn" workshop, UK EES (with Kay Shenoy and Jennifer Osterhage of UK Biology)
2013, A&S Course Redesign Institute
2012, Assessment Team for UKCore "Natural, Physical, and Mathematical Sciences"
2012, Organized recruitment booth at national Geological Society of America meeting
2012, Organized outreach booth at Falls of the Ohio Earth Discovery Day at Falls of the Ohio State Park
2011, Participant, Pilot Project, Early Student Intervention software

COMMUNITY INVOLVEMENT & OUTREACH

2018, Volunteer, Kentucky Science Olympiad
2018, Bluegrass Gem and Mineral Club, "How Minerals Make Fossils"
2018, Judge, Fayette County Science Fair
2017, Yates Elementary Family Science night
2017, Consultant to Bourbon County Public Library, paleontology and geology display
2017, Girl Scout GEMS Day (Girls in Engineering, Math, and Science)
2017, Judge, Fayette County Science Fair, 5th grade Earth & Planetary Science
2017, Kentucky Paleontology Society, "The Future of Paleontology: Challenges & Opportunities"
2016, Falls of the Ohio State Park Fossil Fest, Clarksville, IN
2016, Burpee Museum of Natural History "Paleo Fest", Rockford, IL
2014, Girl Scout GEMS Day, UK Campus
2015, Girls STEM Day, UK Campus
2015, Girl Scout GEMS Day (Girls in Engineering, Math, and Science)
2015, Kentucky Paleontological Society, "The Other Food Chain: Chemosynthesis in Today's Oceans and What it Tells Us About the History of Life"
2014, Kentucky Paleontological Society, "The Cyclora Fauna: Fossils, Fertilizer, and the Future"

2014, 4-H Summer Camp, Estill County, KY
2012, Kentucky Paleontological Society, "The Curse of *Rafinesquina*"
2012, Dry Dredgers Paleontological Society, Cincinnati, OH, "The Brachiopod Trap: What Their Oldest (Upper Ordovician, Ohio) Failed Escape Burrows Tell Us About the Evolution of Burrowing in Lingulides"
2012, Falls of the Ohio State Park Earth Science Discovery Day, "Extinction and Shells on the Beach"
2011, Kentucky Paleontological Society, "Brachiopod Extinction and Predation During the Late Cambrian"

PROFESSIONAL MEMBERSHIPS

Geological Society of America (GSA)
American Geophysical Union (AGU)
Paleontological Society
Great Lakes Section Society of SEPM (Society for Sedimentary Geology)
Sigma Gamma Epsilon
National Association of Geoscience Teachers (NAGT)
National Science Teachers Association/Society for College Science Teaching (NSTA)
Association for Women Geoscientists (AWG)

MEDIA COVERAGE

Coverage of 2019 Stigall et al. paper:
https://www.sciencedaily.com/releases/2019/08/190815180633.htm
https://www.eurekalert.org/pub_releases/2019-08/ou-esd081519.php

Interviewed as "outside expert":
https://www.sciencemag.org/news/2019/09/veil-dust-ancient-asteroid-breakup-may-have-cooled-earth

https://www.space.com/asteroid-breakup-dust-ice-age-life-on-earth.html

Coverage of Kentucky/India State Department Project, "Water Quality Testing Brings Kentucky and Eastern Indian students together" News India, June 22, 2018

https://www.newsindiatimes.com/water-quality-testing-brings-kentucky-and-eastern-indian-students-together/

Coverage of Kentucky/India State Department Project, Mountain Top News, "Belfry students traveling to India to present water research", Feb. 6, 2018
http://mountain-topmedia.com/belfry-students-traveling-to-india-to-present-water-research/

Coverage of Kentucky/India State Department Project, The Hindu, "Learning the Basics of Water Analysis", December 22, 2017
http://www.thehindu.com/todays-paper/tp-in-school/learning-the-basics-of-water-analysis/article22217114.ece

Feature Article, Kentucky Kernel, "Paleontology Professor Studies Early Marine Life", April 13, 2016
http://www.kykernel.com/features/paleontology-professor-studies-early-marine-life/article_a8855494-01f0-11e6-bfd0-230c3c2deeab.html

Columbus Ohio Dispatch, Oct. 6, 2013:
http://www.dispatch.com/content/stories/science/2013/10/06/1-the-strange-tale-of-the-cursed-brachiopod.html

UK College of Arts & Sciences podcast:
https://www.as.uky.edu/podcasts/curse-rafinesquina-prehistoric-mystery-rebecca-freeman