

Dr. Beth N. Orcutt

Vice President for Research & Senior Research Scientist

Bigelow Laboratory for Ocean Sciences

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Summary

Orcutt has been the **Vice President for Research** (VPR) at the Bigelow Laboratory for Ocean Sciences since 2022. Building from an **award-winning career in deep-sea science** leadership, she **guides the bold strategic research priorities** for the institution and relationships with external funders of over \$15M annually in sponsored and contracted research projects. She also **energizes blue economy innovation in Maine**, including overseeing innovation disclosures, patenting, and licensing processes for technology transfer at Bigelow Laboratory, as well as partnering with others in the State to advance ocean-based solutions.

Orcutt is also a **globally-recognized expert** in the environmental **impacts of deep-sea mining**. She's authored some of the most **highly cited papers** on understanding the ecosystem services provided in the deep sea by the microscopic realm of life. She is regularly invited to **provide expert guidance to policy makers** and scientific societies and is **often quoted in the media** on the topic. Orcutt is the Associate Director of the **COBRA** Crustal Ocean Biosphere Research Accelerator, spurring deep sea research to inform decision making.

Orcutt's expertise in deep-sea mining impacts stems from over a **decade of leadership experience** directing diverse and international teams of scientists and students **in the exploration of the deep sea**. Using seafloor exploration assets and deep-sea observatories, her research has focused on discovering how "deep biosphere" microscopic life thrives in strange environments and how their living impacts global processes. Orcutt is a co-founder and co-instructor of the **Deep-Sea Expedition Leadership Master Class**, which trains early career professionals on how to lead effective deep-sea expeditions. At Bigelow Laboratory, she directs the **Deep Biosphere Laboratory** team. She has a Ph.D. in Marine Sciences from the University of Georgia. Having traveled far and wide for her research, Orcutt also has a passion for promoting cross-cultural justice, equity, diversity, and inclusivity in ocean science and spearheaded reforms in this area at Bigelow Laboratory.

Science keywords: deep-sea mining, deep-sea microbial ecosystem services, deep biosphere, geomicrobiology, microbial biogeochemistry, astrobiology, oceanic crust, microbe-mineral, observatories,

Current Appointments

- | | |
|--------------|--|
| 2022-present | Vice President for Research: Bigelow Laboratory for Ocean Sciences, ME, USA (served as interim from July 2022 – April 2023) |
| 2012-present | Senior Research Scientist: Bigelow Laboratory for Ocean Sciences, ME, USA |
| 2012-present | Research Professor: Colby College, ME, USA |

Professional Experience

- | | |
|--------------|---|
| 2022-present | Science Ambassador: Deep Ocean Stewardship Initiative's DOSI official Observer delegation to the International Seabed Authority |
| 2020-2022 | Diversity, Equity & Inclusivity Liaison: Bigelow Laboratory |
| 2019-2022 | Research Fellow: Hanse-Wissenschaftskolleg, Delmenhorst, Germany |

Curriculum Vitae – Dr. Beth N. Orcutt – as of July 2024

2009-2012	Postdoctoral Research Associate: Center for Geomicrobiology, Aarhus University, Aarhus, Denmark; lab of Prof. Dr. Bo Barker Jørgensen
2009-2020	Adjunct Associate Professor: Marine Biology and Biological Oceanography, Dept. of Biological Sciences, University of Southern California, CA, USA
2007-2009	Postdoctoral Research Associate: Department of Biological Sciences, University of Southern California, CA, USA; lab of Dr. Katrina J. Edwards
2004-2006	Guest Scientist: Organic Geochemistry Group, Research Center Ocean Margins, Bremen, Germany; lab of Prof. Dr. Kai-Uwe Hinrichs
2002-2006	Guest Scientist: Habitat Group, Max Planck Institute for Marine Microbiology, Bremen, Germany; lab of Prof. Dr. Antje Boetius

Education and Courses

2002-2007	Ph.D. in Marine Sciences, University of Georgia, Athens, GA, USA. <i>Dissertation advisor:</i> Dr. Samantha B. Joye; <i>Dissertation title:</i> “Anaerobic oxidation of methane in cold seeps and gas hydrates: Responsible microorganisms, rates of activity, and interactions with other processes.”
2003	International Geobiology Course, University of Southern California
1998-2002	B.S. in Interdisciplinary Studies (Marine Geochemistry emphasis with Geology minor), University of Georgia, Athens, GA, USA; Summa Cum Laude

Honors and Awards

2020	CHOICE award and Association of American Publishers 2020 PROSE award for <u>Deep Carbon</u> published by Cambridge University Press (lead editor)
2019	Asahiko Taira International Scientific Ocean Drilling Research Prize , conferred jointly by the American Geophysical Union and Japan Geoscience Union
2019	Hanse Wissenschaftskolleg (Delmenhorst, Germany) <u>Fellow</u> , Nov 2019-Feb 2020
2019	Kavli Frontiers of Science Fellow, National Academy of Sciences. Presentation: <u>https://vimeo.com/321547723</u>
2018	Geobiology and Geomicrobiology Division post-tenure award, Geological Society of America
2017	Charlie & Marie Fish Distinguished Lecturer, <i>University of Rhode Island</i>
2014-2015	Distinguished Lecturer for the U.S. Science Support Program for the Ocean Drilling Program

Research Award Leadership (~\$6M awarded since 2012)

2021-2026	National Science Foundation (<u>OISE-2114593</u>); 10/01/2021-09/30/2026; \$1,997,178; PI: AccelNet-Implementation: Crustal Ocean Biosphere Research Accelerator (COBRA); Co-Is: Julie Huber, Andrew Fisher, Geoff Wheat, Randi Rotjan
2021-2024	National Oceanographic and Atmospheric Administration (NA21OAR0110199); 07/01/2021 – 06/30/2024; \$310,738; PI: Microbial Ecosystem Services at Seamounts (MESS)
2018-2024	National Science Foundation (<u>OIA-1826734</u>); 08/15/2018 – 07/31/2024; \$893,636 of total \$6M; Co-PI: EPSCOR Track-2 FEC: Single Cell Genome-to-Phenome: Integrating genome and phenotype analysis of individual microbial cells in complex microbiomes (PI: Ramunas Stepanauskas, Co-PIs: Nicole Poulton, Kai Zier vogel, Duane Moser)
2018-2023	National Science Foundation (<u>OCE-1737017</u>); 01/01/2018 – 12/31/2023; \$455,041 + \$61,997 supplement; PI: Microbial activity in the deep crustal biosphere

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2022-2023	National Science Foundation (subaward from <u>OCE-1450528</u> from Columbia University); 06/01/2022 – 02/28/2023; \$60,579 subaward; co-PI: Participation of Timothy D'Angelo as Microbiologist on IODP Expedition 393
2015-2022	National Science Foundation (subaward from <u>OCE-0939564</u> to University of Southern California); 10/01/2015 – 09/30/2022; \$928,205 subaward as Senior Scientist; Center for Dark Energy Biosphere Investigations (C-DEBI) Phase 2 renewal (PI: Jan Amend, Co-PIs: Steve D'Hondt, Andrew Fisher, Julie Huber, Geoff Wheat)
2021-2022	National Science Foundation (subaward from <u>OCE-1450528</u> from Columbia University); 06/01/2021 – 02/28/2022; \$15,035 subaward; co-PI: Participation of Melody Lindsay as Inorganic Geochemistry on IODP Expedition 395C
2019-2022	Hanse Wissenschaftskolleg fellowship
2019-2022	NASA (<u>Exobiology-80NSSC19K0466</u>); 2/13/2019-2/12/2022; \$299,453 total; PI: Sorting out active vs. inactive microbes in subsurface oceanic crust Icy World analogs (Co-I: Ramunas Stepanauskas)
2019-2020	National Science Foundation (subaward from <u>OCE-1450528</u> to Columbia University); 04/01/2019 – 02/28/2020; \$65,040 subaward; PI: Participation of Dr. Beth Orcutt as co-chief scientist on IODP Expedition 385T
2019	Sloan Foundation (subaward from <u>G-2017-14084</u> to Marine Biological Laboratory); 01/01/2019 – 11/30/2019; \$20,000 subaward; Co-PI: Deep Life Community - the Deep Carbon Observatory 2018-2019 (PI: Mitch Sogin)
2017-2019	Sloan Foundation (<u>G-2017-9881</u>); 09/01/2017 – 11/30/2019; \$86,128 total; PI: Creation and editing of Deep Carbon: Past to Present book for the Deep Carbon Observatory
2015-2019	National Science Foundation (subaward from <u>OCE-1450528</u> from Columbia University); 09/01/2015 – 02/28/2019; \$212,756 subaward; PI: Participation of Dr. Beth Orcutt as co-chief scientist on IODP Expedition 357
2016-2019	National Science Foundation (subaward from <u>OCE-1450528</u> from Columbia University); 04/01/2016 – 02/28/2019; \$35,763 subaward; Co-PI: Participation of Dr. Stephanie Carr on IODP Expedition 365 (PI: Stephanie Carr)
2015-2018	Gulf of Mexico Research Initiative (subaward from <u>GOMRI-SA1517</u> to University of Georgia); 01/01/2015 – 12/31/2018; \$406,628 subaward; Co-PI: ECOGIG: Ecosystem Impacts of Oil and Gas Inputs to the Gulf of Mexico (PI: Samantha Joye)
2016-2018	National Science Foundation (subaward from <u>OCE-0939564</u> to University of Southern California); 12/01/2016 – 11/20/2018; \$230,000 subaward; Co-PI: Postdoctoral Fellowship for Jacqueline Goordial: Investigations into the Diversity and Function of Active Microbial Subpopulations in Atlantis Massif oceanic crust (PI: Jacqueline Goordial)
2015-2018	National Science Foundation (<u>OCE-1536539</u>); 10/01/2015 – 09/30/2018; \$56,325 total; Co-PI: Collaborative Research: Completing North Pond Borehole Experiments to Elucidate the Hydrology of Young, Slow-Spread Crust (PI: Geoff Wheat; Co-PI: Keir Becker)
2016-2017	NASA (subaward from <u>NNA13AA92A</u> from University of Southern California); 06/01/2016 – 12/31/2017; \$155,915 subaward; Co-PI: Life Underground NASA Astrobiology Institute (PI: Jan Amend)
2016-2017	Sloan Foundation (subaward from <u>G-2015-14084</u> from Marine Biological Laboratory); 01/01/2016 – 12/31/2017; \$34,720 subaward; Co-PI: Deep Life Community - the Deep Carbon Observatory 2016-2018 (PI: Mitch Sogin)
2014-2017	National Science Foundation (<u>PLR-1416961</u>); 09/01/2014 – 08/30/2017; \$154,760 total; PI: Collaborative Research: Year-round autonomous sampling of methane in Arctic Lakes (Co-PI: Laura Lapham, Geoff Wheat)

Curriculum Vitae – Dr. Beth N. Orcutt – as of July 2024

2013-2017	National Science Foundation (OCE-1335810); 08/15/13-07/31/17; \$535,211 total to PI; Co-PI: MRI: Acquisition of genome sequences for Bigelow Laboratory for Ocean Sciences (PI: Ramunas Stepanauskas)
2013-2016	National Science Foundation (DBI-1318385); 09/15/13 – 08/31/16; \$111,649 total to PI; Co-PI: FSML-Enhanced Cooperative Radiochemistry Research and Education at the Bigelow Laboratory for Ocean Sciences (PI: William Balch)
2012-2015	National Science Foundation (OCE-1233226); 08/15/2012 – 07/31/2015; \$182,306 total; PI: IODP Expedition 336 Objective Research: The deep biosphere of young and oxic oceanic crust (Co-PI: Katrina Edwards, Heath Mills)
2012-2014	National Science Foundation (subaward from OCE-0939564 to University of Southern California); 12/01/2012 – 12/31/2014; \$49,995 subaward; PI: The Dorado Outcrop low-temperature ridge flank environment
2012-2013	National Science Foundation (subaward from OCE-0652315 to Consortium for Ocean Leadership); 11/01/2012 – 10/13/2013; \$8,828 subaward; PI: The Adopt A Microbe Project
2012-2013	National Science Foundation (subaward from OCE-0939564 to University of Southern California); 4/01/2012 – 9/30/2013; \$49,919 subaward; PI: Primary productivity in young, oxic oceanic crust: Rates of activity and autotrophic groups in subsurface and seafloor-exposed basalts from North Pond, Mid-Atlantic Ridge

Professional Service

2024-present	Member, State of Maine Blue Economy Task Force
2024-present	Member, AGU Asahiko Taira Prize selection committee
2018-present	Member, Deep Ocean Stewardship Initiative (DOSI): Minerals Working Group and Decade of Deep-Ocean Science Working Group
2018-present	Member, Scientific Advisory Committee, International Center for Deep Life Investigation (IC-DLI), Shanghai, China
2020-2023	Member, IODP Curatorial Advisory Board
2020-2023	Member, JEDI Committee of The Oceanography Society
2021-2022	Short-term Member, Committee on Astrobiology and Planetary Sciences (CAPS) of the U.S. National Academy of Sciences
2019-2022	Steering Committee Member, Network for Life Detection (NFoLD), a NASA Astrobiology Research Coordination Network
2019-2022	Steering Committee Member, Network for Ocean Worlds (NOW), a NASA Astrobiology Research Coordination Network
2019-2019	Science Advisory Board member, Jebsen Centre for Deep-Sea Research, Bergen, Norway
2018-2021	Member, IODP Science Evaluation Panel
2018-2020	Steering Committee Member, Scientific Ocean Drilling post-2023 (SOD23+)
2018-2020	Steering Committee Member, Deep Carbon Observatory Deep Life Community
2016-2018	Member, Deep Carbon Observatory "Task Force 2020"
2015-2022	Senior Scientist, Center for Dark Energy Biosphere Investigations (C-DEBI) NSF Science and Technology Center
2012-2015	Member, U.S. Advisory Committee for Scientific Ocean Drilling (USAC)

- Session co-organizer for society conferences: AGU Fall meeting (2021, 2016, 2014, 2012, 2011, 2008, 2007), Ocean Sciences Meeting (2024, 2022)

- Workshop co-organizer: 2018 Ocean Worlds 3 meeting, 2014 IODP-MI workshop on deep biosphere research
- Recent *ad hoc* reviews for journals: *Deep Sea Research*, *Environmental Microbiology*, *Frontiers in Microbiology*, *Geobiology*, *Geophysical Instruments*, *ISME Journal*, *Limnology & Oceanography*, *mBio*, *Nature Geoscience*, *Nature Microbiology*, *Organic Geochemistry*, *Philosophical Transactions of the Royal Society*, *PLOS One*, *PNAS*, *Science*, *Scientific Drilling*

Society Memberships

- American Geophysical Union (AGU)
- American Society for Microbiology (ASM)
- Association for the Science of Limnology & Oceanography (ASLO)
- Association for University Technology Managers (AUTM)
- Deep Sea Biology Society (DSBS)
- Deep Ocean Stewardship Initiative (DOSI)
- The Oceanographic Society (TOS)
- Society for the Advancement of Chicanos/Hispanics & Native Americans in Science (SACNAS)
- Women's Aquatic Network

Mentoring

Research Scientists

- 2023-present [Melody Lindsay](#)
2023-present [Julia Brown](#)

Postdoctoral Scientists

- 2020-2022 [Julia McGonigle](#). Now a researcher with Basepaws
2019-2022 [Melody Lindsay](#). Now a Research Scientist at Bigelow
2019-2022 [Anne Booker](#). Now a Postdoctoral Scientist at Bigelow with Dr. Joaquín Martínez
2016-2019 [Jacqueline Goordial](#). C-DEBI Postdoctoral Fellow 2016-2018, Now an Assistant Professor at University of Guelph
2016-2019 [Rose Jones](#). Now a researcher with Fugro
2015-2016 [Jessica Labonté](#). Now an Assistant Professor at Texas A&M, Galveston
2013-2017 [Stephanie Carr](#), C-DEBI Postdoctoral Fellow 2013-2015, NSF Postdoctoral Fellow 2015-2017, Now an Associate Professor at Hartwick College

Ph.D. students:

- 2014-2016 [Gustavo Ramírez](#), University of Southern California, Co-advisor and committee member, Now an Assistant Professor at CSU Los Angeles

Master's students:

- 2020 Kerry Dykens, University of New Hampshire, committee member (thesis advisor Kai Zier vogel)
2015-2018 Mitchell Bergstresser, Simon Fraser University, Co-advisor and committee member
2017 Siham De Goeijse, IPGP France, Hosted internship
2015 Aurelien Lecouevre, Universite Occidental Britania, France, Hosted internship

Undergraduate students:

- 2023 Michael Budner, Northeastern University, 2023 fall semester intern
2022 Melissa Herring, Northeastern University, 2022 spring semester intern
2021 Dani Buchheister, University of Colorado Boulder, 2021 Summer NSF-REU intern
2021 Grace Beery, Boston University, 2021 Summer NSF-REU intern
2021 Asher Platts, Southern Maine Community College, 2021 Summer NSF-REU intern
2021 Eliza Goodell, Oberlin College, Spring 2021 intern (NASA funded)
2021 Annie Sternberg, Colby College, 2021 JanPlan intern
2021 Anna Chen, Colby College, 2021 JanPlan intern
2020 Jennifer Gladstone, UCSB, 2020 Colby-at-Bigelow fall semester intern
2020-2022 Annabelle Adams-Beyea, The New School, 2020 Summer intern (Rodney White fellowship funded) + 2020 Fall independent research study + 2021 Colby-At-Bigelow fall semester intern + 2022 COBRA intern on Expedition NA138
2019 Katelyn Smith, Maine Maritime Academy, 2019 Summer intern (NASA funded)
2018 Patricia Montalvo, University of Puerto Rico, 2018 Summer NSF-REU intern
2017 Matthew Weiser, Occidental College, 2017 Summer NSF-REU intern
2016 Jin Mei McMahon, Colorado College, 2016 Summer NSF-REU intern
2016 Elenia Lin, Colby College, 2016 Colby-At-Bigelow fall semester intern
2015 Francisco Spaulding, University of Chicago, 2015 Summer NSF-REU intern
2014 Briana Adams, Texas A&M, Corpus Christi, 2014 Summer NSF-REU intern
2014 Allison Sharrar, University of Michigan, 2014 Summer NSF-REU intern

Teaching & Instruction

Formal Education & Instruction

- 2005 **Teaching Assistant** for Biology of the Marine Environment, University of Georgia, Athens, GA, USA. Designed and presented lectures for the undergraduate laboratory courses for non-science majors; oversaw laboratory exercises; designed, proctored, and graded laboratory reports, quizzes, and exams.

Informal Education & Instruction

- 2021 **Guest lecturer**, Portland High School, Nov 29, 2021
2020 **Guest lecturer**, Portland High School; Dec 1, 2020
2019 **Guest lecturer**, Boothbay Regional High School, March 28, 2019
2019 **Guest lecturer**, University of Southern Maine, March 26, 2019
2017 **Lead of 6-week Adopt-A-Microbe ship-to-shore outreach project** in conjunction with the Girl Scouts of Maine. Featured daily blog posts and weekly interactive activities, followed by an in-person visits of Scouts to Bigelow Laboratory for hands-on science experiments. Based on “Adopt-A-Microbe” project developed in 2010/2011/2012 described in *Current: The Journal of Marine Education* (see publications).
<https://sites.google.com/site/adoptamicrobe2017/>
2017 **Guest lecturer**, Professional development webinar on preparing proposals and budgets, jointly sponsored by C-DEBI and the Consortium for Ocean Leadership, June 15, 2017;
<https://youtu.be/eb3fWiGp5EA>

Recent Notable Public Outreach

- 2023 Interviewed for news articles on deep-sea octopus nurseries:
[Scientific American](#), [NPR Short Wave](#), [Scientific American](#)

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- 2023 Interviewed for articles on deep-sea mining. [Reuters April 14, 2023](#). [Mongabay March 31, 2023](#). Bloomberg May 23. [Salon August 3](#)
- 2023 [Interview](#) on “How Deep-sea Mining Threatens Fundamental Ecosystems” for Science for the Public on GBH Forum Network, with Dr. Julie Huber, May 16, 2023
- 2022 Interviewed for article on deep-sea mining, [Hakai Magazine](#)
- 2022 Public lecture (hybrid) at Cove St Arts on art+science [collaboration](#) with artist Michel Droke; May 26, 2022
- 2022 Public [webinar](#) for National Marine Sanctuaries Foundation “Third Thursday by the Bay” series, March 17, 2022. 474 registrants.
- 2021 Guest on [Next on Nautilus](#) broadcast, Nov 22, 2021
- 2021 [Public lecture](#) (hybrid) at the Maine Jewish Museum on art+science collaboration with artist Michel Droke; Nov 7, 2021
- 2020 Public lecture (virtual) for Islesboro Forum; August 9, 2020;
<https://www.youtube.com/watch?v=ZFSp8F9Plt0>
- 2020 Public lecture (virtual) for the *Café Sci* program of the Bigelow Laboratory for Ocean Sciences; July 21, 2021; “[Deep-Sea Frontiers: What Happens when Humanity Seizes the Seafloor](#)”
- 2019 Interviewed on *Scientifically Speaking* on WMPG 90.9fm (Portland, ME), July 12, 2019;
<https://www.wmpg.org/show/fri1300/#>
- 2018 Public lecture in Dallas, TX, for the *EarthX* Ocean Expo
- 2018 Public lecture in East Boothbay, ME, for the *Café Scientifique* program of the Bigelow Laboratory for Ocean Sciences, 180+ attendees, “Deep-Sea Mining: How Your Cell Phone is Driving the Quest for Seafloor Minerals”
- 2018 Featured in *Smithsonian Magazine* article about deep sea exploration and deep-sea mining, <https://www.smithsonianmag.com/science-nature/diving-deep-reveal-microbial-mysteries-lost-city-180970234/>
- 2018 Speaker, American Museum of Natural History *Milstein Science Series* on Ocean Technology, 500+ attendees. <https://www.amnh.org/calendar/milstein-science-series-ocean-technology>
- 2018 Speaker, Maine Science Festival 5 Minute Genius program, 100+ people.
<https://youtu.be/FAmR9dAhNqk>
- 2017 Featured in *Smithsonian Magazine* article about warming permafrost.
<https://www.smithsonianmag.com/science-nature/climate-scientists-turn-to-unusual-partnerships-arctic-180965015/>
- 2017 Featured in *Life Below the Seafloor: A Deep Sea Search for Intraterrestrial Life* short video by Bigelow Laboratory for Ocean Sciences. <https://youtu.be/MQPXCgzORPw>
- 2017 Public lecture in East Boothbay, ME, for the *Café Scientifique* program of the Bigelow Laboratory for Ocean Sciences, 100+ attendees, “The Oil-You-Can-Eat Buffet: How Microscopic Life Eats Oil in the Ocean”
- 2016 Public lecture in East Boothbay, ME, for the *Café Scientifique* program of the Bigelow Laboratory for Ocean Sciences, 100+ attendees, “If a frozen lake burps methane into the atmosphere, and no one is around to see if, did it happen?”
- 2015 Featured in *Deep Sea Gold Rush* short video on Al Jazeera’s “TechKnow” program.
<https://www.aljazeera.com/programmes/techknow/2015/12/deep-sea-gold-rush-151226120600259.html>
- 2014 Featured in *Meet a Scientist* short video by Ocean Leadership.
<https://youtu.be/p7eYZ56sndM>
- 2013 Featured in *North Pond: Search for Intraterrestrials* documentary (96 minutes); Awards: Best Documentary Feature, 2014 Yosemite Film Festival; Honorable Mention – Documentary Feature, 2014 Blue Ocean Film Festival; <https://vimeo.com/117447690>

Oceanographic Field Experience – 35 cruises & 702 days at sea, and counting

2023	<u>Cruise Fkt231202</u> , <i>RV Falkor (too)</i> with ROV SuBastian, Costa Rica Pacific Ocean, co-lead scientist
2023	Cruise TN421, R/V <i>Thomas G. Thompson</i> with ROV <i>Jason II</i> , Juan de Fuca Ridge flank, co-lead scientist
2023	<u>Cruise Fkt230602</u> , <i>R/V Falkor (too)</i> with ROV <i>SuBastian</i> , Costa Rica Pacific Ocean, co-lead scientist
2022	<u>Cruise NA138</u> , E/V <i>Nautilus</i> with ROV <i>Hercules</i> , Papahānaumokuākea Marine National Monument, lead scientist
2021	<u>Cruise NA134</u> , E/V <i>Nautilus</i> with ROV <i>Hercules</i> , Papahānaumokuākea Marine National Monument, co-lead scientist
2019	<u>IODP Expedition 385T</u> , D/V <i>JOIDES Resolution</i> , Costa Rica Rift flank, co-chief scientist <u>Cruise AT42-11</u> , R/V <i>Atlantis</i> with ROV <i>Jason II</i> , Juan de Fuca Ridge flank, chief scientist
2017	<u>Cruise AT39-01</u> , R/V <i>Atlantis</i> with ROV <i>Jason II</i> , Mid-Atlantic Ridge, co-chief scientist
2016	Cruise PS17-05, R/V <i>Point Sur</i> , Northern Gulf of Mexico Cruise PE16-18, R/V <i>Pelican</i> , Northern Gulf of Mexico
2015	<u>IODP Expedition 357</u> , RRS <i>James Cook</i> with seabed drills <i>MeBo</i> and <i>RD2</i> , Atlantis Massif, co-chief scientist <u>Cruise PE15-20</u> , R/V <i>Pelican</i> , Northern Gulf of Mexico, chief scientist
2014	Cruise AT26-24, R/V <i>Atlantis</i> with HOV <i>Alvin</i> , Dorado Outcrop; Alvin dive <u>4777</u> with Pilot Phil Forte Cruise AT26-18, R/V <i>Atlantis</i> with HOV <i>Alvin</i> , Juan de Fuca Ridge flank; Alvin dive <u>4750</u> with Pilot Bob Waters <u>Cruise PE14-14</u> , R/V <i>Pelican</i> , Northern Gulf of Mexico, chief scientist
2013	Cruise AT26-09, R/V <i>Atlantis</i> with ROV <i>Jason II</i> and AUV <i>Sentry</i> , Dorado Outcrop <u>Cruise PE 14-09</u> , R/V <i>Pelican</i> , Northern Gulf of Mexico, chief scientist Cruise AT26-03, R/V <i>Atlantis</i> with ROV <i>Jason II</i> , Juan de Fuca Ridge flank Cruise NA027, E/V <i>Nautilus</i> with ROV <i>Hercules</i> , Northern Gulf of Mexico Cruise PE 13-21, R/V <i>Pelican</i> , Northern Gulf of Mexico
2012	<u>Cruise Fk006b</u> , R/V <i>Falkor</i> with ROV <i>Global Explorer</i> , Northern Gulf of Mexico, co-chief scientist Cruise MSM20-5, R/V <i>Maria S. Merian</i> (Germany) with ROV <i>Jason II</i> , Mid-Atlantic Ridge
2011	<u>IODP Expedition 336</u> , D/V <i>JOIDES Resolution</i> , Mid-Atlantic Ridge Cruise AT18-07, R/V <i>Atlantis</i> with ROV <i>Jason-II</i> , Juan de Fuca Ridge flank
2010	<u>IODP Expedition 327</u> , D/V <i>JOIDES Resolution</i> , Juan de Fuca Ridge flank
2009	Cruise KM09-23, R/V <i>Kilo Moana</i> with ROV <i>Jason</i> , Loihi Seamount Cruise AT15-51, R/V <i>Atlantis</i> with HOV <i>Alvin</i> , Juan de Fuca Ridge and Ridge flank; Alvin dive <u>4538</u> with Pilot Mark Spear
2008	Cruise TN-225, R/V <i>Thompson</i> with ROV <i>Jason</i> , Loihi Seamount
2008	Cruises AT15-34/35, R/V <i>Atlantis</i> with HOV <i>Alvin</i> , Juan de Fuca Ridge and Ridge flank; Alvin dive <u>4420</u> with Pilot Mark Spear
2007	Cruise AT15-23, R/V <i>Atlantis</i> with HOV <i>Alvin</i> , Juan de Fuca Ridge flank; Alvin dive <u>4532</u> with Pilot Pat Hickey
2004	Cruise JOH/04/0035, R/V <i>Seward Johnson I</i> , Western Gulf of Mexico
2003	Cruise SO-174, R/F <i>SONNE</i> , Northern and Southern Gulf of Mexico cold seeps
2002	Cruise HE-180, R/V <i>Heincke</i> , North Sea cold seeps
2002	Cruise LExEn2002, R/V <i>Seward Johnson II</i> with <i>Johnson SeaLink</i> submersible, Northern Gulf of Mexico cold seeps
2001	Cruise LExEn2001, R/V <i>Seward Johnson I</i> with <i>Johnson SeaLink</i> submersible, Northern Gulf of Mexico cold seeps

Continental Field Experience

- Mackenzie River delta Arctic lakes, Northwest Territories, Canada, 08/10/16–08/16/16
- Mackenzie River delta Arctic lakes, Northwest Territories, Canada, 03/17/16–03/23/16
- Mackenzie River delta Arctic lakes, Northwest Territories, Canada, 07/29/15–8/10/15
- Mono Lake, California, summers 1999, 2000

Scientific Journal Publications (peer-reviewed)

*ORCID ID: 0000-0002-6233-3578 – * student advisee, \$ postdoctoral advisee. h-index = 32*

2024

72. Lindsay MR, D'Angelo T, Munson-McGee JH, Saidi-Mehrabad A, Devlin M, McGonigle J, Goodell E, Herring M, Lubelczyk L, Mascena C, Brown JM, Gavelis G, Liu J, Yousavich DJ, Hamilton-Brehm SD, Hedlund BP, Lang S, Treude T, Poulton NJ, Stepanauskas R, Moser DP, Emerson D, **Orcutt BN**. 2024. Species-resolved, single-cell respiration rates reveal dominance of sulfate reduction in a deep continental subsurface ecosystem. *Proceedings of the National Academy of Sciences*, 121(15), e2309636121. DOI: [10.1073/pnas.2309636121](https://doi.org/10.1073/pnas.2309636121)

2023

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Books, Book Chapters, and Special Issues (peer-reviewed)

Book editing

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