Heather Craig Olins

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EDUCATION

Harvard University, Graduate School of Arts & Sciences, Cambridge, MA

- Ph.D. in Organismic & Evolutionary Biology, May 2016
  Thesis: Abiotic Influences on Free-Living Microbial Communities at Hydrothermal Vents;
  Advisor: Dr. Peter Girguis
- Microbial Science Initiative (MSI) Graduate Consortium Certificate
- Bok Center for Teaching and Learning Teaching Certificate, completed Spring 2015

Wesleyan University, Middletown, CT

- M.A. in Earth & Environmental Sciences, 2006
  Thesis: Spatiotemporal Analyses of Benthic Macroinvertebrate Community Structure in Selected Connecticut Streams; Advisor: Dr. Barry Chernoff
- B.A. with high honors in Earth & Environmental Sciences, 2005
  Honors Thesis: Comparative Methods for Sampling and Analyzing Benthic Macroinvertebrate Communities in the Lower Connecticut River Basin; Advisor: Dr. Barry Chernoff

POSITIONS & TRAINING

2023-present	**Associate Professor of the Practice**	Boston College, Chestnut Hill, MA
2017-2023	**Assistant Professor of the Practice**	Boston College, Chestnut Hill, MA
2016-2017	**Science Faculty**	Fessenden School, Newton MA
2009-2016	**NSF Graduate Research Fellow**	Harvard University, Cambridge MA
2011-2015	**Educational Consultant**	HHMI Biointeractive, Chevy Chase MD
2006-2009	**Science Faculty**	St. Mark's School of Texas, Dallas TX
2003	**Research Assistant**	Williams-Mystic Maritime Studies Program, Mystic CT
2002-2006	**Research Assistant**	Wesleyan Univ., Middletown CT

AWARDS & HONORS

- Selected for Boston College Center for Digital Innovation's Design Thinking Working Group, 2021-2022
- Selected for the Scientist Spotlights and Data Nuggets QUBES Faculty Mentoring Network, Spring 2021
- Selected for Boston College Center for Teaching Excellence Faculty Cohort on Applying Learning Sciences to teaching, Fall 2019
- Selected for the SimBio/QUBES Faculty Mentoring Network, Spring 2019
- Selected for Boston College Center for Teaching Excellence Faculty Cohort on Teaching for Inclusion & Social Justice, Fall 2018
- Selected to participate in Boston College's inaugural Faculty Teaching Retreat, June 2018

- Certificate of Distinction in Teaching, Harvard University Derek Bok Center, Fall 2014
- 2014 Harvard Horizons Scholar: selected for months of mentoring and training in science communication culminating in public talk in Sanders Theater
- Participant (50/800 selected) ComSciCon national science communication conference, 2014
- Winning photograph in "The Subjective Objective" science image show, 2014
- Audience Choice Award at (invited) Phoenix ComiCon FameLab competition, 2014
- "Certificate of Mentor Awesomeness" Science Club for Girls (Cambridge, MA) outstanding mentor award, 2010

INTERNAL GRANT & FELLOWSHIP SUPPORT

Boston College's Undergraduate Research Fellowship
200-400 hours support annually (2018-present) for undergraduate researchers

2019 **Boston College Teaching and Mentoring (TAM) Award** $6,300
Scientist Spotlight Interviews in Introductory Biology

2018 **Boston College Academic Technology Innovation Grant (ATIG)** $15,500
Empowering Biology Students with Cutting-Edge Handheld Sequencing Technology

2018 **Boston College Ignite Award** $20,000
Establishing Long-term Monitoring, Engaging Undergraduates, and Conducting Experiments Related to Carbon Cycling and Climate Change

2018 **Boston College Affordable Courses Initiative grant** $2,000

2018 **Boston College Exploratory Technology Grant**

PREVIOUS GRANT & FELLOWSHIP SUPPORT

- National Science Foundation Graduate Research Fellowship, 2011-2014
- Deep Submergence Science Committee (DESSC) workshop travel grant, 2012
- Harvard's Microbial Sciences Initiative (MSI) travel grant, 2011
- RIDGE2000 travel grant, National Science Foundation, 2010

RECENT TEACHING EXPERIENCE

2017-present ***Assistant/Associate Professor of the Practice*** Boston College
Designed & teach Ecology in a Changing Climate (BIOL4130, ~30 students)
Designed & co-teach biennially Our Oceans (BIOL1706/ENVS1075, ~77 students)
Co-lead biennially Our Oceans Leadership Seminar (BIOL1709, ~12 students)
Teach annually Introduction to Ecology & Evolution (BIOL2010, ~250 students)
Teach annually Gateway Biology Discussion (BIOL2060, ~40 students)
Designed & teach annually Deep Sea Biology (BIOL4030, ~45 students)
Designed & taught Research in Microbial Ecology Lab (BIOL4060, ~12 students)
Designed & taught Microbiomes: Invisible Ecosystems (BIOL5050, ~16 students)

Fall 2021 **Guest Interviewee** Design Thinking and Creativity Woods College

Spring 2020 **Guest Lecturer** Introduction to Digital Media Boston College

Spring 2018 **Guest Lecturer** Deep Sea Biology Harvard Extension School

Spring 2018 **Guest Lecturer** Business & the Natural Environment Boston College

2016-2017 **Science Faculty** in the upper school — The Fessenden School
Taught 4 classes of 7th grade Earth Science

2010-2015 **Teaching Fellow, Deep Sea Biology** (3x) — Harvard University
Assisted with course redesign and led students in discussions of scientific literature

2014 **Teaching Fellow, Foundations of Biological Diversity** — Harvard University
Lead weekly lab and discussion section of 19 in course of 110 students.

2014 **Instructor, Alien Worlds on Earth** — Harvard University
Designed, proposed, and taught week-long course funded by the Graduate Student Council. Selected as one of 13 courses out of 32 proposed

MENTORING and ADVISING

- Boston College Summer Orientation Advising: Summers 2019-2022
- Gateway to STEM program academic advisor: Fall 2021-present
- Boston College Undergraduate Research Students Mentored
  - Erin Lender: Fall 2022 and ongoing
  - Mary Clare Earnst: Summer 2023
  - Katherine Jeszenszky: 2021/2022 academic year
  - Cosette Patterson: 2021/2022 academic year
  - Carlos Tramonte (McNair Scholar): Fall 2020-Spring 2021
  - Meaghan Grogan: Summer 2020
  - Cameron DeAngelo: Summer 2018-Spring 2020
  - Josephine Pandji: Spring 2018-Spring 2020 (Thesis won Biology department's Balkema Award for best senior thesis)
- Boston College McNair Exploratory Program (MEP) mentor, Spring 2018-present
- Boston College Gateway Program faculty member, Spring 2018-present
- Boston College First Year Student Orientation Advisor, Summers 2018-present
- Mentored high school intern on independent research project, 2014
- Volunteer Mentor, Science Club For Girls, Cambridge, MA, 2009-2010

PROFESSIONAL SERVICE - Internal (Boston College)

- Member: Biology Department Microbiology search committee, Fall 2022-Spring 2023
- Biology Department Liaison to the Core, Summer 2022-present
- Faculty advisor to Sea Eagles club, Fall 2022-present
- Designed and facilitated day-long science communication for Boston College graduate students: July & December 2019, May 2021, January 2022
- Biology department retreat poster/talk judge: Summer 2019, Summer 2022
- Environmental Studies Program Affiliate Faculty, Summer 2019-present
- Biology Depart Library Liaison, Spring 2019-present
- Reviewer: Advanced Study Grant, Spring 2018-present
- Co-facilitator: Robin Wall Kimmerer Lowell Humanities Series event, Fall 2021
- Member: Environmental Studies Visiting Assistant Professor search committee, Spring 2021
- Invited Panelist: "Redefining Inclusion" panel (CTE's Excellence in Teaching Day), Spring 2021

- Invited Anchor: CTE's "This Isn't Busywork" Teaching Roundtable, Spring 2021
- Member: Biology department Undergrad. Research Opportunities Steering Committee, summer 2020-2021
- Faculty Interviewer: Gabelli Presidential Scholars Program, Spring 2020, Spring 2021
- B.C. formative education webinar invited panelist, Summer 2020
- Faculty Advisor: Boston College Life Sciences Journal, Spring 2018-Spring 2022
- Invited keynote panelist: CTE's Graduate Teaching Conference, August 2019
- Invited panelist: McNair Exploratory Program Graduate School Panel, March 2019 (invited and declined due to conflict, March 2021)

PROFESSIONAL SERVICE - External

- NSF Career Award ad hoc review, Fall 2022
- SACNAS online conference mentor judge, Fall 2020
- Ad hoc reviewer: ISME Journal; Frontiers in Microbiology; PLOSone; NASA NAI CAN; NSF; NOAA OER; Oxford Press
- Selected Participant, NOAA's National Ocean Exploration Forum, October 2017; October 2018
- K-12 mentor at Goldschmidt 2018 conference Summer 2018
- Session Chair, Marine Microbes Gordon Research Seminar, 2014

COMMUNITY SERVICE

- Chair of Solid Waste subcommittee of Norwood Sustainability Commission, 2022 - present
- Member of Sustainability Commission for the town of Norwood, Summer 2021-present
- Girl Scouts of Eastern Massachusetts troop leader, Summer 2021-present
- Member of Progress Norwood's Green Team, Summer 2020-present
- Chair: Town of Norwood Open Space Planning Committee, Summer 2018-Summer 2020

SCIENCE COMMUNICATION OUTREACH

Educational Outreach

- Created and maintain a website hosting "Scientist Spotlight" interviews highlighting a diverse set of scientists and career paths in ecology and evolutionary biology, 2017-present (link)
- Skype a Scientist volunteer Spring 2018-present
- Education Outreach Coordinator, Harvard's Science in the News (SITN), 2012-2013
- Science by the Pint Co-Coordinator, SITN, 2011-2012

Speaking

- Guest co-host of "Every Rock Has a Story" YouTube channel episode, Dec. 2021 (link)
- Guest on Art in Focus podcast: India Ocean Current episode. Dec. 2020 (link)
- Interviewed on Biology of Superheroes Podcast: Episode 8: Venom - The Biology of Extremophiles and Symbiosis. Dec. 2018 (link)
- Life without Light: Microbes at Deep Sea Volcanoes. 2014 Harvard Horizons Symposium (link)
- Interviewed on Lady Paragons Women in STEM Podcast. Sept. 2014 (link)
- Alien Worlds of Hydrothermal Vents. Harvard's Science in the News (SITN) All-Star Lecture Series. May 2013 (video link)

- Living Foods: The Microbiology of Food and Drink. Co-lecturer, SITN Fall Lecture Series. Oct. 2012 (video link)
- Beneath the Surface: The Present and Future of Our Oceans. Co-lecturer, SITN Fall Lecture Series, Oct. 2011 (video link)

Writing

- earthreads newsletter, personal blog (link) Spring 2022-present
- Teaching Reflections, personal blog (link), Spring 2020 - present
- "The Relaunch of an Ocean Workhorse" (link) American Scientist Multimedia, 2014
- "The Alien Worlds of Hydrothermal Vents" (link) SITN Flash, 2013
- "The Higgs Boson Hoopla Explained" (link) SITN Flash, 2012
- "The Mysterious Lovechild of Geology and Biology: Hydrothermal Vents." Harvard University Dudley Review: revenant, Volume 16 (2010)

INVITED TALKS

- **Women's Panel at Koftsta Dorm** (female student formation event) panelist, September 2023
- **Boston College Biology Department Teaching Career Seminar** guest speaker and panelist, December 2022
- Working on Land and at Sea. **Sea Eagles Club Meeting**, November 2022
- **EcoPledge Environmental Professor Panel** invited panelist, November 2022
- Careers Beyond the Bench session invited panelist at **Boston Bacterial Meeting**, June 2022
- Abiotic Influences on Free-Living Microbial Communities: From Hydrothermal Vents to Local Freshwater Wetlands. **Boston College Earth & Environmental Sciences Seminar Series**, March 2021.
- **Boston College Earth & Environmental Science Colloquium Seminar** - cancelled due to COVID-19, Spring 2020
- Abiotic Influences on Free-Living Microbial Communities: From Hydrothermal Vents to Local Freshwater Wetlands. **Nayak Lab, UC Berkeley** (remote presentation), May 2020.
- Mineral Colonization Samplers Reveal Patterns in Microbial Community Composition and Structure at Hydrothermal Vents. **Girguis Lab, Harvard University**, Jan. 2019
- Abiotic Influences on Free-Living Communities in Hydrothermal Vent Ecosystems… and coming soon local wetlands. **Boston College Biology Department Retreat**, Aug. 2018
- Life without Light at Deep Sea Volcanoes. **Harvard University Project Teach** program for local middle school students, April 2014
- An Unexpected Distribution of Microbial Activity Within a Hydrothermal Vent Field. **MIT Microbial Systems Seminar**, Dec. 2014
- Microbial Activity at Diffuse Flow Hydrothermal Vents. **Bridgewater State biology seminar**, Oct. 2014
- Life without Light at Deep Sea Volcanoes. One of three invited speakers for **St. Mark's School of Texas STEM conference**, Oct. 2014
- Life without Light at Deep Sea Volcanoes. Invited speaker for **Harvard's Institute for English Language** for international graduate students. Aug. 2014

- The Importance of Low Temperature Habitats for Microbial Activity at Hydrothermal Vents. **Microbial Sciences Initiative chalk-talk**, Nov. 2013

SELECTED CONFERENCE PRESENTATIONS

- **Olins H**, Pandji J, DeAngelo C. Spatial Scaling of Microbial Diversity in Nearby Freshwater Wetlands. Poster presented at ASM/FEMS World Microbe Forum, online worldwide (June 2021).
- **Olins H**. Scaffolding Experimental Design in a Microbial Ecology Laboratory Course. Poster presented at ASM/FEMS World Microbe Forum, online worldwide (June 2021).
- **Olins H**, Gartman A, Girguis P. Mineral Colonization Samplers Reveal Patterns in Microbial Community Composition and Structure at Hydrothermal Vents. Talk presented at Goldschmidt 2018, Boston, MA (August 2018).
- **Olins H**. Using Winogradsky Columns to Investigate Links between Geochemistry and Environmental Microbiology with K-Adult Students. Talk presented at Goldschmidt 2018, Boston, MA (August 2018).
- **Olins H**, Gartman A, Girguis P. In situ mineral colonization samplers reveal patters in microbial community composition, structure, and succession. Talk presented at the 6th International Symposium on Chemosynthesis-Based Ecosystems (CBE6), Woods Hole, MA (August 2017).

PUBLICATIONS

- **Olins, H** (2022). Weekly Flow: An Effective Organizing Tool for Structuring Biology Courses and Supporting Student Learning. Journal of Microbiology and Biology Education. 23(3): e00108-22.
- Allen, J. A., Apple, J., Groh, K., Hamman, E., Jindal, P., Marsteller, P., **Olins, H**., Panvini, D., Pigg, R., Santos, G. R., Richardson, M. R., Vemu, S., Wade, J., Yang, S. (2021). Scientist Spotlights and Data Nuggets Workshop Materials (BIOME 2021). 2021 Biology and Mathematics Educators (BIOME) Institute, QUBES Educational Resources. doi:10.25334/HKS3-EY64
- **Olins, H**. (2019). Investigating Biomes with BiomeViewer. SimBio FMN (2019), QUBES Educational Resources. doi:10.25334/Q4K45W
- **Olins, H**. (2019). Investigating Primary Productivity. SimBio FMN (2019), QUBES Educational Resources. doi:10.25334/Q42X7X
- **Olins H**, Rogers D, Preston C, Ussler W, Pargett D, Jensen S, Roman B, et al. (2017). Co-registered geochemistry and metatranscriptomics reveal unexpected distributions of microbial activity within a hydrothermal vent field. Frontiers in Microbiology, 8: 1042.
- Gartman A, Picard A, **Olins H**, Sarode N, Clark D, Girguis P (2017). Microbes facilitate mineral deposition in bioelectrochemical systems. ACS Earth and Space Chemistry, 1(5): 277-287.
- **Olins H**, Rogers D, Frank K, Vidoudez C, Girguis, P. (2013). Assessing the influence of physical, geochemical and biological factors on anaerobic microbial primary productivity within hydrothermal vent chimneys. Geobiology, 11: 279-293.
- Frank K, Rogers D, **Olins H**, Vidoudez C, Girguis P. (2013). Characterizing the distribution and rates of microbial sulfate reduction at Middle Valley hydrothermal vents. ISME Journal, 7(7): 1391-1401.