

Heather Craig Olins

Department of Biology · Boston College · Higgins Hall 425B
140 Commonwealth Avenue Chestnut Hill, MA 02467
olins@bc.edu · 617-552-2890 · www.heathercraigolins.com · twitter: @heatherolins

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

2017-present	Assistant Professor of the Practice	Dept. of Biology, Boston College
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 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

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's Undergraduate Research Fellowship	
	300 hours summer support for two undergraduate student researchers	
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

TEACHING EXPERIENCE

2017-present	Assistant Professor of the Practice	Boston College
	Teach Introduction to Ecology & Evolution (BIOL2010, 110-150 students)	
	Teach Gateway Biology Discussion (BIOL2060, ~40 students)	
	Designed & teach Deep Sea Biology (BIOL4030, ~40 students)	
	Designed & teach Microbiomes: Invisible Ecosystems (BIOL5050, ~16 students)	
Spring 2018	Guest Lecturer Deep Sea Biology	Harvard Extension School
	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	
2009	Teaching Assistant, Marine Environmental Science	Shoals Marine Lab
	Led course labs and field trips and mentored high school students with independent research projects	
2009	Teaching Assistant, Oceanography of the Gulf of Maine	Shoals Marine Lab
	Led course labs and field trips and mentored high school students with independent research projects	
2006-2009	Science Faculty in the upper school	St. Mark's School of Texas
	Taught 6th grade Life Science.	
	Taught 7th grade Earth & Space Science	
	Designed and taught new course: 9-12th grade Marine Ecology & Oceanography	
2007-2009	Science Teacher , for at risk Dallas, TX youth	Future Leaders Program

2005 **Teaching Assistant, Tropical Ecology**
2005 **Teaching Assistant, Intro. to Environmental Studies**

Wesleyan University
Wesleyan University

MENTORING

- Boston College Undergraduate Research Students Mentored
 - Cameron DeAngelo: Summer 2018-present
 - Josephine Pandji: Spring 2018-present
- 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, Summer 2018
- Mentored high school intern on independent research project, 2014
- Volunteer Mentor, Science Club For Girls, Cambridge, MA, 2009-2010

PROFESSIONAL & COMMUNITY SERVICE

- Faculty Advisor: Boston College Life Sciences Journal, Spring 2018-present
- Skype a Scientist volunteer Spring 2018-present
- Chair: Town of Norwood Open Space Planning Committee, Summer 2018-present
- 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
- Reviewer: Boston College's Advanced Study Grant, Spring 2018
- Session Chair, Marine Microbes Gordon Research Seminar, 2014
- Education Outreach Coordinator, Harvard's Science in the News (SITN), 2012-2013
- Science by the Pint Co-Coordinator, SITN, 2011-2012

PUBLIC SCIENCE COMMUNICATION

Speaking

- Creator of EcoEvo "Scientist Spotlight" interview series. 2017-present ([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

- "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)

Blogging

- Advisor to SITN Signal to Noise: Waves (<http://sitn.hms.harvard.edu/waves/>) 2014-present
- Contributor to Useful Science website (usefulscience.org) with ~10,000 followers, July 2014-2017
- Creator of 80 Percent Deep (<http://www.heatherolins.com/80percentdeep/>) blog about my research, studying the deep sea, and science communication, 2013-present
- Creator of Heather At Sea (<http://heatheratsea.wordpress.com/>) blog chronicling research and life while at sea, 2011-2013
- Contributor to We Beasties Blog (www.scienceblogs.com/webeasties) covering all aspects of microbiology research. Average of more than 30,000 page views per month. 2010 - 2012

FIELD EXPEDITIONS

Research Cruises

- DSV Alvin Science Verification Cruise Leg 2 on R/V Western Flyer, Gulf of Mexico, March 2014
- Oxygen Minimum Zone Microbial Biogeography Expedition aboard R/V New Horizons, Baja, June 2013
- Pacific Northwest Expedition Leg 1 aboard R/V Western Flyer, Juan de Fuca Ridge, July 2011
- Expedition AT15-67 aboard R/V Atlantis, Juan de Fuca Ridge, dove in DSV Alvin Dive 4622, July 2010

Other

- Tropical Ecology field course: Helped organize and lead 10 day field course centered on student research projects in Guyana through Wesleyan University Spring 2005
- Independent Research: Carried out a week of independent research in the bioluminescent bay Puerto Mosquito, Viequez Island, Puerto Rico through Wesleyan University, Winter 2003

INVITED TALKS

- 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

CONFERENCE PRESENTATIONS

- **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 patterns in microbial community composition, structure, and succession. Talk presented at the 6th International Symposium on Chemosynthesis-Based Ecosystems (CBE6), Woods Hole, MA (August 2017).
- **Olins H**, Rogers D, Preston C, Ussler B, Pargett D, Jensen S, Roman B, Birch J, Scholin C, Girguis P. Finding the best windows: An apparent environmental threshold determines which diffuse flows are dominated by subsurface microbes. Talk presented at American Geophysical Union annual meeting, San Francisco, CA. (December 2014).
- **Olins H**, Rogers D, Preston C, Ussler B, Pargett D, Jensen S, Roman B, Birch J, Scholin C, Girguis P. Adjacent diffuse flow hydrothermal vents reveal distinct transcriptomic profiles of microbial activity. Poster presented at Gordon Research Conference on Marine Microbes, Waltham, MA. (June 2014).
- **Olins H**, Rogers D, Frank K, Vidoudez C, Girguis P. Microbial Primary Productivity in Hydrothermal Vent Chimneys at Middle Valley, Juan de Fuca Ridge. Poster presented at AGU Fall Meeting, San Francisco, CA. (December 2012).
- **Olins H**, Rogers D, Frank K, Vidoudez C, Girguis P. Measurements of Microbial Primary Production in Hydrothermal Vent Sulfides. Poster presented at Ocean Sciences Meeting, Salt Lake City, UT. (February 2012).
- Rogers D, Frank K, **Olins H**, Vidoudez C, Girguis P. Sulfate Reduction Rates From Communities Hosted Within and on Massive Sulfide Deposits. Poster presented at Ocean Sciences Meeting, Salt Lake City, UT. (February 2012).
- Dobroski N, Carlton J, Fineman R, **Olins H**. Habitat expansion in an invasive intertidal crab, current niche breadth in the Asian shore crab *Hemigrapsus sanguineus*. Poster presented at 34th annual Benthic Ecology Meeting (2005).

PEER REVIEWED PUBLICATIONS

- **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.