

DR. KIRA TREIBERGS

Mars Science Center, 25 Fillmore Drive, Norton MA 02766 // treibergs_kira@wheatoncollege.edu // kiratreibergs.com

EDUCATION

Harvard University

Ph.D., Organismic & Evolutionary Biology, Advisor Dr. Robert Woollacott

Cambridge, MA

2013- 2019

Dissertation: “How does a polymorphic colony divide labor among its modules? Colonial development in the marine invertebrate, *Bugulina stolonifera*”

Focus Area: Marine Invertebrate Zoology, Evolution, Developmental Biology

University of Oregon, Oregon Institute of Marine Biology

MS., Biology, Advisor, Dr. Richard Emlen

Charleston, OR

2009–2012

Thesis: “Settlement and growth of the marine bryozoan *Schizoporella japonica*, and epifaunal development in the South Slough Estuary”

Focus Area: Marine Ecology, Larval Biology

Wellesley College

Bachelor of Arts, Major in Biological Sciences, Minor in Music

Wellesley, MA

2005–2009

CURRENT POSITION

Wheaton College

Professor of the Practice, Marine Biology

Norton, MA

June 2024 to Present

- Design and lead undergraduate lecture and laboratory courses (e.g., Introductory Biology, Marine Biology, Ecology, Environmental Science)
- Develop and implement innovative pedagogical approaches to enhance student engagement and learning outcomes
- Foster an inclusive learning environment that supports students from diverse backgrounds and encourages their success in STEM

TEACHING AND RESEARCH EXPERIENCE, HIGHER EDUCATION

Cornell University

Postdoctoral Associate in the Department of Ecology and Evolutionary Biology, Advisor Dr. Michelle Smith

Ithaca, NY

August 2022 to Present

- Project title: “Evaluating how open educational resources facilitate the implementation of NSF Vision and Change Principles across diverse institutions” National Science Foundation DUE-2125990, DUE-2126110, and DUE-2125998
- Advised undergraduate researchers and facilitated their collaboration and co-authorship of peer-reviewed research: Sanah Ahmed (2022-2023), Tiffany Adjei-Opong (2022-2024), Raudiyat Onimode (2023-2024), and Afsheen Alvi (2024)

Bamfield Marine Science Center

Undergraduate Program Co-Instructor, Marine Invertebrate Zoology

Bamfield, British Columbia, CA

April 2023 to July 2023

- Developed and taught a 400-level, 6-week intensive field, laboratory, and research-based class for 24 undergraduates from the University of Victoria, University of British Columbia, Simon Fraser University, University of Calgary, and University of Alberta
- Led field trips to nearby intertidal habitats for field observations and organism collecting, led labs focused on intensive observation, experimental techniques, and biological illustration, coordinated and advised student independent research projects

Cornell University, Department of Natural Resources and the Environment

Active Learning Initiative Postdoctoral Fellow in the Department of Natural Resources and the Environment

Ithaca, NY

July 2019 to July 2022

- Teaching and curriculum design in ‘Introductory Field Biology’ and Environment and Sustainability Capstone Courses
- Advised undergraduate honors thesis students in education research on the affective outcomes of field biology: Jeannie Yamazaki, Spring 2021, Thesis title: “Learning where you live: Sense of place in a campus-based field biology course” Ella De Bruijn, Spring 2022, Thesis title: “Exploring Student Motivation in Field Biology: Field journal reflections shed light on what influences students’ desire to learn”

Derek Bok Center for Teaching and Learning, Harvard University

Departmental Teaching Fellow in Organismic and Evolutionary Biology (OEB)

Cambridge, MA

August 2017 – July 2018

- Teaching fellow for OEB399 ‘Graduate Pedagogy Seminar’

Spring 2017

Harvard College

Cambridge, MA

- Graduate Teaching Fellow for ‘Foundations of Biological Diversity’ [OEB 10] Fall 2018, Fall 2016
- Graduate Teaching Fellow for ‘Topics in Marine Biology’ [OEB 234] Spring 2016
- Graduate Teaching Fellow for ‘Human Influence on Life in the Sea’ [Science of Living Systems 22] Fall 2013, Fall 2015

University of Oregon

Charleston, OR

- Graduate Teaching Assistant for ‘Marine Invertebrate Zoology’ Spring 2012
- Graduate Teaching Assistant for ‘Marine Ecology’ Summer 2012

TEACHING EXPERIENCE: PRIMARY EDUCATION AND PUBLIC OUTREACH

Harvard Life Sciences Outreach

Cambridge, MA

- Summer Teaching Fellow, Crimson Academy- Harvard Summer School Summer 2018
- Teaching Assistant - Harvard Life Sciences Outreach Spring 2018
- Concord Field Station High School Teacher Workshop Summer 2015

Harvard Museum of Natural History

Cambridge, MA

- Graduate Student Volunteer - led Ocean Week (grades 5-6) and gave research talks and workshops for the public 2012 – 2019

Coos County Public Schools

Coos County, OR

- National Science Foundation GK-12 Graduate Research Fellowship: Marine science education for K-6 students 2009-2011

Oregon Institute of Marine Biology

Charleston, OR

- Graduate Student Volunteer- Marine Research program Boys & Girls Club, field trip leader, community outreach 2009-2012

JOURNAL PUBLICATIONS

* indicates authors share first-authorship; # indicates undergraduate author

- Manuscript “Published lesson plans as artifacts of pedagogical transformation: documenting two decades of change in undergraduate biology education resources” in preparation for submission to *Science Advances*
- Flowers S, Hazlett ZS, Ramirez M, **Treibergs KA**, Vinson E, Smith M, and Knight JK. Understanding How Professional Development Opportunities Affect Open Educational Resource Sharing, *Frontiers in Education, section Higher Education*, accepted.
- Ahmed S#, Adjei-Opong T#, Noyes K, Schmid K, Couch BA, Stetzer MR, Smith MK, **Treibergs KA**. Using Open Educational Resources to Teach the Life Sciences: A Resource List for Educators, *Journal of Microbiology & Biology Education*, 0:e00203-23. <https://doi.org/10.1128/jmbe.00203-23>
- **Treibergs KA**, Esparza D, Yamazaki J#, & Smith MK. 2022. Journal reflections shed light on challenges students face in an introductory field biology course, *Ecosphere*, 14(4): e4509. <https://doi.org/10.1002/ecs2.4509>
- **Treibergs KA**, Esparza D, Yamazaki J#, Goebel M, & Smith MK. 2022. How do introductory field biology students feel? Journal reflections provide insight into student affect, *Ecology & Evolution*, 12(1): E9454. <https://doi.org/10.1002/ece3.9454>
- Shinbrot XA*, **Treibergs KA***, Arcila Hernández LM, Esparza D, Ghezzi-Kopel K, Goebel, M, Graham, OJ, Heim, AB, Smith JA, & Smith, MK. 2022. The impact of field Courses on undergraduate knowledge, affect, behavior, and skills: A scoping review, *BioScience*, biac070. <https://doi.org/10.1093/biosci/biac070>
- Arcila Hernández LM*, Chodkowski N*, & **Treibergs KA***. 2022. A guide to implementing inclusive and accessible conference virtual poster sessions, *Journal of Microbiology & Biology Education*, 23(1): 1-9. <https://doi.org/10.1128/jmbe.00237-21>
- Ward EG, O’Connell KB, Race A, Alwin A, Alwin, A, Cortijo-Robles K, Esparza D, Jolley A, McDevitt A, Patel M, Prevost LB, Shaulskiy S, Shinbrot X, **Treibergs KA**, Alvaro M, & Sea W. 2021. Affective Outcomes in the Field: A Review of the 2021 Undergraduate Field Experiences Research Network Meeting. *Bulletin of the Ecological Society of America*. 00(00):e01920. <https://doi.org/10.1002/bes2.1920>
- **Treibergs KA**, Giribet G. 2020. Differential Gene Expression Between Polymorphic Zooids of the Marine Bryozoan *Bugulina stolonifera*. *G3*, 10(10):3843-3857. <https://doi.org/10.1534/g3.120.401348>.

INVITED ARTICLES & PRESS FEATURES

- Blackwood, K. August 25, 2022. Study identifies ‘transformative learning experiences’ of field courses. *Cornell Chronicle*, <https://news.cornell.edu/stories/2022/08/study-identifies-transformative-learning-experiences-field-courses>
- Holmes, N & **Treibergs, KA**. February 24, 2022. Supporting equity among students in group work. *Times Higher Education*, <https://www.timeshighereducation.com/campus/supporting-equity-among-students-group-work>

- Winnerstein, D. February 21, 2022. Field biology changes student perspectives.
Cornell Chronicle, <https://news.cornell.edu/stories/2022/02/field-biology-changes-student-perspectives>
- Cornell Center for Teaching Innovation, Media Team. Teamwork and Discovery in Field Biology.
Cornell Chronicle, <https://www.youtube.com/watch?v=45b3jtNI6Y0&t=3s>

INVITED PRESENTATIONS

- Invited Seminars:
 - **Treibergs, KA.** “Developing shared resources to support active and engaged learning in Capstone Courses in Environment & Sustainability”
- Cornell University, Provost’s Symposium on Teaching, “Ten years of Active Learning at Cornell.” September 2022.
 - **Treibergs, KA & Goebel, M.** “Improving team-based student projects”,
- Cornell University, Active Learning Initiative faculty presentation. January 2022.
 - **Treibergs, KA.** “How Do Introductory Field Biology Students Feel in the Field? Field Journal Reflections Provide a Window Into Affective Outcomes”
- Cornell University, Department of Natural Resources and the Environment (DNRE) Seminar Series. November 2021.
 - Shinbrot, XA & **Treibergs, KA.** “Teaching Transferable Skills in Natural Resources through Teamwork & Debate”
- Cornell University, Center for Teaching Innovation Seminar. November 2020.
- Cornell University DNRE Seminar Series. October 2020.
- Cornell Biogeochemistry, Environmental Sciences and Sustainability (BESS) Seminar Series. October 2020.
- Invited Workshops:
 - Goebel, M & **Treibergs, KA.** “What is active learning?”
- Cornell University, DNRE. Presentation and workshop about active learning for ‘Introduction to Graduate Studies’ course
 - Holmes, N* & **Treibergs, KA*.** “Envisioning opportunities and overcoming barriers for designing online labs”.
- Dahlem Center for Academic Teaching at the Freie Universität Berlin, Berlin Germany. Virtual workshop for international STEM faculty. March, 2021.
 - Shinbrot, XA & **Treibergs, KA.** “Workshopping solutions to common teamwork conflicts in the classroom.”,
- Cornell University, BESS Workshop for postdocs and graduate students. October, 2020.
 - **Treibergs, KA.** “Teaching in the Laboratory”.
- Harvard University, Bok Center for Teaching and Learning. Workshop for graduate teaching fellows at the 2018 Bok Center Fall Teaching Conference. September, 2018.
- Invited Panelist:
 - ‘How to get to know your students: supporting student-centered undergraduate field experiences’. Undergraduate Field Experiences Research Network (UFERN) Community Conversation. August 2021.
 - ‘Equity Change-making in the Classroom and Beyond’. Cornell University, Center for Teaching Instruction panel discussion and small group workshops. June 2021.
 - ‘Alumnae Career Panel’. Wellesley College, Biology, Chemistry & Biochemistry Club, BC². April 2021.

ACADEMIC CONFERENCE PRESENTATIONS

- Accepted Short Talks [* presenting author]:
 - **Treibergs, KA***, Esparza, DE, Yamazaki, JY, Goebel, M, & Smith, MK. “Field journal reflections provide insights into the breadth of student affective outcomes in a campus-based undergraduate field course.” Society for the Advancement of Biology Education Research (SABER) Annual Meeting in Minneapolis, MN. July 2022.
 - **Treibergs, KA***, Esparza, DE, Yamazaki, JY, Goebel, M, & Smith, MK. “How do introductory field biology students feel in the field? Student reflections provide a window into affective outcomes.” SABER Annual Meeting (Virtual). July 2021
 - **Treibergs, KA***. “Reflections from a Discussion of Race, Identity and the Outdoors in the Field Biology Virtual Classroom”
 - Undergraduate Field Experience Research Network Meeting (Virtual). March 2021
 - Cornell Department of Natural Resources and the Environment Symposium, Antiracism Workshop (Virtual). February 2021
- Accepted Posters [* presenting author]:
 - Noyes, K*, Burbach, S, **Treibergs, KA**, Stetzer, MR, Smith, MK, Couch, BA. “Supporting instructors use of open educational resources: How do instructors change lesson materials for use in their classroom?” presented at X-DBER, virtual conference. April 2023.
 - **Treibergs, KA***, Yamazaki, JY & Smith, MK. “How do student attitudes towards teamwork change after participating in a

- field biology course with an emphasis on cooperative learning?” presented at SABER annual meeting (Virtual). July 2020.
- **Treibergs, KA***. “How does a bryozoan colony divide labor among modules?” presented at the Society for Comparative and Integrative Biology Annual Meeting in San Francisco, CA. January 2018
 - **Treibergs, KA***. “Division of labor in the marine bryozoan, *Bugula stolonifera*” presented at the Society for Women in Marine Science Symposium in Narragansett, RI. March 2018
 - **Treibergs, KA*** & Emler, R. “Settlers of the Slough: Can non-native fouling organisms survive in South Slough?” presented at the Heceta Head Coastal Conference in Florence, OR. October 2011
 - **Treibergs, KA*** & Emler, R. “Adult morphology and larval size effects on settlement and growth of an encrusting bryozoan, *Schizoporella japonica* in Charleston, OR” presented at the Western Society of Naturalists Annual Meeting in San Diego, CA. October 2010.

LEADERSHIP, & SERVICE

Cornell University, Department of Natural Resources and the Environment

Ithaca, NY

- “Conservation Justice Seminar and Discussion Series: Recognizing the past, forging the future in our teaching and scholarship”, seminar series facilitator. Summer 2021 - Spring 2022.
- “Anti-racist Teaching Interventions: Insights from developing and implementing an anti-racist classroom intervention in the Introductory Field Biology classroom”, seminar leader and discussion leader. December 2021.
- “Field Work Culture, Safety & Inclusivity”, seminar leader and discussion leader. November 2021.

Society for the Advancement of Biology Education Research (SABER)

- Conceptualized, organized and co-led the virtual poster session for the Society for the Advancement of Biology Education Research Annual Meeting. Spring - Summer 2020, Spring - Summer 2021.

LEADERSHIP EXPERIENCE & FELLOWSHIPS

- Ethics Network for Course-based Opportunities in Undergraduate Research (ENCOUR) Fellowship- recipient. University of Texas at El Paso, 2020-2021
- Postdoctoral Leadership Program- participant. Cornell University, 2019-2020
- OEB Graduate Student Professional Development Program- program leader. Harvard University, 2018- 2019
- OEB Mentorship Program- pedagogy mentor. Harvard University, 2016-2018
- Oregon Marine Students Association- director. University of Oregon, 2010-2012
- Club Sailing Team- president. Wellesley College, 2005-2008
- Sailing Instructor
 - Great Harbor Yacht Club, Nantucket MA, 2007
 - Duxbury Bay Maritime School, Duxbury MA, 2001-2006
- Cello Instructor, Duxbury High School, 2001-2005

AWARDS & CERTIFICATES

- Certificate in Excellence in Teaching, Derek Bok Center for Teaching and Learning, Harvard University, 2017
- Certificate of Distinction in Teaching. Harvard University, Fall 2016, Spring 2016, Fall 2017, Fall 2018, Spring 2018, Fall 2018
- Simmons Award at the Harvard Center for Biological Imaging. Harvard University, 2016, 2017, 2018
- National Estuarine Research Reserve Graduate Research Fellowship, University of Oregon, 2011

PROFESSIONAL SOCIETIES AND ORGANIZATIONS

Society for the Advancement of Biology Research	2019 - present
International Bryozoology Association, member	2012 - present
Dudley House Orchestra, cellist, Harvard University	Cambridge, MA 2011-2016
Oregon Marine Students Association, University of Oregon	Charleston, OR 2010-2012
Club Sailing Team (Treasurer, President), Wellesley College	Wellesley, MA 2005-2008
Chamber Music Society, Wellesley College	Wellesley, MA 2005-2009

SKILLS & OTHER INTERESTS

Pedagogy: Backwards design, inclusive teaching, fostering equitable student teamwork, implementing course-based undergraduate-research experiences (CURES), field course pedagogy

Qualitative Research: inductive and deductive coding using *nVivo* software, framework analysis, survey development, analysis of student reflections and interview data, scoping review methodology, survey design using *Qualtrics* software

Computing & Software: R, Unix, Microsoft Office, Canvas, Padlet, Jamboard, Slack, Trello, iNaturalist, eBird, Covidence
Scientific/Technical: transcriptomics/big data analysis, microdissection, light microscopy, confocal imaging, RNA isolation, culturing of microalgae and bryozoan colonies, field identification and collection of marine invertebrates

Language: intermediate Latvian, beginner French

Marine: 20+ years sailing and coastal boating experience, Canadian Boating/Marine Safety Licenses: Small Vessel Operator's Permit (April 2023); Marine Basic First Aid (April 2023); Small Domestic Vessel Basic Safety (April 2023); Restricted Operator Certificate- Maritime (April 2023).

Other: Co-creator of the design "Octopi Wallstreet," artwork and internet meme that highlights the fact that invertebrates are 97% of animal diversity (2011). Image published in the book "Staying with the Trouble" by Donna Haraway (Duke University Press, 2016).