

# DR. KIRA TREIBERGS

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## EDUCATION

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### Harvard University Cambridge, MA

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

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 Charleston, OR

*MS., Biology, Advisor, Dr. Richard Emlet*

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 Wellesley, MA

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

2005–2009

## CURRENT POSITION

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### Bamfield Marine Science Center Bamfield, British Columbia, CA

*Undergraduate Program Co-Instructor, Marine Invertebrate Zoology*

April 2023 to Present

- 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

### Cornell University Ithaca, NY

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

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 .

## TEACHING EXPERIENCE, HIGHER EDUCATION

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### Cornell University, Department of Natural Resources and the Environment Ithaca, NY

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

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 Cambridge, MA

- Departmental Teaching Fellow in Organismic and Evolutionary Biology (OEB)

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

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### 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

- 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 (in preparation for *Journal of Microbiology & Biology Education*)
- **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/ecc3.9454>
- 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 stoloniifera*. *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, BC<sup>2</sup>. April 2021.

## ACADEMIC CONFERENCE PRESENTATIONS

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- 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\*** & Emllet, 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\*** & Emllet, 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

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- 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

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- 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

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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

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**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).