Emma K. Wear

Flathead Lake Biological Station, University of Montana
32125 Bio Station Lane, Polson, MT 59860
Email: emma.wear@flbs.umt.edu
Website: www.emmakwear.com
ORCiD: 0000-0002-4811-5363

Education

Ph.D., March 2017; Marine Science, University of California, Santa Barbara
Advisor: Dr. Craig Carlson
Dissertation: Bottom-up Drivers of Bacterial Community Composition and Metabolism of Dissolved Organic Carbon in the Santa Barbara Channel, CA

M.S., 2009; Coastal Marine and Wetland Studies, Coastal Carolina University, Conway, SC
Advisor: Dr. Eric Koepfler
Thesis: Effects of Inter-tributary Dissolved Organic Carbon Variability on Heterotrophic Microbial Communities in Upper Winyah Bay, SC

B.S., 2007; Biology, English minor, magna cum laude, Phi Beta Kappa
Illinois Wesleyan University, Bloomington, IL

Professional Employment

Postdoctoral associate, November 2017 – present
Flathead Lake Biological Station, University of Montana; supervisor: Dr. Matthew Church
Postdoctoral associate, April - October 2017, University of California, Santa Barbara

Research Fellowships Obtained

2012 NASA Earth and Space Science Fellowship (3 years, $90,000)
2008 National Estuarine Research Reserve System Graduate Research Fellowship, North Inlet-Winyah Bay NERR (1 year, $20,000)

Peer-reviewed Publications

EK Wear, EG Wilbanks, CE Nelson, and CA Carlson. 2018. Primer selection impacts specific population abundances but not community dynamics in a monthly time-series 16S rRNA gene amplicon analysis of coastal marine bacterioplankton. Environmental Microbiology 20: 2709-2726. doi:10.1111/1462-2920.14091

EK Wear, CA Carlson, LA Windecker, and MA Brzezinski. 2015. Roles of diatom nutrient stress and species identity in determining the short- and long-term bioavailability of diatom exudates to bacterioplankton. Marine Chemistry 177: 335-348. doi:10.1016/j.marchem.2015.09.001

EK Wear, CA Carlson, AK James, MA Brzezinski, LA Windecker, and CE Nelson. 2015. Synchronous shifts in dissolved organic carbon bioavailability and bacterial community responses over the course of an upwelling-driven phytoplankton bloom. Limnology and Oceanography 60:

657-677. doi:10.1002/lno.10042

EK Wear, ET Koepfler, and EM Smith. 2014. Spatiotemporal variability in dissolved organic matter composition is more strongly related to bacterioplankton community composition than to metabolic function in a blackwater estuarine system. Estuaries and Coasts 37: 119-133. doi:10.1007/s12237-013-9651-y

BP Durham, J Grote, KA Whittaker, SJ Bender, H Luo, SL Grim, JM Brown, JR Casey, A Dron, L Florez-Leiva, A Krupke, CM Luria, AH Mine, OD Nigro, S Pather, A Talarmin, **EK Wear**, TS Weber, JM Wilson, MJ Church, EF DeLong, DM Karl, GF Steward, JM Eppley, NC Kyrpides, S Schuster, and MS Rappé. 2014. Draft genome sequence of marine alphaproteobacterial strain HIMB11, the first cultivated representative of a unique lineage within the Roseobacter clade possessing a remarkably small genome. Standards in Genomic Sciences 9: 632-645. doi:10.4056/sigs.4998989

Other Publications

CE Nelson and **EK Wear**. 2014. Microbial diversity and the lability of dissolved organic carbon. PNAS 111: 7166-7167. doi:10.1073/pnas.1405751111

Select Conference Presentations

EK Wear, J Ranieri, S Devlin, and MJ Church. **Poster**: Bottom-up effects on Flathead Lake bacterioplankton community composition during summer stratification. Montana Aquatic Research Colloquium II, Flathead Lake Biological Station, Polson, MT, April 2019.

EK Wear, CA Carlson, and MJ Church. **Talk**: Mesoscale eddy effects differentially impact bacterioplankton use of phytoplankton lysates across a cyclone-anticyclone dipole in the North Pacific Subtropical Gyre. Aquatic Sciences Meeting, San Juan, PR, February-March 2019.

EK Wear, EG Wilbanks, CE Nelson, and CA Carlson. **Poster**: Primer selection impacts specific population abundances but not community dynamics in a monthly time-series 16S rRNA amplicon analysis of coastal marine bacterioplankton. Ocean Sciences Meeting, Portland, OR, February 2018.

EK Wear, CA Carlson, D Siegel, N Guillocheau, and CE Nelson. **Poster**: Spatial and temporal patterns in bacterioplankton community composition vary in their relationship with bottom-up factors in a heterogeneous coastal system. ISME 16, Montreal, Can., August 2016.

EK Wear, CA Carlson, DA Siegel, N Guillocheau, and CE Nelson. **Talk**: Bottom-up controls on a coastal bacterioplankton time-series: relative utility of *in situ* vs. remotely-sensed measurements. Coastal and Estuarine Research Federation Conference, Portland, OR, November 2015.

Cruises

Deep-CCZ, R/V *Kilo Moana*, 32 days in Clarion Clipperton Zone, May-June 2018
SCOPE cruise, R/V *Falkor*, 14 days in North Pacific Subtropical Gyre, March-April 2018
Plumes and Blooms, R/V *Shearwater*, 35 single-day cruises in Santa Barbara Channel, 2010-2015
Course-associated cruise, R/V *Kilo Moana*, 10 days in North Pacific Subtropical Gyre, June 2011
SBDOM11, R/V *Point Sur*, 6 days in Santa Barbara Channel, May 2011

Course-associated cruise, R/V *Atlantic Explorer*, 2 days in Sargasso Sea, June 2010
SBDOM10, R/V *Point Sur*, 7 days in Santa Barbara Channel, April 2010

Teaching Experience

Teaching Assistant, Introductory Biology Laboratory II, UCSB, 2015W
Teaching Assistant, Chemical and Physical Methods of Aquatic Environments (lab), UCSB, 2012W
Teaching Assistant, Processes in Oceans (discussion section), UCSB, 2010W, 2011W
Teaching Assistant, Plant Anatomy and Physiology Lab, IWU, 2007S

Guest lectures in following courses:
Microbial Ecology, Diversity, and Evolution, University of Montana, March 2018
Principles and Applications of Genetics, Salish Kootenai College, February 2018

Pedagogical training pursued:
Optimizing the Practice of Mentoring, University of Minnesota online course, 2019
CIRTL Network MOOC: An Introduction to Evidence-Based Undergraduate STEM Teaching, 2017

Professional Service

Reviewer: Aquatic Microbial Ecology; Biogeosciences; BMC Genomics; Environmental Microbiology; Environmental Science and Pollution Research; Estuarine, Coastal and Shelf Science; Frontiers in Microbiology; Limnology and Oceanography; PeerJ; Science of the Total Environment

Member: Association for the Sciences of Limnology and Oceanography; International Society for Microbial Ecology

Institutional Service

Faculty Search Committee Student Representative, UCSB marine science program, 2014-2015
Seminar Organizer, UCSB marine science program, 2012

Outreach and Diversity Activities

Panelist, ESA SEEDS coffee hour, Salish Kootenai College, January 2019
Guest speaker, UCSB Summer Sessions Intro to Marine Science (high school students), July 2016

Professional Training

2018 Data Intensive Biology Summer Institute ANGUS: Analyzing High Throughput Sequencing Data, University of California, Davis
2013 Cornell Satellite Remote Sensing Training Program, Cornell University
2011 Summer Course on Microbial Oceanography, Center for Microbial Oceanography: Research and Education, University of Hawai`i
2010 Microbial Oceanography course, Bermuda Institute of Ocean Sciences

Supplemental Funding Awards

2019 ASLO Early Career Travel Grant to attend Aquatic Sciences Meeting
2013 UCSB Academic Senate Doctoral Student Travel Grant
2013 Ocean Carbon & Biogeochemistry funding to attend Cornell Satellite Remote Sensing Training Program