

Keith Bouma-Gregson

Ph.D. Candidate, Department of Integrative Biology
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Education

Ph.D. candidate University of California Berkeley, CA, Integrative Biology Department. Advisor: Dr. Mary Power
M.S. University of Michigan, Ann Arbor, MI, School of Natural Resources and Environment, 2011.
Advisor: Dr. James Diana
Thesis title: Assessing the efficiency of herbivorous fish as nutrient sinks in an integrated freshwater cage aquaculture system using a phosphorus mass balance model.
B.A. Westmont College, Santa Barbara, CA, Sociology, Magna Cum Laude, 2005

Honors and Fellowships

2014 EPA Science to Achieve Results (STAR) Fellow, US Environmental Protection Agency
2011 NOAA/CILER Summer Research Fellow. Great Lakes Environmental Research Lab
2011 Samuel Dana Trask Award, School of Natural Resources and Environment University of Michigan
2010-Present: Au Sable Graduate Fellow
2004 David K. Winter Servant Leadership Award, Westmont College

Grant Awards

2013 NorCal Society for Environmental Toxicology and Chemistry Research Scholarship,
"Production and distribution of cyanotoxins in the Eel River"
2012 Mildred E. Mathias Student Research Grant, "Microbial and invertebrate grazer controls on the ecosystem fate of riverine algal production"
2012 National Center for Airborne Laser Mapping (NCALM) Seed Grant, "Forecasting harmful algal blooms in the Eel River with NCALM green LiDAR"

Research Experience

2014 (Summer) Graduate Student Research Assistant, Eel River Critical Zone Observatory,
Advisor: Dr. Mary Power
2012-2013 Research Affiliate, Lawrence Berkeley National Laboratory. Advisor: Dr. Romy Chakraborty

2012 Research Assistant, NOAA Great Lakes Environmental Research Lab. Advisor: Dr. Ed Rutherford.

2009-2011 Graduate Student Research Assistant, University of Michigan. Advisor: Dr. James Diana.

Teaching Experience

2013-2014: Graduate Student Instructor, Lab Curriculum Development Team: Introductory Biology, Department of Integrative Biology, University of California, Berkeley.

2012 Fall: Graduate Student Instructor. Introductory Biology (Bio 1B), Department of Integrative Biology, University of California, Berkeley.

2011 Winter: Graduate Student Instructor. Rivers, Lakes and Wetlands (ENV 311), Program in the Environment, University of Michigan, Ann Arbor.

2010 Fall: Graduate Student Instructor. Ecological Issues (ENV 201), Program in the Environment, University of Michigan, Ann Arbor.

2007-2009 Intercultural Programs Coordinator. LCC International University, Klaipeda, Lithuania.

2006-2007 Naturalist. Mission Springs Outdoor Education, Scotts Valley, CA.

2006-2009 Senior Instructor. Summit Adventure, Bass Lake, CA.

Conference Presentations

2014 Invited presentation, "*Cyanotoxin Production in Northern California's Eel River*" California Aquatic Bioassessment Working Group, November 2014, Davis, California.

2014 Presentation, "*Changes in cyanotoxin concentrations from benthic cyanobacteria over space and time in a California river*" Ecological Society of America, August 2014, Sacramento, California.

2014 Presentation, "*Flow and climate thresholds for algal assemblages in an N-limited river in a Mediterranean climate: tipping towards toxicity?*" Joint Aquatic Sciences Meeting, May 2014, Portland, Oregon.

2013 Young investigator presentation, "*Species and phenotypic diversity of bacteria growing on marine and freshwater algae in an estuary*" American Society for Microbiology general meeting, May 2013, Denver, Colorado.

2011 Presentation and published abstract, "*Investigating improved cages for fish culture in reservoirs: a phosphorus mass balance model*" Aquaculture America conference, March 2011, New Orleans, Louisiana.

Public Outreach Presentations and Publications

2014 Invited presentation, Eel River Recovery Project's *Water Day IV* outreach event. April 13, Redway, CA.

- 2014 Invited presentation, North Coast Regional Water Quality Control Board. March 11, Santa Rosa, CA.
- 2014 Invited presentation, Eel River Forum meeting. February 19, Fortuna, CA.
- 2013 Invited presentation, Humboldt State University Geology Department Colloquium. November 4, Arcata, CA.
- 2013 Public algal education workshop in collaboration with Eel River Recovery Project, September 14, Phillipsville, CA. Reported by the North Coast Journal:
<http://www.northcoastjournal.com/humboldt/slime-questions/Content?oid=2360959>
- 2013 Invited presentation, Eel River Recovery Project's *Water Day III* outreach event. March 30, Redway, CA.
- 2011 Co-authored "Aquaculture in Michigan" factsheet for Michigan Sea Grant.
- 2010-2011 Contributing blogger with Dr. James Diana to www.earthsky.org about sustainable aquaculture.

Coursework

Ecology, Evolution, Biology, Chemistry:

- Stable Isotope Ecology, UC Berkeley
- Methods in Stable Isotopes, UC Berkeley
- GIS and Environmental Science, UC Berkeley
- Evolution, UC Berkeley
- Population and Community Ecology, University of Michigan
- Philosophy of Ecology, University of Michigan
- Ecology: social context and interactions, University of Michigan
- Soil Ecology, University of Michigan
- Physical Chemistry, University of Michigan
- General Biology II, Westmont College
- Hon. General Chemistry I, Westmont College

Freshwater systems:

- Biology of Algae, UC Berkeley
- Freshwater Ecology Seminar, UC Berkeley
- Ecology of Fishes, University of Michigan
- Biology of Fishes, University of Michigan
- Fluvial Ecosystems, University of Michigan
- Fisheries Science and Management, University of Michigan
- Limnology, University of Michigan
- Aquatic Entomology, University of Michigan
- River Restoration, University of Michigan

Microbiology:

- Principles and Techniques in Light Microscopy, UC Berkeley
- Environmental Microbiology, University of Michigan

Statistics and Modeling:

- Design and Analysis of Ecological Research, UC Berkeley
- Hierarchical Modeling Seminar, UC Berkeley
- Natural Resource Statistics, University of Michigan
- Interrogating Models with Data, University of Michigan
- Applied Statistics I: Linear Regression, University of Michigan