

# Justin Baumann

---

## **SPIRE Postdoctoral Fellow**

Department of Marine Sciences  
University of North Carolina at Chapel Hill  
3202 Venable Murray Hall, CB 3300  
Chapel Hill, NC 27599  
baumannj@live.unc.edu  
(513) 307-1516  
jbaumann3.wordpress.com

### **Research Interests:**

- Impacts of temperature and ocean acidification on coral physiology, ecology, recovery, and resilience
- Coral heterotrophy
- Conservation, policy, and management
- Marine ecology
- Human impacts on marine environments
- Science communication and outreach

---

## Education

---

- 2013-2018    **The University of North Carolina at Chapel Hill**, Chapel Hill, North Carolina  
Degree Sought: PhD Marine Sciences  
Department: Department of Marine Sciences  
Advisor: Karl Castillo  
**Dissertation:** The impacts of anthropogenic global change and human activities on reef-building corals on the Belize Mesoamerican Barrier Reef System.
- 2011-2013    **The Ohio State University**, Columbus, Ohio  
Masters of Science  
Department: School of Earth Sciences  
Advisor: Andréa Grottoli  
**Thesis:** The effects of elevated temperature stress on the acquisition and allocation of carbon in Hawaiian coral lipids.
- 2007-2011    **The Ohio State University**, Columbus, Ohio  
Major(s): Biology (Bachelor of Science)    Earth Sciences (Bachelor of Science)  
Cum Laude, With Research Distinction in Geological Sciences  
**Honors Thesis:** The effects of single and repeat bleaching on photosynthesis, respiration, and feeding in three species of Caribbean coral  
**Advisor:** Andréa Grottoli

## Honors and Awards

---

- 2017-2018    **Future Faculty Fellows Program participant, UNC Chapel Hill:** One of sixteen graduate students at UNC admitted into the Center for Faculty Excellence

- Future Faculty Fellows Program which trains graduate students on pedagogy, course-design, and evidence-based teaching practices.
- 2017 **Best Poster:** UNC Chapel Hill Academic Research Conference
- 2014-2017 **Department of Defense National Defense Science and Engineering Grant (NDSEG) Graduate Fellow**
- 2013 **Distinguished Teaching Award:** The Ohio State University School of Earth Sciences
- 2011 **Best Poster:** Natural and Mathematical Sciences Undergraduate Research Forum, The Ohio State University.
- 2010 **Featured in 2010 “Highlights of Undergraduate Research at The Ohio State University”**
- 2010 **Shell Undergraduate Research Experience (SURE) Summer Intern, OSU**
- 2007 **Eagle Scout**

### Career Stats Summary

Google citation indices	All	Since 2013	Category	Career Total
Citations	323	323	Peer-reviewed Publications	15
h-index	8	8	Total funding (to Baumann)	\$288,396
i10-index	8	8		

### Publications

#### Peer-reviewed Publications:

- In Review **Baumann J**, Courtney T, Rippe J, Westfield I, Ries J, Castillo K. Historical growth rates of two species of long-lived corals along the Belize Mesoamerican Barrier Reef.
- 2018 Rippe JP, **Baumann JH**, DeLeener DN, Aichelman HE, Friedlander EB, Davies SW, Castillo KD. Corals sustain growth but not skeletal density across the Florida Keys Reef Tract despite ongoing warming. *Global Change Biology*. DOI: <https://doi.org/10.1111/gcb.14422>.
- 2018 Levas S, Schoepf V, Warner ME, Aschaffenburg M, **Baumann JH**, Grottoli AG. Long-term recovery of Caribbean corals from bleaching. *Journal of Experimental Marine Biology and Ecology*. DOI: <https://doi.org/10.1016/j.jembe.2018.06.003>.
- 2017 **Baumann JH**, Davies SW, Aichelman HE, Castillo KD. Coral *Symbiodinium* community composition across the Belize Mesoamerican Barrier Reef System is influenced by host species and thermal variability. *Microbial Ecology*. DOI: <https://doi.org/10.1007/s00248-017-1096-6>.
- 2016 Schoepf V, Hu X, Holcomb M, Cai W, Li Q, Wang Y, Xu H, Warner ME, Melman TF, Hoadley KD, Pettay DT, Matsui Y, **Baumann JH**, Grottoli AG. Coral calcification under environmental change: A direct comparison of the alkalinity anomaly and buoyant weight technique. *Coral Reefs*. DOI: [10.1007/s00338-016-1507-z](https://doi.org/10.1007/s00338-016-1507-z).

- 2016 **Baumann J**, Davies SW, Courtney T, Aichelman H, Townsend J, Castillo KD. Temperature regimes impact coral assemblages along environmental gradients on lagoonal reefs in Belize. *PLOS ONE*. DOI: <http://dx.doi.org/10.1371/journal.pone.0162098>
- 2016 Aichelman HE, Townsend JE, Courtney T, **Baumann JH**, Davies SW, Castillo KD. The Temperate Coral *Oculina arbuscula* Exhibits a Heterotrophic Rescue Effect to Temperature Stress. *Ecology and Evolution*. DOI: 10.1002/ece3.2399
- 2016 Hoadley KD, Pettay DT, Grottoli AG, Cai W, Melman TF, Levas S, Schoepf V, Ding Q, Yuan X, Wang Y, Matsui Y, **Baumann JH**, Warner ME. High-temperature acclimation strategies within the thermally tolerant endosymbiont *Symbiodinium trenchii* and its coral host, *Turbinaria reniformis*, differ with changing pCO<sub>2</sub> and nutrients. *Marine Biology*. Vol 163, issue 6. doi:10.1007/s00227-016-2909-8.
- 2016 Cai W, Ma Y, Hopkinson B, Grottoli AG, Warner M, Ding Q, Hu X, Yuan X, Schoepf V, Xu H, Han C, Melman T, Hoadley K, Pettay DT, Matsui M, **Baumann J**, Levas S, Ye Y, Wang Y. Microelectrode characterization of coral interior pH and carbonate chemistry. *Nature Communications*. Vol. 7. DOI: 10.1038/ncomms11144
- 2016 Levas SJ, Schoepf V, Warner ME, Aschaffenburg MD, **Baumann JH**, Bauer JE, Grottoli AG. Can heterotrophic uptake of DOC and zooplankton mitigate C budget deficit in annually bleached corals? *Coral Reefs*. 10.1007/s00338-015-1390-z
- 2015 Hoadley KD, Pettay DT, Grottoli AG, Cai W, Melman TF, Schoepf V, Hu X, Li Q, Xu Hui, Wang Y, Matsui Y, **Baumann J**, Warner ME. Physiological response to elevated temperature and pCO<sub>2</sub> varies across four Pacific coral species: Understanding the unique host+symbiont response. *Scientific Reports*. Vol: 5. DOI: 10.1038/srep18371
- 2015 Schoepf V, Grottoli AG, Levas SJ, Aschaffenburg MD, **Baumann J**, Matsui Y, Warner ME. Annual coral bleaching and the long-term recovery capacity of coral. *Proc. R. Soc. B*. Vol: 282 Issue: 1819. DOI: 10.1098/rspb.2015.1887
- 2015 Levas SJ, Grottoli AG, -Warner ME, Cai W, Bauer J, Schoepf V, **Baumann J**, Matsui Y, Gearing C, Melman T, Hoadley KD, Pettay DT, Hu X, Li Q, Xu H, Wang Y. Organic carbon fluxes mediated by corals at elevated pCO<sub>2</sub> and temperature. *Marine Ecology Progress Series*. Vol. 519: 153-164, 2015. DOI: 10.3354/meps11072
- 2014 **Baumann J**, Grottoli AG, Hughes A, Matsui Y. Photoautotrophic and heterotrophic carbon in bleached and non-bleached coral lipid acquisitions and

storage. *Journal of Experimental Marine Biology and Ecology*. Vol. 461: 469-478, 2014. DOI: <http://dx.doi.org/10.1016/j.jembe.2014.09.017>

2013 Schoepf, V, Grottoli AG, Warner ME, Cai W, Melman TF, Hoadley KD, Pettay T, Hu X, Li Q, Xu H, Wang Y, Matsui Y, **Baumann J**. Coral Energy Reserves and Calcification in a High-CO<sub>2</sub> World at Two Temperatures, *PLoS ONE*. DOI: 10.1371/journal.pone.0075049

**Theses:**

2018 **Baumann JH**. The impacts of anthropogenic global change and local human activities on reef-building corals on the Belize Mesoamerican Barrier Reef System. The University of North Carolina at Chapel Hill. PhD Disstertation.

2013 **Baumann J**. The effects of elevated temperature stress on the acquisition and allocation of carbon to lipids in Hawaiian corals. The Ohio State University, Master's Thesis. [http://rave.ohiolink.edu/etdc/view?acc\\_num=osu1374229960](http://rave.ohiolink.edu/etdc/view?acc_num=osu1374229960)

2011 **Baumann, J**. The effects of single and repeat bleaching on photosynthesis, respiration, and feeding rates in three species of Caribbean coral. Ohio State University Knowledge Bank. <http://hdl.handle.net/1811/48894>

Funded Grants and Fellowships

---

2018 **SPIRE Postdoctoral Fellowship at UNC Chapel Hill**: 3 year postdoctoral fellowship funded by NIH NIGMS.

2017 **The Rufford Foundation, Second Booster Grant**: A continuation grant (£10000) awarded for continued field research characterizing coral community response to climate change in Belize and working with Belizean NGO partners.

2016 **The Rufford Foundation, Booster Grant**: A second continuation grant (£10000) awarded for field research characterizing coral reef community response to climate change in Belize.

2015 **The Rufford Foundation, Second Rufford Small Grant**: a continuation grant of £5000 awarded for field research characterizing coral reef community response to climate change in Belize.

2014 **GPSF Travel Award**: \$800 awarded for travel to the Benthic Ecology Meeting in Quebec City, Canada.

2014-2017 **Department of Defense National Defense Science and Engineering Graduate Fellowship (NDSEG)**: Three year stipend, tuition, student fees, and health care awarded for academic merit and proposed research on coral resilience in Belize.

2014 **The Rufford Foundation, Rufford Small Grant**: £5000 awarded for field research characterizing coral acclimation in Belize.

2012 **Friends of Orton Hall Fund**: \$1000 to attend and present MS research at the International Coral Reef Symposium, Cairns, Australia, July 2012.

2011 **Mayers Undergraduate and Graduate Travel Fellowship**: \$1000 to attend and present undergraduate research at ASLO Ocean Science Meeting, San Juan, Puerto Rico.

## Research Experience

---

2018-Present **Seeding Postdoctoral Innovation in Research and Education (SPIRE) Fellow**, Castillo coral ecophysiology lab and Bruno lab, The University of North Carolina Chapel Hill.

**SPIRE** is an NIH (NIGMS, IRACDA) funded research, teaching, and professional development program that trains promising researchers and educators for careers in science both inside and outside of the academy.

2014-2018 **Graduate Research Assistant**, Castillo coral ecophysiology lab at the University of North Carolina at Chapel Hill, **National Defense Science and Engineering Graduate Fellow** (NDSEG).

2013 **Graduate Teaching Assistant and Lead TA**, Introduction to Earth Sciences/ The Dynamic Earth, The Ohio State University.

2011-2013 **Graduate Research Assistant**, Grottoli Stable Isotope Biogeochemistry Lab at The Ohio State University

2009-2011 **Undergraduate Research Assistant**, Grottoli Stable Isotope Biogeochemistry Lab at The Ohio State University

## Technical Skills

---

- Coding proficiency: R, R Shiny, Bash, GitHub, some GIS.
- PADI Open Water Diving Certification
- AAUS Science Diver
- Biological field sampling techniques: coral coring, AGRRA and video reef surveys, coral identification, specimen collection: nets, seines, trawling, measuring depth, wind speed, light penetration, manipulative field experiments, reciprocal transplant, coral husbandry
- Molecular Techniques: DNA extraction, PCR, gel electrophoresis, nanodrop, Next Generation Sequencing and data analysis.
- Knowledge of, and experience running and maintaining SIRMS (Stable Isotope Ratio Mass Spectrometry)
- Wet chemistry laboratory techniques: organic separation (lipid, protein, carbohydrate extraction), Shimadzu TOC, fluorescence (NH<sub>4</sub>, NO<sub>x</sub>), Raman spectroscopy, X-Ray Diffraction
- Experience running manipulative tank experiments including experience with pH modulation and Neptune Systems Apex controllers.
- 3D printing, laser cutting for fabrication, tinkercad

## Outreach

---

2013-Present **SciREN Triangle Organizing Committee**: 1 of 6-8 graduate students from UNC, Duke, and NC State working on the organizing committee for this statewide workshop that allows K-12 teachers and scientists in STEM fields to share lesson plan ideas and develop connections. The program is designed to stimulate growth and interest in STEM fields and raise awareness of important research projects. Our annual networking workshops began in 2014 and serve approximately 300 researchers and education professionals in North Carolina each year.

- 2013-present **Scientific Research and Education Network (SciREN) Coast Workshop Participant:** K-12 teachers and marine scientists lesson planning workshop (February 2014, February 2015)
- 2013-present **North Carolina Science Festival:** Setup and run a marine science related booth for UNC Science Day. Give public lab tours.
- 2013-2018 **UNdertheCblog:** Co-founder and blogger for graduate student run science blog (undertheblog.org, @undertheblog)
- Nov 2018 **NC SciFest SciMatch classroom outreach program:** Holly Ridge Middle School, Holly Spring NC
- Nov 2018 **Morehead Planetarium Science Café speaker series,** Chapel Hill NC
- Oct 2018 **AP Environmental Science guest speaker:** Leesville Road High School, Raleigh NC
- Oct 2018 **Marine ecology guest speaker:** Leesville Road High School, Raleigh NC
- May 2018 **Marine biology guest speaker:** Ravenscroft High School, Raleigh NC
- May 2018 **NC SciFest SciMatch Program:** Spent a day teaching middle school students about marine science and coral reef ecology (Farmville Middle School, Farmville NC).
- Apr 2018 **AP Environmental Science guest speaker:** Research Triangle High School, Raleigh, NC
- Mar 2018 **Invited Speaker at Hillandale Elementary School Science Day:** Gave an interactive seminar on coral reef biology and how humans impact the environment.
- Mar 2018 **Organizer and speaker for screening of “Chasing Coral”** featuring Dr. Mark Eakin from NOAA and a diverse expert panel- UNC Chapel Hill
- Feb 2018 **Judge, Morehead Planetarium IMPACTS program annual meeting:** Gave feedback to science communication trainees who were developing their own outreach demonstrations and activities.
- Oct 2017 **Panelist and Invited Speaker: North Carolina Association for Biomedical Research “Bridging the Gap” conference.** Served as a panelist during a plenary session (500+ education professionals and researchers) focused on identifying reliable sources of information on scientific topics that are divisive (e.g.: climate change). Gave an invited hour long interactive talk about my coral research guided by audience questions and interest.
- Oct 2017 **Career Day Speaker.** Spoke about science and marine science careers at Mills Park Middle School, Cary, NC.
- Apr 2016 **Introduction to Marine Ecology:** Taught introductory marine science to middle school students at Hunters Creek Middle School in Jacksonville, NC.
- Apr 2016 **Science Career Day Speaker:** Spoke to middle school students at Olentangy Middle School, Columbus Ohio about careers in marine science and academia.
- 2015-Present **Morehead Planetarium and Science Center Science Communication Ambassador:** Attend science communication seminar courses, design and implement a hands-on science activity at the Planetarium. Participate in any of the numerous outreach opportunities provided through Morehead Planetarium.
- Apr 2014 **Classroom Outreach:** Presenting science and discussing scientific careers with 8<sup>th</sup> grade science classes, Jackson Middle School, Columbus, Ohio. April, 2014.

- Dec 2015 **Morehead Planetarium Middle School Science Camp:** Designed and led a hands-on food web lesson focused on coral reefs, overfishing, and other human impacts. December 2015.
- Dec 2015 **Classroom Outreach:** Taught 1 hour lesson on marine adaptation and coral reef ecology to 4<sup>th</sup> grade students at Glenwood Elementary, Chapel Hill, NC. December 2015
- Jan 2015 **Classroom Outreach:** Marine science career discussion and hands-on coral reef ecology activity presented to 30 “Science Explores” at Dillard Drive Middle School, Raleigh, NC. January, 2015.
- 2012 **Ohio State Biological Science Scholars “How to get into grad school” panel member**
- 2011-2012 **Ohio State Biological Science Scholars lab tours for undergraduates**
- 2011 **Presented at URO sponsored “Research Across Continents, OSU Undergrads in Latin America”**
- 2011 **Peer Research Contact for the Undergraduate Research Office (URO)**

### Conferences and Presentations

---

- 2018 Benson BE, **Baumann JH**, Aichelman HE, Castillo KS, Davies SW. Influence of daily temperature variation on the growth and survival of a reef-building coral. Poster Presentation. Society for Women in Marine Science Symposium, University of Rhode Island. March 2018.
- 2017 **Baumann JH**. How to talk about climate change in the classroom- myths and mysteries. Invited session. NCABR Bridging the Gap conference. Oct 24, 2017.
- 2017 **Baumann JH**. Influence of climate change on coral communities in Belize. Winner, poster competition. UNC Graduate Research Symposium
- 2017 **Baumann JH**. Influence of climate change on coral communities in Belize. Second Place, poster competition. UNC Climate Change Symposium. April, 2017.
- 2016 **Baumann J**, Townsend JE, Watkins J, Davies SW, Castillo KD. Influence of thermal history and nutrient enrichment on coral and symbiont community structure on lagoonal reefs on the Belize Mesoamerican Barrier Reef. Oral presentation. 13<sup>th</sup> International Coral Reef Symposium. Honolulu, Hawaii. June, 2016.
- 2016 Cai WJ, Ma Y, Hopkinson BM, Grottoli AG, Warner ME, Ding Q, Hu X, Yuan X, Schoepf V, Xu H, Han C, Melman TF, Hoadley KD, Pettay DT, Matsui Y, **Baumann JH**, Levas S, Ying Y, Wang Y. Coral interior carbonate chemistry measured with pH and carbonate microelectrodes suggests that the chemistry of

the calcifying fluid affects resilience to OA. Oral presentation. 13<sup>th</sup> International Coral Reef Symposium. Honolulu, Hawaii. June, 2016.

- 2016 Aichelman HE, Townsend JE, Courtney T, **Baumann JH**, Davies SW, Castillo KD. The temperature coral *Oculina arbuscular* exhibits a heterotrophic rescue effect to temperature stress. Oral presentation. 13<sup>th</sup> International Coral Reef Symposium. Honolulu, Hawaii. June, 2016.
- 2016 Rippe JP, De Leener DN, Aichelman HE, **Baumann JH**, Davies SW, Bove CB, Fieseler CM, Castillo KD. Skeletal growth trends of two massive reef-building corals on the Florida reef tract: are inshore corals better off in a warming ocean? Oral presentation. 13<sup>th</sup> International Coral Reef Symposium. Honolulu, Hawaii. June, 2016.
- 2016 Castillo KD, Rippe JP, Courtney T, Lima FP, Aichelman HE, De Leener DN, **Baumann JH**, Davies SW, Fieseler CM, Bove CB, Cobleigh KA, Westfield IT, Horvath K, Ries JB. Impact of ocean warming on century-scale growth trends of inshore and offshore corals throughout the western Caribbean Sea. Oral presentation. 13<sup>th</sup> International Coral Reef Symposium. Honolulu, Hawaii. June, 2016.
- 2016 Townsend JE, **Baumann JH**, Aichelman HE, Courtney T, Davies SW, Castillo KD. An accurate and cost-effective reef survey method: video transects with GoPro technology. Poster presentation. 13<sup>th</sup> International Coral Reef Symposium. Honolulu, Hawaii. June, 2016.
- 2016 **Baumann J**, Townsend JE, Courtney T, Aichelman HE, Lima FP, Castillo KD. Influence of thermal history and nutrient enrichment on coral community structure on lagoonal reefs in Belize. Oral Presentation. 2016 Ocean Science Meeting. New Orleans, Louisiana. Feb. 2016
- 2015 **Baumann J**, Courtney T, Davies SW, Aichelman HE, Townsend J, Lima FP, Castillo KD. Influence of thermal history and nutrients on lagoonal reef composition on the Belize Barrier Reef System. Oral presentation. 44<sup>th</sup> Annual Benthic Ecology Meeting, Quebec City, Canada. March, 2015
- 2015 Aichelman HE, Townsend J, Courtney T, **Baumann J**, Castillo KD. The rescue effect of heterotrophic feeding during temperature stress on the temperate coral *Oculina arbuscula*. Oral Presentation. 44<sup>th</sup> Annual Benthic Ecology Meeting, Quebec City, Canada. March, 2015
- 2014 Aichelman H, Courtney T, **Baumann J**, Castillo KD. The effect of feeding and temperature on the calcification response of the temperate coral *Oculina arbuscula*. Poster. UNC Celebration of Undergraduate Research, April 2014.



- 2014 Foguel AD, Roycroft M, Horvath K, **Baumann J**, Courtney T, Castillo KD. Quantifying relative corallite morphology from microscope images. Poster. UNC Climate Change Symposium. November 2014.
- 2014 Foguel AD, Courtney T, **Baumann J**, Castillo KD. A comparison of density, extension, and calcification from CT and X-ray images of coral cores. Poster. UNC Climate Change Symposium. November 2014.
- 2014 Courtney T, **Baumann J**, Foguel AD, Horvath K, Westfield I, Castillo KD, Ries JB (2014), Characterizing 21<sup>st</sup> century trends of the scleractinian coral *Siderastrea siderea* throughout the Belize barrier reef and atoll system. Oral Presentation. 43<sup>rd</sup> Benthic Ecology Meeting, Jacksonville Florida. March, 2013
- 2014 **Baumann J**, Grottoli AG, Levas S, Matsui Y, Hughes A. Acquisition and allocation of carbon to lipids of bleached and healthy Hawaiian corals. Oral Presentation. 2014 Benthic Ecology Meeting, Jacksonville Florida. March, 2013
- 2012 **Baumann J**, Grottoli AG, Levas S, Matsui Y, Hughes A. Acquisition and Allocation of Carbon to Lipids of Bleached and Nonbleached Hawaiian Corals. 12<sup>th</sup> International Coral Reef Symposium (ICRS), Cairns, Australia. Oral Presentation. July, 2012.
- 2012 Schoepf V, Grottoli AG, Warner ME, Cai WJ, Melman T, **Baumann J**, Matsui Y, Pettay D, Hoadley K, Wang Y, Xu H, Li Q, Hu X. Interactive effects of elevated  $p\text{CO}_2$  and temperature on coral calcification and energy reserves. 12<sup>th</sup> International Coral Reef Symposium (ICRS), Cairns, Australia. Oral Presentation. July, 2012.
- 2012 Levas S, Grottoli AG, Warner ME, Schoepf V, **Baumann J**, Aschaffenburg M, Matsui Y, Bauer J (2012) DOC fluxes in healthy and bleached *Montastraea faveolata*, *Porites astreoides*, and *Porites divaricata* corals. 12<sup>th</sup> International Coral Reef Symposium (ICRS), Cairns, Australia. Oral Presentation. July, 2012.
- 2012 Hoadley K, Pettay DT, Warner ME, Grottoli AG, Melman T, **Baumann J**, Matsui Y, Cai WJ, Hu X, Wang Y, Xu H, Li O (2012) The impact of elevated  $\text{CO}_2$  and temperature on the photosynthetic physiology and symbiosis stability of four Pacific reef-building corals. 12<sup>th</sup> International Coral Reef Symposium (ICRS), Cairns, Australia. Oral Presentation. July, 2012.
- 2011 **Baumann J**, Grottoli AG, Levas S, Schoepf V, Warner ME. The effects of single and repeat bleaching on photosynthesis and metabolism of three species of Caribbean coral. 2011 Natural and Mathematical Science (NMS), and 2011 Denman Undergraduate Research Forums, Ohio State University, Columbus, Ohio. Poster. April, 2011

- 2010 **Baumann J**, Grottoli AG, Levas S, Schoepf V, Warner ME. The effects of repeat bleaching on P/R and feeding rates of three species of Caribbean coral. 2010 American Society of Limnology and Oceanography (ASLO) Ocean Science Meeting, San Juan, Puerto Rico. Poster. February, 2010.
- 2010 **Baumann J**, Grottoli AG, Levas S. The effects of bleaching on photosynthesis, metabolism, and feeding rates of three species of Caribbean Coral. 2010 Biological, Math, and Physical Science (BMAPS) and 2010 Denman Undergraduate Research Forums, Ohio State University, Columbus, Ohio. Poster. February, 2010.

### Invited Speaker

---

- 2018 **North Carolina State University**: Marine, Earth, and Atmospheric Sciences- *Impacts of climate change and human activity on coral growth and community structure along the Mesoamerican Barrier Reef System.*

### Teaching Experience

---

***Marine Physiological Ecology teaching assistant (Spring 2018)***

**The University of North Carolina at Chapel Hill, Department of Marine Sciences**

- Led lecture sections on marine invertebrate respiration and coral reef ecology

***Marine Symbiosis teaching assistant (Fall 2017)***

**The University of North Carolina at Chapel Hill, Department of Marine Sciences**

Fall 2017

- Graded student assignments, assessed and encouraged active participation, lectured and led discussion on coral symbiosis.

***Earth Science 100 lab coordinator (Fall 2012-Summer 2013)***

**Ohio State University, School of Earth Sciences**

- Taught introductory Earth Science labs to non-science majors
- Instructed labs, lead discussions, proctor exams, and grade assignments
- Organize and set-up labs
- Trained other Teaching Assistants to teach labs
- Communicated with professors and deal with any scheduling issues
- Independently designed a lab on climate change and sustainability.

***Stable Isotope Biogeochemistry (Spring 2012)***

**Ohio State University, School of Earth Sciences**

- Instructed a lab section of 8-10 graduate students
- Taught mixing models
- Guided the class through isotopic analysis of their own fingernail and hair samples and assisted them in designing a poster and presenting their findings.

***Earth Science 100 laboratory instructor (Fall 2011-Spring 2012)***

**Ohio State University, School of Earth Sciences**

- Taught introductory Earth Science labs to non-science majors
- Instructed labs, lead discussions, proctored exams, and graded assignments

## Memberships

---

International Society for Reef Studies (ISRS)  
Association for the Sciences of Limnology and Oceanography (ASLO)  
Divers Alert Network (DAN)  
Professional Association of Diving Instructors (PADI)  
Consortium for Ocean Science Exploration and Engagement (COSEE)

## Scientific Meeting Session Chair/ co-Chair:

---

Association for the Sciences of Limnology and Oceanography Aquatic Sciences Meeting (2018):  
Session 033- Coral Reef Ecosystems

## Reviewer For

---

*Ecology*  
*Limnology and Oceanography*  
*Marine Ecology Progress Series*  
*PLOS ONE*  
*Coral Reefs*

## Undergraduates Mentored

---

Hannah Aichelman- Now an MS student at Old Dominion University  
Joseph Townsend – Now an MS student at the University of the Virgin Islands  
Alyssa Knowlton  
Jessica Boulton- Now a graduate student at UNC Chapel Hill  
Daphne De Leener- Recent graduate of University College London  
Lauren Speare- Now a graduate student at UNC Chapel Hill  
Brooke Benson- Now a laboratory technician at Boston University  
Kathryn Cobleigh- Now an MS student at the University of the Virgin Islands  
Logan Buie- Now science curator at the NC Museum of Natural Sciences  
Samir Patel- Now an officer candidate in the US Navy  
Megan Van Horn  
Natalie Patetta  
Kirsi Oldenburg  
Catherine Trusky- High school intern